How People Learn to Think Globally: Mapping and Measuring the Development of Internormative Cognition

How people learn to think globally:
Mapping and measuring the development of internormative cognition

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To Brendan Randall

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Abstract

Managing the global organization of human activity requires the cognitive capacity to generate *internormative* frameworks of judgment—frameworks that transcend the boundaries between normative communities. This dissertation describes an effort to grasp how individuals develop this capacity. I begin by critically reviewing the various academic subdisciplines that have, in one way or another, investigated the resolution of internormative conflicts. In so doing I find that none has produced a research strategy capable of elucidating the nature, origin, and growth of reasoning in this domain. I contrast the limitations of these approaches with the special capacity of the Piagetian cognitive-structural research paradigm—particularly the philosophic-developmental mode of inquiry pioneered by Lawrence Kohlberg—to generate such discoveries. I note that this method has not previously been used to study this domain, and explain why I believe it cannot be viably preempted in this task by the non-developmentalist approaches currently ascendant in moral psychology. To bring the Kohlbergian strategy up to date, I present a theoretical synthesis incorporating concepts from Dynamic Systems Theory, Skill Theory, and recent advances in cognitive-developmental theory and measurement.

With this as a foundation, I offer an analysis of seventy cognitive-developmental interviews in which subjects were asked to formulate judgments about *internormative dilemmas* (for example, disagreements as to the suitability of democratic governance for a non-Western country). The product of this analysis is a developmental model (the Internormative Cognition Sequence) mapping the growth of complexity in reasoning

about such issues. The model identifies a single core structural principle—*cross-system norm legitimation*—that simultaneously defines the domain, a philosophical criterion as to what constitutes adequate reasoning in this domain, a psychological theory as to what drives growth, and a methodology for empirically observing this growth. In accordance with this principle, the model describes five empirically identifiable cognitive structures, and a developmental logic that organizes them into an empirically testable sequence. I close by presenting a future program of studies designed to perform such testing and to advance educational and psychometric methodologies in this domain, interweaving this presentation with a meta-methodological reflection on the possibilities and challenges of philosophic-developmental assessment.

Style notes

1. Typefaces are used in a particular way in this dissertation. *Italics* are used to emphasize specific phrases or words, or to introduce special terms. **Boldface** is used to identify main points. Underlining is *not* used for emphasis but instead to highlight relationships among items, especially to make serial items stand out when they are separated by citations or other intervening text.
2. I have used plural pronouns in lieu of masculine pronouns for generic third-person singular subjects, for example, the now legitimate “Each plays their respective role” in lieu of the needlessly gendered “Each plays his respective role”.
3. Quote marks are placed *inside* commas and periods in an effort to help legitimize what is—in terms of net word processing effort, among other things—a more advantageous practice than the current convention.

Lists of Tables and Figures

Chapter 1. Introduction and Rationale

The need for internormative thinking

The norms of any society are validly subject to intersocietal frameworks of judgment. There are two types of reasons for this, which one might classify as *external* and *internal*.

Reasons of the *external* type are rooted in each society's involvement with other societies and with the broader global organization of human activity. Individual societies can no longer perpetuate their system-maintaining cycles in isolation, for these cycles have long since interlinked into a worldwide hypercycle via market, legal, bureaucratic, professional, educational, and other mechanisms. Through this process of coordination there has arisen a new, global equilibrium of human activity characterized by enhanced efficiency, dynamism, and autonomy vis-à-vis the environment. By permitting us to exploit available resources more flexibly and adaptively, this suprasystemic organization has made it possible to bypass the limits imposed by system-level organization, drawing us ever deeper into a collectivized intersocietal balance—an emergent *globalibrium* of human activity in which every society's processes interpenetrate every other's.

This situation, in turn, has generated global accountability for every society's system of norms. This is both because the consequences of our actions have become externalized (e.g., my choice of clothing can cause or prevent deaths of factory workers in India, while an Indian's use of antibiotics can affect my ability to survive surgery) and because many contemporary problems have become insoluble at the system level—

including climate change, resource depletion, disease prevention, food supply, terrorism, cross-border corruption, inequality, and online disinformation, to name only a few (Rodin, 2012). In this circumstance, society-specific frameworks of normative judgment are no longer adequate; we instead require a global community of legitimation in which all norm systems are mutually accountable.

The second type of reason for this global accountability is *internal* to the nature of normative reasoning. For such reasoning proceeds from a premise of universality that is built into normative argumentation (*even* when one's argument is to oppose universal norms) (Apel, 2000; Habermas, 1983/1990). And as we know from both the psychological and philosophical study of moral development, normative reasoning tends spontaneously to become more adequate when it is exposed to intersubjective legitimation (Habermas, 1981/1984, 2005/2008; Kohlberg, 1958, 1971; Piaget, 1932/1965). I will refer to such legitimation, when it involves justifying norms across the boundaries between societies, as *internormative* legitimation.

The burden of internormative legitimation is to justify the validity of a norm according to universalistic frameworks of judgment. Naturally these frameworks must be conceived abstractly enough to accommodate the irreducibly plural forms that local institutions take. But subjecting these institutions' claims of validity to open, discursive criticism generates a "self-corrective learning process" (Habermas, 2005/2008, p. 91)—an intrinsic structural tendency toward principles of judgment that are more logically comprehensive, more internally coherent, more able to solve complex problems, more cognitively autonomous, more deeply self-reflective, and more potentially self-critical.

The *growth* of norm systems is immanent to the process of external accountability, for intersocietal frameworks of judgment provide the medium in which society-level frameworks can reflect on their own unresolved contradictions and limitations.

The challenge of pluralism

Any talk of "intersocietal frameworks of judgment" immediately brings us up against the challenge of cultural pluralism. For it is not possible to separate norms from their institutionalization within authentic communities circumscribed insurmountably within particular interpretive horizons. Yet this does not impede us from discovering that all such horizons fall within the same world and within a common set of possibilities and limitations. The "intersocietal frameworks of judgment" I speak of are not built from the ethnocentric imposition of a particular viewpoint, but from general principles that underpin any coherent and sustainable way of life. Such principles only arise from the common patterns that can be seen to hold across diverse historical pathways, and to be authentically expressible across diverse social contexts. Hence **the external critique of a norm system does not ultimately privilege one culture over another**, for the whole range of societies must be drawn on in the critique of each.

A critique framed in this way derives as much from within each society as from without, while also providing an objective basis for self-criticism. Any society that declares itself exempt from this critique—by claiming to constitute a unique standard of civilization—merely establishes a lower standard for itself. For by claiming immunity from universal criticism, it denies itself an intersubjective process of mutual insight and

transformation, and relinquishes the means to overcome self-deception. It becomes a society unable to learn.

The curriculum of globalized life

And so while a society's norms are always partly context-determined, we must also learn to judge them by context-transcendent standards. Yet our ability to transcend borders with our normative thinking has not kept pace with our ability to do so in our communications and economic activities. Through continuous interaction among the world's societies, there has spontaneously arisen an organized global equilibrium of activity—comprising interconnected flows of people, information, ideas, capital, energy, goods, crime, terrorism, disease, and environmental fallout—more complex than the internal normative orders those societies separately sustain. This equilibrium will not be manageable in the long run without structures of reasoning that permit valid, *non-arbitrary* normative judgment across those orders. If the world's societies are to coordinate their activities and learn from each other, they must generate a superordinate system of judgment—what we might think of as an internormative "court of appeal" (H. Smith, 2003, p. 126).

This superordinate mode of judgment is of a level of abstraction to which our kind is not yet accustomed. Humanity's experience has historically been—and to a large extent still is—firmly bound within the contexts of specific social, cultural, and ideological communities. It is within these limited "social worlds" that our capacity for ethical and epistemological reasoning has evolved (Shibutani, 1955, p. 565). For this

reason, the challenge of generating solutions that *integrate* the truths of these worlds is one that severely tests the capacities of human cognition. Even today, it remains possible for most people to pay little regard to the superordinate global structure that coordinates these worlds, because this structure organizes our activity only in the limited ways that are relevant to global processes, while ignoring most details of daily life (Eigen & Schuster, 1979). Hence the actions of most people remain embedded within national cycles of activity, such that this national activity is what seems most "real" to us. Even today we mostly live "not in a global village, but in national villages locked in a global flux" (Laszlo, 1987, p. 138).

The world is thus, to borrow Rosenberg's phrase from a different context (2002a, p. 55), "dually constituted"—constituted at a global level by our intersubjective activities, and at a societal level in our subjective understanding. On one hand, the subjective structuring has the effect of dragging the intersubjective down to a more primitive level of complexity, as we witnessed in British voters' decision to exit the European Union, U.S. voters' election of Donald Trump, and the Russian state's use of global-level information media as an instrument of state-level power competition. On the other hand, the intersubjective structuring has the effect of uplifting the subjective to a more advanced level of complexity, as shown, for example, by the great output of scholarship in recent years aimed at constructing the conceptual foundations for global governance (e.g., Abbott, Green, & Keohane, 2016; Armeni, 2015; Muldoon, 2018), global civil society (e.g., W. K. Carroll & Sapinski, 2017; O'Byrne, 2017), global ethics (e.g., Ignatieff, 2017; Moellendorf & Widdows, 2015; Pogge & Horton, 2008), and global

justice (e.g., Della Porta et al., 2015; Keohane & Buchanan, 2006; Pogge & Moellendorf, 2008).

Both the subjective and intersubjective structuring forces operate on the same actions and "compete for substantive realization", thereby generating a "reciprocal pressure to restructure [that] constitutes the developmental dynamic of social life" (Rosenberg, 2002a, pp. 56-57). The intersubjective structures change more quickly, because they arise spontaneously from our very interactions, without conscious planning. The subjective structures change more slowly, in reaction to the reality we experience but with the inertia of ideas we inherit from the past. But as we know from *Brexit*, the rise of Donald Trump, and Vladimir Putin's attempt to revive the Cold War, causality operates not only from the leading structures toward the lagging, but also vice versa.

As these recent events attest, **the norm systems we operate in are constituted at a lower level of complexity than that at which the world is now structured**. To paraphrase Einstein (1946), we do not cognitively structure our situation at the level of complexity which is called for in order to manage it. And so just as Robert Kegan has spoken of "the curriculum of modern life" (1994), perhaps we can speak here of "the curriculum of *globalized* life".

To outline such a curriculum is the purpose of this dissertation. The fundamental question I ask, then, is simple: **How does internormative thinking *develop*?**

Evaluating research strategies

To answer this question involves discovering the evidence of such development in individuals, and the internal logic this development follows. What I will argue is that making discoveries of this kind requires using a particular empirical strategy. In this strategy, one analyzes a person's arguments according to their organizing structures of reasoning such that they can be ranked as progressively comprehensive resolutions of internormative discrepancies. That is, **one must interpret a person's arguments as representing *cognitive structures* that can be understood as *evolving* toward *deeper* resolutions of internormative problems**.

The reader may recognize this approach as an application of the ***philosophic-developmental* empirical strategy** associated with Jean Piaget and Lawrence Kohlberg. This strategy is distinctive in that one explains learning processes by pointing to a philosophical criterion of adequacy and then describing psychological growth as a series of increasingly comprehensive realizations of that criterion. One thereby aligns a philosophical criterion as to the direction in which people's thinking should be expected to evolve with a psychological theory as to what drives learning toward that endpoint, based on the insight that people actively prefer the most logically comprehensive approach they grasp (this insight—pregnant with implications—has been substantiated by researchers including Rest, 1969; Rest, Turiel, & Kohlberg, 1969; L. J. Walker, 1982). Distinctively, this approach is able not only to distinguish different thought patterns, but also to elucidate how they are constituted, and to disclose their status as progressive realizations of a single animating principle. **This permits the researcher to organize**

these patterns into a unified ontogenetic account that explains both how and why they emerge as well as the conditions by which they may be transformed. These properties make the philosophic-developmental strategy uniquely suited to the task of understanding how internormative thinking develops.

This strategy imposes several distinctive epistemological standards that are, as I will try to show, indispensable to revealing how internormative thinking develops:

1. **Researchers must adopt a critical attitude toward norm perspectives**. Researchers must have a way evaluating norm perspectives as more or less successful problem solutions, based on their capacity to generate independent, comprehensive, and self-correcting solutions to the problem in question. Without such a criterion, researchers cannot discern an evolutionary process at work. Researchers who treat norm perspectives as static attitudes to be described—rather than as active problem solutions to be evaluated—have no way to discern the logic by which these solutions might be integrated.
2. **Researchers' criterion for this criticism must be structural**. To evaluate a person's norm perspectives objectively, researchers must look beyond the particular *content* of that person's judgments to the system of meaning from which these judgments derive. For only the *organization* of a person's reasoning—not its content—can be assessed on a developmental scale, and can point to the conditions for its own transformation.
3. **Researchers must attend to cognitive activity, not emotions or culturally specific intuitions**. In recent years the focus of moral psychology has shifted

from cognition to biologically, emotionally, and culturally rooted moral "intuitions". But predetermined tendencies and automatic emotions are not the source of moral growth, and they provide no basis for integrating the norm perspectives of diverse communities. The stuff of hierarchically organized moral growth is *cognitive structure*.

4. **Researchers must see norm perspectives as evolving**. The only objective basis for identifying *progress* in thought is *growth*, understood as the increasing independence, reflective depth, and logical comprehensiveness of thought that results from progressive differentiation and integration. If researchers are to observe true growth, they must understand the "integration" of norm perspectives as the holistic assimilation of these perspectives, not as the mere mixing of different ideas or adoption of compromise solutions.
5. **Researchers must attempt to discern an organized pathway along which this evolution occurs**. To answer the question of how people develop their capacity for internormative thinking requires researchers to combine the above insights to specify learning sequences that lead to integrative resolutions of conflicting norm perspectives.

In sum, to discover how internormative thinking *develops*, researchers must (1) eschew the empiricist assumption that norms are merely to be described rather than philosophically interpreted, (2) resist the temptation to attend to the *content* of people's reasoning, (3) look beyond the current theoretical orthodoxy to see that the essence of

moral *growth* lies in the constructive activity of thought and not in automatic emotional responses or biological inheritance, (4) withstand the pressures of their sociocultural milieu against evolutionistic modes of analysis, and (5) consciously arrange norm perspectives into a logical sequence that offers an organized pathway of intellectual transformation.

Using these five criteria, I will argue in the next section that **the research disciplines which have heretofore concerned themselves with questions of intercultural norm conflict have not followed an approach capable of answering the question of how internormative thinking develops**.

Critical review of relevant scholarship

Each of the disciplines reviewed in this section has attempted, in one way or another, to understand how internormative conflicts are resolved. My claim is that none of them has applied the kind of approach needed to understand how this resolution can emerge from within people's own sense-making. Substantiating this claim compels me to embark on a critical review of each discipline's approach to this topic of study. What follows is not a comprehensive review of these approaches, but a critical appraisal of their main organizing principles, intended to illustrate that no discipline has adequately pursued the kind of approach my problem requires.

Psychology of acculturation and cross-cultural adaptation

The psychology of acculturation and cross-cultural adaptation has investigated internormative questions as they emerge in the experience of persons who must adapt to a new culture.

The acculturation field has its roots in studies of culture change arising from large-scale migration, assimilation of minorities, or other contact between historically distinct populations, such as that between colonizers and indigenous peoples (Berry, 1970; G. S. Hall, 1904; Hallowell, 1955; Kvernmo, 2006; Linton, 1949; Miner, 1952; Redfield, 1934, 1941). Redfield, Linton, and Herskovits (1936) provided the classic definition of acculturation: "those phenomena which result when groups of individuals

having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups" (p. 149).

In recent decades, a different strain of acculturation research has attended to the personal adaptation experience of individuals and families who migrate either temporarily or permanently to a distinct cultural setting (much of this research has been published under the disciplinary rubric of "cross-cultural psychology"). These studies have examined the cultural adaptation experience of refugees (e.g., Allen, Vaage, & Hauff, 2006; Cohon, 1981; Donà & Ackermann, 2006), migrants (e.g., Horenczyk, 1996; Schmitz, 1994; van Oudenhoven, 2006), and sojourners (e.g., Bochner, 2006; Cox, 2004; C. Ward, Bochner, & Furnham, 2001).

Neither strain of the acculturation literature has generated a research strategy that can elucidate how internormative thinking develops. This is primarily because each has approached cultural value systems as preconstructed arrangements to which one adapts, rather than as logical structures that one can creatively integrate in one's mind. The non-integrative paradigm of this field is evident both in the term *acculturation* itself and in the field's dominant theoretical framework, which conceives cultural adaptation as a combination of two orthogonal variables: more or less desire to maintain one's home culture, and more or less desire to partake in one's host culture (Berry, 1976, 1990, 1997, 2006a; Sam, 2006; C. Ward & Kennedy, 1994). In this framework, one is conceived as having the choice of selecting or rejecting aspects of either culture (Johnston, 1976; LaFromboise, Coleman, & Gerton, 1993; Sung, 1985), or at best mixing them in additive fashion (Berry, 1980; Bouvy, van de Vijver, Boski, & Schmitz, 1994; Clanet, 1990;

Denoux, 1992), but not of sublating their internal logics within a superordinate type of system. **The values of each culture are thus conceived merely as alternatives from which to choose, not as epistemological perspectives that could be holistically integrated in such a way that each could be seen as ultimately partial**.

In accordance with this static conception of culture, researchers have tended to view acculturation not as an *epistemological* task, but as one of acquiring language and other culture-specific skills (Bochner, 1972; Furnham & Bochner, 1982, 1986; Gudykunst, 1993; Schmitz, 1992), coping with stress (Aldwin, 1994; Diaz-Guerrero, 1979; Krishnan & Berry, 1992; Lazarus, 1990; Lazarus & Folkman, 1984; Sam & Berry, 1995), negotiating a new identity (Berry, Phinney, Sam, & Vedder, 2006), and attaining a degree of social participation and belonging (Hammer, Bennett, & Wiseman, 2003)—all for the purpose of maintaining one's "psychological wellbeing and satisfaction" (Masgoret & Ward, 2006, p. 60). The focus of the acculturation framework has thus been primarily affective and behavioral, and only cognitive in the horizontal sense of acquiring specific knowledge and skills, rather than in the vertical sense of elevating one's consciousness as to the *kinds* of reasons one could have for embracing one value or another. Lacking the concept of structural development, this framework conceives the ways that one could relate to values as static alternatives, rather than as the evolving products of logical activity. Such a conception is inadequate for understanding how internormative problems can be resolved through intellectual growth.

Reflecting most other subject areas in psychology, the developmental studies of acculturation have focused on *children* (R. Brown et al., 2013; Nigbur et al., 2008;

Oppedal, 2006; Oppedal, Roysamb, & Sam, 2004; Sam & Oppedal, 2002). This unfortunate assumption that developmental study is irrelevant for adults ignores the fact, which I hope to make clear in this dissertation, that we cannot understand adults without attending to developmentally diverse interpretations of reality. Moreover, **the failure to orient ourselves to adults' room for growth leaves no room for internormative conflicts to be *outgrown***, rather than simply *managed*. In the field of acculturation psychology, this assumption of non-development translates to the idea that to "culturally adapt" can only mean to adjust one's ideas to fit a new environment—not to create a new mental context in which more types of ideas could be integrated. In the absence of a developmental perspective, "complexity" is conceived in terms of a linear combination of multiple cultural valences, not in terms of an unfolding differentiation and integration of cultural perspectives. The result is a non-integrative paradigm in which adaptation amounts to lateral *adjustment* rather than structural *transformation*.

Studies of intercultural communication and competence

The theme of the studies I review in this section differs subtly from that of acculturation. Whereas acculturation psychology examines the cross-cultural adaptation *process*, the studies I review here examine the *skills* required for such adaptation, and for effective *communication* between any culturally different persons, including members of the same multicultural society. Such skills are frequently referred to as "intercultural competence", though one can find them referred to by many other terms, including "intercultural skills", "effective intercultural communication", "intercultural adjustment

potential", "intercultural empathy", "intercultural vision", "multicultural competence", "cross-cultural competence", "cross-cultural adaptability", "cultural intelligence", "cultural sensitivity", "cultural self-awareness", and "multicultural personality quotient" (M. J. Bennett, 1986; Broome, 2015; Chiu, Lonner, Matsumoto, & Ward, 2013; Condon, 2015; Cortés & Wilkinson, 2009; Deardorff, 2009; Hammer, 2015; Kelley & Meyers, 1987; Matsumoto et al., 2001; Takai, 2015; van der Zee & van Oudenhoven, 2000).

Researchers have variously defined intercultural competence as the "successful navigation of cultural differences" (Hammer, 2015, p. 483), the "ability to communicate effectively in cross-cultural situations and to relate appropriately in a variety of cultural contexts" (J. Bennett & Bennett, 2004, p. 149), and the "specific attitudes, knowledge, understanding, skills and actions which together enable individuals to understand themselves and others in a context of diversity, and to interact and communicate with those who are perceived to have different cultural affiliations from their own" (Barrett, Byram, Lázár, Mompoint-Gaillard, & Philippou, 2013, p. 4). As these definitions attest, scholarship in this field has generally approached the issue of intergroup understanding as a problem of **cultivating positive communications** and **affirming cultural identities**. The goal, according to J. Bennett (2015), is to "support effective and appropriate interaction in a variety of cultural contexts", "respecting the norms of the cultures involved" (p. 23).

And so unlike this dissertation, **the field of intercultural communication and competence is not concerned with how internormative conflicts are *integratively resolved*, but how they are *accommodated***. Indeed this literature, perhaps due in part to

its close association with communications studies (e.g., Gallois, Giles, Jones, Cargile, & Ota, 1995; Gallois, Ogay, & Giles, 2004; Giles, Mulac, Bradac, & Johnson, 1987; Gudykunst, 1991), typically regards mutually affirming communication among people of diverse backgrounds as the *summum bonum* of cross-cultural perspective-taking. But as I will attempt to show in this dissertation, approaches to intergroup understanding that work *within* the frame of conventionally accepted culture—rather than to *transcend* it—are inimical to resolving intercultural conflicts, precisely because these conflicts emerge from the naïve assumption that each culture possesses a separate and ultimate integrity. Their true integrity, I aim to show, lies beyond the boundaries of conventional cultural self-understanding. Hence the only lasting reconciliation between those self-understandings is for us to learn to transcend them. In short, I believe that for this field to achieve what its practitioners desire, it must replace its paradigm of *accommodation* with one of *developmental integration*.

The reason this field has not been able to adequately elucidate such integration, I would offer, is that it has not embraced an ontogenetic perspective. This is evident in the many theoretical models of intercultural competence that have appeared in recent years, such as Kim's Intercultural Communicative Competence Model (1988), Byram's Intercultural Competence Model (1997), Howard-Hamilton et al.'s Intercultural Competence Components Model (1998), Arasaratnam's Model of Intercultural Communication Competence (2006), Deardorff's Pyramid Model of Intercultural Competence (2006), Rathje's Coherence-Cohesion Model of Intercultural Competence (2007), and Fantini's Intercultural Competencies Dimensions (2009) (see Spitzberg &

Changnon, 2009 for a thorough review). These models offer extensive lists of desired traits, such as "ability to deal with different societal systems", "cultural self-awareness", "ability to assess intercultural performance", and "analytical empathy" (respectively, Abe & Wiseman, 1983; Deardorff, 2006; Hunter, White, & Godbey, 2006; and Ting-Toomey & Kurogi, 1998; all as cited in Spitzberg & Changnon, 2009). But the problem with these models, for my purposes, is that **they offer little psychological or philosophical explanation as to how such qualities might emerge, what precursor skills they might be built upon, or how they may be internally related**. Notably, many of the traits listed are non-cognitive, and such cognitive traits as are listed often refer to specific knowledge or attitudes—that is, the *content* of thought, as opposed to the way such thought is *organized*. But without understanding these traits as the product of an internally organized way of thinking, there is no way to know how to transform a person's thinking in the desired direction. **The result of this approach is to present a list of desired competencies with no pathway along which one might *learn* them, or along which one might judge whether the specified competencies are themselves adequate**. The solution to this problem, I would suggest, is to understand these competencies as the product of adaptively evolving structures of thought. Only such an approach has the capacity to unify these diverse qualities into a coherent ontogenetic account that clarifies what true intercultural competence consists of, how it emerges, why it emerges, and under what conditions it can be attained.

As it turns out, there is one model of intercultural competence that has used some aspects of such an approach—King and Baxter Magolda's Intercultural Maturity Model

(IMM) (2005), later refined by Perez, Shim, King, and Baxter-Magolda (2015). Unlike this dissertation, the IMM does not ask how people develop structures of reasoning that permit valid normative judgment across contexts. Instead, it asks, "How do people come to understand cultural differences in ways that enable them to interact effectively with others from different racial, ethnic, or social identity groups?" (King & Baxter-Magolda, 2005, p. 571). Hence its aim is to measure the capacity for effective intercultural communication in a diverse setting, rather than the capacity to integratively resolve norm conflicts across diverse contexts. But even though the IMM addresses a different question than that posed by this dissertation, I believe that its cognitive-developmental portion is a relevant example of the kind of approach that is required to elucidate the ontogenesis of intercultural competence.

Before closing this section, I should acknowledge an earlier developmental model that has held a prominent place in the literature on intercultural communication and competence—Milton Bennett's Developmental Model of Intercultural Sensitivity (DMIS) (1986). The DMIS has made an important contribution toward a developmental understanding of intercultural competence, though it is not a structural model and does not satisfy the formal conditions of a cognitive developmental sequence. These points are explained beginning on page 309.

Intermediate reflection: The need for an integrative approach

The central criticism I am making of the subdisciplines reviewed in this introductory chapter is that they do not offer a way of explaining how people learn to integrate norms.

A basic shortcoming I point to in all these fields is the lack of an *ontogenetic* lens. For the fields I have reviewed so far, this limitation seems related in one way or another to the fact that they do not adopt what I would call an *integrative* approach to their question.

A common characteristic of the fields reviewed above is that they attend primarily to the manner in which people relate to the fact of intergroup differences. This means they pay less attention to the meta-cultural problem of how such differences might be *transcended*. If these fields were to reconceptualize their subjects' experience as a constructive growth process—rather than a negotiation between preconstructed cultures—I believe they would have less of a tendency to assume that each culture possesses an ultimate integrity in its own distinctness, and could begin to look for that integrity in something that rises above any culture as it is currently constituted. For the ultimate integrity of a culture does not lie in its separate distinctness but in the common growth process from which that distinctness arises. This view of culture as a process of growth goes hand in hand with the view of the *person* as a process of growth. **Lacking such a developmental viewpoint, the literatures reviewed above can only explain the psychology of intercultural phenomena in terms of mutual accommodation, not in terms of developmental integration**. The values and identities they speak of are presumed to be incommensurable because they are believed to possess a distinct wholeness that is prior to their enactment by persons. An integrative resolution is foreclosed by very structure of this approach.

The fields of study I review below are less affected by the problem of non-integration. But like the ones reviewed so far, they lack the ontogenetic perspective required to answer the question posed by this dissertation.

Social psychology

Social psychologists have investigated questions of intergroup norm conflict as part of their inquiry into multicultural and global identities, intergroup processes, political attitudes, and the moral frameworks of diverse social communities. I will consider separately the contributions of each of these lines of inquiry.

Multicultural and global identities

Multicultural and global thinking is a subject of growing interest to social psychologists, who have produced a series of measures attempting to capture these constructs. These include scales of Global Orientation (S. Chen, 2013), Identification with All Humanity (McFarland, Webb, & Brown, 2012), Psychological Sense of Global Community (Malsch & Omoto, 2007), Cosmopolitanism (Cleveland, Laroche, & Papadopoulos, 2009), Global Citizenship Identification (Reysen & Katzarska-Miller, 2013), Global Social Identification (Reese, Proch, & Cohrs, 2014), and Global Identity (Türken & Rudmin, 2013).

As can be discerned from the names of these measures, **social psychologists have focused squarely on the *identity* component of multicultural and global thinking,** including civic identity, that is, the public concerns that people identify as their own.

This focus reflects the central theoretical perspective social psychologists have used for studying the relationship between socialization and the perspectives of individual persons—*social identity* (Abrams & Hogg, 1999; Abrams, O'Connor, & Giles, 2002; Gudykunst & Hammer, 1988; Harwood, 2006; Hogg, Abrams, & Brewer, 2017; Kosmitzki, 1996; Tajfel, 1982a, 1982b; S. C. Wright, Aron, & Tropp, 2002). This perspective has been shaped by two dominant research orientations, Social Identity Theory (Tajfel, 1978; Tajfel & Turner, 1986) and Self-Categorization Theory (Abrams & Hogg, 1990; Reid et al., 2008; Reid & Hogg, 2005; Turner, 1987, 1999). Taken together, these theories suggest that people's social identities emerge from an interaction between cognitive processes of social categorization and the drive to construct a favorable and distinctive self-evaluation.

These orientations have generated research programs vital for understanding intergroup relations and broader forms of self-identification (e.g., Abrams & Hogg, 1999; McFarland & Hornsby, 2015; Oakes, 2003; Reid et al., 2008; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Turner & Reynolds, 2003). However, **these research programs have treated identities as *static content* rather than as *dynamic, organizing activity.*** That is, they have been built upon **a conception of people's social or civic identity as *attitudes* to be described, or related to other variables, rather than as dynamic *structures of reasoning* to be understood ontogenetically**. Thus lacking a perspective from which to observe identities as adaptively evolving thought structures, social psychologists have been unable to elucidate the organization, origin, stability, and transformation of these attitudes. What they are missing, from a Piagetian standpoint, is

a way of explaining how global and multicultural identities evolve as *structural adaptations* to the reality of a globalized social environment. Without explaining how such understandings are *constructed*, they can articulate a worthy objective for people to strive toward (as in the following quote), but are unable to explain the *pathway along which they might reach it*:

> We hope that studies of global human identification will continue, as we hope they will prove useful for both scientific purposes and for elevating global human identification as an ethical ideal. Perhaps that elevation can offer a strong antidote to ethnocentrism and narrow nationalism, while helping enlarge our concerns for our common human problems. (McFarland & Hornsby, 2015, p. 815)

Reflecting social psychology's non-ontogenetic focus, recent research on global and multicultural identities has shed little light on how such thinking might *develop*. For example, rather than examining the logical structure in which such identities are put together, studies have focused on figuring out their factorial structure for purposes of efficient measurement (Malsch & Omoto, 2007; McFarland & Hornsby, 2015; Reese, Proch, & Finn, 2015). Similarly, rather than seeking an internal explanatory relationship between different types of social identification, studies have looked for external relationships between these identifications and various sociopolitical attitudes (Hackett, Omoto, & Matthews, 2015; Malsch & Omoto, 2007; McFarland, 2016; McFarland, Brown, & Webb, 2013; McFarland & Hornsby, 2015; McFarland et al., 2012; Reese et al., 2014; Reese et al., 2015). Clearly these studies are of vital importance. At the same time, they seem to indicate that social psychology has not generated a research strategy suited to answering the specific question of how internormative thinking develops.

Social identity complexity

In the previous section I noted that social psychology has typically viewed multicultural identities as static content rather than developing structure. But in recent years some in the field have sought to analyze multicultural identities from a more cognitive-structuralist perspective, based on the assumption that a bicultural or multicultural identity is more "cognitively complex" than a monocultural one. Now from the Piagetian perspective—which defines "complexity" in terms of progressive structuration—much of this literature is not in fact properly structuralist, because it assumes multiculturals to be "cognitively complex" for what is simply the mixing of different cultural contents (Benet-Martínez, Lee, & Leu, 2006; Leung & Chiu, 2010), a point that has been made previously by Tadmor, Galinsky, and Maddux (2012). These studies seem to assume that complexity derives from the presence of multiple valences of social identity, when in fact it derives from the layers of organization in how those perspectives are structured via successive differentiation and integration.

However, a different group of studies (Brewer, Gonsalkorale, & van Dommelen, 2013; Brewer & Pierce, 2005; K. P. Miller, Brewer, & Arbuckle, 2009; Roccas & Brewer, 2002) has applied a more rigorously structuralist approach, seeking to correlate different patterns of social identity perception with Suedfeld & Tetlock's scale of Integrative Complexity (Suedfeld & Tetlock, 1977; Suedfeld, Tetlock, & Streufert, 1992; Tetlock, 1983). Some of these studies do not pass a rigorous test of cognitive structuralism, due to their introduction of non-cognitive factors that are not plausibly

related through progressive structuration. But the most promising of them does pass such a test: Tadmor et al.'s (2012) study, which analyzed people's capacity to *integrate multiple cultural perspectives*, conceiving this in terms of *structural complexity* (i.e., hierarchical organization).

But there are a couple of fundamental reasons why I regard even that study's approach as inadequate to the task I undertake in this dissertation. To begin with, while the authors use a *cognitive-structural* approach, they adopt this from the Integrative Complexity scale, which is not a developmental measure (see page 298 for more information). That is, they do not have a basis for understanding this structure ontogenetically. Hence they are not able to offer a true learning sequence toward the type of thinking they regard as desirable. Moreover, their combination of the Integrative Complexity measure with a measure of bicultural identification seems to confuse the *affective* dimension of *affiliation* with the *cognitive* dimension of *perspective*. As I suggested earlier, the stuff of complex organization is not affect but cognitive structure. That is, one may develop cognitively by being able to *take the perspective* of another culture, without necessarily *self-identifying* with that culture. I believe this explains the anomaly Tadmor et al. observed in finding that subjects who did not affiliate with either their home or host culture scored relatively high on the Integrative Complexity scale (p. 537). Perhaps this can be taken as a small piece of evidence for my larger message that **a genuinely developmental understanding of intercultural thinking requires shifting away from the identity frame dominant in social psychology, and toward a cognitive-structural one**.

Even though the scholarship on social identity has not, in my view, worked out an approach adequate for elucidating the genesis of intercultural thinking, we might perhaps interpret the work described above as a sign that investigators are trying to figure this out, and that their efforts are leading them in the direction of more structuralist approaches. The disciplinary lineage of their work suggests, at least to me, that they may not be fully aware of how a Piagetian approach would be able to uncover what they are looking for and much more. Clarifying how it can do this is one of the main purposes of this dissertation.

Intergroup processes

Another area in which social psychologists have investigated questions related to intercultural norm conflict is in their study of intergroup processes. This line of inquiry has included studies of religious tolerance and intolerance; stereotypes, bias, and other intergroup perceptions and beliefs; evolutionary and other motivations for group attachment; intergroup anxiety; empathy and antipathy toward outgroups; ingroup-preferential attitudes; perspective-taking; discrimination or other membership-driven behavior; and intergroup competition or avoidance (see Dovidio & Gaertner, 2010; Yzerbyt & Demoulin, 2010). As these focal areas suggest, the study of intergroup processes has primarily thematized affect, affiliation, and bias. **Focusing on social identity and its consequences for intergroup relations, the field has tended to envision groups as distinctive identity referents** (Turner & Reynolds, 2003), **rather than as social systems whose norms might be reconciled**. In short, this field has not

pursued any significant line of inquiry related to resolving the norm perspectives of different groups.

As with the scholarship on acculturation and multicultural identities, the developmental studies of intergroup processes have focused almost entirely on children, with a particular concern for how intergroup biases are learned (e.g., Aboud & Amato, 2003; Bigler, Jones, & Lobliner, 1997; Doyle & Aboud, 1995; Fishbein, 1996; Hirschfeld, 1996; Vaughan, 1987). Once again there seems to be an assumption that adults cannot grow. Here this assumption of stasis results in the idea that the resolution of intergroup conflict must be achieved through the promotion of specific attitudes of intergroup tolerance and non-prejudice, whereas the possibility of integratively transcending the very category of groups is overlooked.

The social-intuitionist study of morality

The momentum of moral psychological research has swung in recent decades from Kohlbergian cognitive development toward the social-psychological study of morality based on "social intuitions" (Graham et al., 2013; Graham et al., 2011; Haidt, 2001, 2007, 2013; Haidt & Bjorklund, 2008; Haidt & Kesebir, 2010). I will critically review the social intuitionist paradigm beginning on page 46, in a section addressing criticisms of the Kohlbergian approach. The gist of that critique is that social intuitionism does not offer a basis for observing objective growth or understanding how different normativities might be integrated.

Political psychology

Another discipline germane to this study is political psychology, which has generated theoretical frameworks applicable to explaining citizens' thinking about international affairs and other issues involving conflicting norm systems. Scholars in this field have largely focused on examining the content, variation and determinants of political attitudes and behavior (Ashton et al., 2005; Conover & Feldman, 1981; S. Feldman & Johnston, 2014; Jost et al., 2007; Jost & Sidanius, 2004; Krosnick, Visser, & Harder, 2010; Simon & Klandermans, 2001). But **just like researchers of multicultural identity, most of these scholars have approached the thinking they study as *static content* rather than as *adaptively evolving structure***, **and have therefore been unable to elucidate its internal organization, genesis, stability, and progressive change**.

With a few exceptions that I will mention, political psychologists have not investigated the *internal* relationships between *structures of reasoning* (i.e., how one way of reasoning may constitute the adaptive reorganization of a less complex way of reasoning, or the building block of a more complex way of reasoning), but instead the relationships between *substantive attitudes* and *external* factors, such as the determinants of policy preferences (Berelson, Lazarsfeld, & McPhee, 1954; Claassen, 2009; Krosnick, 1990; Lewis-Beck, Jacoby, Norpoth, & Weisberg, 2008), voting decisions (Downs, 1957; Verba, Schlozman, & Brady, 1995; Wolfinger & Rosenstone, 1980), and political expression (Almond & Verba, 1963; Baumgartner & Leech, 1998; S. Diamond, 1995; Olson, 1965). In short, **this literature has studied citizens' specific political attitudes and behaviors, and the external factors associated with those attitudes and**

behaviors, rather than the logical structures in which those attitudes and behaviors are internally organized, or the ways in which these structures *develop*. And so whereas the acculturation literature has a static conception of *culture*, and the social identity literature has a static conception of *identity*, the political psychology literature has a static conception of *attitudes*.

Accordingly, political psychologists have often studied the extent of citizens' political knowledge (Delli Carpini & Keeter, 1993, 1996; Kinder & Sears, 1985; Krosnick & Lupia, 2008), or the sources of that knowledge (Perse, 1990; Robinson & Levy, 1986; Zukin & Snyder, 1984), but rarely how that knowledge is internally structured and transformed. This field's engagement with the concept of *ideology* is an illustrative case. Several early studies suggested that most citizens' political "ideologies" were in fact far less internally organized than that term assumes (Adelson, 1971, 1975; Converse, 1964). From a Piagetian perspective, this finding would have been predictable and seen as underscoring the importance of mapping out the structures of political thinking and how these develop. But in the absence of a developmental lens, the primary impact of these influential studies has merely been to generate interest in the extent to which citizens' policy preferences cohere, and the dimensions of any such coherence (R. S. Erikson, 1979; S. Feldman, 1988, 2003; S. Feldman & Johnston, 2014; Judd & Milburn, 1980; Lane, 1969, 1973). In other words, the interest has focused on **the *factorial* structure of citizens' attitudes, not their *developmental* structure**.

A similar case in point was the finding that citizens are better able to store information about politics the more prior knowledge they have (Fiske, Lau, & Smith,

1990; McGraw & Pinney, 1990). This clearly suggests the presence of developmentally different *ways* of assimilating that information—and that understanding these epistemologies might be a higher priority for the field than merely finding more correlations between knowledge and assorted variables of interest. But this prioritization has not been made.

Despite the field's dominant tendency to disregard the logical structuration of political views, there have been important examples of structural analysis, including Adelson's studies on ideology development (Adelson, 1971, 1975; Adelson, Green, & O'Neil, 1969; Adelson & O'Neil, 1966), Tetlock's work on political ideology (Tetlock, 1984; Tetlock & Tyler, 1996), and, in particular, the neo-Piagetian research on political reasoning by D. Ward (1981), Chilton (1988), and Rosenberg (1988, 2002a). Rosenberg's work is especially worthy of mention, though it has not addressed the domain of thought addressed in this dissertation.

Also, along with Tetlock, a number of political psychologists have used the aforementioned Integrative Complexity scale to analyze the internal organization of political thought. As I explain beginning on page 298, the Integrative Complexity scale is not adequate for developmental analysis. The continuing interest in the Integrative Complexity scale may indicate that there is much to be discovered in political psychology if it could be nudged into adopting a more effective cognitive-structuralist approach than that scale offers. In any event, at present, this field has not developed an adequate research strategy for investigating internormative development.

International relations

The development of intersocietally valid normative frameworks is of vital importance to world affairs. As such it was an early concern of the academic discipline of International Relations ("IR"), which took shape amid the progressivist strivings of the Wilsonian era and the idealism of the new League of Nations. But the discipline's initial norm-constructive orientation was discredited as utopian after the sharp realist turn that accompanied the League's demise and the historical events that subsequently unfolded. In the postwar decades, this withdrawal from a norm-building program was advanced still further by a strong scientist trend within IR that marginalized normative concerns as old-fashioned and unacademic (S. Smith, 1992, p. 489).

Yet, after what Steven Smith (1992) referred to as "the forty years' detour", IR reintegrated its original normative concern, influenced by, among other things, the undeniable progress of international law and organizations (Ruggie, 1998a, 1998b; Simmons, 2013) as well as growing evidence of states' practical need for international normative regimes (Finnemore, 1996; Keohane, 1983; March & Olsen, 1998). Another influence favoring this reintegration was constructivist thinking—introduced to IR by Kratochwil and Ruggie (1986), Wendt (1987, 1995), Onuf (1989), Dessler (1989), Adler (1991), and Haas (1992), among others—which holds that there is an evolving structure of international norms driven by collective learning among nations as a joint epistemic community (Adler, 2013). Constructivist IR scholars have emphasized the social reality of intersubjective normative understandings and how these constitute the world order through the shaping of international institutional frameworks (Barnett, 2009; Linklater,

1998; Sikkink, 1993; B. Steele, 2007; Wendt, 1994, 1995, 1998). They have also noted the potential of such frameworks to generate structures of deliberation oriented toward collective learning (Crawford, 2002; Kornprobst, 2009; Mitzen, 2005; H. Müller, 2004; Risse, 2000). One such structure is that of international law, which by its very nature orients collective discourse toward intersubjectively valid claims of justice and obligation (Kratochwil, 1991; Reus-Smit, 2004; Simmons, 2013). The cumulative impact of all this work has been to generate a paradigm for researching collective progress toward universally credible international norms.

Where this very promising paradigm falls short, for the purposes undertaken in this dissertation, is that **it has not provided a way to research the normative development of *individual subjects***. For even if constructivist IR scholars speak of "cognitive evolution" (Adler, 1991), they have not offered an account of such evolution as it occurs in the mind of a single person in a single lifetime. This is not for lack of interest in subjective cognition, as we know from IR's scrutiny of such psychological questions as decision-making (Deutsch, 1964; M. Kaplan, 1957; T. Schelling, 1960), emotion-influenced reasoning (Blieker & Hutchinson, 2008; Edkins, 2002), and motivated cognition (Grayson & Schwartz, 1999; J. G. Stein, 2013; Wegener & Petty, 1998). And so perhaps it may be suggested that, should this dissertation point the way toward a valid method of investigating the *individual's* progress toward universally credible international norms, it could make a useful contribution to this field.

Studies of sociocultural development

This dissertation might offer a similar contribution to the research on globally convergent values evolution that has emerged across a wide range of disciplines including social anthropology (D. Brown, 1991; Distin, 2011; Hallpike, 2004; Kluckhohn, 1960; Lenski, 2005; Nolan & Lenski, 2004), comparative sociology (Bellah, 1964, 2011; Parsons, 1964), comparative religion (Humphreys, 1975; Niebuhr, 1932/1995; B. Schwartz, 1975a; H. Smith, 1958/1991), philosophy of development (Habermas, 1976/1979, 1983, 1987; Nussbaum & Sen, 1993; Sen, 1988, 1999), and political culture (Carter, 2012; L. Diamond & Inkeles, 1980; R. Fisher & Boer, 2001; Flanagan, 1987; Flanagan & Lee, 2003; Franck, 2001; Fukuyama, 1992, 1995; Inglehart, 1990; Norris & Inglehart, 2009; Tilly & Wood, 2009; Welzel, 2013). Like IR, **this research has pointed to a process of development toward universally shared norms, but without elucidating how such a process may occur in parallel at the ontogenetic level**.

A common presupposition of these literatures is that one can identify universally shared values in the human potentials that realize themselves in analogous social evolutionary processes across diverse settings. Although these values are usually assumed to be arrived at through conscious selection, this selection process is not articulated to a theory of cognitive development (here Habermas is a lonely exception). For example, Christian Welzel (2013), building on earlier work with Ronald Inglehart and Hans-Dieter Klingemann (Inglehart & Welzel, 2005; Welzel, Inglehart, & Klingemann, 2003), has articulated an influential "evolutionary theory of emancipation" which holds that all cultures tend to develop toward valuing—and then finally

guaranteeing—personal freedoms, provided material conditions develop to the point that such freedoms offer citizens positive utility (p. xxiv). This theory, with its "sequence thesis" and "utility ladder of freedoms" (p. 37), is akin to a structural-developmental theory, only at the societal level. It does include a cognitive component inasmuch as it regards the degree of citizens' "cognitive mobilization" as a factor helping to account for the extent to which people value freedoms (p. 70). However, this mobilization is conceived as a straightforward outcome of citizens' conditions of existence, and the process of cognitive growth itself is not examined. For theories of this kind to help offer an account of how cross-culturally legitimate ways of valuing emerge psychologically, they will need to be complemented with cognitive-developmental research programs examining the ontogenesis of such ways of valuing in rational-constructive processes at the *subjective* level.

Studies of global citizenship and global competence

Research on global citizenship and global competence has shed light on the skills and values needed to address the challenges of globally organized human activity. Yet it has made relatively little progress toward elucidating how such capacities *develop*. The result is that educators have been offered extensive descriptions of target competencies (e.g., AACU, 2018; Boix Mansilla & Jackson, 2011; Council_of_Europe, 2002; Hovland, 2014; OECD, 2018; Oxfam, 2006) but little clarity as to how these competencies might be constructed sequentially through cognitive activity.

Designed largely as practical guides for educators, these competency frameworks tend to list a variety of cognitive, affective, and behavioral traits seen as related in some way to a normative concept of educated global citizenship. The following statements are a limited sample intended simply to illustrate the broad way in which the goals of global learning have been conceived (underlining added to the concepts being defined):

> Global competence is the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development. (OECD, 2018, p. 7)

> Education for global citizenship is a framework to equip learners for critical and active engagement with the challenges and opportunities of life in a fast-changing and interdependent world. It is transformative, developing the knowledge and understanding, skills, values and attitudes that learners need both to participate fully in a globalised society and economy, and to secure a more just, secure and sustainable world than the one they have inherited. (Oxfam, 2006, p. 5)

> Global education is education that opens people's eyes and minds to the realities of the globalised world and awakens them to bring about a world of greater justice, equity and Human Rights for all. Global education is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education. (Council_of_Europe, 2002)

> Global learning is a critical analysis of and an engagement with complex, interdependent global systems and legacies (such as natural, physical, social, cultural, economic, and political) and their implications for people's lives and the earth's sustainability. Through global learning, students should 1) become informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences, 2) seek to understand how their actions affect both local and global communities, and 3) address the world's most pressing and enduring issues collaboratively and equitably. (AACU, 2018, p. 1)

This multidimensional and largely non-cognitive manner of defining global competence typifies not only such school-oriented framework statements, but also the academic literature on this topic (e.g., Braskamp & Engberg, 2011; Finkbeiner, 2009; Guilherme, 2015; B. Hunter et al., 2006; Noddings, 2005; Reimers, 2008). The result is that **we do not yet have a conception of global learning that could be specified as the progressive structuration of a single aspect of cognition**. Without such a consistent core structure, we lack the basis for the rigorous cognitive-developmental research that is required to guide the practice of global education. Accordingly, a possible contribution of this dissertation might be to help understand how this field could be articulated to internally coherent developmental theories.

In the absence of such a developmental lens, the field has tended to conceptualize global competence as a set of desired traits rather than as a sequential growth process. **One consequence of this tendency has been to conceive learning in *flattened* terms as a simple horizontal expansion of knowledge, engagement, awareness, or commitments, rather than as a hierarchical organization of cognitive structures** (the AACU's definition at the end of the preceding set of quotes, with its reference to "critical analysis of…complex, interdependent global systems" is less lacking in this regard and is suggestive of the type of cognitivist conception that I believe is required). This flattening phenomenon takes the form, for example, of conceiving global citizenship as a spatially expanded definition of one's social boundaries (rather than as a reflective synthesis of sociocentric perspectives), or of conceiving global competence as the awareness of the

fact of global impacts and interdependence (rather than as a structured understanding of how different society-level systems have become holistically coordinated).

The non-developmental view thus tends to make global citizenship and competence sound much simpler to attain than it actually is. This leaves one with no way to explain why the competencies so clearly stated in an educational framework booklet cannot simply be absorbed from reading such a booklet—or taught in a classroom—but require years of cognitive effort to grasp. And so one finds it necessary to emphasize to the reader of such a booklet that acquiring global competence is "a lifelong process" (OECD, 2018, p. 4), though one has no theoretical basis for explaining why the process should take that long or what sequence of steps it might entail.

In truth this process cannot be understood as an acquisition of competencies but only as a hierarchical organizing of *ways* of organizing knowledge. Each such way of organizing is put together only after years of effort organizing knowledge at the previous structural level. This means that the proximal concern for educators should not be directly teaching the competencies listed in global education rubrics but providing the type of challenges that will stimulate learners to metabolize knowledge into whatever type of structure they are currently building. In the case of secondary school students this will mostly be society-level structures, though the structures taught need not be limited to those of students' own society.

In short, education for global competence should not be reduced to the geographic expansion of one's subject matter or a declaration of global civic commitments. It is not a simple broadening of one's horizons but a *vertical* process of hierarchical structuration.

Such processes can only be understood ontogenetically. A cognitive-developmental approach can help global educators find their way out of an oversimplification they have not intended.

Philosophy

Cosmopolitanism

Though "cosmopolitanism" is often used synonymously with "global citizenship", I use the terms distinctly here. In the previous section I considered global citizenship as an educational goal and object of empirical study. My purpose in this section, by contrast, is to consider the philosophical tradition of moral and political universalism. Though this tradition has much to say about how internormative conflicts are resolved, it has not generated an empirical understanding of how this resolution emerges from within people's own meaning-organizing activity.

Scholarship on cosmopolitanism has traditionally examined the desirability and/or viability of cosmopolitan moral obligations (e.g., Beitz, 1999, 2001; Delanty, 1997, 2009; Waldron, 2008; Walzer, 1985, 1994) and political commitments (e.g., Bohman & Lutz-Bachmann, 1997; Brock & Brighouse, 2005; Caney, 2005; D. Miller, 1995, 2007). In recent decades the study of cosmopolitanism has spread beyond these strictly philosophical questions, as the issue of globality has become increasingly topical in the social sciences (Delanty, 2012; Inglis, 2012). In this context, scholars in various disciplines now find it necessary to perform in universalistic terms whatever form of

social analysis they happen to be engaged in (Chernilo, 2007, 2012). But how that cognitive skill *itself* develops has received little attention.

The lack of cognitive-developmental research on cosmopolitanism is perhaps ironic given that it **has long been recognized as a form of reflective cognition that emerges from a learning process** (Bertram, 2005; Bohman, 1999; Kant, 1784a, 1795; Linklater, 2012). Piet Strydom (2012, p. 35) has described cosmopolitanism as "a meta-rule that emerges from social practices and the development of society to form part of the cognitive order of modernity", reminding us of Piaget's concept of moral-cognitive structures as the foundational organizing principles "at the back of all rules" (1932/1965, p. 285). Several other philosophers have similarly noted cosmopolitanism's function as a cognitive constituent of modern society (Chernilo, 2012; Held, 2005; O'Neill, 1990a). Viewed as the outcome of a cognitive-constructive process, cosmopolitanism appears not as a polar alternative to communitarianism, but as an abstract, second-order perspective hierarchically integrating context-bound communal commitments through a process of reflective abstraction.

The *developmental* view of universalistic thinking—that it emerges from a process of reflective abstraction—**has arisen within philosophy itself** (Habermas, 1976/1979, 1981/1984; Kleingeld & Brown, 2013; Strydom, 2012). **Philosophical reflection thus offers a psychological hypothesis for investigation by cognitive-developmental methods attending to the construction of philosophical reason**. This points to the need for Piagetian-Kohlbergian research programs in this area.

Global ethics

The need for such research programs can also be inferred from an analysis of scholarship on global ethics.

Like the literature on cosmopolitanism, this scholarship has found its way to the idea that universalistic ethical frameworks are in fact meta-principles or "transcendental pragmatic foundations" of ethics that emerge through processes of reflective abstraction (Apel, 2000, p. 137). In this case, the reflective abstraction is upon those common foundations which can be seen as uncircumventable in any viable ethical system regardless of context. The result is a two-tiered framework with "thin", abstract, universalistic meta-rules that set limiting conditions on "thick" value systems anchored in—and varying according to—particular contexts.

O'Neill (1990b, 1996, 2000) has described one such conception, emphasizing that "transnational justice" must allow for local expressions to vary so as to account for specific conditions of oppression or inequality. Nussbaum (2002) has argued that such a multilayered conception justifies, for example, a variant standard of free-speech rights in Germany in relation to anti-Semitic expression. Similarly, Chadwick & Strange's (2009) concept of "harmonization" calls for a superordinate "score" guiding a variety of separate vocal lines that sing in harmony rather than in unison. Dancy (1993, 2004) likewise argues for maintaining distinct levels of abstract and context-specific ethical guidelines, though in Dancy's view the context specificity derives not from different local traditions but from the relevant factors of each particular case and circumstance.

These philosophers' shared concept of nested levels of increasingly abstract ethical reflection precisely matches what one would derive from a cognitive-constructivist approach to global ethics. But **the cognitive approach, unlike purely philosophical inquiry, offers an explanation as to how different levels of reflection psychologically emerge**. It builds this explanation on the simple but stupendously consequential insight that people empirically prefer reasons they find to have greater moral significance. This internal relation between the normative and the empirical was demonstrated ingeniously by Rest (1969, 1973) and summarized memorably by Williams (1981, p. 102): "If there are reasons for action, it must be that people sometimes act for those reasons, and if they do, their reasons must figure in some correct explanation of their action".

This relation points powerfully to the need for philosophic-developmental research programs to investigate the ontogenesis of validly global ethics. Indeed **the findings of such empirical programs could prove vital to solving questions insoluble to philosophical inquiry alone**. The need for such an empirical approach follows logically from theories of global ethics that see universal legitimacy as requiring actual dialogue among diverse normative communities.

The philosophic-developmental approach

The fields of inquiry just reviewed all seek a resolution of conflicting cultural viewpoints. Those inclined to find this resolution horizontally—through reciprocal accommodation or "effective" intercultural communication—foreclose the possibility of finding it integratively. Meanwhile, those seeking this resolution in the expansion of social identities do not offer a way to resolve norm conflicts. In contrast to these groups, the philosophical approaches reviewed (cosmopolitanism and global ethics) offer an account of transcendent meta-principles that integrate the viewpoints of diverse cultures. But like the first two groups, these approaches are not articulated to a theory of development. And the only two literatures that do offer growth theories (sociocultural development and IR) do not offer a way of researching this growth at the ontogenetic level. In sum, **none of the literatures surveyed above has produced a satisfactory framework for researching the development of internormative reasoning in individuals**.

As it turns out, an exceptionally insightful way of researching this development is to attend to the very process of resolution-seeking that has produced the literatures just reviewed. For by taking the depth of such resolution as a philosophical criterion of adequacy, we can discern a process of cognitive development in a person's growing realization of that criterion. What this philosophic-developmental approach reveals is a unified constructive process, susceptible of investigation, generating progressively organized forms, growing in depth and sophistication, from the most limited to the most free from limitation, yet all arising from a single principle. The principle is structural—

the degree of a resolution's freedom from subjective limitation—for only the structure of thought *develops*. And so only by interpreting internormative resolutions as progressive realizations of this principle can one discover the growth process this dissertation seeks.

Nothing said here can diminish the staggering contributions made by the fields reviewed in this chapter. I wish only to suggest that they have not yet adequately pursued the kind of approach my specific problem requires—and in so doing, to call attention to the under-exploited potential of a research paradigm that was prematurely set aside in the study of moral psychology, to a large extent because it was poorly understood, and in some instances egregiously misrepresented (Gilligan, 1977, 1982; Graham et al., 2011; Haidt, 2001, 2007; Haidt & Bjorklund, 2008; Haidt & Kesebir, 2010; Munsey, 1980; Murphy & Gilligan, 1980; Shweder, 1982b; Shweder, Mahapatra, & Miller, 1987, 1990; Shweder & Much, 1991). Its distinctive capacity is to offer a dynamic and ontogenetic understanding of ways of thinking that mainstream approaches treat as static entities. An ontogenetic approach is unique in being not simply *descriptive*, but also *constitutive*, in that it reveals the logic by which ways of thinking are constructed. In addition, it is *predictive*. That is, it can serve not only for classifying the ways of thinking we observe, but also for explaining why they happen and making empirical predictions. Moreover, it is *prescriptive*, in that it offers an internal criterion for evaluating whether a resolution is adequate to the demands of a problem. And so unlike the approaches reviewed above, this approach has the capacity to describe a *pathway of transformation* toward an integrative resolution of discrepant norms. This dissertation attempts to do just that.

Addressing criticisms of the philosophic-developmental approach

There have been many criticisms of the Kohlbergian philosophic-developmental approach, and of Piagetian cognitive-developmental approaches generally. Some of these have resulted in improvements to these approaches. Other criticisms have proven to be either unwarranted or easily addressed. With respect to this dissertation in particular, it is important to note that many of the criticisms of Kohlberg's approach do not apply to internormative thinking, due to the nature of the domain. I will address each of these issues in this section, taking the opportunity of these criticisms to acknowledge both the limited scope of this domain and the importance of non-Kohlbergian approaches in moral psychology.

Criticisms of Piagetian cognitive-developmental approaches generally

A basic question confronting this dissertation is whether its use of a Piagetian approach is au courant with contemporary developmental theory. Although this approach has not been at the center of theoretical debates in recent years, it has remained remarkably resilient as a guiding paradigm for research on the development of epistemological reasoning (Hofer, 2017; King & Kitchener, 2015; Weinstock, Kienhues, Feucht, & Ryan, 2017), sociocognition (Diazgranados, Selman, & Dionne, 2016; Gillespie, 2005, 2006; Heikkinen, 2014; J. Martin, 2005, 2006), moral judgment (Gibbs, 2014; Lind, 2016; Thoma, Bebeau, & Narvaez, 2016), self-authorship (Baxter Magolda & King, 2012; Baxter Magolda, Meszaros, & Creamer, 2010; L. S. Harris & Kuhnert, 2008; Heikkinen,

2011; King & Siddiqui, 2011; Lahey, Souvaine, Kegan, Goodman, & Felix, 2011), and cognitive complexity (Commons et al., 2007; Dawson, Goodheart, Wilson, & Commons, 2010; Rose & Fischer, 2009; Z. Stein, 2014; Z. Stein & Fischer, 2011). This resilience is not due to simple inertia but to its capacity to underpin highly successful research programs, such as those based on the Defining Issues Test (Thoma, 2006), the Moral Judgment Test (Lind, 2008), the Reasoning about Current Issues test (University_of_Michigan, 2018), and the Lectical Assessment System (Lectica.org, 2018). Research with these measures has conclusively born out theoretical predictions and the validity of neo-Piagetian measurement techniques.

On the other hand, several criticisms of the Piagetian cognitive developmental approach have been justified. These include criticisms of ladder-like conceptualizations of developmental stages (Fischer & Bidell, 2006; Rest, 1979), insufficient attention to variability in context (Fischer & Kenny, 1986; Fischer, Yan, & Stewart, 2003), imprecision regarding the nature of complexity and inter-level transformations (Commons, Trudeau, Stein, Richards, & Krause, 1998; van Geert, 2003), and the use of substantive concepts as heuristics for identifying stage (Dawson, 2002a). These criticisms have not invalidated the cognitive approach. On the contrary, the researchers cited above have contributed to refining the approach and improving its explanatory power. This dissertation builds on their contributions, employing an updated cognitive approach that rejects hard functional stages, emphasizes variability in individual performance, attempts to define the nature of stage-to-stage relationships in relatively precise terms, and distinguishes levels of performance based on structural criteria. It will

be the burden of the remaining chapters to fully demonstrate how the approach used in this study responds to the justified questions raised about the cognitive developmental approach.

Criticisms of the Kohlbergian philosophic-developmental approach

Beyond the criticisms of Piagetian developmental psychology listed above, there have been numerous criticisms of the Kohlbergian philosophic-developmental approach in particular. Some of these have been unwarranted (e.g., the claim that cognitive models cannot account for variation by culture or gender; see, e.g., Garbarino & Bronfenbrenner, 1976; Gilligan, 1977; Murphy & Gilligan, 1980; Shweder et al., 1987; Shweder & Much, 1991), overdrawn (e.g., the argument that cognition is merely used for rationalizing judgments rooted in emotion; see, e.g., Damasio, 1994; Graham et al., 2011; Haidt, 2001), or easily addressed (e.g., the purported lack of empirical evidence for postconventional reasoning; see, e.g., Modgil & Modgil, 1986; Snarey, 1985).

Space will not permit me to respond to all these criticisms as fully as I should. But in a nutshell, my rejection of these three critiques is based on, for the critique of culture and gender bias, the abundant evidence that Kohlbergian models have proven valid across genders and cultures (Gibbs & Widaman, 1982; Gielen & Markoulis, 1994; Moon, 1985, 1986; Nisan & Kohlberg, 1982; Rest, Thoma, Moon, & Getz, 1986; Roetz, 1996; Shaffer, 2005; Snarey & Keljo, 1991; Snarey, Reimer, & Kohlberg, 1985; L. J. Walker, 1985); for the anti-cognitive critique, the argument that anything viewable as *growth* in moral sentiments has cognitive underpinnings (Cushman, Young, & Hauser,

2006; Paxton, Ungar, & Greene, 2011; Pizarro & Bloom, 2003), and that cognitive judgment is the only intrinsically *moral* aspect of morality (Alston, 1968; Rest, 1983); and for the critique citing a lack of evidence of post-conventional reasoning, the fact that such evidence is abundant when subjects are only required to *comprehend* such reasoning rather than *verbally articulate* it (King & Kitchener, 2004; Lind, 2008; Rest, Narvaez, Thoma, & Bebeau, 1999b). I will provide a more thorough response to the anti-cognitive critique in the next section.

Moral psychology's shift away from cognitive developmentalism

Among the criticisms just addressed, the anti-cognitivist critique, in particular, bears upon the question of whether the approach I have followed in this study has adequately integrated recent scholarship in moral psychology. For in recent decades there has been a marked shift in this field away from issues of cognitive growth toward other sources of moral conduct that received relatively little attention during the cognitivist era Kohlberg inaugurated, including bioevolution, brain function, emotion & intuition, personality & identity, character & virtue, and the social contexts of moralization (Blasi, 1990; Lapsley, 2006; Lapsley & Carlo, 2014; Lapsley & Narvaez, 2005, 2008; Maxwell & Beaulac, 2013).

In particular I would like to address here the so-called "**New synthesis**" articulated by Jonathan Haidt and his colleagues, which has sought to reframe moral psychology in terms of emotional, intuitive, and social factors that allegedly provide a stronger foundation than cognitive development for accommodating the diverse

moralities found in communities around the world (Graham et al., 2013; Graham et al., 2011; Haidt, 2001, 2007, 2013; Haidt & Bjorklund, 2008; Haidt & Kesebir, 2010). This shift from the Kohlbergian cognitive-developmental paradigm to an intuitionist paradigm emerged from discoveries that the foundations of moral choice were not only cognitive but also emotional (Fischer & Tangney, 1995; Gibbard, 1990; M. Lewis & Haviland-Jones, 1993), neurological (Damasio, 1994; Greene, Sommerville, Nystrom, Darley, & Cohen, 2001; Sinnott-Armstrong, 2008b), and bioevolutionary (de Waal, 1996; Fodor, 1983; Gallistel, 2000; Hauser, 2006; Pinker, 1997; Sinnott-Armstrong, 2008a; Tooby, 1987; R. Wright, 1994). These discoveries were assimilated into a new framework positing that moral reasoning primarily served as a means of post hoc rationalization of moral choices made unconsciously according to automatic impulses shaped by particular social influences (Valdesolo & DeSteno, 2006, 2007; Wheatley & Haidt, 2005). Haidt and Kesebir (2010) described the shift toward non-cognitive horizons of moral foundations as a much-needed correction to the "great narrowing" and "moral parochialism" of the Kohlberg era (pp. 798, 800). Kohlberg's cognitive-developmental focus, they argued, inappropriately restricted moral psychology to the study of reasoning about Western academics' characteristic moral concerns of reciprocity and benevolence, whereas the intuitionist synthesis offers a more pluralistic vision of context-dependent social intuitions accommodating "multiple incompatible but morally defensible ways of organizing a society" (p. 800).

The charge of "moral parochialism" is somewhat puzzling, given the considerable attention paid by Kohlberg and others to testing the cross-cultural validity of the

cognitive-developmental approach, an effort that largely proved successful (see, e.g., Kohlberg, Levine, & Hewer, 1983, 1984b; Moon, 1985; Rest et al., 1986). Indeed, one could argue that the more parochial approach is Haidt's "pluralistic" social intuitionism, which is unable to reconcile the world's diverse moralities within an integrated developmental framework. There are two reasons it has no access to such a framework. First, by turning its attention away from cognitive activity, social intuitionism disregards the one source of objective, non-relativistic moral growth, which is the progressive differentiation of judgment that results from the hierarchical integration of epistemological structures. Second, by renouncing philosophical criteria in favor of an empiricist approach that seeks to be purely descriptive of different moralities (Haidt, 2013, p. 292; Haidt & Kesebir, 2010, p. 807), the intuitionist approach relinquishes the only basis on which one can resolve the contradictions between those different moralities and integrate them within a universal growth process. This reductionist move leaves no grounds from which to judge a morality's capacity to solve a given problem, such as the problem of internormativity, or to see a morality as evolving or learning (Blum, 2013; Damon, 2014; Musschenga, 2013). Hence in its effort to broaden the horizons of the study of morality, the intuitionist approach abandons the dimension through which morality grows. It has responded to "the great narrowing" with a great *flattening*.

We thus have the first two reasons social intuitionism does not offer a viable alternative to cognitive developmentalism for investigating internormative growth: **(a) it has no basis for understanding how different normativities might be integrated,** and **(b) it has no basis for observing objective growth**. But there is another major reason

the social intuitionist approach is not viable for studying internormative growth, which is that **(c) the moral foundations it offers are not suited to resolving conflicts between the perspectives of different groups**. To begin with, the bioevolutionary foundations of morality strongly favor ingroup cohesion and tribalism *at the expense of outsiders* (Babcock & Loewenstein, 1995, 1997; Brewer & Caporael, 2006; G. Cohen, 2003; J. Henrich, 2004; N. Henrich & Henrich, 2007; Kurzban & Aktipis, 2007; Wade-Benzoni, Tenbrunsel, & Bazerman, 1996; D. S. Wilson, Van Vugt, & O'Gorman, 2008). A key problem for Haidt and his colleagues is that they define the essence of morality as "suppressing selfishness" (Haidt, 2008, p. 65; Haidt & Kesebir, 2010, p. 815), which is a useful value for ensuring moral behavior within groups, but is of little use to ensuring moral behavior between them, or to resolving the contradictions between moralities that suppress selfishness in different ways. For as we know from intergroup conflicts throughout history, the morality of sacrificing oneself on behalf of one's group provides little basis for resisting the inhumane treatment of *other* groups (Bellah, 1962; Eisenstadt, 1986; Kato, 1982; Parsons, Bales, & Shils, 1953; Vickers, 2005, 2009). Though Haidt and his colleagues chastise Kohlberg for allegedly imposing a Western individualist bias on morality, to the extent one is concerned with the problem of reconciling the moralities of *different* groups, one must acknowledge that the concept of individual rights is a more developed moral criterion in that it offers a more logically comprehensive and universally acceptable standard of judgment. The logic of this development toward more universally credible standards is of course the essence of Kohlbergian moral psychology and is readily observable in both individual and societal trajectories of development (Ferguson,

2014; Fukuyama, 2000; Ginsberg, 1944; Monroe, Hankin, & van Vechten, 2000; Tylor, 1871; Welzel, 2013; Westermarck, 1906).

As a final reason that the intuitionist approach is not viable for studying internormative growth, I would point out that its effort to embed morality within the idiosyncrasies of particular social frameworks runs precisely opposite to what internormativity requires. My purpose is to understand how people grow *beyond* the diversity of moralities to find the coherent unity among them. Doing so requires them to *rise above* bioevolution, brain function, emotion, intuition, personality, identity, social context, and all the other non-cognitive and non-spiritual sources of moral conduct that have recently attracted scholarly attention. Flattening the landscape of moral psychology will only cause us to miss this phenomenon. Observing it requires attending to the *growth of consciousness*.

Acknowledging limitations of the internormative domain

Having defended this dissertation's need for a cognitive-developmental approach, I hasten to acknowledge that this is largely a function of the domain I am investigating, and that other approaches (even "flattened" ones) are of vital importance to a full understanding of the many topics moral psychologists take under study. For all the importance of understanding how to reconcile different moralities, this question is but a small slice of a very large field, and the research strategy appropriate for this question will not be ideal for all others.

Guide to this dissertation

The aims of this dissertation

This dissertation describes an effort to map the growth of internormative thinking. In this search for a philosophic ontogeny of internormative thought, I have attempted

1. to select and interpret a number of existing ideas from related research strategies, in some instances to extend or reformulate them, and finally to integrate them into **an updated dynamic structuralist theoretical synthesis** that may provide a strengthened foundation for research of this type;
2. to apply this theoretical synthesis to **a distinct domain** of reasoning that has not previously been charted by cognitive-structuralist methods, and thus to apply a novel approach to this domain, as well as to extend the reach of this theoretical tradition;
3. within this domain, to identify **a single logical principle** that simultaneously defines
    a. the **domain**,
    b. a **philosophical criterion** as to what constitutes good reasoning,
    c. a **psychological theory** as to what drives growth, and
    d. a **methodology** for empirically observing this growth;
4. in accordance with this principle, to identify the basic structures of internormative resolution, and a **developmental logic** that organizes them into an **empirically testable sequence**;

5. with this sequence, to offer the numerous subdisciplines reviewed earlier—in exchange for what I have received from them—the idea that the intersocietal wholeness they seek can be found emerging from **within people's own sense-making activity**, in a growth process that **transcends the separate integrity of each society while also embracing it**;
6. by capturing this growth process in a unified ontogenetic account that explains both how and why its stage structures emerge, as well as the conditions by which they may be transformed, to **guide a new kind of learning that would allow us to think about norms at the level of complexity at which our world is now structured**; and finally,
7. to support such learning by **laying the groundwork for measuring it**.

Plan of this dissertation

This opening chapter has presented the rationale for this study, including a justification for its research strategy grounded in a critical review of relevant scholarship. It will conclude with an overview of the Internormative Cognition Sequence (ICS) a developmental model of internormative thinking.

The remaining chapters will proceed as follows:

- **Chapter 2** introduces the theoretical concepts and assumptions on which the ICS is based, and which should be expected to have observable correlates in internormative thinking if the model is accurate. It also explains how each conceptual thesis presented is, in principle, observable in the ICS. To provide a

strong foundation for this new program of research, Chapter 2 also presents a theoretical synthesis updating the Piagetian-Kohlbergian strategy with concepts from Dynamic Systems Theory, Skill Theory, and recent advances in cognitive-developmental theory and measurement.

- **Chapter 3** presents this study's background, empirical procedures, and limitations.
- **Chapter 4** offers a full presentation of the ICS, including the rationale for identifying internormative cognition as a distinct *skill domain*; a detailed description of ICS stages in terms of the growth of a single core cognitive feature; an analysis of ICS growth as the coordination, in increasing dimensions, of a basic cognitive building block; an illustration of ICS stages with interview excerpts; and an analysis (further elaborated in Chapter 5) of the ICS as a cyclical recursion—at the societal level—of interpersonal perspective-taking.
- **Chapter 5** compares the ICS with related growth models, including Kohlberg's stages of justice reasoning, Habermas's stages of interactive competence, Kegan's stages of existential development, Perry's stages of intellectual and ethical understanding, King & Kitchener's stages of epistemological thinking, and Bennett's Developmental Model of Intercultural Sensitivity. I explain how the ICS both converges with existing models (in positing parallel sets of operations reflecting common underlying complexity structures) and diverges from them (in positing a qualitatively distinct chain of adaptations in response to a qualfy distinct adaptive challenge). I also detail the ICS's correspondence with three

domain-general scales (the Integrative Complexity scale, the Model of Hierarchical Complexity, and the General Skill Scale), and explain why domain-general metrics cannot viably substitute the ICS in measuring internormative cognition.

- **Chapter 6** presents a future program of studies designed to test the validity of the ICS and to advance educational and psychometric methodologies in this domain. It also describes a series of instruments for measuring internormative development, and how the ICS research program will integrate these instruments to generate useful knowledge in this domain. Interwoven through the chapter is a meta-methodological reflection on the possibilities and challenges of cognitive-structural assessment.
- A brief **Conclusion** summarizes the potential significance and implications of this study.

Definitions

I need to define a couple of terms.

First, *internormative*. The "inter" simply denotes that internormative judgments aim to be legitimate *across* norm systems. But what type of judgments qualify as "normative"? Scholars have long debated how to define "normative", without reaching a clear consensus (Blair, 1995; Borg, Hynes, Van Horn, Grafton, & Sinnott-Armstrong, 2006; Davidson, Turiel, & Black, 1983; Foot, 1972; Nichols, 2002; Wainryb & Turiel, 1993). I use the term in the broad sense of that which *should* be done. In this way what I

refer to by "normative reasoning" corresponds to what has been known in the German philosophical tradition as "practical reason" (Habermas, 1957; Kant, 1788/1996). Thus I mean the term "normative" to be understood more broadly than "moral", in that I take it to encompass questions of prescriptive evaluation that may not be strictly moral, such as the ideal pattern of global Internet governance. In attempting to justify (or reject) the possibility of a globally valid Internet governance system, subjects might talk about that which is "good" or "appropriate" (i.e., normative) rather than that which is "right" or "just" (i.e., moral).

To be sure, the underlying reasoning may overlap significantly with moral reasoning. But even if one interprets the term "moral" to include *any* kind of prescriptive evaluation (Hare, 1981), the internormative domain would remain distinct from the moral, because what primarily distinguishes it is not the difference between "normative" and "moral", but the task of legitimizing a judgment *across* norm systems. The heart of the task lies in *cross-contextual* integration, with a concern for legitimacy across diverse sets of conditions. I have operationalized this in interviews and questionnaires by inquiring into the possibility of cross-contextually valid principles of justice, governance, trade & competition, ethics, and historical interpretation.

But what qualifies as a *norm system*, or a *context*? In the stimulus materials used in this study, I operationalized "norm systems" as "countries", presenting subjects with value conflicts arising between people of different nations in relation to an international issue. The "norm systems" or "contexts" in these dilemmas have been sociocultural ones of national scope. Following M. Harris (1979, p. 47), I define a sociocultural system as

"the conjunction of a population, a society, and a culture, and constituting a bounded arrangement of people, thoughts, and activities". Here the key concept is "culture", which is to some extent synonymous with "norm system".

But I deliberately adopt the latter term, which focuses attention on the fundamental starting point of ICS growth, that is, a person's understanding of a culture or society as a *holistically organized system*. The term "culture" lacks this sense of internal organization, and is too expansive, being variously conceived as shared values, beliefs, symbols, customs, habits, representations, worldviews, discourses, meanings, repertoires, schemas, and patterns of production (Bergesen, 2005; Bourdieu, 1985; Durkheim, 1915/1965; M. Harris, 1967; Parsons, 1970; R. H. Williams, 2005). Whereas "culture" encompasses affective and behavioral aspects as well as cognitive, this dissertation is squarely focused on this last, on the premise that our capacity to judge internormative issues is rooted in a cognitive-developmental process directly related to the complexity of our education, experience, and sense-making activity.

I also choose "norm system" over "culture" to reflect the possibility that the ICS may validly describe growth in resolving discrepancies among norm systems less broad than sociocultural systems, such as professions or disciplines. This possibility awaits further research.

The growth of internormative cognition: An overview

In this dissertation I attempt to map the growth of reasoning about internormative issues with a cognitive-developmental model (the ***Internormative Cognition Sequence*** or **ICS**). The ICS is the product of an iterative conversation between theory and data gathered from seventy cognitive-developmental interviews in which I asked subjects to formulate judgments about *internormative dilemmas* (for example, disagreements as to the suitability of democratic governance for a non-Western country). It describes five empirically identifiable cognitive structures, and a developmental logic that organizes them as the sequential fulfillment of a single core structural principle.

Formally presenting the model requires an in-depth explication of the theoretical foundation on which it is based. I provide this in the next chapter. First, however, I will offer here a general overview of the model.

The ICS conceives development in this domain as a progressive comprehension of the possible ways of justifying norms across the distinct *legitimacies* (i.e., internal orderedness) of different norm systems. It posits that the motivational force behind this reconciling is a person's desire for disparate legitimacies to *cohere*, that is, to simultaneously make sense. In response to the awareness of conflicting systems of norm legitimation, each person attempts to integrate these systems under a universal validity criterion accessible to that person's current thinking structure. Development in this domain, I suggest, consists of reconceptualizing this validity criterion so that it is less constrained by arbitrary limitation. This reconceptualization is motivated by the

discovery that one's current criterion for judging norms across systems—one's resolution to the internormative challenge—is arbitrarily limited.

The ICS posits a fixed sequence of four possible resolutions that follow an initial naïve condition in which norm legitimacy is not yet problematic.

- **Order 0 (°0 for short)**: **Concrete Groupism**. This is the "initial naïve condition". From this perspective, we do not experience the need to resolve norm system discrepancies, because we do not yet grasp the concept of norm system legitimacy even for our own society. At this level we do not conceive societies as abstract norm systems but as literal-concrete entities, akin to groups of people. We therefore hypostasize internormative questions such that we conceive them as questions of concrete interpersonal or intergroup relations.
    - *Symbol*: **[ ] (blank)**. The empty brackets symbolize that Order 0 has not yet developed the cognitive building block essential for reasoning in this domain: grasping the internal orderedness of norm systems. Here I should emphasize that Order 0 is not an internormative resolution but simply a description of thought that does not yet grasp this domain's cognitive building block. Because neither Order 0 nor the Order 0-Order 1 transition is defined in a way that is structurally consistent with the four internormative stages, I define the ICS as formally beginning with Order 1. Order 0 is intended only to clarify the cognitive requirements and starting point of Order 1.
    - *Sample statement*:

Different countries have different ways of doing things.

The sample statements given in this list are idealized quotes representing how cognition at each order might respond to an interview dilemma regarding disagreement as to the suitability of democratic governance for a non-Western country. Except for the one just given, the sample statements are adapted from real statements made by research subjects.

- **Order 1 (°1): Conventionalism**. From this perspective, we do grasp the concept of norm system legitimacy, but perceive different norm systems as distinct quasi-natural entities in zero-sum relation. This viewpoint constitutes a rudimentary form of internormative "resolution" in that no integration of normative perspectives is called for, because we do not yet have a cognitive dimension in which they could be integrated. Because we still cannot *relate* (i.e., simultaneously contemplate) the logical perspectives of two norm systems, our only perceived basis for resolution is either for each system to maintain its separate distinctness or for one system to be imposed on the rest (as in the sample statement below).
    - *Symbol*: **[· ·] (unconnected dots)**. This represents Order 1's notion of unrelated legitimacies.
    - *Sample statement*:

      My country has a whole democratic system to run society. Other countries would do well to follow this system.

The position expressed here might be regarded as a kind of "democratic fundamentalism" (Senge, 2013). In the subsequent orders, this position will develop to more contextualized and holistic normative understandings about democracy. Note that the complexity attributed to each statement is derived from its structure of reasoning rather than its substantive opinion.

- **Order 2 (°2): Contextualism**. A contextualist perspective enables us to think from the viewpoint of multiple norm systems at the same time. This makes is possible to relate different norm systems as analogies with a *reversible* logic or legitimacy. This discovery increases coherence, because it generates a holistic dimension in which diverse norm systems possess a coherent unity. This new dimension gives us a reflective, hypothetical attitude toward our own norm system. We grasp that, because the norms of two systems are both *interchangeably* logical while being incompatible, norm system logic is not a natural feature of reality but is constructed relative to its context. Yet, our thinking at this stage is limited to a one-dimensional reversibility in which we can only contemplate norm system differences relativistically. For even though we can relate multiple legitimacies into a single dimension of context-dependent variation, we cannot yet relate (i.e., simultaneously contemplate) context-dependent and context-*independent* variation. This means we cannot yet contemplate the context-independent validity of a norm *after* taking context-dependent variation into account. Consequently, we cannot yet see how cross-

contextual normative judgments could be other than ethnocentric. And so at this level our source of norm legitimacy moves from that of *system* to that of *the context in which the system is rooted*.

- *Symbol*: **[–] (line)**. This represents Order 2's relating or "mapping" of norm systems into a single dimension of reversible legitimacy.
- *Sample statement*:

  > *To say that other countries should also adopt our democratic system is naïve and ethnocentric. The correct form of government for those countries can only be determined in context*.

- **Order 3 (°3): Transcontextualism**. This perspective overcomes Contextualism's problem of incommensurability through the capacity to consider context-rooted variations and other types of variations *simultaneously*. This capacity increases coherence, because it overcomes the arbitrary limitations of judging norms only in relation to context. Order 3's multivariate mode of comparison allows us to recognize the objective patterns that operate independently across context. For instance, we can compare the relative trajectories of different societies under a given type of norm variation (an example is given in Figure 5 on page 195). Order 3 thus allows us to hold Order 2's relativization in mind while also applying a second variable across it. This two-dimensional reversibility allows us to envision how changing a norm would play out across different contexts. For example, at Transcontextualism we can

consider the effects of constitutional governance structures across diverse historical and cultural settings, while respecting those settings' unique, path-dependent development. This kind of thinking permits us to generate cross-contextual rules of judgment, because we come to see relativistic variations themselves as relative to a broader set of possibilistic conditions that can be expressed in terms of specific principles. However, we are not yet able to conceptually unify multiple such principles.

- *Symbol*: **[∟] (plane)**. This symbol represents Order 3's two-dimensional reversibility, which coordinates two types of variation in a single thought structure (just as the x and y variables of a coordinate graph generate an overall objective relationship applying across both variables).
- *Sample statement*:

  > *The argument that other countries should adopt democracy need not be naïve. Democracy can take different forms according to context, and can be justified in terms of those countries' own particular situations*.

- **Order 4 (°4): Universal Paradigms**. This perspective articulates a paradigm that generates, justifies, or transforms the transcontextual principles developed at Order 3. This capacity increases coherence, because it overcomes the arbitrary limitations imposed by the specific nature of the principles generated at Order 3. At this Fourth Order we are able to conceptualize a common foundation or

holistic dimension unifying multiple transcontextual principles. For example, in the interview from which the sample statement below is paraphrased, the subject unified principles of decentralized decision-making in governance, economic productivity, and public expression into a single paradigmatic criterion of *empowerment*. This Fourth-order paradigm is consistent across any dimension being compared. For instance, it would also justify judgments in relation to other institutions, such as political economy, gender roles, religious systems, and so on. This additional dimension of thought allows us to emerge from our ethical identification with specific injunctions such as "democracy". Here we move past thinking merely in terms of judgments across contexts, because by reasoning through universal paradigms we attain a kind of antecedent impartiality or aperspectival vantage point in which contextualized thought is intrinsic.

- *Symbol*: **[∠] (cube)**. Suggesting the corner of a cube, this symbol represents Order 4's assimilation of Order 3's transcontextual principles within a third dimension of variation, in which diverse principles find coherent unity in a common underlying framework, process, or logical foundation.
- *Sample statement*:

  > *Democracy is not an end in itself, but is merely the best system modern societies have yet discovered for supporting people's growth, self-expression, and empowerment*.

In this way, each order addresses the limitations of the last by creating a more coherent (i.e., comprehensive) basis for legitimizing norms across systems. All five orders respond to the same requirement of internormative legitimation, but to distinct degrees of depth. The ICS thus describes a progressive structural adaptation to a single challenge that defines the skill domain.

This adaptation passes through a chain of increasingly holistic perspectives on how norms can be simultaneously legitimated across systems. Once this problem is thematized (at Order 1), the first resolution available is to assume that different norm systems possess a separate and absolute legitimacy (hereafter, when a model name is not specified, "Order 1", "Order 2", et cetera will refer to levels of the ICS). When it is discovered that these legitimacies are not absolute but instead relative to context, the ultimate source of legitimacy shifts to the context itself. When it is discovered that context-based differences themselves reflect a still broader context of possibilistic conditions expressible as transcontextual principles, the ultimate source of legitimacy shifts to those principles. And when it is discovered that these principles are themselves just particular instances of a general process or perspective, the ultimate source of legitimacy shifts to that more general point of view.

Each of the orders generates a resolution of norm legitimation perspectives appropriate to its own understanding. This resolution grows progressively in depth from resolution in pre-legitimacy (°0) to resolution in non-relationship (°1), non-judgment (°2), shared principles (°3), and underlying principles of principles (°4). The qualitative distinctness of these resolutions generates the empirical prediction that transitional states

should be unstable, due to the incoherence between pre-legitimacy and legitimacy (°0-°1), judgment/certainty and non-judgment/uncertainty (°1-°2), non-judgment and restoration of judgment (°2-°3), and specificity and generality (°3-°4).

The relationship between orders is one of increasing structuration. Thus each new order does not simply replace the previous one, but integrates it within a more complex and inclusive structure. The use of more complex structures presupposes the grasping of less complex ones, which are indeed the very components from which the higher structures are organized. The different orders are not just different ways of thinking, but progressive realizations of a single principle, each one more encompassing than the one before.

The five cognitive structures are uniformly defined in terms of their degree of subjective limitation in legitimizing norms. They thus represent different depths to which single core structural principle—internormative legitimacy—is realized. The progressive deepening of the basis for this legitimacy parsimoniously explains the relation between the diverse characteristics of successive stages. This abstract structural criterion is independent of history, culture, gender or other contingent influences because it refers to nothing more than the very ways in which internormative consensus can potentially be organized.

The next chapter will present the theoretical basis for the model just introduced.

Chapter 2. Theoretical Foundation: A Neo-Piagetian Synthesis

This chapter is intended to clarify the concepts and assumptions on which the ICS is based, and which should be expected to have observable correlates in internormative thinking if the model is accurate.

What follows is not an overview of a subdiscipline, but a personal theoretical synthesis. This synthesis is the product of selecting a number of existing ideas from related research strategies, interpreting them in the light of my own study, extending or reformulating them where I felt it was reasonable to do so, and integrating them into an overall vision of development that I hope will provide a strong foundation for research of this type.

Concepts and theses of structural developmentalism

This investigation is rooted in the tradition of structural-developmentalist psychology. One can find various precursors of this perspective in early explorations of thought-evolutionary processes by Enlightenment figures including Locke (1690/2008), Leibniz (1704/1981), Vico (1725/2002), Montesquieu (1748/1949), Turgot (1750/1973), Voltaire (1751/1990), Rousseau (1755/1997), Kant (1784b) and Condorcet (1794/1955) (see Cassirer, 1951; Habermas, 1987; M. Harris, 1967; Overton, 2006). But it was not until the time of Fichte (1795/1982), Schelling (1800/1978), and particularly Hegel (1812/1993) that there emerged a systematic philosophical speculation on the structured

nature of intellectual growth. The dialectical study of mind these scholars set in motion made its way into modern developmental psychology through the likes of Comte (1830-1842), Spencer (1855), James (1890), Peirce (1898/1992), Baldwin (1902), Dewey (1933), Mead (1934), and Werner (1934/1978), and was elaborated into an empirical method for observing sociocognitive and philosophical growth by Piaget (1950) and Kohlberg (1958), and many others since.

Research in the Piagetian empirical tradition proceeds from the assumption that people's interpretations of the world around them reflect organized epistemic patterns or structures, which (a) comprise a logically interrelated set of habitual rules for processing information or connecting observations, (b) originate in people's own interpretive efforts in conversation with environmental inputs, and (c) develop through a fixed sequence of basic reorganizations in adaptation to environmental feedback. That is, people's ways of making meaning are *self-organized adaptive structures* that *develop* through successive interpretation and environmental feedback toward a more adequate approximation of objective reality.

The structured holism of thought

In this paradigm, cognitive growth is conceived as quantal development through a succession of stable holistic qualitative patterns, or *stages*. Each of these stages constitutes a *structured whole* because the various assumptions flowing from it are logically interrelated. For example, the ICS's Contextualist stage (°2) constitutes a structured whole because its rejection of ethnocentrism is logically interlocked with value

skepticism through the structure-typical concern with the norm constructive process. In this way, a Contextualist (or other stage) response is not just the specific result of a given stimulus; rather, it expresses an internally organized adaptation to thinking about problems of that general nature (Flavell, 1972; Kohlberg & Mayer, 1972).

Each of these quantum ordered states is a discrete logical totality arising from the effort to resolve inconsistencies and limitations intrinsic to the previous structure. For example, the ICS's Order 2 arises to resolve the logical incoherence generated by the existence of conflicting norms in different norm systems. This is achieved by subsuming those systems under an abstract category in which they comprise nothing more than arbitrary instances within an infinite set of possible variants. The result is a new stage structure that presents reality to the subject in a *qualitatively* new way. The new quality of thought is not fortuitous but is in fact a direct adaptation to the problems left unresolved by—or indeed created by—the previous structure. In this way each new organization can be said to be *non-arbitrary* (Commons et al., 2007; Commons et al., 1998; Dawson, 2002a).

Each structure has an internal consistency appropriate to its frame of understanding. For instance, Second-order cognition might demand one standard of rights for women in their own culture, but a different standard for women in another culture. While this position might appear paradoxical to a First-order ethnocentrist or naïve to an Third-order humanist, it is coherent from the Second-order perspective of judging all cultures on their own terms.

The emergence of *qualitatively* new logical properties at each stage structure entails that these structures, like walking and running, are difficult to combine into intermediate patterns (van Geert, 1994, p. 12). For instance, while people could alternate between First-order and Second-order perspectives on women's rights, it would be difficult for them to mix these perspectives in a logical way. Such intermediate forms are unstable because they lack internal coherence. Although people do produce disordered transitional arguments, their performances tend to fluctuate rapidly during these transitions before stabilizing at the next ordered stage structure (Thelen & Smith, 1994; van Geert & van Dijk, 2002).

Differentiation and integration

As the foregoing makes clear, the relationship between one structure and the next is that of part to whole. Each new whole thus encompasses the previous level of organization within a broader holistic dimension in which the previous dimension loses its ultimacy and totality, while also being a part encompassed in the still broader dimension of the next whole (Habermas, 1983/1990; Inhelder & Piaget, 1955/1958; Kegan, 1982). Thus we can conceptualize the evolution of meaning structures as a nested hierarchy of whole/part units (Koestler, 1978; Wilber, 2000b). A level within one of these nested hierarchies is both *part* of something larger and itself *whole* in that it integrates lower parts and possesses a logical self-coherence of a certain scope.

A nested hierarchy of conceptual structures can be visualized as a series of concentric spheres. Movement up the hierarchy results in greater depth of both

differentiation (disembedding from partial interpretive spheres) and *integration* (reintegrating them into more comprehensive spheres)—two aspects of a single process. In differentiating or *decentering* from a more limited subjectivity, we come to see that the perspective we considered central is in fact only one possibility among many (Inhelder & Piaget, 1955/1958). For example, in ICS growth, Second-order constructivism represents a *decentering* from First-order ethnocentrism, shifting the focus of our attention from the integrity of norm systems to the integrity of the process of norm system construction. The Third Order then disembeds from this focus on norm construction and integrates it within a focus on the systematic conditions guiding that process. In either case, integration is not possible without differentiation; we cannot take a perspective on a perspective while remaining embedded within it.

The emergence of novelty

Each structure possesses qualitatively new emergent properties that cannot be predicted from a mere summation of its constituent substructures, hence growth is transformational rather than additive (Fogel, 1999; M. D. Lewis, 2000; van Geert, 2003). These properties include solutions to the limitations inherent in the previous structure, but also new problems specific to the new structure's own conditions (Habermas, 1976/1979; Weinreich-Haste, 1983). For example, Order 2 overcomes the limitations of ethnocentric judgment, but introduces the new problem of value skepticism, a more "complex" problem than ethnocentrism in that it only arises at a higher level of abstraction. That new structures generate new problems and limitations implies that development makes

"progress", through a dialectical process in which each structure must ultimately generate an even broader structure in which these novel limitations are transcended.

Self-organizing adaptation

According to Piagetian theory, cognitive development does not result from either predetermined biological maturation or straightforward cultural transmission, but from the self-organizing of internal structures of reasoning in response to environmental feedback. Such feedback arises from complex situations that expose problems with the assumptions of existing structures of reasoning. Both education and experience promote development, but they do so by compelling the mind to actively apply or expand the interpretive structures it has itself generated in trying to make sense of the world.

Originally trained as a biologist, Piaget sought to discover a kind of "embryology of intelligence" that could explain the development of thought as an extension of an organism's adaptation to the environment:

> From the start of my theoretical thinking I was certain that the problem of the relation between the organism and environment extended also into the realm of knowledge, appearing here as the problem of the relation between the acting or thinking subject and the objects of his experience. (Piaget, 1952, p. 245)

The vital contribution of this approach was to merge an embryological focus on adaptive equilibration with the Hegelian idea of a dialectical relation between understanding and environment (Adorno, Horkheimer, & Noeri, 1947/2002; Baldwin, 1902; Hegel, 1807/1977). The result of this propitious combination was a psychology oriented to

observing cognitive growth as a serial adaptive restructuring aimed at resolving inconsistencies between reality and one's present way of understanding it.

In this *interactionist* model, cognitive growth is neither pre-programmed in the organism's DNA nor received through explicit teaching; rather, it results from the organism's active restructuring of thought in adaptation to the structure of the world. Hence cognitive ontogenesis, like embryogenesis, is *self-organizing*; it is done without specific internal or external instructions (Jantsch, 1980; Prigogine & Stengers, 1984). And yet it is constrained to organize itself along certain lines by the possibilistic conditions imposed by the environment. For the world has a natural structure that only allows a certain range of ways for thought to stably organize itself, and any other thought organizations are quickly unsettled by reality.

For example, Kohlberg argued that the world imposes a condition of *reciprocity* on social relationships, and that there are six relatively stable ways of mentally organizing that reciprocity (Kohlberg, 1973a, p. 642). Even the simplest of these permits a form of relationship that is minimally stable, but it can be transformed sequentially through a series of five other viable self-organizations, each of which is stable under a broader set of conditions than the one before.

In the ICS, meanwhile, the condition imposed by the world is that of *internormative legitimacy*. The first solution (°1) offers a minimally stable way of fulfilling this condition, through a kind of moral *Realpolitik*. But each successive reorganization makes that stability more broad-based: Order 2 by recognizing the intrinsic equality of cultures, Order 3 by overcoming value skepticism, and Order 4 by

providing universal foundations for internormative principles. In either model, the vital point is that growth arises from "an interaction between organismic structuring tendencies and the structure of the outside world, not reflecting either one directly" (Kohlberg & Mayer, 1972, p. 459).

In this view, development is a progressive internal systematization of a natural structure. The stages of this systematization are "'natural,' not in the sense of being innate, but in the sense of being the sequential results of processing moral experience" (Kohlberg, 1973a, p. 634). This processing of experience can be thought of as a kind of metabolism through which a person builds its internal structure, transposing an external structure into an internal one (Blanck & Blanck, 1986; Döbert, Habermas, & Nunner-Winkler, 1987). The resulting vision thus bears the imprints of both a unique self-organizing process and the structure of the external reality.

Dynamic equilibration

Structural developmentalism has an internal theory of causality, based on the desire we experience to resolve logical inconsistencies and figure out how various disconnected observations can all make sense at once. We achieve this resolution by way of a progression of logical arrangements or "equilibria" appropriate to the kinds of facts we are presently capable of observing. Each arrangement results from the genesis of a holistic dimension that integrates the facts emergent in the previous arrangement and resolves the logical inconsistencies between them. This means that each arrangement offers a more stable equilibrium than the last, in the sense of requiring a more profound

perturbation to be destabilized. We are naturally drawn toward more stable states to the extent that we are (a) exposed through education or experience to the cognitive incoherences intrinsic to our current arrangement, (b) receive the kind of support that would allow us to resolve these incoherences, and (c) experience the desire to resolve these incoherences rather than ignore them (Fischer & Bidell, 2006). Through this process, we move gradually toward an *ultimate equilibrium* or *attractor* state—a generalized and highly abstract arrangement resulting from the logical systematization of facts observed at all levels.

The drive toward coherence

Philosophers have long claimed that humans naturally seek consistency, systematicity, and comprehensiveness of thought (Baldwin, 1906/1976; Dewey, 1934; W. James, 1897/1979). The fact of our preoccupation with these concerns was well established by cognition researchers in the postwar decades (Abelson, 1959; Abelson et al., 1968; Festinger, 1957; Heider, 1958), has received further support from social psychologists (Heine, Proulx, & Vohs, 2006; Hogan & Shelton, 1998; Kruglanski, 1990), and is a core tenet of developmental theory (Boom, 2009; E. Erikson, 1959; Piaget, 1975/1985). Also supporting the coherence thesis is the fact that social psychologists have found humans to be strongly motivated to achieve cognitive control over their environment (Fiske & Taylor, 2013; Haidt & Rodin, 1999; Pittman, 1998), are averse to uncertainty (Guimond, 2006; Hogg, 2000; van den Bos & Lind, 2002), and show a strong inclination toward

simplification (the so-called "cognitive miser" hypothesis: Macrae, Milne, & Bodenhausen, 1994; Richeson & Shelton, 2007; Yzerbyt & Corneille, 2005).

The idea that the experience of inconsistency or "dissonance" drives development is a fundamental premise of equilibrationist models. These models posit goal states such as "reversibility", "equilibrium", "generalization", and "integrity" as motivating thought-organizational processes. I would offer the term *coherence* as perhaps the most suitable term in English for capturing the essence of these various concepts, for it suggests a cognitively desirable condition resolving not only inconsistency but also simple *disconnectedness*. The ICS assumes that it is the *incoherence* of norm legitimation perspectives—whether from their inconsistency or from their simple disconnectedness—that drives internormative growth.

The essential quality of any new structural organization of thought is that it provides a holistic dimension or principle in which the previous structure's concepts can be recognized to have a coherent unity. Each structure constitutes a metaperspective or "theory" of the concepts emergent in the previous structure, in that it provides a broader logical totality in which these concepts can all make sense *together* (Kegan, 1982; Piaget, 1974/1980; Wellman, 1990; Wellman & Gelman, 1992). For example, ICS Order 2 provides a logical framework in which Order 1's contrasting normativities can be understood as interchangeable variations of a single constructive process. Similarly, Order 3 provides a holistic framework in which Order 2's arbitrary variations can be organized into non-arbitrary systematic patterns, and Order 4 provides a holistic framework in which Order 3's systematic patterns can be comprehended as various

expressions of one or more general paradigms. Each structure can thus be understood as deriving from the effort to logically organize a number of isolated lower level theories into an interrelated whole, "the simplest possible system of thought which will bind together the observed facts" (Einstein, 1934, p. 138). By grasping the analogy among the parts, we recognize the underlying unity in what we once perceived as diversity.

In the new "system of thought", our attention shifts from the component parts to the *relationship* between them, which not only organizes them but explains what they *are*. Grasping the overall gestalt is what allows us to understand what something is, because it creates the category that defines it. For example, we cannot grasp how language shapes our thought except through understanding how another language shapes our thought *differently*. It is only through the relationship between the two that we come to understand what language *is*.

Within the new coherence, the once separate parts are no longer in zero-sum relation, but are recognized as representing instances of a general class or holistic category. A crucial point about this discovery is that it allows us to think in the abstract about the possibilities imaginable through that category (the whole in which all the component parts fit). For example, ICS Order 2 allows us to understand norm systems as variant outcomes of a single norm-constructive process, opening up infinite hypothetical possibilities for such outcomes. Likewise, Order 3 generates a category in which we can think about how those variations can *themselves* be varied, which permits us to formulate non-arbitrary principles for choosing among those possibilities. Finally, Order 4 discovers a holistic category encompassing these principles by revealing the abstract

logics they have in common. At each level, the essential quality of the units being comprehended (norm systems, context-dependent constructions, or context-independent principles) is disclosed in their *interrelationship*. The qualities thus grasped are of an abstract nature, allowing for the imagination of new possibilities that transcend pre-existing patterns.

For Piaget, the philosophical criterion of a new thought organization was whether it related the component observations in a *reversible* way (1972, p. 32). By this he simply meant that the subject can move freely back and forth through the new relational dimension to grasp how the related observations are analogous illustrations of a single principle. This two-way networking of units into a single dimension or conceptual whole is what developmentalists variously refer to as "coordinating", "mapping", "relating", "correlating", "organizing", "networking", "integrating", "subsuming", "sublating", "generalizing", "abstracting", and so forth. The result of this activity is that the subject mediates the relationship between the units *internally* ([· ·] → [–]) (Lahey et al., 2011). The impetus of this activity is the subject's desire for the related units to *cohere*.

Each ICS stage structure arises from relating norm legitimation perspectives in a more generalized and freely reversible way. Order 1 recognizes all norm systems as possessing an internal organization, but can only legitimate norms in one system at a time. Order 2 makes that legitimation freely interchangeable within a two-way relation, but provides no way to integrate it across contexts. Order 3 produces principles for such integration, but it takes Order 4 to provide a principle for integrating the principles

themselves. Through this process the subject achieves a fully generalized reversibility of perspectives.

Adaptive equilibrium

This generalized reversibility constitutes the most "stable" or "equilibrated" structure of internormative reasoning, in the sense of being least likely to be overturned by the discovery of a limitation, self-contradiction or unanticipated counterexample (Boom, 2009; Piaget, 1947/2001). The successive types of feedback that contradicted or "disequilibrated" earlier structures have already been integrated within it, resulting in a kind of ultimate equilibrium—"a 'yes' hardened in the fire of many 'no's'" (Tillich, 1957, p. ix). In this way, development is conceived as moving always in the direction of a more stable and coherent ordering of possible observations—a resolution that solves more types of problems and comprehends more classes of potential feedback from the environment.

For Piagetian models, this activity of equilibration or coherence-seeking is what drives cognitive growth, which is conceived as the process through which an organism *adapts to its environment*. Piaget described this adaptation in terms of two complementary processes, one internal and one external. In the internal process the organism *assimilates* new observations within its existing frameworks of thought to generate a coherent picture of reality. Assimilation is adaptive in that it allows the organism to make sense of observations in an internally consistent way. But when these inputs contradict the organism's existing schemas, it experiences cognitive

disequilibrium, resulting in adaptive pressure to *accommodate* the inputs by reorganizing its thought. This process is the external aspect of adaptation, allowing the organism's thought to adapt to objective reality. Piaget thus defined adaptation as "an equilibrium between assimilation and accommodation" (1947/2001, p. 9), aimed at both an "accord of thought with itself" and an "accord of thought with things" (1936/1952, pp. 7-8).

When this accord is lacking, we experience a tension, or a sense that something is missing (Abelson et al., 1968; Festinger, 1957; Piaget, 1975/1985). While one or two such perturbations are unlikely to make us reorganize our thinking, a critical accumulation of anomalies will eventually compel us to "accommodate" them (Dawson-Tunik, 2004; Laszlo, 1987).

In the internormative domain, these anomalies take the form of discrepancies between norm legitimacy perspectives. The incoherence of these perspectives can be a potent impetus to growth because maintaining a positive evaluation of our own moral outlook is important to our self-esteem (J. A. Hunter, Platow, & Howard, 1997; Messick & Mackie, 1989; Tajfel, 1979; Turner et al., 1987). More deeply, we may experience an inconsistency within our moral perspectives as a subversion of our personal integrity (Blasi, 1984; Conning, 1999; Damon, 1984; Kegan, 1982). When this incoherence involves questions of fundamental value, it can present an existential crisis, for in the absence of moral meaning there can be no ultimate redemption of life from death (Tillich, 1955). The dread produced by this abyss of meaninglessness is observable for example in the urgent efforts by many of Japan's WWII survivors to preserve the peace idealism

and constitutional ban on warfare which had allowed them to preserve a morally redemptive interpretation of their wartime experience (Conning, 2007a, 2007b; Oda, 1965, 1991).

Because of the way a new thought system resolves such crises, we can embrace it as a kind of deliverance from the problems endemic to the previous system. In this initial phase, the contradictions and limitations inherent in the new system are easily overlooked, because our attention is naturally drawn to the new truths it reveals, the new exits it offers from old dead ends (Kegan, 1982). Our focus at first is to consolidate the new perspective, rethinking all of our previous conclusions through it. At ICS Order 2, for example, our focus is on deconstructing every conventional and ethnocentric assumption, and we find the idea of transcontextual principles unappealing for their similarity to the ethnocentric subjectivity we have so lately overcome. This reorganization of thought cannot be done by way of an expedient one-time generalization; rather, it must be done more or less item by item until the principle has been sufficiently generalized (Chapman, 1988).

Eventually, the new perspective's inadequacies become difficult to ignore. Assuming the environment is rich in the right kinds of challenges, we become increasingly preoccupied with the present level's inherent limitations and contradictions, which provide the impetus for transcending the stage. The logic of the developmental process is dialectical; for example, the ICS's Order 2 is a deconstructive negation of First-order assumptions, while Order 3 is a reconstructive negation of that negation.

Ultimate equilibration and attractor states

Dynamic Systems Theory (DST) offers resources for understanding cognitive growth as the dynamic, non-linear trajectory of a variable toward an ultimate "attractor state". DST is particularly well suited to modeling structural development, because it postulates dynamic processes that produce novel structures through the periodic reorganization of existing patterns into more durably stable systems (M. D. Lewis, 2000; Sameroff, 1983; Thom, 1972; Valsiner, 2006; van Geert, 2003). Moreover, DST's assumption of an ultimate attractor state mirrors the philosophic-developmental conception of a telos of ultimate logical equilibration. Building on the concept of self-organizing growth, developmentalists have used DST to model developmental trajectories by identifying a variable (such as internormative cognition), characterizing the dynamically stable attractor states for the variable (i.e., developmental levels), and mapping the variable's movement through these states toward an "ultimate attractor" (Aslin, 1993; Ford & Lerner, 1992; Oyama, 1985; Thelen & Smith, 1994; van Geert & van Dijk, 2002).

A simple example of an attractor state is, for human locomotion, walking. A gradual increase in the speed of a treadmill or the gradient of a hill results in linear and continuous change in our gait, but past a certain threshold this perturbation results in a nonlinear quantum shift to a new qualitative pattern (i.e., running on the treadmill, or crawling up the hill) that is dynamically stable at the new speed/gradient (Thelen & Smith, 2006, p. 275). It is my contention that ICS stage structures constitute attractor states because they are relatively stable patterns for legitimating norms across systems, through either non-problematization (°0), natural distinctness (°1), relativism (°2),

transcontextual principles (°3), or universal paradigms (°4). From the logic of the stages, I will argue in Chapter 4 that the task of legitimating norms across systems generates pressure toward reaching more stable attractors that resolve the conflicts between norm perspectives in a more generalized way. Order 4 constitutes an "ultimate attractor" because it transcends the arbitrary limitations of the resolutions achieved by the other levels; Fourth-order decision patterns are no longer liable to be overturned by difficult questions defying the limitations of specific systems (°1), contexts (°2), or principles (°3).

The concept of dynamic stability can be understood through Waddington's metaphor of an "attractor landscape" (1977). Imagine a ball (i.e., our thinking) rolling down a mountainside (i.e., gravitating toward the ultimate attractor) but stopping in a series of *increasingly deep* valleys (i.e., increasingly stable developmental stages) on its way down. Each developmental stage is a deeper "valley"—a more stable attractor—because it requires a more profound perturbation to move us out of it. Most of us settle finally in one of the intermediate valleys, for even though the foot of the mountain (i.e., ultimate equilibrium) beckons, the walls of the intermediate valleys become increasingly tall and steep (i.e., transcending the valley's assumptions requires more profound types of questioning). Moreover, the ball has ever less potential energy (i.e., there is less pressure to develop because fewer members of our community have advanced further down than we). While gravity always pulls us toward the foot of the mountain, disembedding ourselves from the deepest intermediate valleys requires profound reflection on complex ideas that we may never encounter in our everyday experience.

Qualitative growth requires quantitative growth

I have noted that the process of adaptive equilibration is thought to involve two complementary types of growth, accommodation (qualitative or vertical growth to a new stage) and assimilation (quantitative or horizontal growth within one's current stage). We grow qualitatively when we generate a more complex structural organization to accommodate the coherence demands imposed by the environment. We grow quantitatively when we apply this new structure to assimilate new substantive observations (Piaget, 1936/1952; van Geert, 1994). In educational terms, qualitative growth refers to acquiring a new way of thinking, whereas quantitative growth refers to applying that way of thinking across more and more types of specific subject matter. Qualitative development is growth of structure, whereas quantitative development is growth of content.

The notion of quantitative, within-stage development implies that our capacity to apply a stage structure to different tasks appears at different times, a phenomenon Piaget referred to as horizontal *décalage* or "time lag" (1971b). It seems logical to me to assume that a new stage structure develops first in relation to tasks with which the subject is especially familiar, and then generalizes to other analogous tasks. Based on this assumption I have sought to observe advanced internormative thinking by interviewing a subsample of subjects about topics in which they have special expertise, as I will explain in Chapter 3.

Although qualitative growth is more transformational, quantitative growth is equally important, for we cannot build structure without content. For instance, we build ICS Third-order principles by making two-dimensional comparisons of norms across contexts—one dimension accounting for the contextual variation, the other accounting for the normative variation—such as comparing the impact of academic decentralization, private schooling, or telecoms deregulation across multiple countries. From the observation of cross-systemic patterns in more and more such variables, we gradually overcome the habit of relying first on the principle of context-dependence, and replace this habit with a new habit of looking for the underlying unity in the diversity. Hence the thought system arises from the accumulation of analogous cases. The same is true in the construction of Order 4, which requires a certain range of specific Third-order principles before we can recognize them as instances of a meta-principle. What I am suggesting is that the new thought system would be meaningless to us without the substantive observations from which to construct it. Here of course I am simply echoing the first half of the famous Kantian aphorism on the relation between rationalism and empiricism: "Concepts without percepts are empty; percepts without concepts are blind" (Kant, 1781/1966) (cf. Leibniz (1704/1981).

Hierarchical integration

Hierarchical integration refers to the idea that any new developmental structure comprehends the highest existing level of structure as a constituent component, so that the outputs of one level become the inputs for the construction of the next level

(Commons et al., 1998; Kohlberg, 1975; Piaget, 1960b; Werner & Kaplan, 1956). This concept, under a variety of names, has been central to the development of evolutionist theories. It was an important theme in German Idealist philosophy, notably in the work of Fichte (1795/1982), F. W. J. Schelling (1800/1978), and especially Hegel (1812/1993), who wrote that in the evolution of ideas "that which is superseded is at the same time preserved". It became a central thesis of nineteenth and early twentieth century theories of social and cognitive evolution through figures such as Marx (1859/2010), Spencer (1862), Peirce (1892), and Baldwin (1895, 1906), passing from the latter directly into modern developmental psychology through Werner (1948/1926) and Piaget (1950). It underpins many cognitive developmental stage models, including Kohlberg's stages of moral judgment (1969), Fischer's model of skill hierarchies (1980), Pascual-Leone & Goodman's work on attention capacities (1979), Kegan's stages of existential development (1982), and Case's model of conceptual processing (1991).

Although not all cognitive developmental models attribute precisely the same set of features to hierarchical integration, they generally imply a relationship in which the conceptual unit *constitutive* of cognition at one stage becomes an objectified *component* of cognition at the next stage, such that the higher stage can be defined in terms of operations on the lower (Dawson, 2002a). This feature can be readily seen in the ICS, in which Order 2 consists precisely of critical reflections on Order 1's norm systems, reflections that are (a) not present at Order 1, and (b) cannot occur unless and until the systematicity of norms has been understood. Order 3 likewise objectifies Order 2's preoccupation with the *context or construction of norm systems*, and Order 4, in turn,

problematizes Order 3's *cross-contextual principles*. Each new stage generates a larger analytical dimension within which it is possible to reflect on, compare, relate, coordinate, integrate, or otherwise operate upon the conceptual units constituting the previous stage. This new dimension opens up possibilities of evaluation, judgment and transformation that did not exist at the previous stage.

Structural complexity

The process of hierarchical integration results in increasing *complexity*, a term which refers not to "complicatedness" but to *degree of structuration*. Once we have become comfortable with managing conceptual units at one level of complexity, we tend naturally to coordinate these units into broader concepts that allow us to group them, compare them, contrast them, or in some way grasp the *variation* among them. And so each of these more general concepts is essentially a variable (a new *dimension of variation*) arising from the coordination of multiple units on the same level of complexity, similar to the hierarchically structuring relationship between points and a line, lines and a plane, et cetera (Fischer, 1980). Broader conceptual structures are more "complex" in that they involve more layers of progressive structuration upon fundamental cognitive units. In the ICS for example, Contextualism arises from structuring Conventionalist system-level normativities into the new holistic dimension of norm-constructive processes, Transcontextualism arises from systematizing those processes into principles, and Universal Paradigms arises from systematizing those principles into general frameworks for organizing those principles.

Reflective abstraction

According to the concept of hierarchical integration, the governing assumptions at one stage become the object of reflective attention at the next stage (Dawson, 2002a; Kegan, 1982). In the ICS, for example, First-order reasoning analyzes issues *through* existing norm systems, whereas Second-order reasoning can analyze issues by critically reflecting *on* these systems. Likewise, reasoning that advances from Order 2 to Order 3 goes from questioning conventional norms in light of constructivism to critically reflecting on the limitations of constructivism itself. In this way, reasoning at one level constitutes a *reflective abstraction* vis-à-vis the previous level, taking its limitations and subjectivity into critical awareness (Fichte, 1795/1982; Piaget, 1977).

This results in conceptual structures that are more *abstract* ("drawn away") in that they are further removed from the most basic perceptual units, while narrower levels are more "concrete" (closer to the most basic perceptual units). For example, our normative subjectivity at Order 3 resides in highly abstract principles, whereas at Order 0 it resides in concrete interpersonal relations.

Let us consider the process of reflective abstraction through the ICS sequence from Orders 1 through 4. A person's conventional perspective of norm legitimation at the first level becomes self-reflective at the second level—conventional norms are subject to constructivist processes rooted in context. These processes themselves become self-reflective at the third level—the constructivist context itself is subject to a still broader context of systematic principles. Finally, these meta-reflective principles once again

reflect back on themselves at the fourth level—there are principles for generating principles. Through the four levels, the touchstone of legitimacy becomes increasingly abstract and differentiated—from norm system, to norm system construction, to principles of norm system construction, to paradigms for principles of norm system construction.

In each case, a new holistic dimension provides a reflective point of view in which the truths considered ultimate at the previous dimension can be critically evaluated as arbitrary instances within the total range of possibilities—instances that now call for justification. And so in moving to a new stage, Habermas suggests, "the interpretations of the superseded stage are, no matter what their content, *categorically devalued*. It is not this or that reason, but the *kind* of reason, which is no longer convincing" (1981/1984, p. 68).

Conservation of existing structure

Hierarchical integration implies that each new thought organization incorporates the capacities of the previous one within a more developed structure. Thus the capacities of simpler structures are never lost, only transcended (Hegel, 1837/1975; Werner, 1948/1926; Whitehead, 1929). All that is left behind is their exclusivity. Advanced reasoners can fully understand "where people are coming from" when they use a simpler structure, but the opposite is not true. This is what establishes an objective hierarchy of complexity among structures (Rest, 1973). As I will demonstrate later for the ICS, Order

3 reasoning has no difficulty recognizing Order 2 reasoning, but Order 2 is liable to mistake Order 3 reasoning for Order 1.

Invariant sequence

It follows from the concept of hierarchical integration that stage development must proceed in a single fixed sequence without skipping, because each stage is defined in terms of relations of the outputs of the previous stage. One cannot relate concepts that one does not have. The observation of invariant sequence is thus a criterion for ascertaining a stage theory's validity. In Chapter 4 I will argue that the ICS meets a logical test of invariant sequence; in Chapter 6 I will describe a program of studies for testing this hypothesis.

The prediction of invariant sequence flows from the conception of development as a logical stepwise learning process. Says Kohlberg:

> An invariant sequence of stages implies a *logical order* among the stages. Stage 3 must imply stage 2 and must not imply stage 4, etc. Such a logical order within a stage and between stages implies that the stages themselves involve logical operations or relations…[E]ach new basic differentiation made by each stage logically depends upon the differentiation before it; the order of differentiations could not logically be other than it is. (1971, pp. 186-187)

The cogency of some logical growth sequences has led some to suggest the possibility of establishing developmental sequences through rational analysis alone (Brainerd, 1978; B. Kaplan, 1967). However, the disciplinary standard is to seek proof of invariant sequence through longitudinal studies. Many such studies have found proof of invariant stage sequence in cognitive development (Armon & Dawson, 1997; Case, Okamoto,

Henderson, & McKeough, 1993; Colby et al., 1983; Kilgannon & Erwin, 1992; McNeel, 1994a; K. Wilson & Deemer, 1989).

The logic of invariant sequence suggests that stage regression should not be possible, barring dementia. Stage irreversibility has thus often been included as a criterion of Piagetian stage theories (Bearison, 1974; Dudek & Dyer, 1972; Flavell, 1972; P. Miller, 2011; van den Daele, 1969). After all, once we have constructed more adequate way of understanding, we should not be satisfied with anything less. As one of Piaget's child subjects put it, "Once one knows, one knows forever and ever" (1971b, p. 5).

I am inclined to agree, for it is difficult to un-see a bigger reality once we have seen it. Moreover, stage development is a long-term structural transformation, unlike the acquisition of specific content knowledge, which can easily be forgotten (Piaget, 1960a; Wilber, 1995). For example, we could certainly forget a second language if we stopped using it, but it would be difficult to lose the insight that each language discloses a distinct reality. It is far easier to unlearn knowledge than to unbehold a *perspective*.

Kohlberg's investigation of moral development offers an instructive case study on the question of stage regression. Kohlberg advanced a six-stage theory with rigorous assumptions of irreversible stairstep growth based on the development of a series of discrete, math-like logical capacities (Kohlberg, 1969). However, he encountered evidence that some subjects appeared to be regressing from Stage 5 to Stage 2 (Kohlberg & Kramer, 1969). In lieu of accepting the possibility of such stage regression, Kohlberg revised his stage model and scoring system, adding a Stage "4.5" to account for the

anomalous responses, which he believed were distinct from Stage 2 despite being classifiable as such under his original scoring system (Kohlberg, 1981c). I agree with Kohlberg's response, and his assessment that true change from his Stage 5 to Stage 2 is not normally possible. Yet what this example reveals is that the assumption of stage irreversibility is one that goes untested as long as we are more inclined to revise our models than to accept the counterintuitive possibility of reverse growth. To avoid relying on an untestable assumption one way or the other, we must find a way to avoid ruling out stage reversal a priori while still retaining irreversible sequence as a reasonable test of a stage model's validity.

The solution, I would suggest, is to base the assessment of stage reversal on a criterion less blunt than that of time/age. It is too simplistic to assume that people's performance on cognitive tasks—even structural ones—should not decline over time even in the absence of intellectual stimulation. I would argue that it is not inconsistent with the relative permanence of stage growth to postulate slow, limited atrophy in stage performance (particularly in stage skills that were not fully consolidated to begin with) in persons whose exposure to intellectual challenge and complexity has declined. King and Kitchener (1994), for example, noted modest performance declines in persons who were measured first as advanced doctoral students and then again after working several years in a non-academic setting. This observation accords with the finding that formal education is far more predictive of stage score than time/age, which sometimes even correlates *negatively* with test performance (Coder, 1975; Rest, 1979). With the help of these findings, we can refocus the criterion for judging stage reversal from time/age to a

more sensitive criterion such as “effective level of education”, and thereby retain stage irreversibility as a reasonable standard for evaluating stage models.

Quite apart from the question of long-term atrophy, I should note the prediction from non-linear dynamic models that stage scores should also show short-term declines as part of normal performance fluctuation (Fischer & Bidell, 2006). Several longitudinal studies have observed such declines (Fischer & Kennedy, 1997; van der Maas & Molenaar, 1992; van Geert, 1998).

Incorporating the foregoing predictions of non-developmental stage reversal under certain conditions, I present the criterion for judging the ICS’s “longitudinal validity” in Chapter 6 as follows: “Must show a significant upward longitudinal trend without stage skipping or *unexplained* regression” (emphasis added).

Phenomenological constructivism

Phenomenological constructivism is the idea that people do not just passively absorb their understanding of the world through internal copying, but actively organize external inputs to construct the world they phenomenologically apprehend (Overton, 2006; Schutz, 1962; van Geert & Fischer, 2009). The world thereby known to each subject is one that has been constructed within that subject’s own mind, as a means of adapting to the natural and social environment. This implies that the researcher must attend, *from the subject’s point of view*, to the particular meanings that subject makes of the questions being researched (Colby & Kohlberg, 1987; Piaget, 1992).

Failure to do so can lead to errors of observation (Rosenberg, Ward, & Chilton, 1988). For example, we can only conclude from Chinese citizens' relatively favorable ratings of their nation's democracy in the World Values Survey that they interpret the question in a fundamentally different way from the survey's authors (WVSA, 2014).

The concept of phenomenological constructivism underpins structural-developmental stage theories in three complementary ways. First, it offers a framework for explaining why advanced understandings should not be directly transmittable but should instead require a gradual constructive-developmental process undertaken separately by each person. Second, it explains how a single reality can simultaneously make sense to different persons through the fundamentally incongruous viewpoints postulated as developmental stages. Third, because it posits that all persons construct their interpretations *as a means of adapting to the objective environment*, it explains why those stages should follow a single basic form for everyone. In this way, phenomenological constructivism accounts for both the uniformity of developmental sequences and the profound disparities in the way different persons make sense of reality.

In the ICS, these profound disparities take the form, for instance, of different conceptions of universality. Whereas Order 1 believes that what is universally valid is for every system to respect every other system's sovereign internal rules, Order 2 conceives universality in terms of a shared norm constructive process, Order 3 in terms of the common principles guiding that process, and Order 4 in terms of the underlying rational presuppositions of those principles. Subjects operating at different levels thus

"talk past each other", because they form their judgments under different validity conditions.

These judgments are, to quote Alfred Schutz (1962), "second-level constructs"; the "first-level constructs" are the basic structures of validity through which people interpret internormative issues. Different first-level constructs give rise to different worldviews in which second-level constructs take on disparate meanings.

Formalism

Structural developmentalism is not concerned with the specific content of people's views, but with the structures of reasoning they use to arrive at those views. From this orientation, such seemingly contrary arguments as Adam Smith's analysis of the self-regulating nature of supply and demand and Karl Marx's analysis of the self-reinforcing nature of private property would in fact be regarded as structurally equivalent (Marx & Engels, 1867/1996; A. Smith, 1776/1914). Both explain economic behavior at an advanced level of abstraction and generalization, even though they result in contrary substantive positions on the proper relationship between state and market.

In keeping with this formalist orientation, the ICS discounts content. The model defines each normative position in terms of the abstract logical conditions of its point of view—its reflexivity, comprehensiveness, dimensionality, et cetera—and not in terms of substantive prescriptions. Thus in evaluating responses, content is used only as an indicator of the structure of a subject's epistemological perspective. This procedural focus follows in the tradition of Kantian formalistic moral philosophy.

As with the Smith/Marx example, a single stage structure within the ICS can generate opposite substantive conclusions. For example, we could equally use Order 3 to argue either in favor or against the establishment of a global bioethics regime. The argument in favor might focus on the systematic similarities of all societies' concerns with bioethical questions, while the argument against might focus on the systematic benefits of permitting local bioethics regimes to experiment with different approaches.

The ICS can be used to discern the structure-content distinction in historical examples of ideological change, such as Japan's rapid political reorientation at the end of World War II. For some Japanese students who had uncritically accepted the official anti-democratic ideology they were taught during the war, their teachers' abrupt shift to a pro-democracy ideology under the Allied Occupation was a growth experience (°1 to °2), causing them to relativize and reflectively question the values they were taught both before and after the war (Conning, 2007c). But other students who had also uncritically accepted the wartime ideology embraced the new one without developing the idea that conventional norms can be irrational (Conning, 2007d; Dower, 2000). While the <u>content</u> of their views changed, the <u>structure</u> did not; both positions derive consistently from a Conventionalist perspective. Similar examples of within-structure reversal of content include many Chinese citizens' immediate conversion to free market ideology when the state changed its position in 1978, and many US citizens' swift about-face on the issue of federal power when their party gains or loses control of the federal government. In all of these examples, **a structuralist perspective reveals that an apparent reversal is in fact a continuation.**

Conversely, **a structuralist perspective can also reveal that an apparent consistency is in fact a reversal**. For instance, it shows us how authoritarian regimes have adopted liberal regimes' principled term "rule of law" to refer to what is in fact arbitrary "rule *by* law" (J. Cohen, 2014; Conning, 2014). Likewise, it reveals how the anti-individualist "Asian values" critique (Lee, 1994) has misinterpreted the post-conventionalist concept of "individualism" (a philosophy that promotes the dignity of all persons as human beings) to signify pre-conventionalist egoism (a philosophy that exalts the pursuit of self-interest).

With its formalist orientation, the ICS is thus able to reveal the profound disparity between superficially similar positions arrived at through different stage structures. For example, the statement, "I oppose a global regime for Internet governance" could be justified by one person at Order 4 ("I oppose such a regime because it would allow national governments to restrict the free flow of information and expression, impeding the growth of ideas") and by another person at Order 1 ("I oppose such a regime because it would interfere with my society's sovereign system") or Order 0 ("I oppose such a regime because it would be unfair to my country").

A vital advantage of the structuralist approach is that it allows us to measure development independently of culture, political ideology, or other factors that would confound a content-based approach (Fischer & Ayoub, 1994; Fischer, Knight, & Van Parys, 1993). This does not mean that stage complexity is entirely uncorrelated with substantive views. On the contrary, we should expect increasing complexity to generate outlooks that correlate with certain culturally or politically shaped ideas, such as

environmentalism, libertarianism, and support for free trade (S. Feldman & Johnston, 2014; Hamilton, 1999; G. E. Marcus, Sullivan, Theiss-Morse, & Wood, 1995; Suedfeld, Bluck, Loewen, & Elkins, 1994). In the field of moral development, Rest (1979) noted numerous studies that found a relationship between complexity and substantive moral decisions (Candee, 1976; D. Cooper, 1972; Fishkin, Keniston, & MacKinnon, 1973; Fontana & Noel, 1973; Kohlberg, 1958; Kohlberg & Elfenbein, 1975; R. M. Martin, Shafto, & van Deinse, 1977). Indeed, as Candee (1976) emphasized, our interest in moral development largely owes to the fact that it *should* generate wiser substantive choices. Yet notwithstanding this correlation between structural complexity and substantive choices, the structuralist approach ignores the content of such choices, instead focusing on universal growth transformations. These transformations are of a systematic nature that is not reducible to sociological, historical or other external explanations, but only to formal dimensions of internal validity and developmental logic. This logic is intrinsic to the progressive solution of norm legitimation problems encountered at successive stages of abstraction.

As the foregoing illustrates, the formalist approach gives us a truer and more profound understanding of people's meaning, allowing us to resolve apparent paradoxes, avoid the confusion caused by different interpretations of a single term, and steer clear of potential confounds such as culture or political ideology.

Cognitivism

Structural developmentalists believe that growth in normative judgment reflects the development of one's capacity to *reason*. This assumes that such judgment is based primarily on cognitive operations, rather than emotions or personal dispositions.

This assumption has been the subject of perennial debate. Aristotle regarded virtues as dispositions toward emotion as well as action (MacIntyre, 2002), and contemporary Aristotelian ethicists continue to emphasize the importance of sentiments in guiding moral judgment (Nussbaum, 2001; Throop, 2012). Along the same lines, the Scottish "moral sense" theorists argued that moral choices are rooted in a selfless personal disposition (Hume, 1740/2005; A. Smith, 1759/2002).

Other philosophers have nonetheless insisted that moral judgments do reflect cognitive assessments, and cannot be reduced to an expression of sentiment or personal inclination (Habermas, 1983/1990; Lovejoy, 1961). Moreover, anthropologists have found across many cultures that people tend to regard their moral judgments as appraisals of objective truth, not as expressions of sentiment or personality (Ladd, 1957/2004; Malinowski, 1926; Shweder, 1982a; Westermarck, 1932).

Cognitive developmentalists, for our part, believe that moral sentiments are in fact rooted in underlying capacities of thought. For example, one cannot feel empathy for others if one does not have the capacity to imagine their inner mental state (Baldwin, 1906/1976; Mead, 1934; Selman, 1971; Wilber, 1995). Indeed, the cognitive underpinnings of moral sentiment seem evident even in the formulations of Aristotelian ethicists, who speak of "*education* of the sentiments", "*learn[ing]* to deal with conflicting

desires" (Throop, 2012, p. 151), or the "*intelligence* of emotions" (Nussbaum, 2001) (emphasis added). Developmentalists believe that moral judgments have cognitive substance, even if these judgments have emotional correlates and require non-cognitive motivations in order to translate into action.

I adopt a cognitivist and moral realist position, i.e., that moral truths are not merely a matter of personal preference or sentiment but exist "out there", and are thus accessible to reason (Habermas, 1983/1990; Putnam, 1987). In particular I conceive moral truths as sets of possible states or relations in the abstract structure of reality, such as equality and inequality, inclusion and exclusion, universal and particular, organization and disorganization, viability and inviability, being and nonbeing. As abstract structural or logical conditions, they possess an ontological status independent of any specific configuration or subset of human society, or even the existence of humanity itself. I believe these formalistic conditions are a natural feature of the cosmos accessible to our rational comprehension.

In the domain of internormative problem-solving, these logical conditions appear in the form of structures of norm legitimation. The adoption of progressively comprehensive structures of norm legitimation is, I believe, a matter of *cognitive* growth in conceiving how contradictory norm systems can be *integrated*. To the extent that these cognitive structures correlate with emotional dispositions, I would argue that the evolution of these structures is the causal factor, which leads to corresponding changes in what generates favorable and unfavorable emotional reactions. Normative judgments, I

believe, are the expression of an evolving consciousness. This evolution ought to have affective correlates if we assume that cognition and affect are inseparable.

Growth as progress

Having referred to development as "evolution" and "progress", I should like to briefly explain what value judgments I believe do, and do not, inhere in cognitive development. I define cognitive development as a process of progressive differentiation and integration that endows the mind with a more profoundly autonomous, self-reflective, and comprehensive solution to a specific problem. Such development may express itself in many different ways according to culture, gender, personal disposition, or life circumstances. I do believe that such growth is desirable and offers all of us an opportunity to realize more of our potential in whatever paths of development we are positioned to pursue. But I for one do not believe that our value as persons lies in how far along these paths we reach, for we all share in this process of growth and in our inevitable failure to complete it. Instead our value lies, I believe, in the very desire we experience to pursue the meaning these paths lead us toward.

Rational reconstruction

The structural developmentalist's task is to trace the trajectory of thought organizations in a given domain. This enterprise is as much *conceptual* as empirical, because the researcher must reconstruct stage sequences in a manner that can be justified as a learning process toward more logically adequate and comprehensive understandings (Habermas,

1981/1984, 1986/1990). This requires providing a rational argument for why one interpretation should follow another and be regarded as more adequate by all those who understand it (Hamlyn, 1971). Habermas has referred to this growth-exegetic process as "rational reconstruction" (1976/1979, p. 8). While this procedure rigorously applies criteria of logical sequentiality and directionality, it rejects philosophical apriorism, postulating hypothetical growth sequences open to refutation by empirical testing (McCarthy, 1984).

Developmental sequences are indeed well suited to such testing, because they generate clear, quantifiable predictions. At the same time, because rational reconstruction must be done from the subject's point of view, it generates a deeply qualitative understanding of each subject's thinking. Indeed, developmental-reconstructive models offer the most profound understanding of the subject's meaning, because they allow us to know *why* that subject makes sense of issues in a particular way. Through them we can know where the subject's ideas have come from (the antecedent ideas from which they have grown, and the logical contradictions they were designed to solve), where they are now (the problems they leave unresolved, and the new problems they create), and where they may be headed (the types of concepts that would resolve the incoherences presently faced).

And so while many social scientists have assumed a dichotomy between the pursuit of hermeneutic insight and the pursuit of nomothetic knowledge (e.g., M. Harris, 1979; Leach, 1982; C. Taylor, 1971), the philosophic-developmental approach enables us to be meaningfully interpretive without sacrificing the etic categories and descriptions on

which theory-building depends. This approach seeks hermeneutic insight *and* underlying regularities, examining the subjective world from the "attitude" of the objective world, but without reducing it to the outwardly observable (Habermas, 1987, p. 314). It permits us to merge naturalistic and interpretive epistemologies, unifying *explanation* and *understanding* (Rothberg, 1990, p. 175).

Corollary developmental theses

Synthetic simplification

Developmental models posit cognitive control hierarchies of exponentially increasing information processing power. They must therefore also posit some kind of mechanism for this growth to occur without exceeding the bounds of working memory. For this we can call upon the concept of synthetic simplification or "chunking".

Although higher thought organizations are always more *complex*—in that they encompass all of the elements of the subordinate organizations and then add a new emergent layer of structuration to them—they in fact generate a *simpler* structure of activity *at the emergent organizational level*. For instance, ICS Fourth-order paradigms, such as Shweder's "Big Three" moral objectives of *autonomy*, *community*, and *divinity*, are simpler to operate on than the many specific principles from which he derived each of these integrating concepts (Shweder, Much, Mahapatra, & Park, 2003). The same emergent simplification occurred, for example, with Darwinian biology—which offered a more consolidated organizing principle than Linnaean taxonomy; and with Einstein's formula of $E = mc^2$—which was far simpler than the cumbersome transformation formulas by which scientists had attempted to redeem Newtonian physics (Laszlo, 1987). In all these cases, the skein of disparate observations at the previous level was parsimoniously accounted for by a single generalizing principle. Naturally such simplification is not itself simple, as it requires the genesis of a more *abstract* systematizing conception, which is initially more difficult to grasp. But the result is a

simplification of thought that radically reduces the number of units that must be coordinated at one time, thereby overcoming the bottleneck of working memory (Burtis, 1982; Halford, 1999). This is a reminder that the term *complex*, as developmentalists use it, refers not to "complicatedness" but to "structuredness".

It follows from the above that the need for simplification can be postulated as a driver of cognitive growth. The theoretical work of information processing and artificial intelligence is instructive on this point. Case has described working memory as a processing bottleneck that compels us to develop consolidating "control structures" (Case, 1991; Case et al., 1996). Pascual-Leone has made essentially the same point, but specifying "mental attention" as the limiting factor (Pascual-Leone, 1980, 1987; Pascual-Leone & Goodman, 1979). These claims, derived from the analysis of computational processing tasks, are rooted in the principle that thinking grows more powerful through *simplification*—not complication.

Postulating this as a driver of growth is consistent with the claim that growth is coherence driven, for generalization is a form of coherence-making.

Within-stage elaboration

To adequately explain my data, it is necessary to account for the fact that people sometimes coordinate multiple concepts *within* a given level, without generating a new level that is more abstract than those concepts themselves. This is a form of the "quantitative" growth referred to earlier, though it differs from Piaget's *décalage*, which refers to the gradual generalization of a new structure across more concepts. Several

researchers have proposed systems for observing and classifying such within-stage "microtransformations" (Fischer, 1980; Granott, 2002; Siegler, 2002; Yan & Fischer, 2002, 2007).

At this stage of my work, I have only begun to consider these issues in relation to internormative reasoning. Nonetheless it is possible on theoretical grounds to suggest a way of distinguishing between concept coordinations that generate a new structure and those that do not. Simply put, a re-structuring coordination integrates concepts into a new abstract whole, whereas a within-level coordination merely adds more concepts at the same level of complexity. For example, if a subject formulated a Third-order principle about rights-based morality by comparing the moral development trajectories of Indians and Americans (Jensen, 1996), and then *elaborated* it by adding more nationalities, I would regard this as "microdevelopment", in that it does not generate a Fourth-order structure. Similarly, if a subject first formulated a Third-order principle by comparing the social impacts of industrialization in Japan with those in China, and then added an extra factor to the analysis by taking into account that one of these processes occurred in the historical context of the early 1900s and the other in context of the late 1900s, I would regard the addition of this time factor as a form of additive growth or "compounding" of Third-order thinking, not a qualitative leap to Order 4 (Fischer, 1980, p. 499). This type of distinction suggests a way of making within-stage scoring distinctions, based on the fact that, within a level, skills involving more concepts develop later (Fischer, 1980; Harter, 2008).

The notion of within-stage elaboration allows us to resolve the paradox that certain highly sophisticated performances should be classified within relatively simple structural stages. Werner noted in his studies on physiognomic perception that artists continue to refine sensory and perceptive capacities long after developing more structurally differentiated conceptual skills (1956, 1957). From this observation we can infer two things: (1) that a stage skill continues to have a potential upward trajectory, within its own level, even after more complex skills have been built upon it; and, conversely, (2) that we need not develop a stage skill to virtuoso proportions in order to move on to the next stage. For example, basketball players must learn to dribble competently before they can dribble-drive, but they need not learn to dribble like Curly Neal.

On the basis of this distinction between necessary competence and "specialized, extreme developments" (Wilber, 2000b, p. 239), I would classify highly elaborate East Asian forms of interpersonal or intrasocietal perspective-taking as considerably more advanced than their Western analogs but no higher than Order 0 or 1 on an *internormative* scale. Likewise, I would classify the fancy cerebral footwork of some postmodern deconstructivism as a kind of Baryshnikov-level elaboration of Order 2 Contextualism. On this basis it does not seem to me paradoxical, for example, to classify Shweder's baroquely intellectual relativist critiques of Kohlbergian liberalism—in which he argued that group norms are founded only on the "soft sand of preferred assumption" (1982b, p. 422), "arbitrary and nonrational" selections guided by "nothing in logic and no regularity of nature" (1982a, p. 51)—as only Order 2. This classification is perhaps

supported by considering Shweder's later evolution to a position accepting universalism only "without the uniformity" (2012, p. 88), in which he acknowledged important transcultural moral ends to be "probably present to some degree in all cultural groups" (p. 98).

This distinction between necessary and extreme competence within a level allows us to retain a dialectical model of development while still allowing for intricate elaborations of thought organizations that are relatively simple in *structural* terms. The criterion for this distinction, I am suggesting, is whether the re-organization in question integrates concepts into a single abstract and inclusive whole. The mark of an integrative advance is that it renders an argument *simpler*, not more elaborate.

Dimensional/logistic growth

Structural developmentalism posits that each successive organization of thought integrates the previous organization as a unit or object of cognitive control within a broader holistic dimension. This stage-to-stage relationship can be correctly understood either as a *dialectical subject-object relation*, emphasizing that one type of cognition operates *on* another (R. L. Campbell, 2009; Mead, 1934; Schutz, 1962), or a *concept-coordination relation*, emphasizing that the new type of cognition arises from coordinating concepts at the previous stage into a hierarchical relation or general abstract category (Case, 1991; Fischer, 1980; Halford, 1982). Either viewpoint describes a logical relation that should lead us to expect certain mathematical properties of stage-to-stage growth:

1. *dimensionality* (the "objects" operated on constitute "possible values" within an infinite range) (R. L. Campbell, 2009; Fischer, 1980; Piaget & Henriques, 1978);
2. *logistic relationship* (the relationship between thought at one level and the next cannot be expressed in linear terms) (Fischer & Bidell, 2006); and
3. *analogy among all stage advances* (the distance—or difficulty of growth—between one level and the next is constant across all levels) (Commons, 2014; Dawson, 2003).

To these I would add:

4. *orthogonality* (thought valences within the new dimension escape measurement within the old, because the new dimension lies "outside" the old).

I will briefly address these properties in turn.

1. *Dimensionality*. Each new stage adds a new "source of variation" to those which existed before (Fischer, 1980, p. 481). A new source of variation can be represented geometrically as adding a dimension that coordinates concepts at the previous level of thought as *possible values*, equivalent to the relationship between a line and dots, a plane and lines, et cetera. This analogy accords with the subject-object relation in that to become able to think *about* something is to gain a perceptive dimension on it. At any one level of thought, the concepts of the previous level are the object of a cognitive control—

a transitive relation that I would argue is constant at any level of abstraction. In the ICS, for example, Order 2 constitutes a category of infinite possibilities for the norm legitimacies at Order 1; Order 3 constitutes a category of infinite possibilities for *the variations* understood at Order 2 (allowing the subject to look at those variations in multivariate rather than univariate terms); and Order 4 constitutes a category of infinite possibilities encompassing Order 3's principles. Between any two stages, the relationship is that of specific within general, concrete within abstract, instance within category, entity within process, observation within analysis, static within dynamic, one dimension within two.

2. *Logistic relationship*. Dimensional growth is expressed mathematically in log values, whereby each stage constitutes a higher power of the preceding stage. Adding a dimension of variation results in exponential growth.

3. *Analogy among all stage advances*. The relationship between stages is constant—univariate to multivariate, in terms of the stage being superseded. Progress to any stage is defined in terms of the same logical relationship—*subject-object* or *concept-coordination*—so the task of creating any level from the inputs of the previous level is essentially the same. Each level *relates* or *relativizes* the concepts of the level below. The difficulty of the task does not get harder as one moves up the scale, except that the content from which one builds the next level tends to be less available in, or demanded

by, one's cognitive environment. Using Rasch modeling (explained on page 356), Dawson (2003) has found evidence supporting this assumption of unvarying difficulty.

4. *Orthogonality*. I add this property in view of the assumption that each new and independent thought dimension arises from cognitively operating *on* the prior dimension, rather than *through* it. If we accept this assumption, then it follows that cognition in the new dimension cannot be mapped or expressed within the old one; the new is "invisible" to the old. This can be represented geometrically by the x and y axes of a coordinate system, in which movement along one axis finds no expression in the other; similarly, movement along a plane z orthogonal to both x and y would find no expression in either (Rodgers, Nicewander, & Toothaker, 1984). When operating in the three-dimensional space constituted by x, y, and z, we can observe variations in the plane defined by x and y, but when operating within that plane we cannot observe variations in the new (orthogonal) dimension generated by variation in z. In cognitive terms, thoughts arising from this dimension will appear inscrutable or paradoxical to us, or will make sense to us only through simplification. For example, Third-order meta-relativist advocacy of global democratization will appear through a Second-order simple-relativist lens to be First-order ethnocentrism. Cognitions at the higher level exist in "another world" outside the lower level's frame of conception.

Emergent pathologies

Researchers in the area of "developmental psychopathology" have suggested that stages of cognitive development are accompanied by the potential for emergent, stage-specific pathologies (Lenzenweger & Haugaard, 1996; Norcross & Goldfried, 2005; Wilber, 2001; Wilber, Engler, Brown, & Chirban, 1986). These researchers' ideas, which I summarize and reflect on below, are useful for interpreting observable differences between moderate and extreme versions of each stage.

Before I began thinking in terms of such stage "versions", I found it hard to reconcile moderate and extreme versions of a stage under a single rubric. For example, while some Second-order responses expressed a strongly relativist viewpoint, neither my theoretical assumptions nor my data as a whole could support the conclusion that a full-blown relativist viewpoint is a necessary step on the way to Transcontextualism. I have thus begun thinking of each stage as expressible through relatively healthy, moderate, *integrative* versions and relatively unhealthy, extreme, *alienated* versions.

Developmental psychopathology suggests that the nature of such alienation is particular to each stage. For example, at Order 1 it might take the form of a virulent ethnocentrism, whereas at Order 4 it might take the form of cold and spiritually desiccated rational frameworks.

In principle, what these pathologies have in common is our fixation with our current outlook and our lack of open-minded inclusiveness toward other perspectives (be they "lower" or "higher"). Pathologies at all levels, in this interpretation, tend to take the form of an overzealous identification with the insights of a given stage and a rejection of

the insights of other stages, especially the previous one. If we slide into such over-identification, we come to see our current stance not as integrating and building on the insights of the prior stage, but as wholly negating them. In this pathological state, we see those who use simpler epistemic structures not as having legitimate (if partial) insights, but as being thoroughly deluded, obstinate, or even ill-intentioned. Indeed, this intense rejection of a simpler epistemology (possibly because we associate it with certain "enemies") is a likely source of our fanatical identification with our current viewpoint. A possible direction for future research would be to test whether the *integrative* and *alienated* versions of each level correspond with measures of healthy social adjustment and personality.

Extended toward those with more *complex* thinking than our own, this intolerance causes us to mistake their opinions for more simple-minded views they superficially resemble (the "pre/post fallacy": Wilber, 2000b, p. 120). Rather than maintaining a healthy openness and self-questioning, we shut down our growth process, refusing to listen seriously to opinions at variance with our own, which we attribute to basic errors. Motivated primarily to point out the blindness of those with simpler epistemologies, we fail to notice the inadequacies of our own. We are not open to new insights because we are certain that our present perspective represents the most advanced thinking there is. We become stuck at this level, able neither to differentiate from it nor to integrate the important insights of earlier levels (Lenzenweger & Haugaard, 1996; Wilber et al., 1986).

Following the research cited above, the general form of pathology I postulate at each level is an exclusionary and totalizing identification with the *insight* of that level.

For example, pathological versions of Order 2 might become overly preoccupied with the notions of constructivism and context dependence, resulting in nihilist criticism and strong versions of relativism. These totalizing versions of constructivism may actually hinder further development since higher levels of reasoning depend on submitting constructivism to its own limiting conditions. The concepts that are differentiated at Order 2—norms and legitimacy—must be reintegrated for development to proceed and for the critical insight of Order 2 to fulfill its creative potential.

Similarly, pathological versions of Order 3 might become overly fixated on specific rule-like principles for judging across diverse contexts, elevating these injunctions to the status of ultimate ends. This notion, which Kohlberg (1984) called "rule principlism", holds that certain cross-contextually valid principles like "freedom" and "human rights" are adequate by themselves for resolving the many tensions among diverse cultures and sets of local conditions. These interpretations are tentative hypotheses.

Integrating stage-like and non-stage-like features of development

"Hard stage" assumptions

The Piagetian concept of quantum ordered stages of thought originally incorporated the assumption that subjects use a single stage consistently across situations, with little variation or mixing of stages (Kohlberg, 1976; Piaget, 1975/1985). After all, one of the basic insights of the Piagetian approach had been to reveal that thought [reflects] a logically organized pattern—a discrete structural whole that is qualitatively different from other patterns. Because mixing or alternating between such patterns would seemingly violate the holistic logical organization of thought, the tendency arose to view observations of stage inconsistency as measurement error (Bidell & Fischer, 1992; Estes, 1956; Fischer et al., 1993; Rest, 1979). [Under] this "hard stage" assumption, researchers saw their task not as the quantitative measurement of how frequently or intensively a subject uses different stage structures, but as the qualitative discovery of a single underlying thought organization for that subject (Kohlberg, 1969, pp. 348-349). In the field of moral development, for example, Kohlberg advanced a model of ladder-like growth through six stages; when he encountered observations that violated strict stage expectations, he simply revised his scoring criteria to make the data conform to these expectations (Rest, 1983).

Variability of stage performance

For the many reasons explained earlier in this chapter, the concept of qualitative stage structures is genuinely insightful. But the assumption that subjects do not vary in their stage performance—an unnecessary one, as I will explain shortly—proved early on to be untenable, not least in the area of moral development. Already a half century ago Kohlberg and his colleagues had found evidence that subjects mixed stages (Kohlberg & Kramer, 1969), and that subjects aligned with different stages under different conditions (Rest et al., 1969). In the same year, Flavell and Wohlwill (1969, p. 99) argued that stage usage has a "probabilistic character", and by 1975 Rest had argued for replacing simplistic, ladder-like stage models with complex stage models acknowledging that subjects are not "in" a stage but show "upward shifts in distributions of responses" depending on a variety of factors (p. 740). Since then, researchers have repeatedly confirmed that development does not conform with strict stage assumptions (Brainerd, 1978; Fischer & Ayoub, 1994; Flavell, 1977; R. Gelman & Baillargeon, 1983; Goldin-Meadow & Alibali, 2002; McGilly & Siegler, 1990; Siegler, 1994; Thelen & Corbetta, 2002). Instead, they have found that it proceeds through a *gradual shifting of stage usage frequencies* (Davison, 1979b; D. H. Feldman, 1980; King, Kitchener, & Wood, 1994; Rest, 1979; Siegler, 1997, 2002; P. K. Wood, 1993a). There is now a stable consensus that stage usage is not exclusive, but varies according to numerous factors, including the demands of the situation, contextual support, stress, testing conditions, and motivation (Fischer & Bidell, 2006; Yan & Fischer, 2002). As Rest (1979, p. 63) emphasized, "The question of developmental assessment should not be 'What stage is a person in?' but

rather, ‘To what extent and under what conditions does a person manifest the various types of organizations of thinking?’”.

Applied to the ICS, this less simplistic view of stages predicts that a person might continue to deepen First-order understandings of a norm system’s internal organization and integrity even as that person develops an intermediate mastery of Second-order contextualist concepts and initial intuitions of Third-order transcontextualist principles.

This ongoing usage and consolidation of lower levels is in fact predicted by the model, in accordance with the assumption of hierarchical integration. In this conception, lower levels are incorporated within thinking at all times, as complementary tiered levels of analysis, each legitimate within its own scope. Many situations simply do not require, or provide the conditions for, higher levels of analysis. Variability of stage performance is thus an expectation of the model, and is not seen as incompatible with the structured nature of thought. There is no contradiction in measuring thought as the expression of qualitative logical organization and measuring it as a quantitative value comprising different stage frequencies.

Integrating stage structure and variability: Dynamic structuralism

Based on the overwhelming evidence of variability in stage performance, some researchers suggested that development is in fact continuous and additive, without quantal leaps between stages (Flavell, 1982; Thelen & Smith, 1994). But in recent years, a consensus has emerged behind the view that the concept of qualitative stages is not incompatible with variability. This breakthrough has resulted from reinterpreting

structural developmental theory through the lens of Dynamic Systems Theory, whose orientation—as its name suggests—is to discover the order that lies within variation.

Using Dynamic Systems models sensitive to nonlinear growth and context-based variability, Fischer and his colleagues were able to show that each of us has an *optimal level* (achieved under conditions of high support) that advances in staircase-like qualitative stages, while we also have a *functional level* (achieved under conditions of low support) that advances along a continuous, ramp-like slope as we gradually increase our quantity of specific skills at new levels (Fischer & Kennedy, 1997; Fischer & Kenny, 1986; Kitchener, Lynch, Fischer, & Wood, 1993). By disaggregating the measurement of optimal and functional levels, they revealed stage-like growth discontinuities in optimal level that had been masked when performance was measured as a simple average. In doing so, they revealed that **growth is both stage-like and not stage-like**:

> The organization of behavior develops systematically, and it also varies from moment to moment. These facts are contradictory only for overly simple concepts of stage and variation. Real behaviors…function not at a single level but in a range or zone. (Fischer & Bidell, 2006, p. 332)

This concept of *developmental range* between our functional and optimal level in any domain—rooted in Vygotsky's concept of the "zone of proximal development" (1978)—accounts both for the fact that we are not "in" one stage and the fact that we do have one *optimal* stage (Fischer & Bidell, 2006, p. 317). Within this range, our performance varies widely based on context, support, motivation, and other factors. Yet each of us does have a current highest stage of performance, as well as a "center of gravity" within our

developmental range. These stage measures, while not exclusive, are none the less meaningful.

And so by shifting our focus from static structures to a dynamic range of performance that incorporates subjective and environmental factors, we can overcome the apparent contradiction between stages and variability. In this *dynamic structuralist* view, "stability and variability are complementary hallmarks of development, not separate issues…The organization of behavior clearly develops systematically, as Piaget described, and it also varies from moment to moment" (Rose & Fischer, 2009, p. 418).

Stability and transition

Both structural developmentalism and Dynamic Systems Theory predict that performance should be relatively stable at discrete stages (or "attractor states") and relatively unstable between them. What distinguishes stage periods from transition periods is equilibrium versus disequilibrium—even if the stage periods betray a suppressed form of disequilibrium in their very self-defensiveness (Kegan, 1977, pp. 14-15 and 187-192).

Actual subjects may be inconsistent and express ideas that do not sit squarely within any of the stages (i.e., that are not internally coherent). But the stages themselves are coherent, ordered states. This is what makes them relatively stable, well equilibrated attractors, such that subjects will tend to favor them as a home base in which to settle (Rest, 1983, p. 572; Thelen & Smith, 1994, p. 56).

By contrast, transitional performances are unstable, because they lack internal coherence. This instability presents itself in the characteristic vacillation observable

during transition periods (including spurts but also drops), which several researchers have recorded (Fischer & Rose, 1999; Shultz, 2003; L. J. Walker, Gustafson, & Hennig, 2001). The relative dynamic stability offered by the next ordered stage structure draws the subject to settle at that new level. Thus there is a natural selective tendency toward more deeply equilibrated cognition. And yet, as the work on cybernetics and evolutionary epistemology reminds us, the very possibility of advance is enabled by features of variability and dynamic adaptation built into the system (Bickhard & Campbell, 2003; D. T. Campbell, 1960, 1997; Heylighen, 1992). "Variability is the essential ground for exploration and selection" (van Geert & van Dijk, 2002, p. 342).

It is my contention that each of the ICS stage structures offers an equilibration of norm legitimacy perspectives appropriate to its own understanding, growing progressively in depth from equilibration in pre-legitimacy (°0) to equilibration in non-relationship (°1), non-judgment (°2), shared principles (°3), and underlying principles of principles (°4). Based on these levels one might predict that the transitional spaces should be unstable, due to the incoherence between pre-legitimacy and legitimacy (°0-°1), judgment/certainty and non-judgment/uncertainty (°1-°2), non-judgment and restoration of judgment (°2-°3), and specificity and generality (°3-°4).

The ICS's dynamic structuralist view

The ICS takes an integrative view of structure and variability grounded in dynamic structuralist theory.

The orders of the ICS constitute Piagetian stages insofar as they are identifiable, logically self-coherent, relatively discrete and stable sets of principles for organizing information. I use the word *order* to refer to ICS stages to signal that each constitutes an internal organization of thought (between the orders, thought is not orderly). The ICS adopts the following features of the Piagetian stage concept: qualitative differences, structured wholes, invariant sequence, and hierarchical integration.

For variety, I use the terms "stage", "level", and "order" more or less interchangeably in these pages, but my use of "stage" does not imply an endorsement of "hard stage" assumptions. The ICS eschews the idea that development proceeds in single, neat steps—like climbing a ladder—and that a person's thinking about internormative questions is entirely contained within a particular stage or organization. The model describes levels of *thinking*, not levels of *people*. People move about in their thinking according to many factors. Yet the thinking they express in any given argument can be described as more developed or less developed.

Relation of skills

For the purpose of understanding structural growth as *concept coordination*, we can take up Fischer's Skill Theory (Fischer, 1980; Fischer & Farrar, 1987). This theory

conceptualizes the emergent capacity of a new structure as a new dimension of *variation*. Fischer and a coauthor (Fischer & Kenny, 1986) define cognitive complexity

> in terms of a developmental scale of hierarchically ordered skill structures involving the coordination of *sources of variation* in behavior. ...[at higher levels] the sources of variation are based in a structure called an abstraction, which typically specifies an intangible characteristic for coordinating some of the sources of variation in representations (concrete characteristics of people, objects, or events). Examples of abstractions include concepts such as justice, honesty, law, and responsibility, as well as arithmetic operations such as addition and division. [italics added] (p. 58)

In the 1980 article in which Fischer offered his first full statement of Skill Theory, he classified these sources of variation into three hierarchically integrating "tiers" of skills: sensorimotor actions, concrete representations, and abstractions (he later added an embryonic stage preceding sensorimotor actions; the figures below thus refers to the latter as "Tier 2"). Together these tiers comprise the "General Skill Scale" (GSS). Figure 1 summarizes the sequential waves of development through the three tiers of the GSS, while Figure 2 offers a geometric representation of development through the "representational" and "abstract" tiers. The GSS assimilates data from numerous domains offering evidence of developmental discontinuities corresponding to the levels represented in Figure 1 and Figure 2 (Dawson, 2003; Dawson, Xie, & Wilson, 2003; Fischer & Bidell, 2006; Fischer & Kenny, 1986).

Figure 1. Fischer's General Skill Scale: Sequential Waves of Development

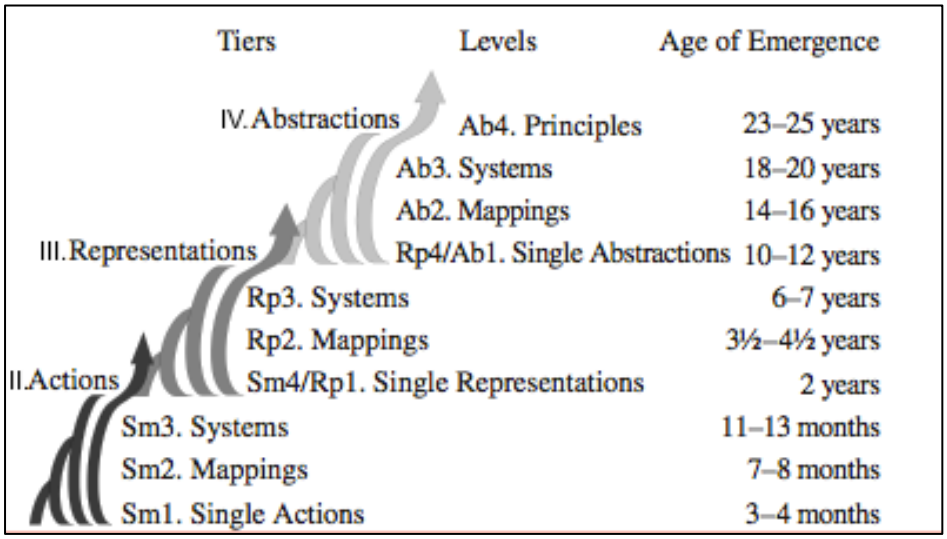


Figure 2. Geometric Illustration of Tiers 3 and 4 of Fischer's General Skill Scale

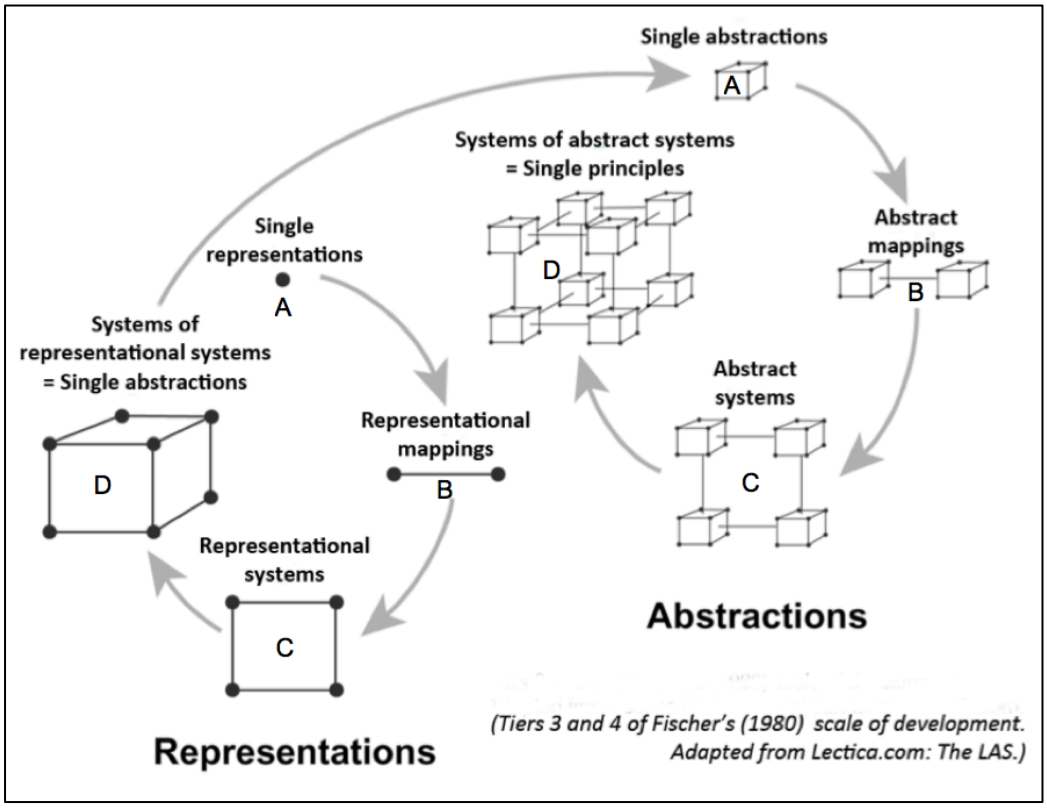


Figure 3. Geometric Illustration of the Development of Internormative Cognition

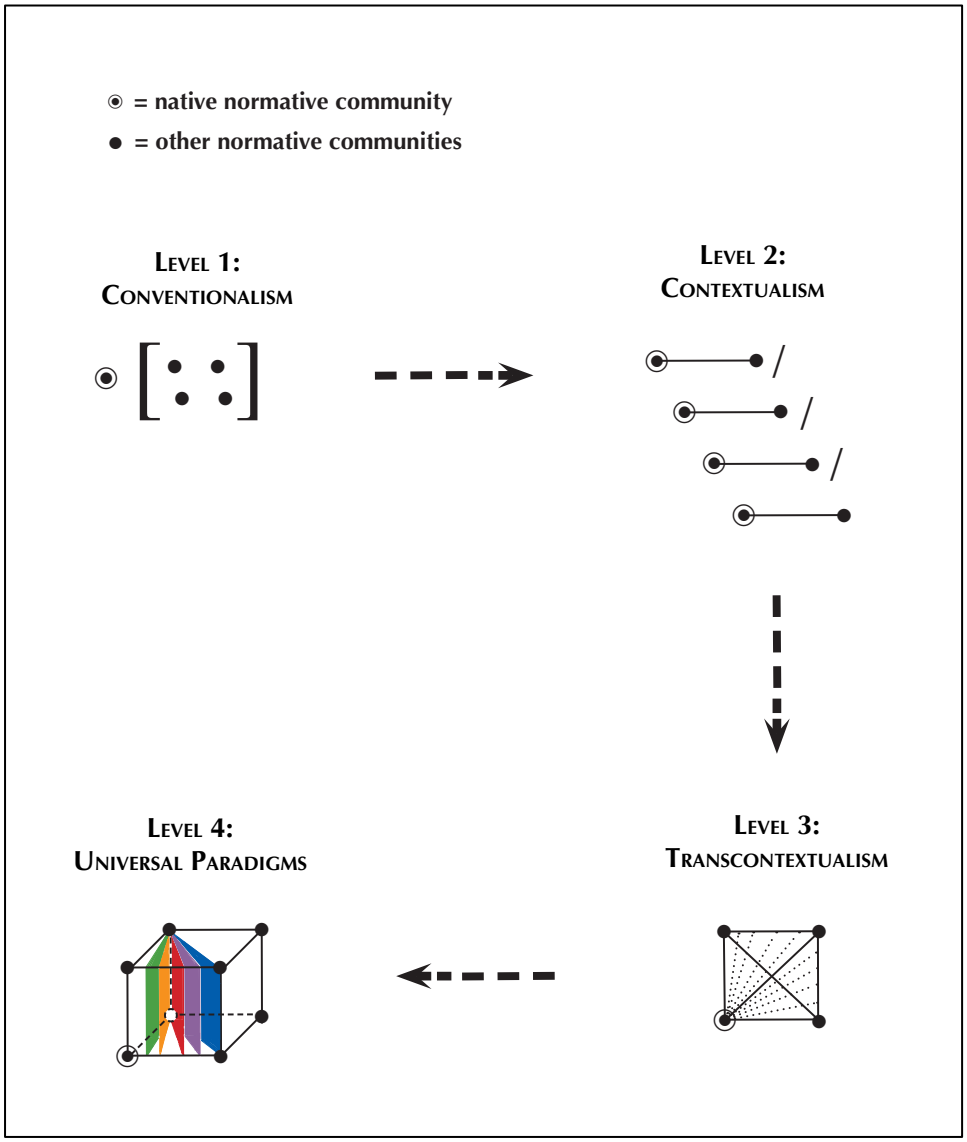


Figure 2 and Figure 3 are merely models for the sake of conceptualizing the way a person would reason through a series of implicit part-whole relations. They are not intended to imply that the mind produces internal images of this type. At the same time, if we consider here the work by Johnson-Laird and his colleagues on mental models, we might well conclude that reasoning does proceed through a type of logical modeling not unlike what these figures embody (Bucciarelli & Johnson-Laird, 2005; Johnson-Laird, 1980, 2006, 2010). After all, those structuralism contends that the mind adapts to its environment by developing abstract structures that reflect the structure of reality. Even if we do not go so far as to claim that these mental models are "internal pictures" (Boltzmann, 1974), we do consider them "iconic" in Peirce's sense that they correspond with the world (Johnson-Laird, 2010; Peirce, 1931-1958). In that regard I would suggest that the geometric images above are "accurate" insofar as the mind internally models reality as a series of nested logical categories.

With this intention in mind, let us consider the figures above. As represented geometrically in Figure 2, Fischer posits that each tier begins with (A) a "single sets" level consisting of a primary conceptual "unit". Within a tier, this "single sets" level can be visualized as a single dot [·]. Note that there are usually multiple such dots or "units" within the set [· ·], but they are not integrated into a *dimension of variation* [–] until the next level. In hypothesis, ICS Order 1 is just such a "single sets" level [· ·], because it can only consider the legitimacy of norms from the perspective of one norm system at a time. ICS Order 1 is graphically depicted as a "single sets" level in Figure 3.

At the next level (B in Figure 2), we coordinate or *map* these primary units, represented here as connecting dots [–]. This mapping—that is, this *com-prehending* of the units within a holistic category, this achievement of "reversibility' between them—generates a new cognitive dimension of variation along which we can imagine how the original unit *could be different* (just as a point can appear at any one of an infinite number of positions along a line). This corresponds hypothetically to ICS Order 2 (the Contextualist stage), in which one becomes able to think from the perspective of multiple norm systems at the same time (see Figure 3). Just as a line reveals an infinite number of potential positions for a given point, Order 2 reveals the insight that the conventional meanings one took for granted at Order 1 are socially constructed and could have potentially taken any number of other forms.

At the next level (level C in Figure 2), we coordinate the mapped relations into a "system" of variations of the original primary unit (in Piaget's terms, we achieve reversibility between the relations). In the geometric analogy, we network the lines (of variation) into a plane [∟] that allows us to **compare and coordinate variations among lines** (i.e., variations of variations). ICS Order 3 similarly possesses two dimensions of variation, because it allows us to contemplate different institutional variations within different contexts (see Figure 3). This permits us to triangulate simple, linear (one-dimensional) variations into dynamic patterns of (two-dimensional) variation that enable evaluative, creative, and potentially transformative thinking across contexts.

At the final level of the tier (level D in Figure 2), we generalize the reversibility once again by coordinating multiple systems into a metasystem or "system of systems";

that is, we network the planes into a three-dimensional figure [∠] that opens up the possibility of **coordinating systems of variation into a general framework or paradigm**. As I have noted, ICS Order 4 similarly possesses three dimensions of variation, because it permits us to coordinate different ICS Order 3 dimensions of cross-contextual judgment (see Figure 3).

As shown in Figure 2, this both culminates the tier of development and constitutes a new primary unit for the next tier. Level D *actions* constitute Level A *representations*; similarly, Level D *representations* constitute Level A *abstractions*. In this way, the pattern of development continues in cyclical fashion from tier to tier.

An important corollary of this cycling feature is that more "complex" cognition is not necessarily more intricate or complicated, because we are able to simplify or "chunk" our thoughts into more abstract units—for example, we operate on meta-systems of representations as single abstractions, or meta-systems of abstractions as single principles. We therefore do not need to assume that cognition at higher tiers requires greater absolute brain processing capacity (Burtis, 1982; Halford, 1999). This makes it reasonable to postulate that cognitive development continues during adulthood.

That more logically complex statements are not necessarily more "complicated" can be readily seen in the scaled statements about democracy presented in the introductory chapter. Consider, for example, that the statement for Order 4 ("Democracy is not an end in itself, but is merely the best system modern societies have yet discovered for supporting people's growth, self-expression, and empowerment") is not noticeably more complicated in its coordination of conceptual units than the statement for Order 2

("To say that other countries should also adopt democracy is naive and ethnocentric. The correct form of government for those countries can only be determined in context"). What makes the Fourth-order statement more *complex* is the number of differentiations between this statement and the system-level legitimacy of Order 1.

Skill Theory's concept of developmental tiers is instructive for understanding the differences between conventional and post-conventional reasoning. Conventional reasoning, which occupies the range of complexity above egocentric thinking and below post-conventional (i.e., "prior-to-society") thinking, corresponds hypothetically to Skill Theory's "Representations" tier and culminates in abstract social conventions (simultaneously the last level of the Representations tier and the first level of the Abstractions tier, as shown in Figure 2). From this point there begins a new wave of development, post-conventional reasoning, which corresponds to the movement through the "Abstractions" tier (Kitchener & King have mapped their Reflective Judgment Model onto the GSS's Abstractions tier in a similar fashion (Kitchener & Fischer, 1990; Kitchener & King, 1990)). In this wave of development, social conventions are reflected upon at multidimensional levels of abstraction, culminating in universal paradigms, which sublate the concept of conventional normativities within a new, more abstract unit of reflection.

The vital concept the ICS adopts from Skill Theory is that a new cognitive structure is in essence a new *dimension of variation*. Skill Theory follows Piagetian theory more generally in that these dimensions of variation are hierarchically integrating

in a structured manner, and that each dimension generates an emergent self-reflective ground that the previous structure does not have.

Integrating skill models and dialectical models

I am grounding the ICS at once in two seemingly disparate frameworks for modeling cognitive development: skill models (like those of Fischer, Commons, and Dawson) that describe development in terms of the hierarchical coordination of concepts or "skills", and dialectical subject-object models (like those of Perry, Kegan, and Bellah) that describe development in terms of the progressive objectification of epistemic frames, that is, meta-perspective-taking. It can be difficult to see how these two approaches are in fact two facets of the same stone. I therefore include this section to explain the underlying unity—the conception of growth as the *hierarchical organization of structures*—lest the ICS appear to lack conceptual integrity.

The most rigorous test of this unity is perhaps that of integrating the theories of Kurt Fischer and Robert Kegan, which sit at opposite ends of the neo-Piagetian spectrum as I see it. At one end you have equilibration as problem-solving (Fischer's Skill Theory) (Fischer, 1980; Fischer & Bidell, 2006). At the other end you have equilibration as ego defense (Kegan's Subject-Object Theory) (1977, 1982). Somewhat unfairly, Skill Theory might be characterized as the product of crossing Piagetian thinking with Skinner and applying it to subjects performing tasks in a laboratory, whereas Subject-Object Theory, with equal unfairness, might be characterized as the product of crossing Piagetian thinking with Freud and applying it to subjects lying on a couch. Both

descriptions are grossly oversimplified but perhaps helpful for conceptualizing the difference between task-focused and subjectivity-focused applications of structural analysis.

Both applications can be used to elucidate the transition, for example, between ICS Order 2 and Order 3. Fischer's approach would describe an ICS Order 3 principle as an "abstract system" that "relate[s] two subsets of each of two sets", "controll[ing] two sources of variation in each set" (1980, p. 486). For instance, a person might generate a transcontextual norm regarding the politicization of knowledge production by internally "relating" this politicization variable with the contextual variable; for example, comparing the impact of changes in this variable in the United States with the impact of changes in this variable in China. In doing so one "relate[s] two subsets of each of two sets", because one compares two alternative outcomes in the US context with two alternative outcomes in the Chinese context.

Meanwhile, a Kegan-style approach might describe the move to ICS Order 3 as "taking a perspective on" the "subjectivity" of a Contextualist perspective. Using this approach, we might regard the new transcontextual norm as evidence that the subject has "internalized" or "objectified" the Contextualist perspective, generating a new epistemic framework in which contexts are themselves seen to be embedded within a superordinate context, in which transcontextual resolutions are possible (Lahey et al., 2011, pp. 13, 23, 280, 288).

From either approach, what we are describing is the genesis of a holistic dimension in which the concepts at Order 2 are brought under a superordinate control

mechanism. This control can equally be described as "taking a perspective on" Order 2 (Kegan) or "controlling a source of variation" that subsumes Order 2 (Fischer). In either case, the subject is generating a new dimension that permits that subject to operate on Second-order ideas, and in which these ideas attain a coherent unity. Both approaches arise from the paradigm that sees cognitive growth as the hierarchical organization of structures. Accordingly, they can be applied to the ICS in analogous terms.

Table 1 below proposes a partial conceptual correlation of Skill Theory and Subject-Object Theory.

Table 1. Proposed Partial Conceptual Correlation of Skill Theory and Subject-Object Theory

Skill Theory (Fischer, 1980)	*Subject-Object Theory* (Kegan, 1982; Lahey et al., 2011)
Coordinate, control, relate	Coordinate, control, reflect upon
Mapped/related sets	Internally mediated concepts
Unmapped	External, not internally mediated
Source of variation	Perspective

Proposing a universal core of philosophic development

In this section I offer a synthetic model of philosophic development, integrating ideas from several developmental theoreticians including Habermas, Hallpike, Laszlo, and Wilber. This model conceptualizes philosophic growth in terms of three interrelated dimensions (autonomy, reflexivity, and comprehensiveness) representing different aspects of a single process of progressive holistic integration.

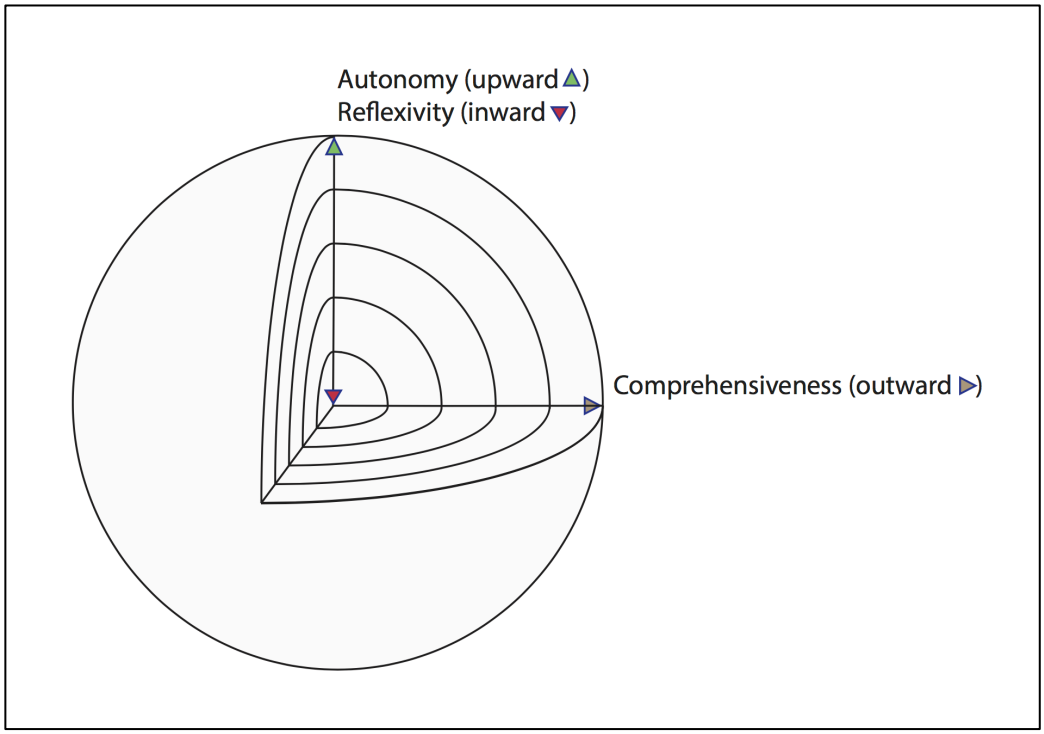
This "universal common core" describes the fundamental dimensions of growth in any domain of philosophic development, not only the internormative. My purpose in presenting it is to lay a general foundation for the argument that ICS growth is valuable and desirable. Later sections of this thesis will present specific valued qualities of ICS growth that can be conceived as corollaries of the general qualities introduced here. My contention is that these qualities provide context-independent criteria for evaluating the adequacy of internormative perspectives.

Figure 4 symbolically represents a hierarchy of five cognitive structures as a series of nested concentric spheres. The process of growth through these levels is symbolized by the lines that extend upward and outward from the center. One can conceptualize philosophic development from three perspectives:

1. *Autonomy*: the number of interpretive spheres one has outgrown as one grows "upward" in differentiation and increasing independence of mind;

2. *Reflexivity* (reflective awareness): the number of spheres one can "see" as one reflects "downward" (inward) toward the origin, peering through those levels of thought organization of which one has already become aware;
3. *Comprehensiveness*: the number of spheres one encompasses "outward" within one's sphere of interpretation (i.e., the "breadth" of one's current sphere).

Figure 4. Geometric Conceptualization of the Dimensions of Philosophic Development



Autonomy, reflexivity, and comprehensiveness can thus be understood as the *upward*, *downward*, and *outward* orientations of philosophic development. Autonomy and reflexivity evoke a vertical or growth dimension, in which we grow upward in capacity, including the capacity to reflect back downward on our own past ways of thinking.

Comprehensiveness on the other hand evokes a horizontal or egalitarian dimension, in which our interpretations become more inclusive, less discriminatory, more logically generalizable, and more universally credible. As all of this illustrates, autonomy, reflexivity and comprehensiveness are merely three ways of describing a single process of increasing holistic integration and decreasing subjective limitation.

Even though all three dimensions describe a single process, it is useful to consider the individual dimensions in isolation. This might help us to think in more specific terms about the profound social and moral consequences of the growth process, and to examine these consequences one by one, such as by examining different levels' tendency toward non-discriminatory practices (an implication of comprehensiveness), or capacity for self-criticism (an implication of reflexivity). Switching to a unidimensional view also makes it possible to operationalize the growth process into constructs that are less vague and more empirically observable than "holism" or "interpretive depth".

By examining growth from the upward, downward, and outward orientations in turn, I want to connect some of the specific features associated with philosophic development into a coherent picture:

Autonomy

Viewed from an *upward* orientation, growth into a new epistemic sphere can be seen as increased **autonomy**—the expanded independence of mind that results from outgrowing a more contextually embedded organization of meaning. From this upward-looking angle it appears as a process of dissociation, differentiation or abstraction (Latin: "drawing

away") from an interpretive schema that once held us in its grip. Each sphere is autonomous in relation its predecessors, and constrained in relation to its successors (Varela, Rosch, & Thompson, 1992). In moving upward we grow into a more active, more self-determined, and more empowered organization of meaning. Expanded autonomy is associated with many of the qualities emphasized by developmentalists, including self-authorship (Kegan, 1994), self-actualization (Maslow, 1954; Rogers, 1951), internalization of authority (Inglehart & Welzel, 2005), freedom from compulsion (Adorno, 1966/1973), and capacity for disinterested awareness (Wilber, 1995). The growth of autonomy is also associated with the expansion of our capacity to step outside conventional norms and evaluate them within a larger context, which scholars have referred to variously as a prior-to-society perspective (Kohlberg, 1984), a transcendental reference (Bellah, 1962), world rejection (Weber, 1924/1946), the logic of negation (Ienaga, 1940), or the dimension of depth (Tillich, 1958). Wilber (1998) captured the subjective experience of autonomy in his reflection,

> When I act in this worldcentric—not egocentric, not ethnocentric, but worldcentric—fashion, I am free in the deepest sense, for I am obeying not an outside force but the interior force of my own ethical reasoning: I am autonomous, I am deeply free (p. 88).

In the domain of internormative cognition, expanded autonomy results in more socially and contextually disembedded standards for judging internormative issues.

Reflexivity

Seen from a *downward* orientation, growth into a new sphere presents itself as deepened **reflexivity**—an increase in the complexity of interpretive structures that are subject to one's conscious awareness and manipulation. Whereas the upward orientation reveals epistemic expansion to be a process of separation or differentiation, the downward orientation reveals it also to be a process of internalization or integration. Looking upward, we enter into freedom from meaning structures that once determined us. Looking downward, we observe those meaning structures as objects of our cognitive control. From this latter orientation, the growth process reveals as "element" entire epistemologies that once were "principle" (Kegan, 1982). Developmental theorists have referred to the capacity bestowed by such reflexivity as objectification (Bellah, 1962), transitivity (Habermas, 1976/1979), capacity to witness (Wilber, 2000b), and ability to stand over against oneself (Tillich, 1977).

In the domain of internormative cognition, increasing reflexivity results in a deeper awareness of the limitations of, and subjective influences on, one's normative judgment.

Comprehensiveness

Seen from an *outward* or horizontal orientation, growth into a new sphere manifests itself as increased **comprehensiveness**—an expanded interpretive structure that is more inclusive, generalizable, non-discriminatory, and logically self-coherent. Each new structure provides a broader principle or context that connects otherwise disconnected

and conflicting pieces at the next level in. In this way, "comprehensiveness" signifies a more inclusive understanding—a "together-grasping" or *com-prehension*.

Each new logical structure has greater internal capacity than the one before; as such, each step outwards is a step toward organizations of meaning that are more universally tenable, logically successful, and permanently stable (for being less susceptible to overturning by a more comprehensive perspective). The conditions that scholars have associated expanded comprehensiveness include equilibrium (Piaget, 1947/2001), universalizability (Kant, 1788/1996), intersubjective validity (Habermas, 1981/1984), legitimacy (Rawls, 2001), universal credibility (Kohlberg, 1981a), inclusiveness (Inglehart & Welzel, 2005), and ethical individualism (Bellah, 2003).

In the domain of internormative cognition, growth in comprehensiveness results in the increasingly universal applicability of one's standards of judging normative issues.

To summarize the developmental dimensions, *autonomy* refers to the independence of mind that results from becoming disembedded from simpler thought organizations; *reflexivity* refers to the taking of these simpler mindsets into consciousness; and *comprehensiveness* refers to the degree to which one's viewpoint has become logically generalizable. The logical redundancy in the description of each dimension is indicative of the fact that they are merely different ways of looking at a single process of epistemological expansion. In this process, each new sphere gains autonomy from the previous sphere's limiting assumptions and boundaries, gains the capacity to reflect upon them, and expands to a more comprehensive sphere of generalization.

Conceptualizing cognitive domains

To posit distinct structures of internormative reasoning presupposes the existence of internormativity as a distinct cognitive task or *domain* of cognitive activity. This is a critical assumption, so I will address this issue at some length.

Though the question of cognitive domains has attracted much attention from psychologists over the past several decades, little clarity has resulted with respect to the content of domains, the boundaries between them, or even what constitutes a domain (Hirschfeld & Gelman, 1994; Hofer & Pintrich, 1997; Keil, 2006). Indeed, the questions of content and boundaries seem irresolvable in the absence of a settled definition. It will thus be necessary for me to briefly review the principal senses in which the term "domain" has been used, in order to offer my own definition as a foundation for positing a distinct type of growth in an "internormative domain". In reviewing the prior usage of this concept, the key underlying question will be **whether it is legitimate to define internormative cognition as a distinct domain**.

Bioevolutionary versus developmental concepts of domain

The most basic distinction in the usages of the term "domain" is that between the bioevolutionary paradigm, which views the mind as adapted to *archaic* domains through *genetic selection*, and the developmental paradigm, which views the mind as adapted to *present-day* domains through *progressive reorganizations of thought*. The bioevolutionary sense—which could hardly support the notion of an "internormative

domain"—defines domains as fields of cognition corresponding to hard-wired neural architectures (Cosmides & Tooby, 1989, 1994; Fodor, 1983; Spelke, 1988; Tooby, 1987). In this nativist paradigm, the mind is a network of specialized "modules" narrowly adapted to specific domains of cognitive activity that were essential to survival in humankind's evolutionary environment (Duchaine, Cosmides, & Tooby, 2001; Gallistel, 2000; Pinker, 1997; Scholl & Leslie, 1999, 2001; Sperber, 2002). Such biologically determined modules have been found to exist in areas of basic functioning such as perception and language (Fodor, 1983, 2000; Hauser, Chomsky, & Fitch, 2002; Pylyshyn, 1999).

If such bioevolutionary modules determined people's thinking about norms, it would not make sense to think of internormative reasoning—an intrinsically modern challenge—as an independent domain. At best, one could posit a more general and archaic domain of morality, based on such fundamental survival behaviors as social cooperation and exchange (Baumard, André, & Sperber, 2013; Baumard & Sperber, 2012; Langergraber et al., 2011; Tomasello, Melis, Tennie, Wyman, & Herrmann, 2012; Tomasello & Vaish, 2013; R. Wright, 1994). But although researchers have firmly established the Darwinian foundations of some basic forms of "mutualism", they have not established that the development of human thinking about norms is pre-programmed within innate "modules" (Bucciarelli & Johnson-Laird, 2005; Bucciarelli, Khemlani, & Johnson-Laird, 2008). Indeed, brain-imaging studies have not found neural architectures specifically evolved to engage in moral thinking (Greene & Haidt, 2002; Moll, de Oliveira-Souza, Bramati, & Grafman, 2002).

The fundamental problem with viewing the domain of normative thinking in Darwinian terms, I would argue, is that of conceptualizing the human adaptive capacity in terms of *genetic* structures rather than *cognitive* ones. While one could certainly contrive some sort of Panglossian bioevolutionary explanation to account for present-day human thought, to believe in such an explanation would ignore the fact that, since the days of humanity's linguistic and cultural takeoff, genes have exerted limited influence over the specific form our cognitive development takes (Donald, 1991; Gould & Lewontin, 1979; M. Harris, 1989), notwithstanding the recent discovery that significant post-takeoff bioevolution has occurred (Hawks, Wang, Cochran, Harpending, & Moyzis, 2007; Voight, Kudaravalli, Wen, & Pritchard, 2006; Williamson et al., 2007). Beyond the most basic levels, we must seek explanations of cognitive development not in the structure of DNA but in the mind's progressive structural adaptation to the nature of problems it considers. As Keil (2006) notes,

> although one might argue that addition precedes multiplication in the development of mathematical thought because of a maturational program, it is much more plausible to argue that addition logically precedes multiplication and that the latter cannot be understood without a sense of the former (National_Research_Council, 2001). (pp. 616-17)

The correct approach, I would suggest, is to view the mind as a flexible organ that adapts itself to the structures that make up the world, and to define "domains" as those structures. This more flexible, *developmental* approach allows us to speak of domains in any existing or potential pattern of organization in life, including post-bioevolutionary domains such as computer science and internormativity. This non-Darwinian usage of "domain" is well established among developmentalists, and among cognitive

psychologists more generally (P. Bloom, 2000; S. A. Gelman & Kalish, 2008; Gopnik & Wellman, 1994; Keil, 1981; Tisak, 1995; Turiel, 2006; Wellman & Gelman, 1998).

Even though such non-Darwinian domains are not hard wired into the brain, they can still be thought of as giving rise to "learned modularity" in the sense of domain-specific expertise (Bellah, 2011; Boyer, 2001; Demetriou & Efklides, 1994; V. Kim & Berry, 1993; Sperber, 1994; Turiel, 1983; Turiel & Davidson, 1986). Hence both the bioevolutionary and developmental viewpoints coincide in positing domain-specific lines of adaptation. The existence of domain-specific expertise is clearly an assumption of the ICS, though I do not assume that ICS growth produces "learned modularity" in the hybrid sense of acquired neural architectures (Dailey & Cottrell, 1999; Karmiloff-Smith, 1992).

Demarcating domains

Within this view of domains as areas of learned expertise, we still have the question of how to define domain boundaries. This question is problematic and not well resolved (Colby & Kohlberg, 1987; Hirschfeld & Gelman, 1994; Hofer & Pintrich, 1997; Pintrich, 2002; Rose & Fischer, 2009). The scope given to cognitive domains varies widely among scholars. Some use it in a broad sense, to refer to school subjects (e.g., science), academic disciplines (e.g., physics), or general areas of competency (e.g., logic or spatial relations) (Connell, Sheridan, & Gardner, 2003; Gardner, 1983; Keil, 1990; Pintrich, 2002; Wellman & Gelman, 1998). Others use it in a much narrower sense, distinguishing such fine-grained domains as "distributive justice", "evaluative reasoning about education", and "representation of the future self" (Damon, 1977; Dawson-Tunik, 2004;

Niedenthal, Setterlund, & Wherry, 1992). Many applications of the term seem particularly ad hoc, such as the "conventional domain" (Turiel, 1983), the "personal domain" (Nucci, 2001), and the "good life domain" (Dawson, 2001)—prompting one scholar to refer facetiously to "the domains of baseball and knock-knock jokes" (D. H. Feldman, 1980). And attempts at defining "domain" have seemed correspondingly nebulous, such as "a set of tasks that share certain qualities in common" (Commons, Danaher-Gilpin, Miller, & Goodheart, 2002, p. 25), or "thinking [that] has features distinctive from thinking about other aspects of the [world]" (Turiel, 2006, p. 827).

A structural-developmental definition of "domain"

In the absence of a clear definition, it is necessary here to operationalize the concept so as to make it reasonable to posit a specific domain of internormative cognition. This must be done in a way that derives logically from the theory underlying the model itself. I thus turn for guidance to Piaget's illuminating interpretation of cognitive development as **adaptation to a structured environment** (Piaget, 1946/1970). Unlike bioevolutionists, Piaget saw cognitive structuration as arising not from any biologically predetermined pattern, but instead from the structure inherent in the possible ways of logically organizing one's thought about a specific problem. Rooted in this structural-developmental premise, I offer the following definition of "domain":

> A domain is **any organized pattern in the world capable of generating corresponding organization in the mind.** From the subject's point of view, such a pattern presents **a set of interrelated adaptive demands that empirically tend to appear together**.

Such a definition has the advantage of being compatible with domains of any scope (because identifying any organizational pattern identifies a domain) while also providing a criterion for formal testing (that of empirically demonstrating organized thought).

A "domain" concept of such infinitely variable scope relieves us of the futile task of attempting to define what "*the*" domains are. It also accounts for the behaviorist insight that virtually any demand arising in the environment calls forth a cognitive skill of corresponding form and scope (Fischer, 1980; Jackson, Campos, & Fischer, 1978; Sameroff, 1975; Skinner, 1969). And it offers an explanation of why narrow and broad interpretations of the "structured whole" need not be mutually exclusive: because internally coherent patterns of diverse scope can coexist in the mind, just as a wall, a building, a campus, and a city can coexist as organizational patterns in physical space.

By suggesting that domains can be sliced just as narrowly or as broadly as we find meaningful to slice them, the definition offered here redirects our attention to the criteria we use to establish such meaning. These, I would suggest, should be only that the domain be empirically coherent (unlike, for example, "critical thinking" (Willingham, 2007)), and significant enough to reasonably merit investigation (unlike knock-knock jokes). Such criteria, I will show, strengthen the case for a domain of internormativity.

Domain specificity

Corollary to the concept of domain is the notion that development proceeds more or less independently in different domains, in accordance with the amount of growth stimulus (i.e., challenge and support) we experience. Many researchers have found evidence of

such domain specificity (Case, 1992; Ceci, 1989; Chi, Hutchinson, & Robin, 1989; Conway et al., 2016; Damon, 1977; Demetriou, Christou, Spanoudis, & Platsidou, 2002; Keil, 1994; Lourenço & Machado, 1996; Turiel, 1979, 1980). Even a general measure of epistemological sophistication (the Reflective Judgment Interview, described on page 334) was found to vary sharply from such seemingly related skills as deduction, statistical inference, and metacognition (King, Wood, & Mines, 1990; Kitchener, 1983; P. K. Wood, 1990, 1997). Such evidence of domain specificity supports the hypothesis that internormative reasoning exists as a distinct type of growth. The "Discriminant validity" section on page 374 will describe a plan for testing this hypothesis.

Domain synchrony and carryover

Conversely, researchers have also found evidence of developmental carryover and synchrony across related domains (Case, 1991; Fischer & Silvern, 1985; Schommer & Walker, 1995; Weinreich-Haste, 1983). To some extent, the development of complexity appears to be endogenous; that is, growth in one domain can beget growth in nearby domains. This is hypothesized to occur via dynamic interaction of related skills, or the grafting of analogous relations from one problem to another (Ayoub & Fischer, 2006; Falkenhainer, Forbus, & Gentner, 1989; Fischer & Immordino-Yang, 2002). This would explain, for example, why those who have learned a second language find it relatively easy to learn a third language. Within the domain of internormative reasoning, this would suggest that a person who has learned to reason at Order 3 in relation to law would tend to seek similar structures to address an internormative problem in relation to ethics.

With respect to the relationship between internormative reasoning and neighboring domains such as justice reasoning, I would suggest that growth in one domain may support, but is not sufficient for, analogous growth in the other.

Domain-general scales

While the stage structures in different domains are different, and develop at different rates, the scales of complexity across domains are analogous. Indeed, according to some theorists, they are all variants of the same scale (Case et al., 1996; Commons et al., 2007; Dawson-Tunik, Commons, Wilson, & Fischer, 2005; Fischer & Bidell, 2006). Neo-Piagetian task analysis schemes offer domain-general methods of classification that can be applied to validating stage schemes constructed within individual domains (Bickhard & Campbell, 2003; Case, 1985; Dawson, 2018; Fischer, 1980; Pascual-Leone, 1987).

My aim in this chapter has been to present the general theory of development underlying the Internormative Cognition Sequence, and the specific predictions it makes as to what features should be observable in the growth of internormative thinking. Along the way I have tried to show, if only with hypothetical examples, how the model could indeed be seen as embodying these predicted features. The next chapter will describe the research strategy and methods used in this study.

Chapter 3. Research Strategy and Methods

Roots of the study

Background

Before describing the formal methods used in this study, I must first acknowledge its non-scientific origins in a personal quest to integrate the diverse people, values, and ideas that have shaped my experience.

The questions and ideas driving this study arose from a lifetime of what might be called "participant observation" of internormative problematics. Growing up in a White family but deeply influenced by concurrent Black and Hispanic circles of friends, I was challenged from an early age to reconcile competing cultural logics. From this experience I developed an intense concern with understanding the origins of these diverse logics and identifying some basis on which I could integrate them. This concern found its expression in my residing in an International House during college, studying abroad, learning five foreign languages, and participating in international education ventures in six countries.

It also led me to pursue earlier graduate studies in social anthropology, which I felt would help me better understand the complex relationship between social influences and personal value judgments. With this inquiry in mind, I conducted several months of fieldwork in Mexico to produce a thesis on the process through which indigenous peasant migrants adapt their value orientations in assimilating with urban Mexican society. I

continued pursuing this intellectual concern as I taught courses in comparative sociology and anthropology at a university branch campus in Japan, and in conducting an oral history project there on how young Japanese managed to maintain a sense of personal moral continuity despite the drastic reorientation of state education at the end of World War II. As my life has progressed, I have maintained an abiding interest in the ways in which individuals make moral choices that transcend narrow forms of socialization.

Therefore the ideas in this thesis did not arise spontaneously from the research activities described below, but from the deep roots of a lifelong personal inquiry spanning various countries, disciplines, and methodologies. Given that this study was guided by pre-existing ideas, it was by no means an open inductive inquiry starting from a theoretical blank slate. But I would like to argue that these ideas have in fact enhanced the study's empirical rigor. For they did not arise from armchair theorizing, but from sustained and disciplined observation across a diverse range of communities and personal experiences. It is to this sustained and iterative engagement with the problem that I would attribute whatever degree of sensitivity I have been able to attain with respect to the subject of this study.

Here I would emphasize a point made by Kurt Fischer (1980), who argued that before one can empirically study a developmental pathway one must first understand the nature of the task involved: What exactly must we do to solve the problem in question? What concepts and relations must come under our cognitive control? To answer these questions, one must possess an emic understanding of the skill domain, and it is in this

foundational undertaking of "task analysis" that I would identify the contribution of the background just described.

Initial research focus

The initial focus of this study inherited a political theme from the Japanese oral history project, in which the relevant "value conflict" arose from an abrupt transition from militaristic imperialism to peace-championing democracy. In that context, I had become concerned with learning how such a dramatic shift had led some to break through their embeddedness within their own political socialization. I was also concerned with the contemporary revival of nationalistic education, which threatened to reverse the postwar progress toward ethical universalism in Japanese schools.

As disquieting as this was, it was clear to me that the threat from nationalistic education was still graver in China, with its totalitarian control of information and its neo-Leninist system of "ideo-political education". Thus for my doctoral research I turned my attention to the Mainland. I decided to examine whether new experiments in Chinese undergraduate education are permitting students to develop *autonomous, self-critical, universalistic modes of reasoning* about issues of international concern (such as environmental preservation, human and civil rights, history and memory, and political legitimacy).

Revised research focus

This initial focus later changed in two respects. First, I decided not to attempt to validly measure the extent to which students were developing such thinking, as the presently existing measures were, in my view, inadequate (Braskamp, Braskamp, Merrill, & Engberg, 2008; Hammer, 2012; Hammer et al., 2003), and creating a valid developmental measure of my own was clearly going to be a long-term undertaking. Instead, I chose to focus on laying the theoretical, methodological, and philosophical foundation for such measurement. This meant expanding my interview sample, both by adding non-Chinese subjects to improve external validity, and by adding an "expert sample" in order to generate adequate data for defining the upper end of the scale. It also meant shifting to a more exploratory mode of research.

Second, I concluded that my interviews were evincing two distinct types of growth toward universalism—one in terms of norm legitimation perspective, the other in terms of civic identity—and that I would drop the latter for this thesis. Clearly the two are functionally related. And indeed they intersect in various ways in Chinese discourse, such as in the debate over the possibility of "universal values". But my research suggested that these were empirically distinct and could not be measured with the rigorous unidimensionality required for a developmental scale. In the latter stages of interviewing (including the interviews for the multinational and expert samples), I shifted my focus toward examining the development of internormative perspective, and away from that of global civic perspective.

The research questions for the revised research focus were simply:

1. What patterns of meaning can be found in the way subjects make sense of problematic internormative issues?
2. Is there a developmental logic connecting these patterns, and if so, what is it?

Influence of the Chinese focus and sample

It is necessary to consider how the preponderance of Chinese research subjects may have affected the ICS, which I claim is universal. There are many idiosyncrasies of their experience that are likely to influence the development of their norm-legitimation perspectives. Among the many influences that might be expected to limit the complexity of this perspective, one could mention the anti-transcendental (i.e., society-affirming) spirit of Confucian thought (Bellah, 1957/1985, 1970c; Duiker, 1972; Hallpike, 2004; Munro, 1969, 2000; Pye, 1992; B. Schwartz, 1975b); the prevalence of essentialistic conceptions of culture and nationhood (Goldman & Perry, 2002; Vickers, 2005); the recent rise of Chinese nationalism (Gries, 2005; Hughes, 2006; Perdue, 2006; S. Zhao, 2000); the Communist Party's strict control of education, media and public discussion (Mooney, 2005; Wang, 2007); the "ideo-political education" requirement in all undergraduate curricula (P. Li, Zhong, Lin, & Zhang, 2004; Min._of_Ed._of_China, 2001; S. Zhao, 2004); and the prevalence of Party-sponsored ideologies of "Chinese characteristics" and "cultural autonomy" (Bickers, 2017; X. Chen, 2008; Hayhoe, 1987, 1989; Pan, 2009).

Conversely, one could also list reasons the Chinese subjects might be expected to have relatively *complex* norm-legitimation perspectives, such as student resistance to

nationalistic indoctrination (Fairbrother, 2003, 2004, 2005); the presence of liberal arts and internationalization initiatives at the universities where I conducted fieldwork (X. Chen, 2008; K. Fisher, 2012; Kirby & van der Wende, 2016; M. Li, 2006; Postiglione, 2009; Z. Zhao & Postiglione, 2009); the prevalence of cross-cultural comparisons in public discourse (Pan, 2009; Tu, 1991); and, critically, the fact that over half the Chinese students I interviewed were graduate students and roughly one-sixth had lived overseas. As shown in Chapter 4, the Chinese subjects did in fact range over the same structures of complexity as the non-Chinese subjects, even though they expressed those structures in characteristic ways.

Ultimately, empirical testing will determine whether the preponderance of Chinese data has biased the ICS. For several reasons, I predict that any such bias will be small. First, the ICS is a formalist model defined not in terms of substantive norms but in terms of the logically possible ways of organizing norm legitimation. Cultural variations are accounted for as alternative expressions of these legitimation structures. A previous chapter has described a stereotypical Chinese pathway through the ICS structures.

Second, my analysis was guided not only by Chinese data but my many years of prior investigation across diverse international settings. In this sense, the impact of the Chinese phase of research was not to generate the model *ex nihilo*, but to force it to account for a wider range of cultural variation than it otherwise would have. In particular I would acknowledge that the China research, combined with the oral history project in Japan, made it necessary to account for three things: (a) the particular patterns resulting from development within authoritarian settings, including a tendency to either adhere to

an ethnocentric perspective or to replace it *in toto* with a pro-Western, liberal democratic allegiance (without in fact developing a more complex perspective); (b) a typically East Asian or "collectivist" pathway through the ICS structures, with its own characteristic challenges and sticking points; and (c) a higher ceiling to development *within* conventionality than is usually found in the United States, especially a higher awareness of cultural differences. This last point illustrates how the Chinese portion of the study helped eliminate a *structural* blind spot within the model, which was its initial inability to account for a high sensitivity to cultural differences within the Conventionalist perspective. The ICS now accounts for this fact via the concept of "unmapped units".

Finally, I would add that the model continued to "work" after I began applying it to non-Chinese interviews. For this reason too, I would suggest that the impact of the original Chinese focus was to make the model appropriately broad and formalistic, rather than to bias it toward Chinese thinking.

Still, it is evident that there *is* a Chinese bias in the substantive *illustrations* of the model presented in these pages, at least at the lower levels (0-2), given that most of the undergraduates I interviewed were Chinese. I predict that future research with a wider diversity of subjects will reveal new substantive expressions of each level (especially the lower levels), but will validate the structural model.

To sum up this section, I am suggesting that my extensive immersion in Chinese thinking at the outset of the current study has had a favorable impact on the ICS, enhancing its universality and providing a check on my personal biases as a Westerner.

Analyzing the adaptation of norm-legitimation perspectives in the Chinese context has forced me to reckon with patterns of development (and stasis) quite different from those typically found in the West. As with the development of internormative reasoning itself, such challenges push a conceptual framework to be broad enough to encompass the full spectrum of human experience.

Empirical procedures

Cross-cultural fieldwork and natural observation

The way subjects make sense of the world can only be inferred through insightful and accurate interpretation. For this reason, culturally immersive fieldwork is indispensable to researching consciousness development across diverse groups. Researchers must speak subjects' language, engage in their conversations, watch what they watch, read what they read, and become thoroughly steeped in the way they think.

I have briefly described prior long-term research experiences in Mexico and Japan that contributed to my cross-cultural understanding of internormative growth. Here I will outline the fieldwork component of my Chinese research on this subject.

To learn the language and gain a deeper understanding of the thinking and learning of Chinese university students, I spent my pre-doctoral year (2008-09), two subsequent summers, and my research year (2012-13) at universities in Beijing, Shanghai, and Kunming. I also organized a symposium on the development of civic consciousness in China (Conning, Haste, & Selman, 2014), guest-lectured at various universities, participated in various conferences on Chinese education and civil society, and led student discussions on civic & moral development during a graduate course I taught at Peking University.

An important pillar for understanding my Chinese subjects was the day-to-day observation of the values, standards, interpretations, judgments, self-identifications, justifications and other structures of meaning communicated in my discourse

environment over two and a half years of study and fieldwork in China. This informal but virtually uninterrupted data stream included not only conversations with Chinese students and scholars but also observations of Chinese academic and media discourse, which offered a continuous study of internormative problematics in a natural setting. Following Piaget's "shuttle" method, this participant observation formed a progressive feedback loop with my interviewing, allowing me to combine the virtues of natural observation and direct clinical interrogation (1925, p. 192).

The clinical cognitive-developmental interview

The data-gathering for this study has been based primarily on a series of interviews aimed at identifying the deep structure of subjects' reasoning about internormative issues. The method I used in these conversations is known as the "clinical cognitive-developmental interview," pioneered by Piaget. Teams in several domains of cognitive-developmental research have used this approach—notably with Kohlberg's Moral Judgment Interview, Kegan's Subject-Object Interview, and Kitchener & King's Reflective Judgment Interview, all of which informed my own approach.

The general injunction of the clinical interview is that the researcher must discern the logic, organizing principles, and bedrock concepts that subjects use to make judgments, even when these cognitive constructions are largely invisible to the subjects themselves. The general approach is to pose a set of *problems* typical of an identifiable cognitive domain, and then probe the respondent's ability to *resolve* those problems until his or her fundamental epistemic *structures* are revealed. The stimulus must be able to

generate distinct responses for all the different levels of complexity one wishes to measure. The follow-up probes, for their part, must require respondents to (a) make a *judgment* of the best approach to the problem, and (b) exhaustively explain the *rationale* behind their judgment. Here the researcher bears the burden of continuing to probe the respondents' rationale until it appears that they have expressed the full depth of their justification for the judgment they have made. This must be done without leading the respondent.

Throughout the course of conducting and analyzing the interview, the researcher is concerned not with the specific content of the responses (e.g., "I oppose a global regime for Internet governance"), but with the epistemic depth of the considerations being enacted (e.g., "I oppose such a regime because it would result in a loss of sovereignty for my country," as opposed to "I oppose such a regime because it would enable national governments to restrict freedom of information and expression"). Following cues from the respondent, the researcher must calibrate the follow-up probes to zero in on what appears to be the most abstract level of equilibration the respondent appears able to achieve, seek confirmation of the initial stage indications, and check for finer distinctions (Colby et al., 1987; Kitchener, 1986; Lahey et al., 2011). The above procedure, in the 45-minute interview format used in this study, does not reliably disclose the stage status of any given respondent, but across a reasonably large and diverse sample does reveal the range of reasoning patterns in which most people can be expected to fall.

Initial interview design

Developmental research is oriented perforce by an initial conception as to the general direction of growth. For this I turned to the guidance of a number of disciplinary literatures, some familiar (developmental psychology, cultural anthropology, comparative sociology, cross-cultural psychology, comparative government, political philosophy, and critical theory) and some unfamiliar (moral philosophy, consciousness development, intellectual history, dynamic systems theory). As I explain in Appendix A, these literatures all suggested in one way or another that the arrow of development points from perspectives that are relatively heteronomous, unselfreflective, and concrete/particularistic toward those that are relatively autonomous, selfreflective, and abstract/universalistic.

Armed with this theoretical orientation and the Kohlberg, Kegan, and Kitchener & King interview models, I drafted an initial interview protocol for exploring development in this domain (see Appendix B). In each interview I began by having subjects read a hypothetical issue presenting contradictory ingroup and outgroup positions, but not presenting any specific approach for *resolving the tension* between these positions. I then asked them to identify the position that more closely resembled their own thinking, and to explain why. Next, I asked them to explain the thinking of the Group they did *not* agree with. Among the other questions, I always inquired in one way or another about whether it is possible to render fair and objective judgments across different societal contexts, and if so, how such judgments could be justified.

I designed the issue statement to test respondents' capacity to transcend society-specific standards and frames of reference and, more challengingly, to integrate them into a higher-order system capable of resolving the contradictions that exist among diverse worldviews. I also aimed to activate specific cognitive patterns (among those so predisposed), including ethnocentric feelings, attitude toward the possibility of cross-civilizational frameworks of value judgment, and commitment to universalistic principles such as human rights. In this way, the interview allowed me to probe subjects' capacity to construct solutions that resolve the contradictions arising at narrower levels and appeal to consensual agreement across societal boundaries.

A constant feature of the interview was a line of questioning exploring the respondent's "evolution of meaning" (Kegan, 1982, p. 39). This focuses on discovering whether the respondent's views have changed over time, and if so how they have changed and why. This line of questioning has been an important source of insights in developing the ICS.

For more information on how my typical line of questioning elicited the types of integrative skills described above, see the footnoted annotations given for each of the open-ended questions listed in Appendix D (these questions appear under Screen 5 and Screen 8).

Model-building focus

The purpose of the interviews was to collect a wide range of responses so as to identify general patterns and attempt to rationally reconstruct the domain. I did not seek to

accurately measure the sophistication of any one respondent's reasoning, or to compare the sophistication of different groups of respondents. For this reason, I did not concern myself with conducting the interview in a precisely consistent manner. On the contrary, I experimented with different lines of questioning and continuously revised my approach. Being focused on exploration rather than measurement, I took liberty to scaffold interviewees.

Pilot interviews

I piloted my initial interview protocol in early 2012 with six Chinese graduate students at a university in United States. I used the results and feedback from these interviews to iteratively revise the instrument for the purpose of eliciting validly scorable responses (this included revising the issue statement as well as the focus, wording, and sequence of the questions).

Main research phase: Interviews and focus groups

During the 2012-13 academic year I lived in China, during which time I interviewed another 34 Chinese university students. I also conducted five focus groups with university students using the same questions and clinical method as in the interviews.

Early in this period I also began a series of 30 interviews with non-Chinese, 16 of whom I selected as "experts" (defined as persons having at least 7 years of post-secondary education, a minimum of 1 year of overseas post-secondary study or work

experience, and prior research or consulting experience addressing global or international issues).

As noted earlier, the shift to a more global sample resulted from my decision to redirect my efforts toward the laying the foundation for valid developmental measurement in this domain. This entailed a more open-ended and exploratory mode of research involving continuous experimentation with new issue statements and lines of questioning. For example, I wrote up a variety of new issue statements so that I could interview "expert" respondents about an issue they knew deeply, so that knowledge deficits irrelevant to my research question would not prevent them from showing their full ability (Watson & Fischer, 1980).

The new interview tools included more globally relevant subject matter, as my original material had been tailored to be particularly meaningful for Chinese respondents. They also reflected my shift toward focusing on ways of cognitively addressing norm conflicts, with less attention to themes of civic commitment and identity. After many iterations, I eventually settled on the question set shown in Appendix C: "Sample latter-stage interview protocol".

Open-response questionnaire

In the spring of 2013, I developed an online, long-answer questionnaire intended to simulate interviews but in written form. The questionnaire had three purposes: (1) to gather large amounts of qualitative data without having to conduct or transcribe interviews; (2) to collect a wide variety of authentic responses that could be used in

formulating answer choices for a multiple-choice test; and (3) to make it possible to conduct a large-scale cross-sectional study that might offer an initial test of the ICS's validity.

I piloted the English version of the questionnaire with four US colleagues, and the Chinese version of the questionnaire with two Chinese colleagues. After making final adjustments, I used the online questionnaire to gather data from 235 respondents at a Chinese university in May 2013. Based on feedback from reviewers, I decided to exclude the cross-sectional study from this thesis. I will therefore discuss the questionnaire only in the next chapter, where it pertains to my discussion of methods development and my future research program.

Appendix D shows all three forms of the questionnaire in English and Chinese.

The abductive approach: Mapping development in dialogue with data

This study has been conducted under the assumption that both theory and data are interdependent and improve through iterative dialogue with the other. I have eschewed a narrow inductivist approach by which theory must be preceded by ostensibly neutral or "grounded" observation. Instead, I have followed an *abductive* approach, moving back and forth between normative theorizing and empirical examples of cognition to gradually approach a mutually confirming equilibrium (Kohlberg, 1981c; Kohlberg, Boyd, & Levine, 1990; Overton, 2006; Peirce, 1898/1992).

This strategy, a compromise between induction and deductive hypothesis testing, involved postulating structures of norm legitimation to explain prior observations and

then testing these postulates with new observations. As explained below, this cumulative feedback loop reformulated the model several times, always to accord with empirical reality rather than pre-existing notions. The primacy of the former manifests itself, for example, in my having posited "Contextualism" as an independent and stable structure, rather than as an unstable transitional phase, as prior theorists have done (Kegan, 1982; Kohlberg, 1979, 1981c; Kohlberg et al., 1983; Turiel, 1972; Wilber, 1995).

Based on an iterative conversation between my theoretical ideas and the sometimes surprising things I learned from my observations, I attempted to identify the core epistemological structures being used and rationally reconstruct a developmental logic linking them. I began with a simple continuum from relatively heteronomous, unselfreflective, and concrete/particularistic to relatively autonomous, selfreflective, and abstract/universalistic, with a yawning middle range for concepts that seemed intermediate. Responding to what I observed in early interviews, I added an intermediate "deconstructivist" coding category, which corresponds to what I now call the "contextualist" level. Based on subsequent rounds of interview data, I began coding "universalistic" responses into two different categories, which are now the "transcontextualist" and "universal paradigms" levels. Later, I also divided the bottom level into concrete and abstract levels, to account for an important difference I observed among responses I had been lumping together.

Among the other changes resulting from analyzing responses, three stand out. First, I eliminated the expectation for Order 2 to take the form of a strong version of

relativism (this became rather a possible pathway through that level). Second, I determined that subjects could have a sensitive cultural self-consciousness without yet having the contextualist structure. This change, which I attribute to Chinese data correcting a US assumption, made me account for two types of intercultural awareness at the conventionalist levels, and contributed to generating the hypothesis of a distinctive collectivist line of development. Finally, as noted earlier, I concluded that the responses were indicating two empirically distinct types of growth, requiring separate developmental scales.

Recruitment, sampling and administration

Recruitment

All Chinese participants in China were recruited via in-class announcements and handouts. All participants in the USA, and all non-Chinese participants in China, were recruited via personal invitation. All participants received a reasonable payment, which was larger for the lengthy questionnaire.

Sampling strategy for the interviews

During the initial China-only phase, I simply sought a mix of undergraduate and graduate students for interviews, with a rough balance of men and women. After shifting to a more global sample, I used a convenience sample seeking to interview men and women of a variety of nationalities. As noted above, I specifically sought interviews from those meeting the criteria for expertise in this skill domain.

Interviewee characteristics

The sum total of 40 Chinese interviewees (including 6 interviewed in the United States and 34 in China) included 24 females, 16 males, 10 undergraduates, 28 graduate students, and 2 professors. Their years of post-secondary education ranged from 1 to 9 (M = 5.1, SD = 2.2), counting the current school year as if completed.[1]

In the midst of conducting interviews in China, I began interviewing non-Chinese, including other foreigners in China as well as non-Chinese in the United States via teleconference or in person after returning home. The non-Chinese sample included 12 females, 18 males, 2 undergraduates, 20 graduate students, and 8 university graduates no longer in school. They ranged from 1 to 9 years of post-secondary education (M = 6.8, SD = 2.2). The 30 non-Chinese interviewees included 11 from the USA; 3 from the UK; 2 each from Israel, Eritrea, and Japan; and 1 each from Chile, Denmark, Egypt, Germany, India, Iran, Mexico, Pakistan, South Korea, and Switzerland.

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[1] I list statistics for education level rather than age, because at this level of norm legitimation perspective development the impact of age is almost entirely accounted for by education (Coder, 1975; Rest, 1979).

Table 2. Interviewee Characteristics

	n	(%)
Gender		
Female	36	(51.4)
Male	34	(48.6)
University education		
Undergraduates	12	(17.1)
Graduate students	48	(68.6)
Other graduates	10	(14.3)
Domain expertise		
"Experts"	20	(28.6)
Other	50	(71.4)
Nationality		
China	40	(57.1)
USA	11	(15.7)
Other	19	(27.1)

Note. For the purposes of this study, I defined "experts" as persons having at least 7 years of post-secondary education, a minimum of 1 year of overseas post-secondary study or work experience, and prior research or consulting experience addressing global or international issues.

Including subjects from China, the USA, and a range of other Western and non-Western societies may have contributed to generating an etic structural model sufficiently broad to encompass emic conceptual content across highly diverse cultures.

Interview administration

Interviews with Chinese respondents in China were held in private meeting rooms on campus, usually in Chinese but sometimes in a combination of Chinese and English. Interviews with non-Chinese respondents in China, or with Chinese respondents in the USA, were conducted in English, and were held either in private meeting rooms or via Skype. Most interviews lasted approximately 45 minutes.

Questionnaire sampling strategy and administration

The sampling strategy for the questionnaire was based on principles of cross-sectional study design. Because the cross-sectional component is excluded from this thesis, I omit the sampling strategy as well as information about respondent characteristics, observed covariates, validity threats, and other issues related to the cross-sectional design, as well as information about how the questionnaire was administered.

Systematically evaluating responses

Structural-developmental assessment

The technique used in evaluating developmental interviews allows the researcher to assess the depth of subjects' adaptation to a given type of cognitive challenge. Hence it is both qualitative and quantitative, combining numerical measurement with a rich understanding of subjects' organization of meaning. It is also both emic and etic—a kind of interpretive etics or "objective hermeneutics" (Habermas, 1983). That is, the researcher must understand subjects' statements from their own perspective so as to determine etically what level of development they express. Ultimately, the goal is to provide an objective (etic) account of subjects' cognition so as to develop or test scientifically productive theories, for example, regarding the course or causes of development. But these etic observations also aspire to emic validity, in that they aim to interpret subjects' cognition in a way they would themselves consider meaningful and appropriate.

As previously explained, structural assessment ignores substantive content, analyzing responses on the basis of formal dimensions of internal validity and developmental logic.

Analysis

The unit of analysis for both interviews and focus groups was not subjects, but arguments. Each subject produces a variety of arguments, not all of which are at the same level of complexity.

Argument scores may be combined in a variety of ways, depending on one's theoretical orientation, to derive a developmental score for a subject. However for this study I have not yet attempted to assign scores, as my present purpose is not to rate all the arguments but to use them for devising a system by which such ratings can be made.

Relation between the model and its data

A subject's organizing principles of thought cannot be observed directly but must be inferred speculatively through a process of dialogic interpretation (Rest, 1979, p. 17). Inevitably this method of collecting and interpreting the data reflects the researcher's existing conceptions as to what structures of thinking exist, their particular inadequacies, and the sequence in which they develop. For this reason the whole enterprise of constructive-developmental research is liable to provoke the accusation that it can only find what it is looking for. From the standpoint of this criticism, it would make more

sense to proceed inductively, without prior assumptions as to what patterns of reasoning exist and the direction in which they develop.

For several reasons I believe this critical claim is not valid. First, a researcher's conceptions regarding the structures of thinking to look for do not ideally (or, I believe, typically) arise from mere armchair speculation, but instead from the accumulated results of earlier research and analysis by scholarly communities. I have explained how my own theoretical orientation was so derived.

Second, it would be a caricature of cognitive-structuralist research to suggest that researchers simply impose their pre-drawn maps of reality on the data. In fact proper cognitive-structuralist research unfolds as a conversation between theory and data. An initial theoretical orientation guides researchers to find patterns of reasoning that are, predictably, both structured and linked by a certain logical directionality. However, the forms these patterns take and the pathways development weaves through them are ultimately investigated empirically. If researchers' initial assumptions regarding these questions are not accurate, they are quickly corrected by the data.

This feedback produces a revised theoretical model, which generates new methods (in this study, new issues and lines of questioning), which generate new data, which again revise the theoretical model (as seen in the numerous reformulations of the ICS already described). This cyclical process iteratively zeroes in on the "real" pattern of development until things "stop wiggling". Thus the process is neither purely inductive nor purely deductive, but rather an "abductive" process made up of sequential pushes and pulls between theory and data (Fischer & Dawson, 2002; Peirce, 1898/1992; Tappan et

al., 1987). To assert that the process ought to be purely inductive to be properly "scientific" is in my view naive and does not reflect the way science actually works in practice, least of all in fields that depend on phenomenological interpretation.

That *structural-developmental* researchers look for *structural*, *developmental* patterns in their data should of course strike the critically minded as a minefield of potentially self-fulfilling predictions. Yet the solutions to this problem lies within the paradigm itself, in the "saving circularity" between theory and data (Loevinger, 1978) (as cited in Kohlberg, 1981c, p. 9) (see also C. F. Feldman & Toulmin, 1975), and in the system of checks and balances of the scientific community more generally. Both solutions have the effect of rectifying errors in the researcher's pre-drawn maps.

The current formulation of the sequence has stabilized. That is, I cannot infer from existing data that any further adjustments are called for. The model both accounts for what I have observed and matches subjects' own reports as to how their thinking has evolved over time. I do not believe the current data warrants explanation by any more levels than the model now has, nor that it can be adequately explained by any fewer levels, or by a different set of adaptations. The research program described in the next chapter will test these judgments.

Limitations of this study

This study represents only the foundation of a long-term process that would be required to validate the Internormative Cognition Sequence. Its many limitations include the following:

1. Because the cross-sectional study was deferred, there is as yet no quantitative information that would make it possible even tentatively to determine whether the posited sequence represents a true sequence of development. The entire study to date has been model-constructive, so we do not as yet have a solid basis for judging whether the model holds up empirically. Validating the model will require the type of work described in Chapter 6, including longitudinal studies.
2. The sampling of interview respondents was highly unsystematic. The study began with a focus on Chinese respondents, then expanded to include a convenience sample of respondents from other nations. This non-Chinese sample, however, differed from the Chinese sample in relevant ways, most importantly in having more mean years of higher education (6.8 versus 5.1) and including only 2 undergraduates. Moreover, the entire sample included only 12 undergraduates, and no high-school students. To improve the credibility of the lower levels in the model, future work will have to include many more young subjects.
3. The instruments used were experimental tools designed to explore an uncharted domain, and as such were not established or validated instruments.

4. The study initially sought to examine a domain that was subsequently determined to consist of two separate types of growth, one of which (civic identity) was not retained in the final model. However, the analysis proceeded on the basis of the entire dataset, including data that was gathered before the civic identity component was dropped. This makes it hard to objectively determine whether the analysis was done on the basis of questions that accurately represent the domain that was ultimately defined. Validating the model will require fresh data collection with instruments that derive unambiguously from the new domain definition.
5. Order 0 (Concrete groupism) was added to the model relatively late, to account for key differences observed in responses that had been classified as Order 1. Because the sampling strategy and interviews were not designed to draw out such differences, the distinction between these levels is empirically tenuous. To retain Order 0 in the model, future work will have to include questions specifically designed to test the First-order competencies, not simply rely on observing Order 0 accidentally in the process of looking for post-First-order competencies.
6. The study produced an appropriately varied set of nine polished issue statements, winnowed from a set of several dozen that were tested. However, only six of these have been used to gather data, and most of the data was gathered with only three issues. To eliminate possible biases in the model arising from the idiosyncrasies of these issues, it will be necessary to gather more data with a wider variety of issues.

7. In addition to the above, all of the limitations listed in the next chapter for the future research program also apply to this study.

In light of these limitations, the primary contributions of this study should be seen as limited to (a) generating and illustrating an empirically testable model of structural development in a previously unexplored domain, (b) offering a philosophical basis for its logical progressiveness, and (c) laying a methodological foundation for validating it. Chapter 6 will describe a research program for such validation.

The next chapter will examine the Internormative Cognition Sequence in depth.

Chapter 4. The Internormative Cognition Sequence

The skill domain of internormative cognition

"Internormative cognition" refers to logical reasoning aimed at resolving discrepancies between norm legitimacy perspectives at the level of systems (°1), contexts (°2), or transcontextual principles (°3). It is empirically observable in the way subjects work out dilemmas subject to resolution through progressively universalized norm legitimation structures. By calling internormative cognition a "domain", I claim that it develops to some degree independently from other types of thinking, and is not adequately measurable by existing methods. It is distinguished from other domains by the nature of the logical challenge (discrepancies between norm legitimacy perspectives) and the type of validity pursued (cross-contextual norm legitimation). These challenges define the domain and the tools with which it can be studied.

The internormative domain is defined structurally (in terms of how the subject integrates norm systems) rather than substantively (in terms of specific content such as finance, governance, ethics, etc.). For this reason, it is what one might call a *skill domain*, as opposed to substantive areas of knowledge, which one might call *thematic domains* (both of these falling under the broader category of "cognitive domain").

Borrowing from Fischer (1980), one might refer to the intersection of a skill domain and a thematic domain (e.g., internormative cognition about finance issues) as a *task*. Internormative cognition can only be measured through performance on specific

tasks, because substantive content is required to observe subjects' thinking in a realistic manner. There is evidence that skill performance should vary significantly across substantive tasks (Hofer, 2000; Willingham, 2007), but there is also evidence that it should be relatively stable (Bernstein, 1996; Schommer & Walker, 1995; Tesser, 1978). I predict that subjects' development across different internormative tasks should be closely correlated, but not identical. My hypothesis is that subjects first develop a new internormative structure within a familiar thematic domain, and then transfer the skill via analogy to less familiar thematic domains (Bernstein, 1996; Thelen & Smith, 2006). It may be that internormative structures operate as cognitive "schemas" (stereotyped stimulus interpretations), allowing ready recognition of similar internal relations across different thematic domains (Rest et al., 1999b; S. E. Taylor & Crocker, 1981).

The existence of internormative reasoning as a coherent and independent domain of structural adaptation, and the correlation of internormative growth across different thematic areas, is subject to confirmation by the empirical tests described in Chapter 6.

Relation to existing models (preview)

I posit that the specific challenges of internormative cognition are unique, and result in forms of equilibration that do not develop as a natural consequence of growth in other domains. I will address this issue in detail in Chapter 5, after fully elucidating what I mean by internormative growth.

Common core structure of the ICS: Cross-system norm legitimation

Developmental stage models have been criticized for defining stages in terms of a diverse set of characteristics such that it is difficult to discern a single essential factor at work (Kuhn & Weinstock, 2002). Moreover, from a theoretical perspective, an internally consistent model should be able to define all stages in terms of a universal structural feature. Here I would like to argue that the ICS does possess such an essential factor—*cross-system norm legitimation*—and that the progressive deepening of the basis for this legitimation parsimoniously explains the relation between the diverse characteristics of successive stages. This common core links the definition of the domain, the philosophical criterion of adequacy, the psychological theory as to what drives growth, and the methodology for empirically observing this growth.

This common core factor is a domain-specific instance of the "universal core" of philosophic development described in Chapter 2, because it represents the increasing depth of one's capacity to reflect on and autonomously legitimize norms in a comprehensive way. This abstract structural criterion is independent of history, culture, gender or other contingent influences because it refers to nothing more than the very ways in which norm consensus can potentially be organized.

The drive toward the *coherence* of norm legitimation across systems is the impetus of development in this domain. The awareness of conflicting versions of norm legitimacy produces a tension that drives subjects to integrate these versions under a

universal validity criterion accessible to their current thinking structure. This is a way of saying that subjects try to figure out how disparate norm systems can *make sense together*. Here I adopt the premise that humans are driven by a natural desire for intellectual wholeness, as James did when he spoke of our passion for "integrity", as Baldwin did when he spoke of "coherence", as Erikson did when he spoke of "inner unity", and as Piaget did when he spoke of "reversibility" or "equilibrium" (Baldwin, 1906/1976, p. 273; E. Erikson, 1959, p. 101; W. James, 1897/1979, p. 59; Piaget, 1947/2001, p. 4; 1972, p. 32). This desire to grasp things together, to *com-prehend* them, compels subjects to organize higher-order conceptions of norm legitimacy which transcend discrepancies that seem contradictory at lower levels of complexity.

The result is a progression of increasingly deep and stable foundations for universal consensus:

- From the **Concrete Groupist** perspective (°0), subjects do not experience the need for such a consensus, because they do not yet understand the concept of norm system legitimacy even for their own society. If asked to think about ways of unifying different social or cultural systems, they conceive such an idea in concrete terms analogous to interpersonal relations, such as one society imposing its will on others.
- From the **Conventional** perspective (°1), subjects understand the concept of norm system legitimacy, but perceive different norm systems as isolated units in zero-sum relation. From this viewpoint they experience a rudimentary kind of equilibrium in that they see no need of integrating norm perspectives, which they

interpret as primordially different natural entities. From this viewpoint subjects still cannot relate the perspectives of two norm systems, so their only perceived basis for consensus is either for each system to pursue its own separate path or for one system to impose itself on the rest. Whereas from the Concrete Groupist perspective subjects can only conceive such imposition concretely, as the imposition of will, from the Conventional perspective they can conceive it in rational terms, as the generalization of a particular system. Such "generalized particularism" (Eisenstadt, 2000) constitutes a shallow and unstable basis for universal consensus, because it has no principled grounds for rejecting ethnocentric imposition. This perspective can only underpin either an imperialist or an isolationist/balance-of-power theory of international relations, embodying the generalization of non-generalizable values.

- **Contextualism** (°2) takes an important step toward integrating norm systems by recognizing that they are not primordially different "natural" entities, but instead are arbitrarily different outcomes of a single process of norm construction. From this perspective, subjects come to see different norm systems as essentially interchangeable variations within a single holistic dimension. This perspective is more mutually balanced than the conventionalist because it respects different context-specific practices as intrinsically valid, and does not tolerate ethnocentric imposition. However, it only allows subjects to compare such practices relativistically, for it does not coordinate variations into a *system* in which they could be objectively evaluated. It therefore does not provide a consensual basis

for *resolving* norm discrepancies across context—only a basis for mutually refraining from judgment. This underpins a theory of international relations that is protective of local self-determination but remains unable to justify global ethical standards under which the activities of different communities might be coordinated.

- The **Transcontextualist** perspective (°3) overcomes this incommensurability through the capacity to consider irreducible contextual differences and other types of variations *simultaneously*. This multivariate mode of comparison allows subjects to recognize the objective patterns that operate independently across context. Such systematic patterns underpin validly transcontextual normative principles, which provide a consensual, non-ethnocentric, and non-arbitrary basis for integrating norm systems. However, because the resulting principles are limited to specific dimensions of comparison, they do not provide a completely comprehensive or stable basis for resolving norm discrepancies. The result is a theory of international relations that offers only fragmentary systems of integration.
- **Universal Paradigms** (°4) provide a more stable and comprehensive basis for integration, by articulating the common characteristics and logical foundations unifying diverse transcontextual principles. These paradigms can thus be applied without arbitrary limitation.

In this way, each order addresses the limitations of the last by creating a more stable basis for legitimizing norms across systems. All five orders respond to the same requirement of equilibrated legitimation, but to distinct degrees of depth. The ICS thus describes a progressive structural adaptation to a single challenge that defines the skill domain.

Each scheme of internormative legitimation generates a mode of universal consensus appropriate to its own understanding. Although each of the structures differs profoundly from the others, they all respond to the same criterion of adequacy. Hence the more advanced notions of universality are derived from the same principles of reversibility intrinsic to the lower levels. The progressive generalization of this reversibility produces a series of increasingly inclusive categories (internal legitimacy of norm systems, contextual contingency, transcontextual principles, and universal paradigms) that gradually add depth to our mode of conceptualizing universal consensus.

Why do the first two orders have similar approaches to international affairs?

Contextualism's non-interventionist approach to internormative questions superficially resembles the Conventionalism's isolationist view, but differs from it structurally. The latter does not coordinate the perspectives of two norm systems, so it thinks of systems as relating to each other through competition or zero-sum tradeoffs. It cannot conceive a non-ethnocentric way for a norm system to be externally judged, because it assumes that each system possesses the status of a pregiven, de facto standard. Conversely, Contextualism coordinates norm systems into a single dimension of infinite valid variation. This undermines their status as natural, pregiven entities, rendering them subject to reflective criticism. This integration of norm systems into a single abstract dimension is the first of two steps required to develop transcontextual normative principles (the second is coordinating multiple variations of this dimension simultaneously). But since this first step provides only a unidimensional, simple-relativistic space for comparing norm systems, it provides no basis for transcontextual judgment, thereby resembling Order 1 when the latter takes the isolationist/national sovereignty form. This resemblance is only superficial, because Order 2's non-interventionism is self-reflective (based on the deconstruction of norm system validity), whereas Order 1's isolationism is grounded in the unself-reflective assumption that each norm system is a de facto standard. This non-principled isolationism is in fact ethnocentric even if it does not impose one group's standard on others.

Expanding universalization

At every level, there is a characteristic sense of what is *universally valid*. This criterion evolves as progressively deeper challenges of generalization are encountered. Order 1 generates a rudimentary universality by acknowledging the internal integrity of all norm systems. At this level, we might justify a norm as universally valid on the basis of national law or sovereignty, claims which are "universal" in the superficial sense of being available to all societies. Yet questions of international and interethnic concern cannot rely on such principles, because they have no means to secure cooperation other than competition and zero-sum compromises. This means that Conventionalism's "universal validity" is arbitrarily limited to whatever positions different communities can work out based on a balancing or coincidence of their separate internal objectives. Such a system is vulnerable to ethnocentric imposition if the power of different communities is imbalanced. Contextualism provides for a more stable and balanced interpretation of universal validity by undermining ethnocentric notions of cultural superiority, and acknowledging that all systems are the result of fortuitous contextual factors. But this validity is again arbitrarily limited, this time by the contingencies of context. Transcontextualism overcomes this arbitrariness by generating a notion of universal validity based on principles that are recognized to operate systematically across context. The universality of this level is limited only by the specific nature of the principles it generates. Universal Paradigms resolves this limitation by defining universal validity in terms of the frameworks or processes through which Transcontextualist principles can be coordinated.

Through the stages, the property of universalization becomes less limited. Conventionalism makes it possible to acknowledge the normativities of all individual communities. But its ethnocentric perspective means that universality stops at the level of mutual recognition, a formula that only works when the communities remain mutually isolated. Contextualism similarly acknowledges the normativities of individual communities, but is more responsible to them because it recognizes their historically contingent quality and rejects ethnocentric imposition. This permits persons from different systems to interact with a degree of harmony, but provides no objective court of appeal when different norm perspectives require adjudication. It therefore requires the interacting parties to operate on one normative turf or another, or on the basis of some "least common denominator" norm that may be unsatisfactory to both sides (Conning, 2015, p. 121). Transcontextualism conserves Contextualism's responsibility to each community's historical situation, but adds generalized principles for integrating their normative perspectives. Yet this integration itself is limited, because the principles (a) compete with each other, (b) may need to be balanced in different ways according to the situation, and (c) may not be equally suitable for alignment with the accidental features of a given system. For this reason, no single Transcontextualist principle is universalizable to all situations. The criterion of universality thus exerts pressure on the subject to consider what underlying justification might integrate these principles such that it could be applied generally. This quality defines Universal Paradigms.

Integration of normative perspectives

The core task of this domain is the relation of separate organized normative patterns. This task comes into being when we grasp (at °1) that such patterns are internally logical while being mutually unintegrated. Thus the basic building block of the domain is the concept of norm system integrity, and the basic action of the domain is to coordinate such building blocks in a mutually valid way.

Like Kohlbergian justice reasoning, internormative reasoning can be understood as a balanced coordination of perspectives. Kohlberg argued that judgments of justice required "taking the viewpoints of others conceived as *subjects* and coordinating those viewpoints" (1981b, p. 194). His emphasis on "others conceived as *subjects*" points to the child's discovery that other persons possess their own internal consciousness and integrity through time. The analogue in the internormative domain is the adult's consciousness of society as a holistic and internally organized norm *system*. Like seeing a person as a *subject*, seeing society as a *system* involves the capacity to perceive an internal integrity and logical unity. Once we grasp that a society's different norms partake of this internal logic, we are able to consider normative questions from a systemic perspective, seeing norms as *legitimate within a system*. Internormative reasoning thus involves our coordinating different systemic perspectives of norm legitimation.

Neither justice reasoning nor internormative reasoning is reducible to the psychological skill of perspective-taking, because both rest on a philosophical criterion. That criterion is the **balanced resolution of the conflicts between perspectives**. Whereas equilibration in justice judgments involves resolving conflicting personal claims

through the principle of *reciprocity* (Kohlberg, 1973a, p. 642), equilibration in internormative judgments involves reconciling norm legitimation perspectives through the principle of ***internormative legitimacy* (IL)**, i.e., that which seems to us to be logically justifiable across the systems in question. Compelled to maintain this logical coherence, we formulate judgments according to the most profound criterion of IL we are able to grasp.

Successive pivots of this core axis result in a deepening progression of *legitimacy perspectives*:

- °0: *Pre-legitimacy* (we have not yet grasped norm system legitimacy)
- °1: *Norm systems gain ultimate legitimacy* (sublating interpersonal norms)
- °2: *Contexts gain ultimate legitimacy* (sublating norm systems)
- °3: *Transcontextual principles gain ultimate legitimacy* (sublating contextual contingency)
- °4: *General processes of principle justification gain ultimate legitimacy* (sublating principles)

Having once attained one of these legitimacy perspectives, we are not satisfied to resolve norm discrepancies with a less profound one, because the perception of incoherence would remain. Compelled to maintain our personal integrity, we feel obligated to justify our judgments in terms of the most profound legitimacy perspective we grasp. Thus a newly discovered structure becomes our own personal norm legitimation perspective.

Internormative legitimacy is conceptualized in a more deeply equilibrated way with each perspective. At perspectives lower than Universal Paradigms, norm legitimation is subject to arbitrary influence by group (°1), context (°2), or specific principles (°3). Each new stage structure envisions IL in a less conditional, more categorical, and more stably balanced way than the one before. IL thus represents the "logic" for reconciling diverse norm perspectives, just as justice represents the "logic" for reconciling the perspectives of subjects (Kohlberg, 1981b, p. 200).

This logic moves in the direction of progressively deepened resolution of discrepancies among normative perspectives. In this progression, the subject does not coordinate the perspectives of *subjects*, but of *norm systems*, internalized in the form of conceptual structures. At this level, the developmental progression of *interpersonal* perspective-taking repeats itself in a more abstract progression of *internormative* perspective-taking.

Internormative legitimacy

I am currently using the term *internormative legitimacy* (IL) to refer to the core validity criterion common to all the levels. My usage of "legitimacy" is rooted in the philosophical discourse on the concept, which I might venture to summarize as pointing to *that which is reasonably justifiable* (Benhabib, 1989; J. Cohen, 1989; Habermas, 1973/1975, 1992/1996; Keohane & Buchanan, 2006; Rawls, 1996, 1997, 2001; Sternberger, 1968; Weber, 1921–22/1978). Rooted particularly in Habermas's conception of the term, I will use it to refer to that which is *intersubjectively* justifiable.

Because internormativity incorporates normativity, its intersubjective justification operates at two levels: *within* systems and *across* systems. Within systems, "intersubjective" means "between persons"; norms adjudicate what actions are justifiable between persons. Across systems, "intersubjective" means "between normative communities" or "between subjects of different normative communities"; internormativity adjudicates what norms are justifiable across such communities. **The core challenge of internormative reasoning is to reconcile these two levels of intersubjectivity**, that is, to legitimize judgments simultaneously within norm systems and between them. This requires incorporating an understanding of how particular norm systems legitimately work, and integrating those systems into a normative supersystem. This task is distinct from traditional Kantian universalizing in that it operates not simply to produce generalizable principles for governing relations between *subjects*, but specifically on integrating disconnected normative *systems*, each bound to a particular context defined by history, culture, geography, socioeconomic development and other factors.

I refer to the common core criterion as "internormative legitimacy", rather than "universalizability", because this criterion does not generate specific policies to be universally applied. Instead, it provides a general structure for validly evaluating policies whose specific forms vary with context. In seeking to integrate diverse norm systems, we are forced up a ladder of abstraction, because only *some* local particularities lack internormative legitimacy, while others are simply relative to context. The specific local form legitimacy takes is indeterminate. In order to encompass such relativistic variation,

we are forced to construct abstract principles of evaluation capable of integrating diverse local expressions of IL within a common holism.

Structural analysis

Earlier I claimed that growth through all ICS stages can be understood in terms of a common core criterion—*internormative legitimacy*. The progressive abstraction and generalization of this criterion, I suggested, is what relates successive ICS stages. In this section, I want to present a structural analysis of this growth, which I believe can be understood as the recursive coordination of norm system legitimacies in zero, one, two, and three "dimensions" (i.e., levels of reflective abstraction). I also want to argue that this structural specification is compatible both with domain-general scales and with established domain-specific models in cognate domains.

Recursive coordination of norm system legitimacies

As I noted earlier in this chapter, the basic building block of internormative cognition is the concept of the legitimate (i.e., internally organized) norm system. The subject's comprehension of this structure marks the genesis of internormative thinking—Order 1. At this level, the legitimacies of different norm systems are not yet coordinated; that is, they are considered sui generis, rather than as contingent outcomes of a single process. Hence we can say that Order 1 provides zero dimensions of coordination of norm system legitimacies [· ·]. From that baseline, ICS growth proceeds through the coordination of those foundational First-order units into one dimension [–] (°2), two dimensions [∟] (°3), and three dimensions [⦜] (°4). Whereas, at Order 1, norm system legitimacies are unrelated [· ·], at Order 2 they are related as variant outcomes of a single process [–], at

Order 3 they are related as elements of a system [∟], and finally at Order 4 they are related as elements of a meta-system [⦜].

This description of ICS growth as the zero, one, two, and three-dimensional coordination of a fundamental object of cognition is analogous to what Fischer has postulated as a "developmental tier" in his General Skill Scale (GSS) (Fischer, 1980; Fischer & Bidell, 2006). Table 3 below proposes a correspondence between the ICS and the "Abstractions" tier of the GSS. It also shows the ICS's correspondence with King & Kitchener's Reflective Judgment Model (RJM) (1994), a description of epistemological development that has been similarly calibrated with the GSS (Kitchener & Fischer, 1990). I include the RJM to show the ICS's compatibility with an established domain-specific model in a related domain.

As you can see in Table 3 below, I have tentatively positioned Orders 1-4 of the ICS to correspond with the "Abstractions" tier of the GSS. This is based on the types of skills Fischer cites for this tier. As examples of the "Abstract sets" level, Fischer cites such skills as developing an abstract personal identity, or understanding the concept of society (1980, p. 495). He suggests that the development of those skills through the rest of the Abstractions tier corresponds to the skills required, for example, to direct a corporation, or write an effective novel (p. 496). Such skills are advanced enough that it may perhaps be justifiable to posit a correspondence between this tier and the ICS.

That said, let me be the first to point out that the type of reasoning described by the ICS stages seems rather complex for the corresponding GSS stages, and that I am not yet entirely convinced of this correspondence. It may well turn out that the skills used at

ICS Order 1 are too complex to correspond with Fischer's Abstract Sets. This would not affect the ICS's plausibility, because the GSS's "tiers", with their classifications of "mappings" [–], "systems" [∟], et cetera, are arbitrarily designated. That is, any level is in fact a "mapping" of the previous level, a "system" of the one before that, and so on. As far as we know from existing evidence, there are no special discontinuities in growth between the "tiers" as they are defined in the GSS (Commons et al., 1998; Fischer & Bidell, 2006). The tiers simply offer a heuristic for subdividing a long sequence of development into conceptually tractable phases (in this sense, it seems not coincindental that the tiers have exactly as many internal levels as the number of physical dimensions we earthlings are able to conceptualize). Hence the ICS would be no less plausible if we positioned it as starting, for example, at the "Abstract systems" level of the GSS. In any event, I do not regard the existence or non-existence of a precise ICS-GSS correspondence to be dispositive of the question of the ICS's validity as a model in its own right.

Table 3. Postulated Correlation among ICS, General Skill Scale, & Reflective Judgment Model

Internormative Cognition Sequence	*General Skill Scale* Fischer (1980, pp. 494-496)	*Reflective Judgment Model* Kitchener and King (1990, pp. 65-67)
Order 0: Concrete groupism. We do not yet grasp the idea of a legitimate norm system, either of our own society or of other societies. We do not conceive societies as abstract norm systems but as literal-concrete entities, akin to groups of persons.	*Representational systems*. We grasp systematic relations between concrete variables, but are unable to organize such systems into abstract concepts.	*Level 3*. We grasp that knowledge is not always accessible, but assume the truth will be known at a future date. We still rely on authorities as the source of knowledge.
Order 1: Conventionalism. We grasp the legitimacy (internal orderedness) of individual norm systems. But we cannot relate these legitimacies (lacks "reversibility"), so we see them as distinct quasi-natural entities. We see variations as pre-given, not as variant outcomes of a single process.	*Sets of abstractions*. We grasp intangible concepts unifying broad classes of things, but are unable to relate multiple such concepts.	*Level 4*. We grasp the concept of knowledge in the abstract, but are unable to relate multiple abstract perspectives, so justifications remain idiosyncratic.
Order 2: Contextualism. We are able to relate norms in different systems as analogies with a reversible logic/legitimacy. We grasp that, because the norms of systems A and B are both *interchangeably* logical while being incompatible, norm system logic is not a natural feature of reality but is constructed relative to its context. Yet, we are unable to relate *variance* in norms in one context with variance in norms in another (i.e., we are unable to *relate relationships between abstractions*), so we cannot systematically evaluate norm effectiveness across contexts.	*Mappings of abstractions*. We can relate multiple abstract concepts at once. We grasp that variations in one abstract set produce predictable variations in another. However, we are unable to coordinate these relationships into a more general system.	*Level 5*. We grasp that "knowledge must be understood within a context", and see justifications as interpretations from particular perspectives. However, we are unable to "relate several abstractions into a system that allows comparison across contexts".
Order 3: Transcontextualism. Unlike L2, we are able to "control two sources of variation in each of two abstract sets" (paraphrasing Fischer, 1980). In ICS terms, this means relating variance of context with other variables applied across those contexts, eg comparing *trajectories* of different systems to illuminate common trends while also accounting for irreducible uniqueness. The cognitive result is a cross-contextual reversibility of norms, allowing us to envision how *changing* a norm would play out across different contexts. We are not yet able to conceptually unify multiple such principles.	*Systems of abstractions*. We can relate two subsets of two abstractions into a single skill, thereby becoming able to coordinate relationships into systematic comparisons or conclusions. However, we are unable to coordinate multiple such systems.	*Level 6*. We grasp that some judgments can be judged more reliable than others, independent of context. We are able to "compare the properties of two contexts and combine them into an abstract system that allows for simple judgments". However, such conclusions are not generalizable beyond specific areas.
Order 4: Universal paradigms. We are able to conceptualize a common foundation or holistic dimension unifying multiple transcontextual principles, e.g., we might unify principles of decentralized decision-making in *governance*, *economic productivity*, and *public expression* into a single paradigmatic criterion of empowerment.	*Metasystems of abstractions*. We relate multiple abstract systems in a single skill, forming a new kind of set.	*Level 7*. We are able to "synthesize several stage 6 systems into a general framework or principle of inquiry".

The table on the preceding page is a way of suggesting that ICS growth occurs through recursive coordinations of a baseline concept. This concept (norm system legitimacy) is non-existent at Order 0; emerges at Order 1; and then is subject to *relation* within one dimension (*contextual*), two dimensions (comparative-contextual, or *transcontextual*), and finally three dimensions (meta-transcontextual, or *paradigmatic*).

At the baseline of this sequence (°1), we grasp the existence of different internally ordered norm systems, but do not "map" them; that is, we cannot coordinate the perspectives of two different systems into a single dimension in which they would each represent mere hypothetical possibilities. From this perspective, we see each norm system as a distinct natural entity, whose justifications are assumed to be idiosyncratic.

Order 2 opens the process of coordinating different legitimate norm systems, by achieving reversibility between them. What "reversibility" means in this context is the understanding that the difference between norm systems is arbitrarily constructed; their logic or *legitimacy* is interchangeable. Another group's classist worldview makes just as much sense as our own group's egalitarian worldview, considering their sociohistorical context, and vice versa. Within this new dimension of reflective, "prior-to-society" hypothesizing, we no longer can think of norms as "naturally" legitimate, but only as legitimate in relation to a context. At this stage, it is logical for us to conclude that norms are arbitrarily constructed, because this is the only balanced way to integrate contradictory norm systems within a single dimension of comparison.

As I previously noted, this one-dimensional, static-relativistic relation of norm systems is comparatively well understood. Consequently I do not believe that describing this stage of growth will add very much to what we already know. I would therefore like to focus this structural analysis on a transition I believe is far less well understood, which is the move to transcontextual thinking.

Relating relationships: the Third-order move

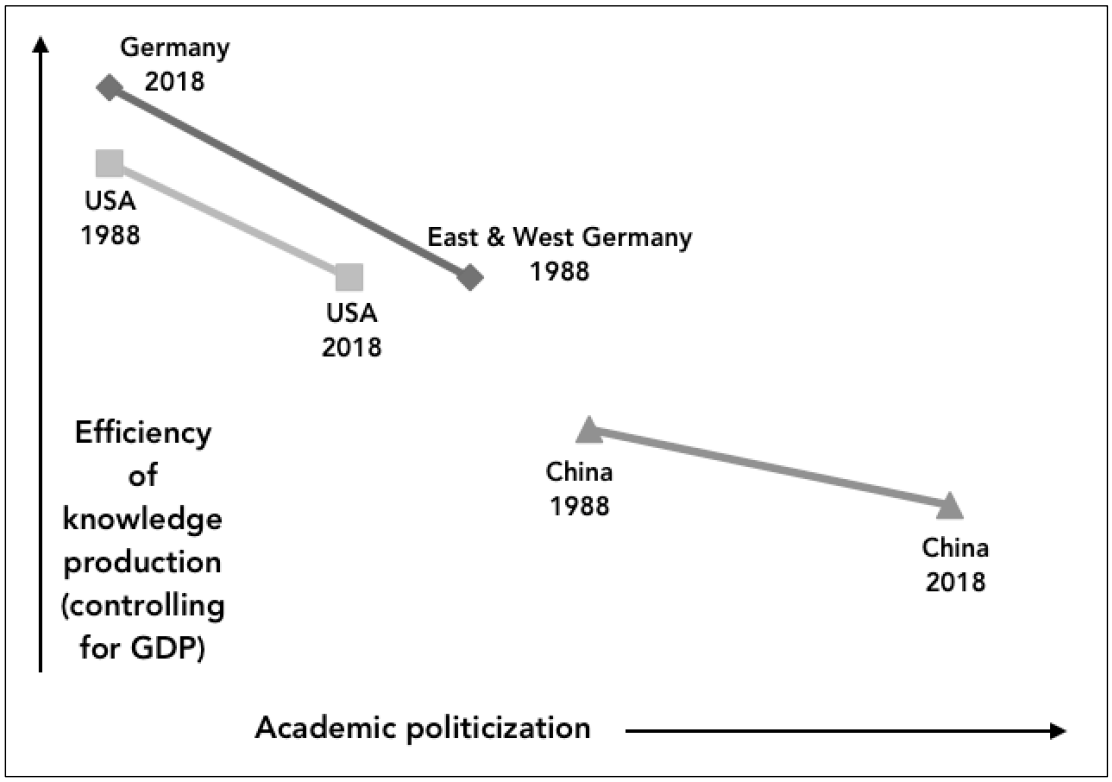
The essence of this transition, I believe, is the move toward *relating relationships* rather than relating static entities. "Relating relationships" is equivalent to Fischer's "abstract systems", which "relate two subsets of each of two sets" (1980, p. 486). This two-dimensional relating is what makes it possible to validly evaluate norms across contexts, because it allows us to evaluate the effects of a norm variation *while also taking irreducible contextual variation into account*. In this way, we can come to understand that the same kind of norm change has the same kind of impact across various contexts, *even though the norm must express itself differently in different contexts*. It is this simultaneous relation of two variables—one normative and one contextual—that separates this *legitimate* transcontextual normative thinking from a "blanket" First-order recommendation that does not take context into account.

For example, imagine that a group of scholars from Germany have recommended to Communist Party officials in China that they make efforts to depoliticize knowledge production in their country. The scholars' recommendation is more likely to be perceived as cross-contextually valid if they can show a parallel between the politicization-

knowledge production *relationship* in the German setting and the same relationship in one or more other settings. This would allow the officials in China to see that the recommendation does not necessarily represent the simplistic transposing of a German practice, but can be seen to apply across diverse settings.

To make this point, the scholars might present the officials with a graph like Figure 5 below. This graph suggests a transcontextual relationship between academic politicization and knowledge production controlling for GDP, with 1988 and 2018 values for China, Germany, and the USA. These values suggest that the situation has worsened in the USA and China while improving in Germany. Although these values are hypothetical, any combination of times and countries would be likely to show some sort of relationship.

Figure 5. Relating Diachronic Relationships into a Transcontextual Principle



Note. This graph presents a hypothetical relationship between academic politicization and knowledge production in three countries, after controlling for GDP. The parallel among the three relationships suggests a transcontextual norm of "academic autonomy".

I include this graph to illustrate two points. First, that by relating relationships across contexts we can generate a transcontextual principle (in this case, we might call it "academic autonomy"). And second, that this principle is not a simplistic, First-order conclusion imposing one country's idea of academic autonomy on everyone else. For the principle only arises *after* taking irreducible contextual uniqueness into account. That is, the principle does not impose a single line, or even assume that lines will eventually converge. Instead, it encompasses multiple pathways and endpoints according to an

already integrated Second-order principle of *contextual fit*. This is what I mean when I say that Order 3 does not *negate* contexts, but is *made out of* contexts. The cross-contextual principle simply cannot be derived unless the relation in question has shown itself to be meaningfully expressible in various countries, cultures, communities, or whatever the "contexts" in question may be. And these local expressions of the principle are never exactly the same, because they must be anchored within the *internal* logic of each setting. Unlike a First-order conception of academic autonomy, a Third-order conception is *indeterminate*.

To ascertain whether the German scholars' recommendation of academic depoliticization arises from Order 1 or Order 3 thinking, we could interview them to see if they can articulate how that relationship expresses itself in at least two different contexts. They might begin by describing how this relationship has expressed itself in the German context. Here they might note that the detrimental effect of academic politicization is evident in comparing East and West Germany, which had very different levels of academic efficiency despite sharing a common cultural tradition (this synchronic comparison is not represented in the graph). Then they might point out the overall German trend away from academic politicization since 1988, and some local ways in which this has improved the efficiency of research over time. Then they might turn to the US case, describing an overall trend in the opposite direction. Here the issues would be very different, including such things as universities' reliance on public funding for research, the political homogeneity of many campus communities, and political polarization within a rigid two-party system and fragmented media environment. Finally,

the scholars might note a similarly negative trend in China, but again under a very different set of conditions. These include not only a hardening Leninist system, but also the legacies of a Confucian heritage that continues to organize the distribution of research opportunities on the basis of interpersonal relationships rather than open individualistic competition. In this way, the scholars would demonstrate the Third-order skill of identifying a globally legitimate norm of academic autonomy while also accounting for the particular ways that norm would need to be institutionalized in different local settings.

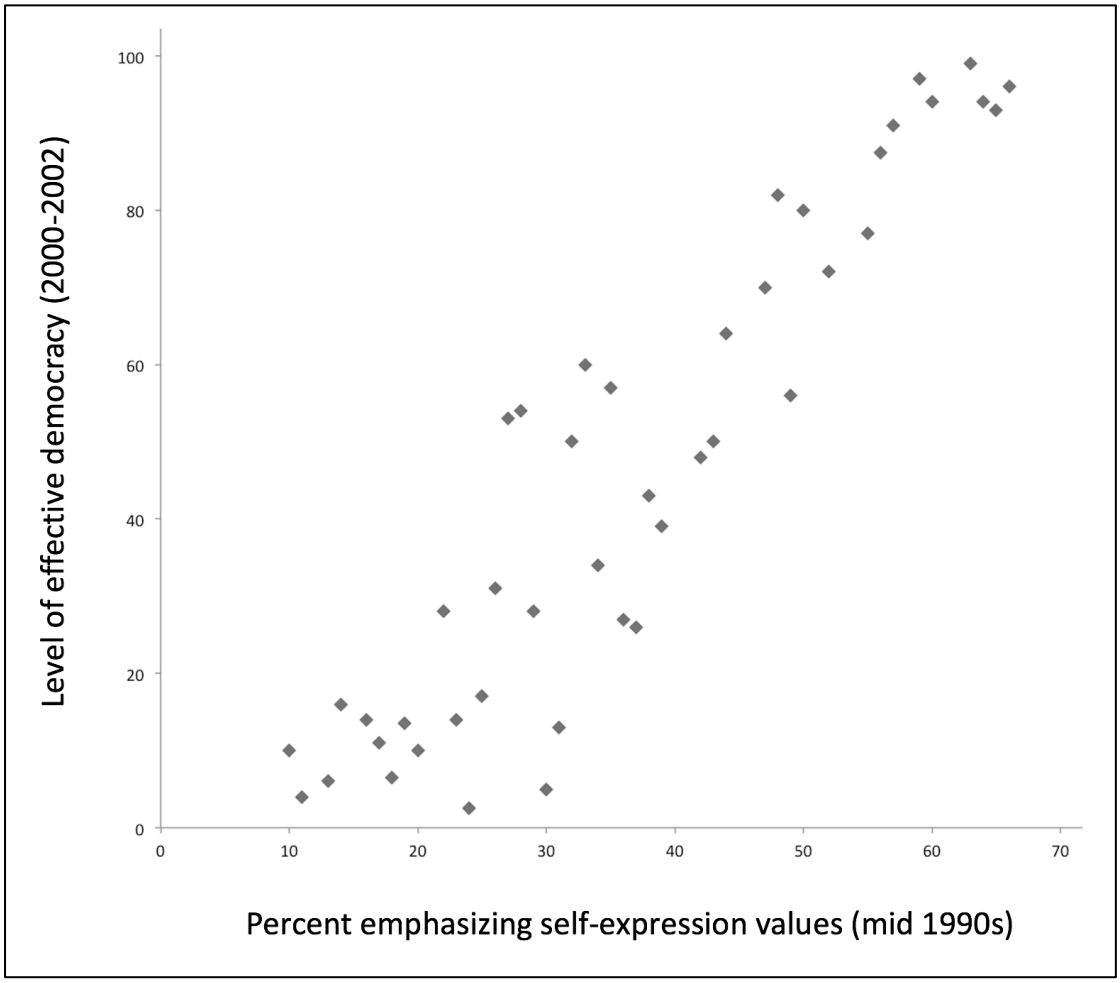
These are the types of diverse local illustrations—political, historical, social, and cultural—that distinguish a Third-order conception of academic autonomy from a First-order conception. Whereas a First-order conception would be stumped by the challenge, "That is just your Western idea of how academia should function", a Third-order conception would (a) understand that the concept cannot be applied as a Procrustean rule to other contexts (the °2 insight), and (b) be able to explain how that concept can nonetheless be expressed through different local lenses (the °3 insight). Naturally such insights require a deep familiarity with settings that are deeply different. This is what I mean when I say that one cannot build structure without content.

The previous graph uses three diachronic, within-context relationships to illustrate my suggestion that Order 3 arises from *relating relationships* across contexts. I want to add here that I believe a transcontextual principle can also be derived *synchronically*, by discerning a relationship among multiple contexts measured at one time.

For example, consider the data in Figure 6 below. This graph uses World Values Survey data from 73 nations to show the relationship between the nations' "self-

expression values" (i.e., cultural emphasis on individual autonomy) in the mid 1990s and their level of "effective democracy" several years later. Here "effective democracy" is measured as the product of a nation's Freedom House liberal democracy score and its World Bank anticorruption score. To simplify the graphing procedure, some dots represent averages of multiple countries.

Figure 6. Relating Synchronic Relationships into a Transcontextual Principle



Note. Reproduced with permission from *Modernization, Cultural Change, and Democracy: The Human Development Sequence*, by R. Inglehart and C. Welzel, p. 155. Copyright 2005 by the authors.

Awareness of the relationship shown in this graph could give rise to a transcontextual principle favoring individual autonomy (at least as far as its consequences for governance are concerned). The information shown here, while synchronic, is none the less sufficient for formulating a transcontextual norm favoring individual autonomy, because it allows

the subject to see how a *change* in that direction has the same kind of impact (more effective democracy) across contexts. My contention is that this type of analysis offers the same leverage toward Order 3 as the diachronic comparison illustrated in Figure 5, because it is *implicitly diachronic*. That is, a subject who is *relating relationships across contexts* is relating the assumed future impact of a change in context A with the assumed future impact of a change in context B: a *comparison* (=synchronic) of assumed *impacts* (=diachronic).

Hence the criterion I am suggesting for Third-order cognition does not go so far as to require "coordinating historical and comparative thinking", but simply requires *relating relationships across contexts*. This skill can be constructed from the purely synchronic observations of Figure 6. Even without diachronic observations, the general trend of the graph is sufficient for imagining how any given norm system might be affected by changing its degree of emphasis on individual autonomy. The diachronic careers of different norm systems through this trend are visibly multilinear, which means that a system can institutionalize this norm in its own way, authentic to its own internal logic. We can thus affirm that each community is indeed unique and yet bound within a common set of possibilistic conditions.

Now it is true that the earlier of the last two graphs is in one sense a more powerful stimulus for Third-order thinking, in that it is explicitly both diachronic *and* synchronic. And from an educational standpoint I would suggest that the practice of *coordinating* historical and comparative thinking is likely to be the most effective route toward grasping that all systems fit within a single framework. But what I am trying to

argue is that change over time is already implicit in the difference between settings, and vice versa. Comparative thinking is implicitly historical (or futuristic), just as historical (or futuristic) thinking is implicitly comparative.

Coordinating reversibilities

I have been arguing that the essence of the Order 2-Order 3 transition is the move toward relating *relationships* rather than static entities. Whereas Order 2 relates *static qualities* into *differences*, Order 3 relates *relationships* into *systems*. Now "static qualities" or "static entities" might sound like the language of Order 1, not Order 2. Indeed, a distinctive Second-order skill is to understand that a norm system is not bound by an essential, pregiven nature, but *could have been constructed in another way*. In good Piagetian fashion, we might call this skill "historical reversibility" or "reversibility through time". Likewise, the Second Order understands that *your norm system has the same kind of internal logic or legitimacy as my norm system*, even though they contradict each other. We might call this "comparative reversibility" or "reversibility through space". Either of these two reversibilities represents a major advance over Conventionalism, precisely because what was once static is now dynamic.

Why, then, do I describe Order 2 as "relating static entities"? The answer is that, while Order 2 can generate a "relativistic" dimension by relating one norm system to another, or by relating a norm system to its own alternative possibilities, *it cannot do both things at once*. It can *alternate* between these relationships, but it cannot *integrate* them. In Piagetian terms, while Order 2 is endowed with both "comparative reversibility" and

"historical reversibility", it can only use *one reversibility at a time*. The subject who cannot go beyond a Second-order argument is thus perfectly capable of critically reflecting on two norm systems, but at the moment of *comparing* them must treat them as if they were absolutes *in relation to each other*, by assuming that the *difference* between them possesses an absolute quality. It is as if the one "reversibility" available to the subject were being occupied by the cross-system comparison, forcing the systems being compared to be treated as absolutes for the purpose of comparing them.

Here I am well into the realm of theoretical speculation, but I would like to push the idea just a little further. We might imagine that when a subject using Order 2 puts two systems in comparison, that subject takes the perspectives of the two *systems*, rather than the perspectives of two *variable* systems (despite being able to think of them as variables *individually*). And so that same dimension the subject uses to see each of the systems individually as dynamic variables ends up situating them as static entities at the moment of comparing them. This re-simplification is not paradoxical, because the same complexity of cognitive operations is being used: one-dimensional reversibility [–]. Whether the subject relativizes a norm system within its own set of alternative possibilities (historical reversibility) or within a comparison of different contexts (comparative reversibility), that subject is using a single dimension of reversibility or relativization.

What Order 3 requires is to hold this relativization in mind while also applying a second variable across it. This two-dimensional reversibility [∟] allows us to think of norm systems as relativistic while *also* judging them to be relatively strong or weak on

some dimension, because we are able to consider the context-independent consequences of varying a norm while maintaining contextual differences at the same time. In this way the critical reflection upon norms that was already possible at Order 2 can be applied simultaneously across multiple contexts without violating the relativistic principle.

Such cross-contextual judgments appear, from a Second-order perspective, to be simplistic First-order judgments, because Order 2 cannot conceive how these judgments *incorporate* the relativistic principle. For Order 2 lacks that extra dimension in which to hold the idea of irreducible uniqueness while generalizing judgment. Hence while Order 2 is very good at relativizing every norm system to its unique context, it has no context for that context, and so cannot take that context *itself* as the object of critical reflection. Or to put it another way, it has no meta-context from which to reflect critically upon its critical reflection, or relativize its relativization. For this reason, Second-order thought can only compare two norm systems within a simplistic dimension of *difference* that provides no grounds for evaluative comparison.

The evaluative dimension

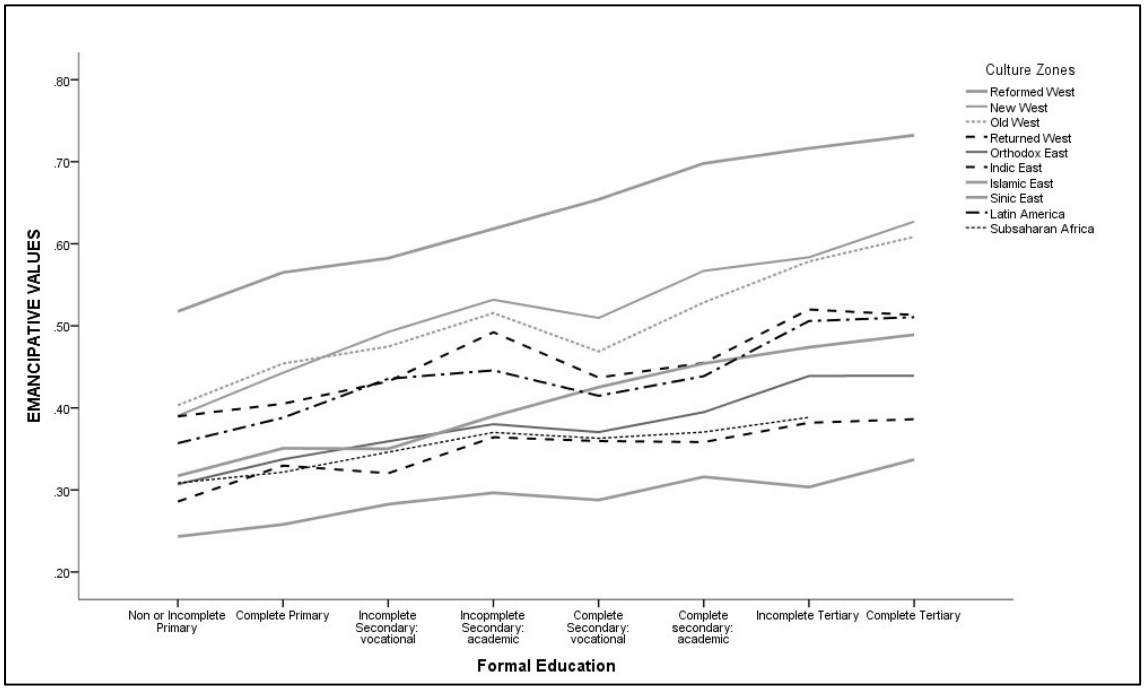
In contrast to Order 2, Order 3 does not reduce cross-context comparisons to absolutistic *differences*, but considers these differences as a subset of possibilities within a larger set of possibilities in which contexts and norms are simultaneously variable. This meta-hypothesizing of norm systems as not only mere possibilities, but possibilities within

possibilities, is what I mean when I say that Order 3 is two dimensions of abstraction removed from norm systems.

As suggested by Figure 5 and Figure 6, reasoning about norms through two dimensions allows us to see that the same type of change has the same type of impact across systems without negating their unique context-dependent qualities. This opens up a non-arbitrary dimension of evaluation, in which we can legitimately judge norms across contexts.

Consider, for example, what Figure 7 below suggests about the shift toward "emancipative values" (a cultural emphasis on freedom of choice and equality of opportunities) (Welzel, 2013, p. xxv). The data in Figure 7 is drawn from 95 societies aggregated into ten "culture zones" according to historical ideological influences (mainly religion and Communism). These observations indicate that the difference between emancipative and non-emancipative values is not simply a cultural one—between, for example, "more Westernized" and "less Westernized" societies—but is in part a developmental one. This allows us to overcome a simple-relativistic argument against the need for emancipative values in "less Westernized" societies, by emphasizing that more complex thinkers within those societies also tend to move in the direction of such values. Naturally one might counter that those persons are simply Western-influenced, but that would be an empirical question. My aim here is not to claim that the relationship shown in Figure 7 empirically exists independent of Western influence, but merely to suggest that the contemplation of such possibilities is the stuff from which a transcontextual perspective is built.

Figure 7. Relationships between Education and "Emancipative Values"



Note. Data is drawn from 95 societies surveyed at least once by the World Values Survey/European Value Study. "Reformed West" = Protestant Europe; "New West" = Australia, New Zealand, Canada, United States; "Old West" = Catholic & Greek Orthodox regions of Europe + Israel; "Returned West" = ex-Communist non-Orthodox Central & Eastern Europe. Reproduced with permission from *Freedom Rising: Human Empowerment and the Quest for Emancipation* by C. Welzel, p. 109. Copyright 2013 by Christian Welzel.

Figure 7 also illustrates how relating *relationships*, instead of static entities, allows Order 3 to avoid misleadingly simplistic comparisons. For example, were we simply to compare the values data from different *societies*, we would have to compare them as consolidated *averages*. Because respondents from less developed regions tend to be less educated, we would end up comparing relatively educated persons from developed regions with relatively uneducated persons from developing regions. This one-dimensional comparison—comparing static entities or attributes rather than

relationships—would make it easy to conclude that the difference in ethical values is simply cultural—and arbitrary. By contrast, the two-dimensional comparison shown in the graph reveals a striking transcontextual trend toward emancipative values among those with greater opportunities for cognitive mobilization—a *non*-arbitrary criterion. In this way, Order 3's habit of *relating relationships across contexts* provides the objective, non-arbitrary evaluative space that Second-order thought lacks.

In this new evaluative space, we think not simply in terms of static *differences*, but in terms of *different ways of structuring those differences*, and the consequences those variations would have on other variables. By stepping outside of Order 2's single dimension of norm system variation [–], we become able to coordinate that dimension with other dimensions of its kind [∟]. This skill is analogous, at a much higher level of abstraction, to that of the child who learns to coordinate the dimensions of height and width in figuring out that pouring milk from a mug into a tall thin glass does not create more milk (Piaget & Szeminske, 1941). As Kegan's analysis (1977, 1982) has clarified, what occurs in both instances is that we learn to objectify the dimension of thought in which we were formerly embedded—moving it from subject to object—with the result that we can operate *on* it within a larger frame of thought. In the transition to Order 3, we objectify a single dimension of contextual thinking [–] within a still larger context of comparative-contextual or *transcontextual* thinking [∟].

From this meta-contextual perspective, we view both societies and institutions as possibilities within possibilities, variations within variations. Contemplating the parallel, non-converging lines of the graph above, we can imagine how a relatively non-

emancipatory society could become more emancipatory while still being authentic to its own historical trajectory, and, conversely, how emancipatory norms could be adapted into that society while still being true to their animating principles.

From the univariate to the multivariate

The move from Order 2's unidimensional comparisons (of static entities or attributes) to Order 3's bidimensional comparisons (of dynamic relationships) is structurally analogous to a shift from univariate and multivariate statistics—which can also be understood as a shift from linear space to planar space, or from a number line to a coordinate system. All of these shifts result from the simultaneous coordination of multiple variables.

At Order 2, we have a single dimension of variation in which to relate norm systems. In this univariate (number line) conception, we can imagine how any norm system could have been legitimately organized another way (historical reversibility), and can understand why the logics of any two norm systems are interchangeable (comparative reversibility). But these variations have an inescapably subjective quality, for we cannot evaluate them by their objective consequences on another variable. Whatever comparisons we make within this linear dimension can only be considered descriptive, because we cannot infer anything from them beyond the difference itself. This is why at Order 2 we perceive differences as ultimately arbitrary, as a young Richard Shweder did in asserting that group norms are founded only on the "soft sand of preferred assumption" (1982b, p. 422), "arbitrary and nonrational" selections guided by "nothing in logic and no regularity of nature" (1982a, p. 51).

The move to Order 3, I am suggesting, adds a second *simultaneous* dimension of variation, a second coordinate axis orthogonal to the single axis of Order 2 (what I mean here by "orthogonal" is not that the two variables are perfectly uncorrelated, but only that they are contemplated *independently*, operating *upon* each other, rather than being lumped into one composite variable). This shifts us from binary, unorganized, descriptive comparisons in linear space to multivariate, systematic, inferential comparisons in planar space. We thus become able to evaluate the objective consequences that modulating one variable has on other variables (provided we have sufficiently varied observations), and to compare different norm systems as sets of relative possibilities rather than fixed essences. In the "planar space" of Order 3's "coordinate system", we can relate relationships across contexts, modulating and controlling variables to draw systematic conclusions, as illustrated in the preceding three figures. In this meta-contextual dimension we are able to recognize, as an older Shweder did, that patterns can be *global yet indeterminate*, applying "to some degree in all cultural groups" (2012, p. 98), only "without the uniformity" we once supposed such generalizations necessarily entailed (p. 88).

The importance of quantitative variation

I suggested above that Order 3's "coordinate system" requires a sufficient variety of observations in order to consider the consequences of a norm variation systematically. After all, a "variable" is only as good as the variation it gives us. In order to "relate relationships across contexts", the bare minimum number of observations is two. For

example, we might compare the relationship between academic politicization and efficiency of knowledge production across China and Japan. But it would be difficult to draw any clear or reliable conclusion from only these two cases, because we could not, for example, evaluate the impact of the political system while holding culture constant, or vice versa. By adding democratic Taiwan as a third observation, we could take a large step toward isolating the influence of culture (by comparing China and Taiwan with Japan) or political system (by comparing democratic Japan and Taiwan with communist China). Already with only three cases, our observations defy unidimensional comparison: In cultural heritage, China and Taiwan resemble each other, contrasting with Japan; while in their political systems, Japan and Taiwan are closer, with China as the outlier; while in regards to their status within the international system, the outlier is Taiwan. Adding Hong Kong as a fourth observation would be still better, as it would help us partial out the confound resulting from the cultural legacy of Japan's colonial rule over Taiwan. And so forth. From a statistical perspective, such "small *n*" comparisons would of course remain weak. But from a cognitive perspective, they seem to me quite sufficient for generating Third-order thinking. What is required, I believe, is simply to have varied enough observations to begin to see societies as outcomes of systematic, multidimensional variation, rather than binary, essentialistic variation.

Here again we see that without content, we cannot build structure. Quantitative growth is the stuff of qualitative growth. The more norm systems we observe, the more we are able to "recognize which variables are controlled and which are not in a given comparison" (Lenski, 2005, pp. 205-206). Accounting for more such observations can

lead, at the "large *n*" extreme, to such robustly cross-contextual trends as that shown in Figure 7 on page 205, which reveals the change toward emancipative values to be a uniformly developmental feature across ten culture zones encompassing nearly the entire human population. Accounting for an exceptionally vast range of societies, this data allows us to control for the cultural variable to see the systematic relationship between cognitive growth and emancipative values, or, if you will, to "control" for education level to identify the systematic advantages of emancipative values across cultures.

The inadequacy of unidimensional comparison

I have been arguing that the move to Order 3 can be understood structurally as the simultaneous, orthogonal coordination of two variables, and that this shift provides the leverage with which to derive legitimate norms from cross-contextual observations. Implicit in this analysis is the claim that the unidimensional comparisons of Order 2 are too simplistic to comprehend the systematic unity that underlies difference. We can find indirect support for this claim if we look to the literature on ideological complexity, which has produced similar comparisons of unidimensional and bidimensional thought.

For instance, researchers have found substantial evidence that unidimensional categorization is inadequate for comprehending political ideologies. It is standard in public discourse to classify politics along the single dimension of "left vs. right" or "progressive vs. conservative". Even political psychologists tend to take these categories for granted (Alford, Funk, & Hibbing, 2005; Jost, Glaser, Kruglanski, & Sulloway, 2003; Jost et al., 2007). And yet this single-factor categorization of political ideas has proved

unable to explain the data on political preferences and behavior (Conover & Feldman, 1984; S. Feldman, 2003; S. Feldman & Johnston, 2014; Kinder, 1998). As several researchers have found, such data only appear systematic when analyzed with models comprising two independent factors, such as social ideology and economic ideology (Duckitt, 2001; Duckitt, Wagner, du Plessis, & Birum, 2002; S. Feldman & Johnston, 2014; S. H. Schwartz, 1992).

Thinking simultaneously across economic and social dimensions allows us to understand how two ideologies, such as libertarianism and progressivism, or libertarianism and traditional conservatism, are similar and different at the same time. This bidimensional framework is cognitively more taxing, and requires knowledge of how the two dimensions relate to one another. It demands that we think about a person's politics as deriving from a *relation* of different ideas, rather than as a static attribute. But it gets us much closer to the truth, which is why it accounts so much better for the data on political preferences and behavior. And by allowing citizens to see those of other political affiliations as being not only different, but simultaneously similar to themselves, such thinking may have the potential to attenuate the polarization that prevails in unidimensional party systems such as that of the United States.

It seems that the vital feature of true bidimensional thinking is that the two factors be contemplated *orthogonally*, such that each operates autonomously and in relation to the other (to repeat, I am not using "orthogonal" to mean "perfectly uncorrelated"). In their studies on within-subject value conflict, Tetlock and his colleagues found that subjects scored higher on the Integrative Complexity scale when asked questions that

forced them to consider value dimensions they found highly *conflicting* (Tetlock, 1986, 2000; Tetlock, Peterson, & Lerner, 1996). Similarly, Tetlock and others have found that political centrists, who tend to balance *conflicting* values such as personal freedom and social equality, score higher on the same scale (Tetlock, 1984; Tetlock, Armor, & Peterson, 1994; Thoemmes & Conway, 2007). What may perhaps be suggested here is that the perception of conflict between the values forces subjects to consider them *independently* of each other, compelling them to arrive at political judgments from a bidimensional framework.

Presumably this is more likely to occur for persons, such as libertarians in the United States, whose ideas are non-binary in terms of the standard categorization of their political community. While there are certainly simple-minded libertarians—persons who think of libertarianism as a static attribute or self-identification, rather than a systematic *relation* of independent ideas—it is not possible to *logically* account for this ideology within the country's predominant unidimensional political framework. Hence we should expect to find relatively few simple-minded libertarians in that community, which is indeed the case (S. Feldman & Johnston, 2014; G. E. Marcus et al., 1995; McClosky & Brill, 1983). In the ways just noted, the research on ideological complexity clarifies the inadequacy of unidimensional comparative frameworks.

One can find further support for this idea in the many breakthroughs of social theory that have been made with frameworks that coordinated two orthogonal dimensions of variation. One can point, for example, to Parsons's axes of Internal/External and Instrumental/Consummatory, which revealed four irreducible subsystems present in any

society (organism, personality, social system, and cultural system) (1964, 1970); Wilber's axes of Interior/Exterior and Individual/Collective, which organize a comprehensive theory of universal evolution (1995); Welzel's axes of Secularization/Sacralization and Emancipative values/Survival values, which effectively account for cross-cultural trajectories of value change (2013); and Schwartz's axes of Openness to change/Conservation and Self-transcendence/Self-enhancement (1992, 1996), which effectively systematized Rokeach's unwieldy list of 36 political values (1973). What all of these frameworks have in common is that they use two dimensions of variation to capture a *systematic* phenomenon (a *relation of relationships*) that cannot be collapsed into a single variable. In so doing, they rule out unicausal explanations, defining any process of change or continuity in terms of separate and independent dynamics. In all of these cases, the fundamental breakthrough was made by using two orthogonal dimensions to transcend the limitations of one-dimensional comparison.

The importance of these dimensions' being orthogonal is that they account for differences that are *mutually irreducible*. For the problem with unidimensional frameworks is that they reduce one type of variation into another from which it is in fact autonomous. For instance, the "modernization" debate was long shackled by a false dichotomy between unicausal explanations of norm development emphasizing either socioeconomic development (e.g., Bell, 1973, 1976; L. Diamond, 1993; Gasiorowski & Power, 1998; Inglehart, 1990, 1997; Toffler, 1970) or cultural path-dependence (e.g., Dalton, 1999; Dalton, 2000; DiMaggio, 1994; Fukuyama, 2000; Gibson, 1997; Huntington, 1996), until researchers demonstrated that both causes operate at once and in

autonomous dimensions (Inglehart & Welzel, 2005; Welzel et al., 2003). Similarly, a "left vs. right" categorization of political ideologies treats economic ideology and social ideology as if the one could be reduced to the other. But in fact political psychology could not satisfactorily account for political preferences until it "squared" this binary categorization into a four-quadrant one incorporating both these principal axes of ideological variation.

In the ICS, it is Transcontextualism that allows us similarly to account for multiple dimensions of variation without reducing one to the other. The things I am suggesting are irreducible, in our attempt to make disparate norm systems cohere, are the *context-dependent* variation and the *context-independent* variation. If in our effort to achieve coherence we strike a balance by reducing the context-dependent to the context-independent, we produce simplistic generalizations. If, on the other hand, we strike a balance by reducing the context-independent to the context-dependent, we end up with a simplistic relativism. Only at Order 3 are we able to account for both factors without reduction, coordinating contextual variation and cross-contextual variation "simultaneously and in relation to each other" (to adapt for a different context the description of two-way reversibility given by Kegan, 1982, p. 55). From this vantage point, we grasp that the forward trajectories of different norm systems are both parallel *and* inescapably multilinear, and that both the unity and diversity of norms have an irreducible claim to validity.

Before wrapping up this analysis of the Order 2-Order 3 transition, I need to make an important distinction: that between *aggregating* and *coordinating* variables. It is easy

in considering "variables" and "factors" to think of them as different attributes that can be aggregated into a composite variable, such as "socioeconomic status". Such aggregation does not produce a bidimensional framework, because the resulting comparison simply occurs along the single dimension of the aggregate variable. It is for this reason that internormative thinking does not become bidimensional by virtue of acknowledging that norm systems differ in multiple ways. Typically we treat the multiple dimensions of difference between norm systems simply as different attributes lumped together within an overall "differentness" considered unidimensionally ("East is East, and West is West").

The task for Order 3 is more advanced: We must consider two dimensions of variation *at the same time and in mutual relation*. This is much harder, which is why we generally tend to reduce comparisons to such single dimensions as "East vs. West". However, when we do manage to think in two dimensions, we actually dissolve the sense of disparity, because we come to understand that different norm systems are more deeply similar than different.

From social perspective-taking to societal perspective-taking

I have described ICS growth as the progressive decentering of our *perspective* toward norm systems, from a perspective embedded within such systems (°1), to a perspective embedded within the *relation* between systems (°2), to one embedded within the *systems* governing such relations (°3), and finally one embedded within the *paradigms* governing such systems (°4). This sequence of abstract, inter-*systemic* perspective-taking clearly

parallels the four-step progression of concrete, inter-*subjective* perspective-taking operations described by Selman (1980) and incorporated into Kohlberg's model of moral development (1976). And indeed **it seems logical to conceive the inter-systemic progression as a cyclical recursion of the inter-subjective**. Numerous investigators have hypothesized similar types of cyclically recursive development (Boyes & Chandler, 1992; Chandler, Hallett, & Sokol, 2002; Dawson, 2018; Fischer, 1980; Fischer & Bidell, 2006; Graves, 1970; Kesserling, 2009; Overton, Ward, Noveck, & Black, 1987; Piaget, 1954/1973; Zelazo, 1999).

There are several reasons to favor such a hypothesis for internormative development. First, the starting point of the internormative progression is precisely the endpoint of the interpersonal progression: system-level norms. Moreover, the sequence of perspective-taking operations is identical: first-person (unmapped perspectives), second-person (mapped perspectives), third-person (systematized perspectives), and finally, observer of third persons (meta-systematized perspectives). As I will show in the section entitled "The ICS as a cyclical recursion of intersubjective perspective-taking" beginning on page 291, there are numerous parallels between corresponding levels of internormative and interpersonal perspective-taking, such as that between the constructivist thinking of ICS Order 2 and the "constructivist theory of mind" of second-person perspective-taking (Carpendale & Chandler, 1996). This alignment of developmentally distant levels of thought via perspective-taking operations suggests a specific resolution to the paradoxical observation of "relativistic" thinking in both early childhood (Meltzoff & Gopnik, 1993; Wellman & Hickling, 1994) and late adolescence

(Kitchener & King, 1990; Perry, 1970), echoing Chandler et al.'s suggestion that these may represent concrete operational and formal operational versions of the same idea, two "turn(s) of the developmental wheel" (2002, p. 163).

Table 4. Summary of Structural Features of the ICS

	Order 1: Conventionalism	*Order 2: Contextualism*	*Order 3: Transcontextualism*	*Order 4: Universal paradigms*
Core structural feature	——— Legitimation of norms across systems ———			
What is universally valid	Internal integrity of all norm systems	Dependence of norms on context	Principles that operate across contexts	Frameworks that coordinate principles
Universalization is arbitrarily limited by	Mutual recognition	Context	Fragmentation/conflict among principles	[Sphere of value]
Basis for universal norm consensus/ equilibrium of legitimacies	Generalized particularism (whether isolationist or imperialistic)	Relativism	Systematic transcontextual patterns	Logical foundations underpinning cross-contextual principles
Dimensions of internormativity, abstraction, & reversibility	0 · ·	1 –	2 ∟	3 ↙
Recursive coordinations of baseline concept: Norm system legitimacy (NSL)	0: Grasps NSL	1: Relates NSL to context	2: Relates context-dependent NSL with context-indep. NSL	3: Relates principles of NSL
Coordination of norm legitimacy perspectives (NLP)	1st person: One NLP at a time	2nd person: Coordinates 2 NLPs	3rd person: Systematic coordination of NLPs	Metasystematic
Decentration of norm legitimacy perspective	Legitimizes norms from the perspective of a norm system within a worldwide set of such systems. Decenters from a literal-concrete perspective toward norm systems.	Legitimizes norms as hypothetical constructs contingent upon contextual factors. Decenters from the norm system perspective.	Legitimizes norms as an objective observer, systematically comparing their similarities and differences. Decenters from the contextual perspective.	Legitimizes norms from the perspective of abstract metaprinciples underlying multiple transcontextual principles. Decenters from specific principles.
What is integrated/ loses ultimate legitimacy/ becomes dynamic	Interpersonal roles and relations	Norm systems	Norm construction	Principles of norm construction
What is differentiated/ gains ultimate legitimacy/is static	Norm systems	Norm construction	Principles of norm construction	Metaprinciples of norm construction

Note. I exclude Order 0 Concrete Groupism here, as it is not a stage of internormative reasoning but a precursor of it, analogous to the interpersonal stages of moral reasoning (Selman/Kohlberg Stage 3). It is the next stage—system-level normativity—that is the essential building block of internormativity.

Stage illustrations

The aim of this section is to further clarify and distinguish the ICS stage structures, and to illustrate certain stage-typical concepts with interview data.

The stages represent idealized formulations drawing from analysis of the most salient regularities I have observed. They are theoretical constructs intended to shed light on identifiable patterns of reasoning, not to capture the full range of thinking in this domain. Needless to say, the levels are not meant to precisely describe the totality or even the majority of any one person's thinking, as if a person's mind could somehow be described as being "in" a stage. Any person's reasoning is bound to range across multiple levels according to the demands and incentives of the situation, the support provided, the effort made, and other factors. Yet it is possible to identify a "center of gravity" for almost any individual argument, even if this lies not within one of the levels defined in this model, but on the borderline between two of them, or in some hybrid combining aspects of different levels that I have for analytical purposes distinguished.

The insights of earlier levels are not overturned or abandoned by later levels, but are the very components from which they are built. In this sense the higher levels are not exclusive of patterns associated with lower levels, which can and do coexist within them. But this inclusiveness of course works only in one direction.

Because Order 0 is a precursor stage, and Orders 1 and 2 are well covered ground, I will focus most of the illustrations on Orders 3 and 4.

Order 0: Concrete groupism

The "Naughth Order" does not constitute an internormative resolution, because at this level we have not yet thematized the problem for which such a resolution would be required. For this reason, and because this order cannot be defined in the same structural terms as the internormative orders that follow, I do not regard it as part of the model. I include it here only for the purpose of clarifying the starting point for internormative cognition, which is an abstract conception of the norm system as being endowed with *legitimacy* by virtue of its internal orderedness.

I added this level after the other levels were in place, in order to account for a distinction I had observed between Order 1 interview responses that were relatively concrete-sounding and those that were relatively abstract-sounding. The more concrete-sounding responses gave shape to a precursor stage that I have hypothesized to align with the interpersonal relations/primary group perspective of Kohlberg and Habermas (see Table 5 on page 254). My basis for this tentative alignment is essentially that Order-0 subjects hypostasize internormative questions such that they conceive them as questions of interpersonal relations, using the logic typical of Kohlberg Stage 3:

> *Subject*: If things happen in China that do not affect other countries, what gives other countries the right to criticize? It is our own family thing. Other families should not interfere. You have your own parenting style. I don't have the right to teach you how to talk to your son or daughter. It is not my business. Human rights is a national issue. We have our own conditions. … We don't need other people to criticize.

This subject appears—in relation to the internormative issue discussed in the interview (see Appendix B on page 387)—to be completely fused with her group's point of view.

This accords with a Kohlberg Stage 3 perspective in perceiving society not as an organized system but as "a sort of homogenous, harmonious 'we' composed of people who share moral values" (Edwards, 1981, p. 258; as cited in Hallpike, 2004, p.143). From the vantage point expressed by this subject, internormative questions are essentially questions of intergroup relations, conceived as if they were *concrete interpersonal* relations, with each group thought of as a literal, family-like entity.

Similarly, this next subject conceived the same issue as a matter of interpersonal relations:

> *Subject*: There is no such thing as universal values. This would be like taking the viewpoint of the group and forcing it upon an individual. This goes against human sympathy. So there can't be something really universal.... You think this thing is good, so you just force it upon him. Even if you think it's good, even if all people think it's good, you still can't say that person thinks it's good.

Neither of the examples quoted above evinces an understanding of the legitimacy of a norm *system* as such. This also accords with the definition of Kohlberg's Stage 3 (as interpreted for the Defining Issues Test): "No appeal to the broader social systems are included within this schema. It is as if the social world was a network of micro-moral considerations linking close relationships and individual interests" (Thoma, 2006). Following Kohlberg and colleagues, I hypothesize that this concrete conception of the social world is the cognitive substrate for the organized norm systems understood at the next level. I provide additional description of Order 0 in Chapter 5.

Order 1: Conventionalism

I classify as "conventionalist" any argument that evinces an abstract understanding of conventional norms but not an understanding of their social constructedness or context dependence. Conventionalist arguments suggest that the subject interprets conventional norms not as arbitrary or semi-arbitrary constructions but as part of the natural order of things.

At this level of consciousness, we are fused with the norm perspective of our own community. Having come to understand the importance of the norm system, we are particularly concerned with maintaining its integrity, rather than with the more complex problem of integrating it with other systems. Because our thinking is centered in the perspective of a single system, we lack freedom from an ethnocentric perspective on normative issues. In sum, we have not yet developed an externalized, "prior-to-society" vantage point that would permit us to objectify, judge, and potentially stand against the standards of our own society (Bellah, 2003; Ienaga, 1940, 1977; Kohlberg, 1984; Tillich, 1957; Weber, 1924/1946).

This level of reasoning lacks a constructivist point of view. That is, at this level, we tend to see our group's conventional norms as natural and pre-given (for "us" in any case), rather than dependent upon continuously evolving context and choices:

> *Subject*: I think [culture] is where the heart of the whole Chinese nation lies. If we were to lose our culture, this Chinese nation would have a hard time holding together. Many nations have risen and disappeared. We, China are a civilization of five thousand years. Why are we able to go on passing this down through the generations? Because the script we use, the culture we use, is always one. So regardless of time this nation of ours always exists, unlike so many nations that arise and then disappear.

At the conventionalist stage, we tend to experience encounters with diversity as simplistic contrasts, and to interpret intercultural differences as primordial, rather than as constitutive of a dimension of legitimate variation that would subject the cultural order to critical reflection:

> *Subject*: Different countries have different cultures, and their values and cultures are based on a long history. Our country has a long history where the emperor controlled the whole country, and a long history of agriculture, and it didn't develop well in industry until the last 100 years, so the culture is that the citizens may have to listen to the governor. And I think it the Western countries, there are many revolutions, for example, America is founded by the immigrants from Europe, and from the beginning their value is equality and democracy and they declared independence. So democracy is just passed on as tradition, and the keywords in the culture are freedom, equality, democracy, opportunity. But here there is such a long history that there is only one person, the emperor, that what he says is very important, and everyone should listen to him, and this is a tradition and we can't easily change it.

Because this mindset lacks the basis for integrating diverse group-embedded understandings, it is not able to conceive the possibility of universal values in a meaningful way:

> *Subject*: I don't think there is any way to evaluate universal values, because we live in different situations. The norms from one environment are not applicable to another environment. The norms depend on the circumstances. There is not a common standard you can use. For example, over in your country you drive on the left, whereas we drive on the right. They're opposite. Can you say that one is better than another? It's simply that the situations are different. So our rules are different too.

In Figure 2 on page 123, Conventionalism corresponds to the first level of the "Abstractions" tier, representing the building block of this domain, the comprehension of norm system legitimacy. This ability constitutes the fundamental unit of a new wave of

"post-conventional" development in which we learn to reflect on norm system legitimacies at increasingly complex levels of abstraction—first contextual, then transcontextual, then paradigmatic. At the next such level these conventions are subjected to a thorough critique.

Order 2: Contextualism

In the end there is never a right and a wrong

– Research subject

Nothing can be sole or whole
That has not been rent

– William Butler Yeats

Arguments at this level evince an understanding of the arbitrariness, social constructedness or context dependence of conventional norms, but do not evince an understanding of how to construct new, non-arbitrary, integrative norms across these contexts.

Order 2 is distinguished by an emphasis on constructivism and contextualism, and reflects the capacity to explain the legitimacy of variations among the norms and values of different sociocultural systems. At this level, we critically reevaluate system-level judgments, but do not possess a conceptual framework for reenvisioning them at a cross-system level. From this perspective, we see each sociocultural system as relative to its

context. This gives us a tendency to question aspects of our native system as arbitrary, and to deny any basis for making judgments across systems:

> *Subject*: From different social backgrounds, the same concept can be defined differently. The NGO's annual report exposed [my] country's human rights abuses. These abuses could be considered commonplace in [my] country, so that the people don't even think there's anything wrong with it. But people in other countries don't think so. On the basis of their culture they might establish a standard and norm, and borrow this to pass judgment on whether the behavior is right or wrong. This results in different ways of seeing the same thing, that is, one country thinks a behavior violates human rights and another does not. My evaluation of this issue relies on thinking about the unique background of each culture.

In Figure 2 on page 123, Order 2 corresponds to "abstract mappings" on Fischer's General Skill Scale. Following this model, I depict Order 2 in Figure 3 (on page 124) as a series of lines connecting dots. These lines refer to a new cognitive *dimension of variation* [–] along which we can imagine how the original units *could be different* (i.e., the norms we understood as legitimate at Order 1 could have potentially been equally legitimate in a different form). However, the lines themselves are not coordinated into a plane; this conveys the idea that we are not yet able to make meaningful judgments *about the variations between systems*.

Order 2 improves on Order 1 in that it permits us to disidentify with ingroup-embedded standards and sublate socially determined norms within a larger dimension of variation. It thereby allows us to objectify the limitations of Conventionalism, which interprets conventional norms as static and essentialistic. Order 2 resolves these limitations by generating a new analytical dimension in which we coordinate the perspectives of multiple sociocultural contexts. This contextual dimension gives us the

leverage to decenter from the conventional meanings taken for granted at Order 1, understand the extent to which these meanings have been artificially constructed, and imagine new possibilities.

Order 2 is more comprehensive than Order 1, because we become able to explain why (ethnocentric) generalizations at the level of social systems can't generalize beyond that level. Order 2 is also more self-consistent than Order 1, because it grants the same possibilities of legitimacy to other communities of meaning as it does to its own, as illustrated by the interviewee's quote above.

An intrinsic deficiency of Order 2 is that it lacks a dimension in which cross-systemic variations can themselves be compared. In other words, it does not provide a basis for meaningfully judging the variations themselves as better or worse:

> *Subject*: Do YOU think there is any objective standard by which you can judge right and wrong? [Skeptical tone]
>
> *Interviewer*: Do YOU think that there is?
>
> *Subject*: It's something you need to think about. If you believe that there is, then there is. If you believe there is not, then there is not. This is from an individual point of view.

So although at this order we no longer perceive systems of meaning as pregiven, we face a new, relativist trap in which we tend to see variation itself as pregiven, unjudgeable, and inescapable. This results in the exaltation of context and diversity, and the disparagement of judgment and hierarchy. With judgment suspended, we become incapable of meaningfully ranking values, purposes, or interpretations of truth, or of

generating integrative principles that would resolve the tensions among competing ideologies.

> *Subject*: I don't think some cultural values are better than others. I think this is always subjective and often a source of antagonism between countries. Cultural values, although distinct, can be used to justify harmful actions and separate countries. I also think these values are contextual, meaning that they arise due to different circumstances. Thus, certain values may make sense in some country but not another.

The next pair of quotes illustrates the same deficiency:

> *Interviewer*: Given that such different cultural perspectives exist regarding human rights, is it possible to determine a most reasonable and objective way of thinking about this issue?

> *Subject*: I don't think it's possible, because these different viewpoints produced from different cultures and values reflect intensely subjective consciousness, and it is very difficult to attain a high degree of consistency between these subjective consciousnesses of human groups of different cultures and backgrounds. For this reason, they generate different standards of evaluation, so there's no way to decide which viewpoint is most objective or rational.

> *Separate subject, responding to the same question*: Toward different cultural views, I take a fair attitude. There is no absolute right or wrong. Each person has his own opinion. Now how do the cultures of two countries shape the views of two peoples? I cannot explain this. I cannot systematically explain the differences between cultures.

For those subjects whose milieu calls on them to choose among or integrate conventions across contexts, the deficiency shown by the above statements generates adaptive pressure toward development to Order 3.

Order 3: Transcontextualism

The loss of faith can become the faith of loss

– Robert Bellah

I think it is politically correct (and easy) to be culture-agnostic. It requires some self-confidence and skill and experience to be able to critique someone's culture in a way that does not immediately elicit self-defensiveness.

– Research subject

Third-order (transcontextualist) arguments describe legitimate sources of cross-contextual judgment, based on the recognition of systematic, non-arbitrary patterns of variation across contexts. But they do not coordinate these sources of judgment into a general analytical approach or paradigm, an ability that emerges at Order 4.

Transcontextualism is distinguished by an emphasis on the *limits* of contextualism and a preoccupation with context-independent judgment and purposes. At this level we seek to overcome the limits of the previous level by formulating specific injunctions that permit meaningful comparisons and value judgments across contexts. The potential for consensual agreement across context is a guiding criterion in formulating such injunctions.

Transcontextualism improves on Contextualism in that it permits us to objectify the limitations of constructivism and overcome the suspension of judgment. It does so by generating a new analytical dimension that allows us not only to consider variations

among contexts but also to contemplate the outcomes of different institutional variations within different contexts, and vice versa. With this new analytical dimension we become able to sublate simple, linear variation within dynamic patterns of systematic variation. This allows us to put context itself in context, that is, to compare across contexts along objective evaluative dimensions. At this level, we no longer view context-dependent constructivist processes as absolute, because we come to understand how they are subject to general principles that apply across contexts—even if these principles manifest themselves in diverse ways across different settings. This realization opens up a new evaluative space that permits cross-systemic judgment.

In Figure 2 on page 123, Transcontextualism corresponds to "abstract systems" on Fischer's General Skill Scale. Following this model, I depict Transcontextualism in Figure 3 (on page 124) as lines integrated within a plane, to convey the idea of coordinating norm system legitimacies within two dimensions of variation [∟]. This two-dimensional surface includes a new cognitive dimension of variation in which cross-systemic variations can be subjected to normative comparisons. This permits us to triangulate simple, linear (one-dimensional) variations into *dynamic patterns of* (multi-dimensional) *variation* that enable evaluative, creative, and potentially transformative thinking across contexts.

Just as Contextualism takes a "meta" perspective on Conventionalism, so also does Transcontextualism take a meta perspective on Contextualism. It does this by taking the limitations of cultural and contextual relativism into critical awareness. In interviews and surveys I often asked, "Can you say that one society's cultural values with

respect to [a given set of issues] are in some way better than another's?" Numerous *Contextualist* responses to this question said something along the lines of, "No. Whether one value or another is better depends on your *perspective*". For example,

> *Subject*: It is very difficult to attain a high degree of consistency between these subjective consciousnesses of human groups of different cultures and backgrounds. For this reason, they generate different standards of evaluation, so there's no way to decide which viewpoint is most objective or rational.

Responses at higher levels, by contrast, are not preoccupied with *perspective*, but tend to think about the objective ground on which a perspective should be based:

> *Subject*: It is easy to say 'no' and embrace basically cultural relativism. But for some issues there probably are societies that have 'better' cultural values for the issue in question. For instance, producing 1 pound of beef requires 25 times the land as producing 1 pound of soy beans (and soy beans have a higher protein content)…. I think that we can justify that some societies' values are incommensurate with a sustainable global society and work to confront those unsustainable values. I think it is politically correct (and easy) to be culture-agnostic. It requires some self-confidence and skill and experience to be able to critique someone's culture in a way that does not immediately elicit self-defensiveness.

The *reconstructive* capacity exhibited by this subject comes from comparing multiple sets of social norms and understanding the systematic, *non-arbitrary* ways they can vary. Contextualism is prerequisite to this understanding, because one must first understand what is arbitrary before one can discover what is not arbitrary. We know with some confidence that this subject has encompassed and transcended the relativist critique, which he explicitly refers to in two places. His statement that to be culture-agnostic would be "politically correct" indicates that he understands how the contextualist stage represents a correction of simple-minded statements based on unquestioned cultural

views. He includes this critique and then transcends it. The verdict he passes on beef-consuming food cultures is thus not an ethnocentric First-order judgment, but a judgment that has been made on "this" side of constructivism.[2]

This judgment is based on a powerful concept—sustainability. A great deal of analytical depth is packed into this one word, which has the power to evaluate whole societies. It stands outside and above them. It says, "Your society can be as wonderful as you please, but if it cannot sustain itself, then there is a contradiction built into it. Hence I can dismantle its legitimacy by its own internal logic, without having to resort to extracontextual standards. The principle of sustainability is one that can be constructed just as easily from within your cultural framework as from within mine, because it transcends both frameworks and includes both frameworks". Had the subject expressed the principle in such abstract terms, the statement would have earned a Fourth-order rating. As it is, his statement demonstrates at least a Third-order logic. The transcontextual principle of "sustainability" can both be derived from and abstracted to a universal paradigm.

The next subject took a stand against gender inequality that I classified as transcontextualist, then later articulated a universal-paradigm justification for it, which I will return to in the next section. His initial justification already qualified as transcontextualist:

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[2] The phrase "It is easy to be culture-agnostic" is a good example of the "chunking" phenomenon discussed earlier. The phrase is short and simple and yet cognitively highly complex, in that it embeds multiple layers of differentiation from the ICS 1 concept of cultural normativity.

> *Interviewer*: Do you believe that it's possible for a person from one society to reasonably judge another society's preferences on a particular issue?
>
> *Subject*: Yes, absolutely.
>
> *Interviewer*: Why?
>
> *Subject*: The way I think to think about this is not in terms of a dichotomy or binary. You have people who would perhaps be culture-specific maybe, in which case there is no right or wrong, it's what you're subscribing to. I think really what you have is a kind of larger framework of possibilities, and then you have ways in which things develop. For example, I think that any culture that would suggest that women are inferior to men, and they have no position in society, and males will always be dominant, and so on, is something that I can understand how it would develop. I can understand how it would make internal sense for people in that society, even women in that society; yet at the same time, I think that it is OK for me, it is right for me, to say, "This is not OK. This is not a society that I would want to be a part of". And I wouldn't mind even confronting people in that other society, and talking about it.
>
> For me it's not a simple matter of conviction. It's more about understanding the mechanisms. It's about understanding the process that brings about the situation.

This argument is transcontextualist because the subject shows a recognition of culturally contingent possibilities, and then places that within a "larger framework of possibilities". Possibilities within possibilities [∟]—Third Order. Taking a different tack, we could also note that he is able to *take a perspective* on the process by which the culture under consideration has come to be how it is, such that this process can become the object *of* critical judgment, rather than simply be occasion for immunity *from* judgment. This shows the subject has decentered from the process of cultural construction—Third Order.

In the return to judgment that is Transcontextualism, the reappropriations of truth are made "not on the basis of simple affirmation but of doubt and disillusion" (Bellah,

1970b, p. xv). The relativist critique is not discarded, but rather taken up in more subtle form. Transcontextualism understands that, yes, relativism is true, but that transculturalism is *more* true; it embraces the truths disclosed by relativism and adds a new layer of emergent truths to it. But Transcontextualism without relativism would cease to be Transcontextualism. Context is an integral *component* of Order 3. Indeed this order is *made of* contexts.

In responding to the relativist critique of Group B in the "Foreign NGO" dilemma (see Appendix B on page 387), the following subject demonstrates both a recognition and an overcoming of the relativist critique:

> *Subject*: I don't completely agree [with Group B]. At least if Group B sees that every country's current situation is formed from the synthetic function of its history, culture and values, these foundations can influence things like the way "human rights" is defined. But to say that to criticize must imply a misunderstanding of history, culture and values, I think is off the mark. Because history, culture and values are not completely natural or rational; within them there is the wheat but also the chaff.
>
> I believe they [Group B] think this way because I think they hold the following assumption: that history, culture and values are shaped by a natural and spontaneous process and so are natural and rational, and therefore that the ways it addresses various problems all have a natural basis.
>
> Culture is a really vague and subtle thing, although it does exist within a group, and guides behavior, this does not mean that it is completely rational or justified. Chinese culture and values have been accumulated over many centuries, and influences our behavior often without our being conscious of it, but it must be examined and guided.

As we know from the nested hierarchic nature of structural development, the insights of simpler interpretive structures are not replaced but rather *integrated* into more adequate structures. Even though Contextualism's relativist insight is too simplistic to solve all the problems we must solve, it is more right than wrong. Indeed, Contextualism is the

indispensable solvent to the myth of national and cultural integrity (Kegan, 1994). It does not itself produce transcendent values, but without it there would be no possibility of transcendent values.

And so the capacity to "contextualize context" does not overturn the insight of constructivism, but rather enables us to advance from a simplistic, disconnected, one-dimensional constructivism to a subtle, integrated, multi-dimensional constructivism. The one-dimensional variety recognizes that judgments are socially constructed, but cannot describe an objective basis for different societies to agree on one judgment or another. It has internalized only the dimension of variation, not the objective conditions in which this variation is embedded. As we have seen, this "cross-contextual context" is what allows us to judge that some solutions are better than others, *across contexts*. Multi-dimensional constructivism is a limited, mature, non-arbitrary version of constructivism that has internalized *both* the arbitrary dimension of variation *and* the objective conditions in which this variation is embedded.

One-dimensional, totalizing constructivism (°2) precedes multi-dimensional, relativized constructivism (°3+) because one must first discover constructivism before one discovers what its limitations are. As I gather from both the logic of subjects' statements and their self-reports of developmental sequences, one's first activity upon internalizing constructivism is to apply that profound insight across a wide range of issues. Only when the deconstructivist principle (°2) bumps up against obvious limitations is one forced to foray into re-constructivist thinking (°3). This appears to be

precisely what happened to the following subject, who in the boldface portion crosses the boundary between Contextualism and Transcontextualism:

> *Subject*: No, I don't think some cultural values are better than others. I think this is always subjective and often a source of antagonism between countries. Cultural values, although distinct, can be used to justify harmful actions and separate countries. I also think these values are contextual, meaning that they arise due to different circumstances. Thus, certain values may make sense in some country but not another. **The only way that I can disapprove of certain values is if these values are oppressive and harmful to people. In these cases, I do think it's appropriate for the international community to critique these countries and possibly intervene**.

This statement seems to be eminently reasonable by allowing for both judgment and non-judgment, but in fact contradicts itself. Here we observe both the process of development and the fact that structures of consciousness are *habituated*. The subject starts out with the habitual thought. This shows the basic embedded assumption, the processing rule, the organizing principle of thought the respondent feels at home in. Analyzing it though, he bumps up against the limitation of this way of thinking. He responds to this realization by contradicting himself: If one can say that a people's values are harmful to itself, then one can say that some cultural values are better than others. As happens regularly in interviews of this kind, the question has pushed the subject to the boundary between one way of knowing and another.

At Transcontextualism we grow in comprehensiveness because we become able to explain the validity of cross-systemic generalizations (these differ fundamentally from ethnocentric First-order generalizations in that they incorporate the insight of relativism/constructivism). For example, the subject quoted below was able to explain the cross-systemic disadvantages of academic politicization (**bold**) while simultaneously

acknowledging that this question is legitimately viewed differently in different contexts (underlined):

> *Subject*: The way academia or other institutions are organized is ultimately a political decision, and it has political consequences. And I think that in a regime [Communist China] that is basically committed to an elite-led model, where there's an elite political class that gets to concentrate power and gets to make decisions on behalf of others, I think it's only natural that they would seek to prevent the formation of independent sources of authority in academia. So as part of a political project that sees long-term value in concentrating power in this way, in an elite class, I think it naturally implies a certain way of governing the academy and other key sources of social power and authority. Because honestly it would be a threat to such a regime to have an academy that organized outside of politics, that's not institutionalized through the state, or in which political criteria don't affect the success of scholars.
>
> So understanding what the leaders of China are aiming at, I don't think they're stupid to try to control academia or shackle it in that way. But I would prefer to be in a system where the political decision is to use the academy to expand human knowledge and to make people's lives better. And I personally think that's achieved by allowing freer rein to the academy to make certain decisions, to have authority that is more insulated from the political elite. And to allow freer discourse with fewer political referees. I think that's more conducive to allowing new ideas and competition between ideas to test and arrive at new truth.
>
> So **I do think that there is an objective difference there in terms of which system is more conducive to establishing more objective facts about the world**. Now someone with a different set of political priorities could say that another system is preferable in terms of advancing those priorities, but given my priorities, I think that naturally creates an affinity for an academic organization, an institutionally autonomous academic realm, and allowing the closest thing you can to meritocracy to prevail, and allowing real competition and openness, rather than limiting the scope of competition between ideas—I think that makes the most sense given the political values that I hold.
>
> But I don't think that academia is outside of politics. We also make particular choices in this country about how academia is structured. For example, regarding the development of technology, I think there are particular questions about how much free rein we should give to science, because while it's incredibly powerful, when unchecked it could also be socially harmful. We have to consider that possibility. So how freely should scientists who are working on cutting-edge technologies, especially biotechnology and nanotechnology and artificial intelligence, how much free

> rein should they have, and at what point should we step in on behalf of preservation of a certain kind of social order. And that's a decision, in my view, that even a liberal society has to make. But <u>if the priorities of a political class are not just to maintain a particular order but to keep themselves in power, then they'll have a different approach</u>.
>
> But **at the end of the day, I do think there are some objective criteria by which we can differentiate these systems and their effectiveness**. **I think it could be established through scientific means that the Western way of organizing academia is superior in terms of generating new knowledge**.

This argument differs from a Second-order argument in that it places a contextual [–] understanding of academic organization within a supracontextual [∟] principle recognizing the relative preferability of an autonomous form of organization *after allowing for uncircumventable context-dependent variation*. The subject evinces the capacity to simultaneously manipulate two dimensions of reversibility [∟], holding the Order 2 relativization in mind while applying a second variable orthogonally to it, thereby putting the context itself in context.

The argument made by the next subject evinces the same capacity, this time in relation to a question (printed on page 394) regarding the legitimacy of subjecting local history curricula to accreditation by "a committee of historians and education professionals from around the world". As with the previous example, the <u>underlined</u> portions indicate contextual contingency, and the **bold** portions that which applies regardless of such contingency:

> In history, **teaching students how to critically engage the sources, using a variety of sources—that could be taught across national and cultural contexts**. There could be some cultural issues that you would have to pay attention to. But that would be easier to standardize across countries than, for example, how you write the history of any given country. Or **the insight that history is always told from a certain perspective. Being aware of the**

> **situationality of any historical text. These meta-level insights**. That could be part of a global curriculum. In whatever [local] way you want to teach it!
>
> But with a big caveat that there might actually be some fundamental cultural differences with how you would do this, like to what extent is it a text-oriented culture, or an image-oriented culture, or other artifacts of communication are important to you. You would have to factor that in as well. It could be very Western-centric to assume that a certain medium of representation is universal.

The argument made by the next subject responds to a question, printed on page 389, regarding the legitimacy of worldwide standards of "good governance". It suggests that there is a basis for such standards, but also warns of the risks of "aggressively advancing" them without sufficient consideration of local conditions. It illustrates Third-order thinking in the way it *relates relationships* across contexts to generate an objective, non-arbitrary standard, while simultaneously attending with great sensitivity to the importance of context-specific needs:

> We know that societies can change quite dramatically. But I think that pretending that you can will that kind of change overnight is not only wrong but really dangerous. I would take more of a consequentialist viewpoint here, that if you knew you could introduce values that would work well, and they've been shown to work and even to attract the attention of people from other settings, and you have the opportunity to put them in place knowing that there's adequate institutional support and a cultural foundation for those ideas to take root, I think there might be more justifiability to promote those ideas. But I think it would be downright wrong to try to aggressively advance those ideas in a setting that doesn't have the conditions for them to thrive, because that not only might fail to establish those values, but might even strengthen the opponents of those values.
>
> I think one would have a hard time arguing for the universal or applicability of certain principles unless they could be shown to inspire interest and sympathy from people outside a certain cultural sphere. In the case of values like individual rights or liberal democracy, I think there *is* good evidence that people of many different backgrounds can perceive value in this. So **adherence to these values is not limited to people in societies that have grown up practicing them and who have just inherited them.**

> **There are also people who have been converted to them through their experiences and interactions. And that is powerful testimony**. I would guess that there are fewer people from liberal democratic societies who are converted to totalitarian value systems than vice versa, in the course of their ordinary lives.
>
> That's not to say there aren't any. So as a philosophical matter, we also have to address the possibility that value systems very different from our own can thrive, not just through a kind of false consciousness, but through actual social and psychological appeal. And so there are appealing alternatives to liberal democracy or constitutional democracy and the set of values that go with it in the West.

In this example, "relating relationships" takes the form of not comparing the (static) preferences of people in different societies, but instead, as highlighted in bold, comparing the *trends* of those preferences. In the non-arbitrary fact that spontaneous conversions trend primarily in one direction, the subject identifies an objective basis for pointing to a common standard, while recognizing that this standard should nevertheless not be applied as a rigid, Procrustean rule. He thereby indicates the integration of a Second-order insight within a Third-order insight.

Indeed this argument might be seen as evincing a Fourth-order decision framework, if the subject were to further articulate and develop a process of free choice as a *general* basis for justifying norms cross-contextually.

Order 4: Universal paradigms

The only long-term ethical use of power is empowerment.

– Research subject

His argument violates the conditions of its own existence.

- Personal e-mail communication

Order 4 (“Universal Paradigms”) is distinguished by an emphasis on general processes or approaches for making valid context-independent judgments. Paradigmatic arguments evince cognitive control over analytical frameworks from which credible cross-systemic conventions can emanate. They evince an integration of all the lower capacities in that they articulate general approaches or paradigms (°4) for justifying (°3) constructions (°2) that can be validly adapted to any specific system (°1). At this level, we articulate impartial paradigms of evaluation that generate integrative and highly abstract trans-systemic norms that dissolve tensions among diverse perspectives. Paradigmatic reasoning is itself aperspectival (not “the view from nowhere”, but "the view from *everywhere*") in that it synthesizes cross-contextual perspectives into general frameworks or processes of analysis.

In Figure 2 on page 123, Universal Paradigms corresponds to “Systems of abstract systems (=Single principles)” on Fischer’s General Skill Scale. Connecting the

"planes" of "Abstract systems" into a three-dimensional figure opens up the possibility of *coordinating systems of variation into a general framework.*

Similarly, I depict Universal Paradigms in Figure 3 (on page 124) as surfaces integrated into a figure [⊾], to convey the idea of coordinating norm system legitimacies within three dimensions of variation. This includes a new holistic dimension capable of coordinating different Third-order dimensions of transcontextual judgment into a coherent unity.

A good example of such Fourth-order holistic integration came from a subject who was asked to consider the "Investment" issue, shown on page 396. This issue describes a conflict between the values of local citizens and foreign investors. The subject began by articulating two separate high-caliber transcontextual principles encompassing the general value embodied by each side: "market efficiency" (for the foreign investors) and "political community" (for the local citizens). He then sublated these two principles within a still broader dimension in which they could be seen to yield their separate integrity.

Here is how this subject framed the principle he referred to as "market efficiency":

> *Subject*: We would think of, for example, countries in the global North that are rich in expertise and capital goods and information technology, and we would think that these countries could help develop countries in the global South by bestowing these qualities in which they are endowed, for example, by exporting capital goods such as factories, by exporting expertise, such as engineers, by exporting maybe complicated trading systems or institutions that are in place in New York or London or Frankfurt, and that this could really help countries that have a lot of economic potential but currently very little ability to turn this potential into actuality, and who at the very least

> would take a considerably longer time if they were to develop these kinds of capabilities internally.
>
> So as the argument often goes, it is, let the developing countries focus on what they currently do best right now, which is for example selling natural resources or primary commodities, and let foreign investors share their advantages with these countries in return for getting whatever portion there is of increases in productivity that are going to arise out of this transformation, and one might also think that there might be some kind of active competition between international investors that would mean that these developing countries are receiving reasonably good terms for the bargain.

Here is how he framed a principle he referred to as "political community":

> *Subject*: Creating a flat market, there is something almost post-national, if that logic is driven to its extreme, there's the idea of the creation of a single marketplace. And the creation of a single marketplace would imply that it makes no difference where one trades. If I'm trying to reverse-engineer some of that logic, I think there's something about that logic which to some extent … is inherently in tension with the notion of political determination. Because if we are a political group, then we have to be bound together in some kind of way that is not evenly distributed across the globe. So to say that we are a community for some purposes, is really to say that there have to be some kind of distinguishing criteria that put us in a position vis-à-vis one another that is not a position vis-à-vis anybody else on the globe.
>
> I think there are many different ways you can create markets, and I think a lot of times it would make a lot of sense for a market to be local. And it's not necessarily because I think [the locals] need to have a command economy, or every type of decision needs to be made through participatory political institutions…. But I do think that that the ability to change is very important….The ability to adapt.

He then described a third way of framing the problem, in which each of the above two principles could be seen as ultimately partial. The solution offered by this broader holistic framing was not in the nature of a tradeoff or middle-ground compromise. Rather, it dissolved the contradiction between the two principles by dispelling the myth of their separate integrities:

> *Subject*: I think that you can ultimately come to some type of solution that would be satisfactory to enjoying some kind of advantages of living in an international community but also have safeguards so that you can live with a tolerably high level of ability to make local policy. And I don't think there is any kind of optimal middle mix. I don't think it's an optimization problem. I think it's a deeply shifting and contingent matter that people should be very mindful about, and people should be brave enough to think about changing it when it doesn't work out.
>
> Where my thinking has been developing toward is to think that the distinction between these two realms is very conceptually messy. So for example, if we think on the sovereignty side, as a polity, our ability to flourish, our even our ability to engage in self-determination, is always mediated by something that is going on outside. I think it's a pretty narrow idea of sovereignty to think that sovereignty is only what is happening inside the community. If we want to develop, we do need some kind of interface with the outside world. There is also an international community that countries are members of. They're not floating in space...
>
> And at the same time, look at the members of [foreign investor group]. What's the first thing they're doing?—They're urging a country to adopt a law. So, immediately, they are trying to institute a reform that is ultimately a political reform, and that ultimately taps into whatever political institutions that exist in [the local group].
>
> If we think about this in more concrete institutional contexts, it's very clear. If any market is big and deep and liquid, it is the market for foreign exchange. Well actually, there is a ton of dense state infrastructure that is supporting these markets, from special payment systems to special central bank arrangements to special exceptions to bankruptcy laws, and it's very orchestrated. This is not just Robinson Crusoe trading with Friday on their island. A lot of times these claims of market efficiency are conceptually fuzzy in the sense that they are really petitions for some kind of polity to instill a very particular type of legal regime in place.

Order 4 improves on Order 3 in that it permits us to *coordinate* different Third-order dimensions of transcontextual judgment into a broader mental context. This allows us to transcend specific, rule-like injunctions such as "freedom" or "democracy" and instead pursue the general values such specific institutions are intended to advance. A good example of producing a generic Fourth-order framework from specific Third-order comparisons is the interviewee whose arguments formed the basis of the idealized

statements about democracy given in the introductory chapter. This interviewee combined comparisons highlighting the relatively successful cross-civilizational performance of decentralized decision-making patterns across three areas (governance, economic productivity, and public expression) into a single generic principle of inquiry regarding the extent to which a system tends to empower individuals (emphasis added):

> *Subject*: So let's say that democracy is a relative concept. So I think of Vietnam, one of the few countries left that claims to be communist, yet they're embracing free market principles left and right. So while they're communist on paper, they seem to be getting the hang of capitalism pretty well. And I think there's a **democratization of the market** that capitalism is. So they might not call themselves a democracy, but I think they're evolving in that direction. And the extent to which say Internet-based media help spread free speech in a place like China or North Korea, **that's adding more democracy**, whether their governments call themselves that or not. That's a separate issue. Maybe one way to put it would be, I just have this feeling that **the only long-term ethical use of power is empowerment**, and the extent to which power structures become entrenched and self-serving, that's not serving the greater good. So **the extent to which power can be distributed and more voices can be heard, whether you call it democracy or not, I think that's in humanity's best interests**.
>
> *Interviewer*: You mentioned that 'democracy is a relative concept'…
>
> *Subject*: I guess I was trying to respond to the critique that what I was saying was inherently ethnocentric. So I guess to say that there are different flavors of democracies. American democracy is different from British democracy is different from Chinese democracy is different from Vietnamese democracy. So I think the culture can still be there even if the system is listening to more voices.

This subject has clearly incorporated the insight of pluralism (°2), which he resolves in favor of democracy cross-contextually (°3), but guided by a more general approach that seeks the long-term empowerment of individuals (°4), without determining the specific

institutional expression of that value. The Order 4 rating does not owe to his substantive preference for democratization, because an argument for the cross-cultural validity of one-party governance could be similarly structured (i.e., by attempting to derive cross-culturally valid conclusions from a pluralistically generated principle of human empowerment).

At this fourth level we move past thinking merely in terms of judgments across contexts, because with paradigmatic reasoning we attain a kind of aperspectival, preveniently impartial vantage point in which contextualized thought is intrinsic. We no longer need to pursue valid injunctions by considering those that would be acceptable across a diversity of specific systems, but can derive them directly from highly abstract principles of the good that have the capacity to integrate the worthiest values of any sustainable human society.

Universal paradigms do not of themselves determine a single, privileged solution across contexts, because they are built precisely to address the challenges that the recognition of pluralism imposes. While concrete solutions are derived from universal paradigms, this is done by way of an accounting of contextual conditions. In this way, context-*independent* insight guides decisions made in light of context-*dependent* specifics. Universal paradigms' source of right is not a concrete vision of the good life, but the context-independent normative presuppositions of sustainable human existence, including the conditions inherent in the coexistence of diverse communities.

Returning now to the subject who took a stand against gender inequality in the previous section, I can now explain why his ultimate justification for that stand was not

merely transcontextual, but *meta*-transcontextual. This is because he not only was able to articulate a principle for why the society under consideration should treat women equally, but was able to articulate the *logical underpinnings* of why that principle would be credible to persons in any cultural context, based on the logical assumptions built in to the very foundations of all human communication:

> *Interviewer*: On what basis could you justify your judgment which would not be somehow just coming from your own particular tradition?
>
> *Subject*: The simple answer, for me, is that the claim in this case, that women should not be treated as inferior to men, is basically an extrapolation of logic and rationale that we all share. Why do we share this? Because we're having a conversation now; I understand what you're saying; you're understanding what I'm saying. If we're from a different culture, we're not even able to communicate, directly—but with the help of a translator, we can. We know from anthropologists that you can go across the world and do these studies. So there *is* something that we share. So it's clear that we have something in common. So I think it would be possible to…go *through* these assumptions that you have that might bring about a scenario where women are inferior, in this example, and say, "Well, now how *would* you make that argument?"
>
> … I think what it all comes down to is that, if we're talking, if you're asking about things that I can understand, if we're arguing, if both sides think they can convince the other, there's something fundamental there that is shared, which will allow them to appreciate where the other side is coming from.

Because universal paradigms' source of right inheres in such general presuppositions, they do not point to a single best resolution to each internormative challenge. Instead they present us with a *framework* or *procedure of* resolution that accounts for both pluralism and the conditions of existence in which it is embedded. Consider, for example, the reasoning of this next subject in response to the claim that a cross-culturally valid system of global justice is not possible:

> *Subject*: Liberal political theory has the assumption that … "the reason we make wrong and terrible decisions is that we're not well informed". … The implications for domestic political order are to have a good and robust democracy, therefore people can discuss things, and then we can make consensus. Internationally you still have the conception about sovereignty, so we're still working this out. But for liberal political thinkers, the international community should somehow be like the domestic process, where a good, robust democratic process will eventually produce good results.

Again it is not the argument's substantive conclusion that earns the Fourth-order rating, but its abstract, procedural orientation. The speaker articulates not simply the possibility of transnationally valid jurisprudence, but a process for *producing* that jurisprudence. A different type of transnational process, perhaps one framed in communitarian rather than liberal terms, would receive the same rating.

The next and final sample response further illustrates the abstract, procedural orientation that typifies Fourth-order reasoning. This subject was asked how he would propose to address a situation in which an international scheme to reduce fossil fuel consumption pushed for particularly onerous sacrifices for his own country's consumption, even though it is still developing:

> *Subject*: It's one of those things that's just a continual evolving process, negotiation, renegotiation, of different needs. And whether humanity survives or not in the next few centuries is going to come down to whether people can make those choices in terms of the broadest possible perspective.
>
> I don't think there's one right answer. The simplest thing I can think of to say is to iteratively harvest the wisdom of the crowd. What's hard about that is when I say "the crowd", I mean the average citizen is living in terms of a much smaller world, just their local environment, so it's not as simple as a popularity contest. But also harvesting the wisdom of the experts, people involved in the science of it, in NGOs. One thing that comes to mind is this notion of "multi-stakeholder change processes" that bring representatives of different constituencies into one room to make a long-term learning

> community around such an issue, and not only provide sort of a well appointed focus group, but also act as liaisons to each of their constituencies.

In their abstractness and universalizability, Universal Paradigms are closely analogous to Kantian frameworks of moral judgment such as Rawls's "public reason", Habermas's "discourse ethics", and Kohlberg's "ideal reciprocal role-taking" (Habermas, 1983/1990; Kohlberg, 1973a; Kohlberg et al., 1990; Rawls, 1997). Indeed any of these frameworks, if used to generate *internormatively* justifiable judgments about issues demanding such justification, would produce Fourth-order arguments on the ICS scale. At this level of abstraction, there is in fact a high degree of convergence between argumentation about internormative issues and that about morality in general. This reflects the fact that cognitive-developmental sequences tend to converge at the top in their very abstractness, reaching the same summit from different sides (Parfit, 2011, p. 419). What distinguishes ICS Order 4 from these other universalistic reasoning processes is that *it is generated from integrating diverse norm legitimation perspectives*. An ICS Order 4 argument invokes a generic approach for making valid judgments for the purpose of resolving the contradictions between such perspectives. It always demonstrates an understanding of contextuality and derives its judgments from an *awareness of the need for valid sources of agreement across context*. These are the special demands of internormative issues.

"Is that all there is?" Notes on development beyond universal paradigms

The adequacy of any ultimate perspective is its ability
to transform human experience so that it yields life instead of death.[3]
– Robert Bellah

It is possible to reason about internormative issues through structures that transcend universal paradigms. Such holistic or transparadigmatic reasoning is identifiable in statements that *coordinate* abstract rational frameworks, or *evaluate* such frameworks on the basis of higher, typically spiritually oriented, purposes. Because transparadigmatic reasoning structures operate at an even higher level of abstraction than is required for resolving internormative norm conflicts, my present view is that such structures are too general to be meaningfully considered part of the internormative domain.

Hence I do not include an "Order 5" in the ICS, though I affirm that reasoning about internormative issues can and does occur at this level of abstraction. The statement in the epigraph, for example, could conceivably arise as an evaluative principle for resolving internormative conflicts. Yet it could also arise as a solution to any number of other epistemological problems.

Transparadigmatic reasoning defines an upper limit for the domain of internormative cognition, because at this level of abstraction the primary elements of cognition are no longer conventional, group-embedded norm systems, but universal frameworks of understanding and expression. Where has conventional normativity gone?

---

[3] By "life", Bellah implies meaning and wholeness; by "death", meaninglessness and disintegration (Bellah, 1970b, pp. 244-245).

Let us review. Order 1 first understood conventional normativity. Order 2 objectified and contextualized it. Order 3 systematized it across contexts. But at Order 4 it was sublimated within a higher principle, and an entirely new primary element was born. A new "tier" or "wave" of development began (Fischer & Bidell, 2006; Wilber, 2000a). Hence at transparadigmatic reasoning we move beyond the post-conventional (which operates on conventions) and into a trans-rational wave of development, which operates on types of truth. This "post-post-conventional" stage has been clearly described by developmental researchers such as H. Smith (1958/1991), Wilber (2000b), and Cook-Greuter (2005), and hypothesized or strongly intimated by researchers whose work principally examined rational structures, including Baldwin (1904), Maslow (1954), Loevinger (1966), Kohlberg and Power (1981), Kegan (1980), and Habermas (1992, 2010).

If we borrow Wilber's (2000b) metaphor of consciousness development as a flowing river, we can think about integrative consciousness as a "current" that emerges to address the problem of intercommunal norm conflicts, then merges back into the larger developmental stream at ICS Order 4. After this level there is no longer any reason to operate on group norms as cognitive units, for the claims of convention have already been subsumed within a larger category of understanding. Convention is the operating unit within the post-conventional wave of development, but beyond that we might say that it gets "chunked" within more general frameworks (Burtis, 1982).

In short, the ICS should be understood to address only the post-conventional wave of development, as applied to internormative issues.

Chapter 5. Relation to Existing Models

In the previous chapter I described the common core structural feature that *distinguishes* ICS growth from development in other domains (cross-system norm legitimation) as well as some still deeper features of pure structural complexity (dimensions of reversibility, recursive coordinations, relations of variables) through which ICS growth *aligns* with development in other domains. Because I thereby claim that the ICS at once diverges from and converges with other complexity sequences, I need to clarify the basis of both claims.

This question must be answered both empirically and theoretically. In Chapter 6, I address the empirical side of this question by outlining a set of studies that would be required to demonstrate that ICS growth proceeds both concurrently with, and independently from, other types of cognitive growth. If internormative reasoning is a true developmental domain, we would expect it to grow to some degree autonomously from other types of logical reasoning, based on the well established fact of domain specificity noted in Chapter 2.

What I will attend to here is the theoretical side of this question. That is, if the ICS sequence aligns with already established sequences, then on what conceptual basis can we regard the ICS as describing something that has not already been described?

My answer, following Colby and Kohlberg (1987, p. 13), is simply that ICS thought structures perform a unique function. What makes one structural adaptation

sequence qualitatively different from another, in my view, is the nature of the environmental challenge being adapted to. **My claim that the ICS constitutes a distinct adaptive sequence therefore rests on the premise that the challenge of cross-systemic norm legitimation is qualitatively different from the challenges identified by existing growth models**. As I have suggested, I believe that the challenge of resolving discrepancies between culturally distinct norm perspectives produces qualitatively distinct forms of logical equilibration that do not develop as a natural consequence of growth in other domains. Different challenges require different sets of adaptations, even if these different sets use isomorphic complexity structures.

The existence of this structural isomorphism, moreover, in no way diminishes the distinct existence of the adaptive sequences, for many developmentalists posit that all cognitive growth sequences correspond to a common universal scale of complexity (R. L. Campbell & Bickhard, 1986; Case, 1991; Commons, 2004, p. 59; Commons et al., 1998, p. 239; Dawson, 2018; Fischer & Bidell, 2006, p. 324; Kesserling, 2009, p. 385; Richards & Commons, 1990, p. 160). Hence we should expect to find structural symmetry among distinct sequences. In closely related domains, this symmetry should appear as parallel sets of operations on conceptually analogous tasks, such as the parallels between Selman's and Kohlberg's sociocognitive stages, or the parallels, shown in Table 3 on page 191, between the ICS and the Reflective Judgment Model. Indeed, one can find close parallels even between such seemingly unrelated sequences as Loevinger's psychodynamic stages of ego development and Kohlberg's cognitive-structural stages of moral development (Kohlberg, 1981c; Sullivan, McCullough, & Stager, 1964). These

symmetries are *expected* to exist, and do not imply that two sequences represent a single series of adaptations.

In short, when we compare the ICS with related growth models, we should in theory expect to find both **divergence** (i.e., qualitatively different sequences of adaptations in response to distinct challenges) and **convergence** (i.e., parallel sets of operations reflecting common underlying complexity structures). This combination of difference and similarity thereby also defines **this dissertation's scope of originality**. This originality **lies in the description of a qualitatively distinct challenge of logical equilibration, and a sequence of progressively generalized structural adaptations to that challenge**. These adaptations are unique, domain-specific forms of the universal complexity structures I believe can be found in all lines of cognitive development, including such diverse sequences as Kohlberg's stages of justice reasoning (1976), Fowler's stages of understandings of faith (1980), and Gebser's stages of sociocultural evolution (1985). The scope of originality I claim for the ICS is no more and no less than that of these other sequences.

In Table 5 below and the sections immediately following it, I will outline what I see as the convergence and divergence between the ICS and related growth models. It will be for the reader to judge whether the ICS is prima facie validated both in terms of its structural symmetry with other models and the distinctiveness of its adaptive challenge and sequence.

Table 5. Postulated alignment between the ICS and related complexity sequences

Growth sequence	**Adaptive challenge**	**Criterion of validity/ equilibrium**	**Experimental stimuli (dilemmas)**	**Hypothesized alignment to domain-general scales:** *(a) Integrative Complexity (Baker-Brown et al., 1992); (b) Hierarchical Complexity (Commons et al., 2007); (c) General Skill Scale (Fischer & Bidell, 2006)*				
				a	*Undifferentiated*	*Differentiated*	*Integrated*	*Holistic*
				b Concrete	*Abstract*	*Formal*	*Systematic*	*Metasystematic*
				c Systems of representations [∟]	*Sets of abstractions* [⩙]/[· ·]	*Mappings of abstractions* [–]	*Systems of abstractions* [∟]	*Metasystems of abstractions* [⩙]
ICS: View of internormative legitimacy	Legitimating norms across systems	Cross-system legitimacy	Cross-system norm conflicts	0: Concrete group perspective	1: System-level legitimacy perspective	2: Contextual legitimacy perspective	3: Systematic/ principled legitimacy perspective	4: Metasystematic legitimacy perspective
Kohlberg (1976): View of justice	Balancing individual interests	Reciprocity (fairness)	Conflicting justice claims	3: Interpersonal relations perspective	4: Social system perspective	4½: System-questioning perspective	5: System-organizing perspective	6: Ideal moral consensus perspective
Habermas (1983): View of right interaction	Achieving consensus	Reciprocity (of interaction)	--	3: Primary group perspective (role behavior)	4: System perspective (normative beh.)	4½: System-dissociated perspective	5: Principled perspective (principled beh.)	6: Procedural perspective (ideal discourse)
Kegan (1994): View of self/subject and other/object	Balancing what is self & what is other	Ego integrity	Conflicts b/t reality & self-understanding	3: Pre-ideological/ institutional self (traditional)	4: Ideological/ institutional self (modern)	5a: Post-ideological self (deconstructive postmodern)	5b: Post-ideological self (reconstructive postmodern)	
Perry (1970): View of knowledge and values	Evaluating knowledge & value claims	Intersubjective justifiability	Conflicting knowledge & value claims	1-2: Dualistic perspective	3-4: Multiplistic perspective	5-6: Relativistic perspective	--	--
King & Kitchener (1994): View of knowledge	Evaluating knowledge claims	Intersubjective justifiability	Conflicting knowledge claims	3: Concrete view of knowledge	4: Abstract view of knowledge	5: Context-dependent view of knowledge	6: Context-independent view of knowledge	7: Processual view of knowledge
Convergence across models	*Logical disequilibrium*	*Logical equilibrium*	*Conflict in need of resolution*	*Advanced concrete structure*	*Unrelativized abstraction*	*Relativized abstraction*	*Systematized abstraction*	*Metasystematized abstraction*
Divergence across models	*Type of disequilibrium*	*Validity criterion*	*Subject of conflict*	———— *What function the structure performs* ————				

Note. This table uses the details of existing sequences to suggest that ICS levels represent general structures of complexity that appear in similar form across related domains. To make the relationships among the domain models easier to follow, I have encapsulated them in my own words.

Table 5 includes only a small fraction of the many developmental sequences against which one might wish to compare and differentiate the ICS (Appendix E includes a slightly larger fraction). This limited selection is intended only to be suggestive as to where the ICS fits within the universe of comparable models. My reasons for focusing on this particular set of sequences are:

- The Integrative Complexity scale is a domain-general scoring system for measuring the internal logical complexity of arguments. It is widely used in studies of decision-making.
- The Model of Hierarchical Complexity (MHC) and General Skill Scale (GSS) are domain-general sequences that, if their authors' claims are correct, should be expected to align with any accurate domain-specific sequence. For the purposes of the ICS, the MHC and GSS match each other. I exclude Piaget's sequence because it does not provide clear distinctions for developments beyond the emergence of formal operations (equivalent to the "Abstract" level in the MHC).
- Kohlberg's sequence is the best known philosophic-developmental stage model, and has influenced many others. Because of its influence on and close relation to the ICS, this is the primary sequence from which the ICS should demonstrate divergence in order to have a valid claim to originality.
- Habermas's sequence is a non-empirical, philosophical reconstruction of social and psychological evolution in types of justifications for moral action. Though not based on original research, it incorporates the insights of Kohlberg's,

Selman's, and Mead's investigations of sociomoral perspective-taking. Because Habermas's theory encompasses a social-structural level of analysis, it comes closest to the ICS in considering questions of cross-societal comparison informed by historical context. Habermas's analysis has particularly influenced my conception of the philosophical basis of evolutionary sequences of this type.

- Kegan's sequence of existential stages is less closely related to the ICS. I include it here because many people have come to learn about structural development through his books, because it connects in its later levels with internormative issues, and because it was among the models with which I was familiar when I devised the ICS.
- The Perry and King & Kitchener sequences do not fall strictly within the area of social or moral perspective-taking, but are broadly related to the ICS in analyzing how competing epistemological claims are evaluated. Their models are also relatively well known among educational psychologists in the United States, and have been extensively applied within U.S. higher education through various "Perry measures" and King & Kitchener's Reasoning about Current Issues test. King & Kitchener's model is the most identical in structure to the ICS, reflecting the GSS's parallel influence on both models.
- The table includes the primary models with which I was familiar prior to conceiving the ICS: Kohlberg, Kegan, GSS.

Before addressing these sequences in detail, I should note that specific subjects do not necessarily develop in accordance with the alignments shown in the table. For example, while I claim that Kohlberg Stage 5 is structurally analogous to ICS Order 3, I do not claim that all subjects performing at Kohlberg Stage 5 also perform at ICS Order 3, for ICS growth proceeds with a degree of autonomy. The same subject who frequently performs at Kohlberg Stage 5 may struggle to surpass a simple relativistic response to an *internormative* question, which presents a distinct adaptive challenge.

With Table 5 as a general plan, let us consider the questions of convergence and divergence.

Convergence

My fundamental claim to validation via convergence is that the ICS aligns with existing models in (a) its **underlying structural complexity pattern** and (b) its **general qualitative progression** from *concrete* to *abstract* to *relativistic* to *post-relativistic*. The expectation of such an alignment, together with the requirement of an internal developmental logic, constitutes an initial test of the ICS's theoretical plausibility.

The claim of structural alignment rests on the premise that the operations listed at any one level of complexity are parallel in their logical structure, defined in terms of (a) the degree of abstractness of the concepts being related, and (b) the complexity of the logical relations being performed on those concepts (Dawson-Tunik et al., 2005). For example, I claim that Order 2 of the ICS is structurally symmetrical to Level 5 of King & Kitchener's model because (a) I believe that "norm system" is equal in abstractness to "abstract view of knowledge", and (b) both concepts are related unidimensionally at this level, forming "mappings of abstractions" on the General Skill Scale.

The claim of alignment in general qualitative progression rests largely on the premise that the different sequences incorporate transitions both into and beyond some kind of relativistic phase. Though the models do not all agree on whether relativistic thinking constitutes a distinct equilibrium, they all incorporate such a phase at around the same level of organizational complexity, as shown in Table 5.

The "*Convergence across models*" row in Table 5 lists the type of structures I claim are used in parallel across all the models. I provide additional substantiation below for each sequence.

Domain-general scales

See top right of Table 5: Integrative Complexity scale[4], Commons's Model of Hierarchical Complexity (MHC) and Fischer's General Skill Scale (GSS).

The Integrative Complexity scale (marked "a" near the top of Table 5) is an information-processing measure that can be used to rank the internal logical complexity of an argument, based on the demonstrated capacity to recognize multiple legitimate perspectives and logically integrate them. The first level of this scale describes arguments that are limited to a single undifferentiated conceptual perspective, identifying "only one reasonable approach to an issue" (Baker-Brown et al., 1992, p. 408). With respect to an internormative issue, this would align with ICS Order 1. The remaining three levels of the Integrative Complexity scale and ICS closely match in their logical relations, first coordinating two perspectives in mind at once (the "differentiated" level, in that scale's usage), then simultaneously coordinating that relationship with another relation between the perspectives (the "integrated" level), then finally integrating all the relationships within an "overarching viewpoint" (the holistic level) (p. 416). Table 6

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[4] Because the Integrative Complexity scale apparently originated from the independent contributions of several scholars, I do not include the name of an author with it. It is most closely associated with Suedfeld and Tetlock, who in their 2014 article attribute credit to several scholars for contributions to a precursor "Conceptual Complexity" scale (Driver, 1962; Harvey, Hunt, & Schroder, 1961; Schroder, Driver, & Streufert, 1967).

below uses summary statements for each Integrative Complexity level to substantiate this hypothesized alignment with the ICS. To clarify the relationship, I also include the parallel series of logical relations posited by the General Skill Scale.

Table 6. Parallel Logical Relations in Integrative Complexity, General Skill Scale, and ICS

Integrative Complexity (Baker-Brown et al., 1992, pp. 408-416)	*General Skill Scale Fischer (1980)*	*ICS*
Undifferentiated: "There is…only one reasonable approach to an issue"	Sets ··	Conventionalism
Differentiated: "Different perspectives…can be held in mind simultaneously"	Mappings –	Contextualism
Integrated: "Alternative perspectives…are not only held in focus simultaneously but also are viewed interactively"	Systems ∟	Trans-contextualism
Holistic: There is an "overarching viewpoint pertaining to the nature (not merely the existence) of the relationship or connectedness between alternatives"	Metasystems ⩗	Universal paradigms

The Integrative Complexity scale measures only the complexity of an argument's internal relations—not the complexity of the concepts being related. Because it ignores conceptual complexity, it has only four levels, has no absolute value along any developmental scale, and can only be aligned with the other scales relative to an arbitrary starting point. It is not a developmental scale. Its relevance here is that its four-stage structural pattern of logical relations matches the ICS's. This offers support for the ICS's pattern contra models such as Kohlberg's, as I will explain shortly.

The MHC and GSS scales (marked "b" and "c" near the top of Table 5) are hypothesized to describe the stages of developmental complexity in any domain. Unlike the Integrative Complexity scale, these are developmental scales; that is, they measure the complexity of both logical relations and the underlying concepts being related (for

this reason, they include several times more stages). I detailed the ICS's correspondence with the GSS in Table 3 on page 191; here, I extend this also to the MHC, which aligns level-for-level with the GSS (Dawson-Tunik, 2004, p. 12).

At any given conceptual level, the GSS posits a sequence of four logical relations: base concept, relations of base concept, relations of relations, and holistic viewpoint. Like the Integrative Complexity scale, this four-stage structural pattern of logical relations matches the ICS's. This convergence is apparently independent, because the Integrative Complexity scale originated outside the field of developmental psychology and was in use prior to Fischer's (1980) publication of the General Skill Scale (e.g., Driver, 1962; Harvey et al., 1961; Suedfeld & Tetlock, 1977).

Table 5 aligns the domain-general metrics with six domain-specific scales. The reader should be as independent in judging the accuracy of this alignment as I have been in proposing it. Among the authors of the other models, only King and Kitchener (1994) have aligned their own model with the one of the domain-general scales (the GSS).

Table 5 is intended to make claims as to (a) the ICS's convergence with the other domain models, and (b) its alignment with the Integrative Complexity scale of internal logical relations, and (c) its alignment with a series of five MHC/GSS levels of absolute complexity. But I hasten to add a qualifier to the last point, which is that I am agnostic as to the precise *location* of the ICS's alignment along the MHC and GSS scales (this caveat does not apply to the Integrative Complexity scale, which has no absolute location). The ICS's absolute complexity is irrelevant to the question of whether the ICS is structurally symmetrical with the other domain-specific models. That is, whether we place "norm

systems" on the GSS at "sets of abstractions" or "systems of abstractions" is of no consequence to determining whether "norm systems" are of the same level of abstraction as "social systems" or "abstract views of knowledge". As I have noted earlier, the sets-mappings-systems-metasystems classifications are arbitrary heuristics, because any level is a "set" at its own level, a "mapping" of the previous level, and so on. Hence the plausibility of the ICS or any other domain-specific scale remains unaffected by where we align it along the domain-general scales.

Kohlberg's stages of justice reasoning

Kohlberg's third stage of justice reasoning is the first that appears in Table 5. His first three stages describe how the subject develops from a first-person, egocentric understanding of right (Stage 1: "What's right to do is what I can get away with"); to a second-person, exchange-based understanding (Stage 2: "I'll scratch your back if you scratch mine"); and finally to a third-person understanding that grasps the generalized moral rules required to systematically govern the relations among all directly interacting persons (Stage 3: "It is important to be a good person"). All three of these stages operate within the realm of "representations" (i.e., concrete concepts), because they operate on directly observable entities (i.e., persons). Subjects thinking at these levels do not yet grasp the abstract systematizations of rules ("society" or "law") required to ensure reciprocal relations within a large and complex group based mostly on indirect interactions. Hence to the extent such subjects conceptualize a community or society, they conceive it not as an abstract order, but as a concrete group of persons.

Subjects at this third Kohlberg stage, as well as the two preceding stages, would all be classified as Order 0 in the ICS. For as they have not yet grasped the abstract order of their own norm system, they are not yet capable of equilibrating that system with others. They thus respond to internormative questions by relating communities or societies to each other as concrete entities, using the same structures they use for interpersonal relations, as these two interview respondents did:

> *Subject*: If things happen in China that do not affect other countries, what gives other countries the right to criticize? It is our own family thing. Other families should not interfere. You have your own parenting style. I don't have the right to teach you how to talk to your son or daughter. It is not my business. Human rights is a national issue. We have our own conditions. … We don't need other people to criticize.

> *Subject*: There is no such thing as universal values. This would be like taking the viewpoint of the group and forcing it upon an individual. This goes against human sympathy. So there can't be something really universal.... You think this thing is good, so you just force it upon him. Even if you think it's good, even if all people think it's good, you still can't say that person thinks it's good.

It is for this pattern of relating societies with interpersonal perspective-taking operations that Table 5 aligns the "Concrete group perspective" (ICS Level 0) with the "Interpersonal relations perspective" (Kohlberg Stage 3).

I adopt the core idea of Kohlberg's Stage 4—grasping the internal logic of a social system—as the basis for the ICS's Order 1, deliberately linking the ICS with foundational stages of sociomoral cognition at this point. Hence at this level the two models are aligned by definition (their differences at this juncture, which I will explain shortly, derive only from the nature of the domains).

Order 2 of the ICS is parallel in structure to a relativistic type of justice reasoning that Kohlberg (1973b) regarded as a transition between equilibria—which he called "Stage 4½"—rather than an equilibrium of its own. Kohlberg's observation of such reasoning may be regarded as supporting the possibility of a structural parallel between the models. However, his conclusion that such reasoning is a transitional "no man's land" creates a breach in the two models' structural consistency (1976, p. 43). This has obliged me to consider whether I am justified in positing a "Contextualist" equilibrium, and to cross-examine the developmental logic behind the two contrary positions. Doing so has reinforced my hunch that the ICS's pattern is correct, and has led me to think that this thought pattern may in fact constitute a distinct equilibrium for Kohlberg's model as well, though conceived broadly as a stage of *relating multiple norm perspectives*, rather than narrowly as a stage of moral egoism or value skepticism, as Kohlberg defined it:

> *Level B/C. Transitional level*
> This level is post-conventional but not yet principled.
> Content of transition: At Stage 4½, choice is personal and subjective. It is based on emotions; conscience is seen as arbitrary and relative, as are ideas such as "duty" and "morally right."
> Transitional social perspective: At this stage, the perspective is that of an individual standing outside of his own society and considering himself an individual making decisions without a generalized commitment or contract with society. One can pick and choose obligations, which are defined by particular societies, but one has no principles for such a choice. (Kohlberg, 1981a, p. 411)

This question of a pluralist stage requires more extensive discussion than I can include here, and will ultimately need to be answered with data in any event. But the reasons I

would suggest it is appropriate for both the ICS and Kohlberg's model to incorporate a pluralist stage can be summarized as follows:

a. such reasoning, reinterpreted as a stage of *relating multiple norm perspectives* rather than as a stage of moratorium on judgment, appears to be common and stable in both domains;
b. such reasoning seems too widespread and durable to be merely transitional (Habermas, 1983/1990, p. 184; Kegan, 1994, pp. 322-334);
c. such a stage or complexity level has been repeatedly identified in empirically derived sequences (e.g., Baker-Brown et al., 1992; Kitchener & King, 1990; Kuhn & Weinstock, 2002; Perry, 1970);
d. reconciling the four-step relational logic of the lower, subject-organizing half of Kohlberg's sequence with the three-step logic of the upper, norm-organizing half suggests that the upper half requires an additional stage—specifically, an abstract analogue for the concrete Stage 2;
e. apropos of the previous point, a four-step relational logic (base concept – relations of base concept – relations of relations – holistic viewpoint) is supported by both the Integrative Complexity scale and the General Skill Scale;
f. it would not be consistent with structural-developmental theory to posit the existence of a non-equilibrated "transitional" stage that is qualitatively different from the two adjacent stages (rather than just a quantitative mix between them);

g. concluding that "Stage 4½" is not equilibrated on the basis that it represents "differentiation without integration" (Kegan, 1982, p. 66) (cf. Habermas, 1982; Wilber, 2000b) is not tenable, because the act of differentiating from something (i.e., critically reflecting upon a norm) is tantamount to integrating it[5];

h. progressing from of a pre-relativist stance to a meta-relativist stance logically requires two differentiations (Kegan, 1994, pp. 322-334).

Having said the above, I hasten to acknowledge the possibility that there may be legitimately divergent patterns between the domains based on the qualitatively different challenges they entail. In any event, I wish here only to suggest that the plausibility of the ICS is not undermined by the fact that Kohlberg's sequence does not posit a full equilibrium corresponding to ICS Order 2.

Moving on now to Order 3 of the ICS, this structure parallels Kohlberg's Stage 5 in that both broadly take the form of principles for evaluating norms (again, the reader should not regard both structures' being classified in Table 5 as "Systems of abstractions" [∟] as supporting this assertion of parallelism, because this classification is itself hypothetical). Colby and Kohlberg (1987, p. 29) described the Stage 5 "prior-to-society" perspective as

> that of a rational moral agent aware of universalizable values and rights that anyone would choose to build into a moral society. The validity of actual laws and social systems can be evaluated in terms of the degree to which they

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[5] This assertion may appear to contradict the Integrative Complexity sequence as shown in Table 6, but in fact it does not, because the Integrative Complexity scale uses "differentiation" and "integration" differently than these terms are used in developmental theory, as I will explain.

> preserve and protect these fundamental human rights and values… This is a "society-creating" rather than a "society-maintaining" perspective.

Though, unlike ICS Order 3, this stage structure is not concerned with integrating context-dependent and context-independent relationships, it seems structurally analogous to ICS 3 in that it identifies criteria for judging the values and rights that ought to be incorporated into any moral society. Moreover, the types of principles identified, such as "due process" (Kohlberg, 1976, p. 35) seem to me equivalent in structural complexity to the types of transcontextual principles I have described for ICS 3, such as "academic autonomy". Structurally, I would describe both levels as systematic relations of norms.

Order 4 of the ICS parallels Kohlberg's Stage 6 in that both conceptualize a common foundation for the system-organizing principles of the previous level. In Kohlberg's model, this foundation is "the moral point of view", that is,

> a point of view that ideally all human beings should take toward one another as free and equal autonomous persons. This means equal consideration of the claims or points of view of each person affected by the moral decision to be made. This prescriptive role taking is governed by procedures designed to ensure fairness, impartiality, or reversibility in role taking. (Colby & Kohlberg, 1987, p. 30)

Again the focus of the Kohlberg equilibrium differs from the ICS's in its focus on equilibrating the interests of individuals rather than the norm perspectives of different societies. But in their shared focus on abstract procedures or frameworks for evaluating the systematic principles of the preceding stage, both equilibria constitute metasystematic relations of norms—structurally analogous types of relations on concepts of equal degrees of hierarchical abstraction.

As a final, minor point of "convergent validation" between Kohlberg's model and the ICS, I want to mention two instances in which Kohlberg and I were independently led by our observations to posit parallel structures. The first instance was when I added the Contextualist structure, which prompted an adviser to point out that Kohlberg had written of a similar relativist structure ("Stage 4½"), though it was not included in his formal model and had not been discussed in the papers by Kohlberg I had read up to that point. The second instance was when I added Order 0 to account for subjects who compared social systems in a concretistic way, without appearing to possess the abstract understanding assumed by ICS Order 1. After adding this level, I learned that Kohlberg had similarly added, at his Stage 3, an "Archie Bunker concept of law and order" that invoked concepts of social order without exhibiting the "social system perspective" essential to his Stage 4 (Kohlberg, 1976, p. 43).

I will be relatively brief in discussing the ICS's convergence with Habermas's model, which aligns with Kohlberg's.

Habermas's stages of interactive competence

Habermas (1983/1990) has deduced a sequence of stages of moral interaction from his general theory of communicative action, drawing on Kohlberg's, Selman's, and Mead's observations of sociocognition. Habermas aligns his model with Kohlberg's stages of justice reasoning and sees it as validating their underlying developmental logic. Its structure therefore parallels the ICS in the same way as Kohlberg's model, as shown in

Table 5. The ICS's core structure of internormative legitimacy is based in part on Habermas's concept of intersubjective validity claims.

Kegan's stages of existential development

Kegan has published an influential theory of existential development based on a Piagetian reformulation of psychodynamic theory (1977, 1982, 1994). Kegan's model comprises five stages of progressive ego decentration. Each stage is marked by the expansion of one's subjectivity or selfhood, understood as one's capacity to take a reflective and autonomous perspective on one's own existence and how one relates to one's social environment and other aspects of reality.

Kegan's stage taxonomy took shape under the influence of Kohlberg's, at a time when Kohlberg was retreating from his claim of his sixth stage (which he had not observed among longitudinal subjects). It is therefore understandable that Kegan's model maps onto Kohlberg's and concludes with a fifth stage. In Table 5, I have taken the liberty of dividing this fifth stage into early and late stages ("5a" and "5b"), on the basis of distinctions Kegan makes between "deconstructive" and "reconstructive" phases (1994, pp. 322-334). His "deconstructive" phase aligns with ICS 2, because it takes a critical perspective on the way the social system is organized. His "reconstructive" phase aligns with ICS 3, because it takes a critical perspective on the deconstructive phase.

Kegan's "deconstructive" phase corresponds to "Stage 4½" in Kohlberg's and Habermas's sequences. Because all three models treat this phase as a transition rather than a stable equilibrium, I have highlighted it in gray in these rows. For the reasons

already noted, I believe this phase likely constitutes a distinct equilibrium across all of these models.

Given that Kegan explicitly aligns his stages with Kohlberg's, his sequence does not offer separate convergent validation of the ICS's structural pattern, except insofar as it suggests that the same pattern has been observed in still another domain. Where Kohlberg's subject interprets *moral reciprocity* in terms of concrete relations, then abstract concepts, then abstraction-organizing principles, Kegan's subject interprets *the nature of its own being* through these same logical arrangements.

Kegan's model contradicts the ICS's pattern in having only one post-deconstructive organization. I do not regard this as calling the ICS's pattern into question. For I believe that Kegan's model, influenced by Kohlberg's model during its period of renouncing the claim of a sixth stage, amalgamates two structurally distinct levels. His having done so is understandable, considering the empirical scarcity of cognition at this level. And it may well be that, in a domain as broad and reality-encompassing as existential development, it is particularly difficult either to attain metasystematic comprehension, or to empirically discern such attainment, or both. In any event, I believe we can regard Kegan's "reconstructive postmodern" subjectivity, with its *simultaneous relating of relativistic and non-relativistic differences*, as structurally analogous to Order 3 of the ICS:

> A status-conferring or judging relationship to difference is still a relationship: it does not have to create a discounting of what is less advantaged; it creates instead a connection to it. If one position is actually more complex than the other, it should be able to understand the other's position *on the other's own terms*. (1994, p. 334)

If we are willing to grant that this level parallels ICS Order 3, that Kegan's "deconstructive" phase constitutes a full stage (for the same reasons noted above for Kohlberg's "Stage 4½"), and that Kegan's "reconstructive" phase may be an amalgamation, then we may regard his sequence as converging structurally with the ICS.

Perry's stages of intellectual and ethical understanding

Perry (1970) devised a nine-stage model to describe the development of U.S. undergraduates' understandings of "the nature and origins of knowledge, of value, and of responsibility" (p. 1). In the first two stages, which he classifies as "dualistic" perspectives, students approach judgments of truth using concrete, absolutistic categories derived from authorities. From there, students grow through two "multiplistic" stages, in which they acknowledge competing perspectives, followed by a pair of "relativistic" stages, in which they perceive truth in terms of broader contexts in which these perspectives are embedded. These three pairs of stages, it seems to me, correspond roughly with ICS 0, 1, and 2, although the higher of the two "dualist" levels may shade into ICS 1, and the upper "multiplist" level may shade into ICS 2.

Perry groups his final three levels (7-9) as stages of "commitment in relativism". In these levels, students remain constant in their relativistic view of knowledge and values, but grow in their sense of identity and responsibility, learning to form ethical commitments in their lives despite an ongoing lack of certainty about truth. I have omitted these final three levels from Table 5, because they measure a different construct than the first six. I would expect that if Perry had been able to follow up with his subjects

some years after graduation, he would observed higher levels of thinking along the *original* construct. But from what we know of epistemological development among traditional-age undergraduates, it is not surprising that Perry did not observe post-relativistic approaches to knowledge and values among his young subjects (Evans, Forney, & Guido-DiBrito, 1998, 2010; King, 2003, 2009; Love & Guthrie, 1999; McNeel, 1994b; Moore, 2002). Hence it seems to me that Perry's observations, as far as he was able to go, converge with the general sequence (concrete – abstract – relativistic) I have outlined for the various models.

King & Kitchener's stages of epistemological understanding

There are similarities between development in judging internormative questions and development in judging questions of factual truth in situations where authorities reasonably disagree, a special type of epistemological reasoning that King and Kitchener (1994, 2004)—following Dewey (1933, 1938)—call "reflective judgment". In both the internormative domain and the reflective judgment domain, subjects appear to advance from a situation of relying on authority, to a stage of uncertainty rooted in conflicting perspectives, and then to a resolution of this conflict through a multidimensional coordination of those perspectives. As outlined in Table 5, and more carefully substantiated in Table 3 on page 191, the ICS and the "Reflective Judgment Model" are structurally compatible and can both be aligned with the GSS.

Other models of epistemological understanding

There are several other models of epistemological understanding that, like Perry's and King & Kitchener's, can be closely aligned to the ICS. These include Kuhn and Weinstock's model, with its "Realist", "Absolutist", "Multiplist", and "Evaluativist" stages, corresponding to ICS Orders 0-3 (2002, p. 124). Their levels, in turn, are broadly comparable to the levels of epistemological thinking identified in several other independent studies reviewed by Hofer & Pintrich (1997) and Love & Guthrie (1999).

Selman's stages of interpersonal perspective-taking

For an additional example of the ICS's structural convergence with established models, I would point the reader to page 291, where I present ICS growth as an abstract, inter-*cultural* level recursion of the four-step progression of the concrete, inter-*personal* perspective-taking operations described by Selman (1980).

Divergence

Having made my case for the ICS's structural convergence with established models, I must now explain just what is different about it. As I have said, the ICS's claim to originality rests on the premise that internormative problems present a unique logical challenge, which gives rise to a qualitatively distinct sequence of adaptations. Because the ICS's relationship with the models of Kohlberg and Habermas is particularly important to address on this point, I will do so in a separate, closing sub-section. First I will briefly address the ICS's divergence from the less closely related models.

Kegan's stages of existential development

Kegan's model differs from the ICS in its adaptive challenge (balancing what is self & what is other), logical equilibrium (ego integrity), and in the types of dilemmas used for generating observations (conflicts between reality and self-understanding) (to compare the models on these criteria, see Lahey et al. (2011)). Unlike the ICS, which focuses on a specific type of structural adaptation, Kegan's model attempts to describe virtually any kind of reflective structuring performed by the self upon its reality, as his model's interview scoring manual makes clear: "What we are looking for is the clear demonstration of "subject-objectness" at work, irrespective of which subject-object structure it is" (Lahey et al., 2011, p. 12).

Because the scope of the two models is so different, I believe the challenge is not to distinguish them but instead to consider whether Kegan may be describing a more

general type of growth that may be foundational to internormative thinking at analogous levels of complexity—a necessary but not sufficient condition. I will address this question in a separate section.

Stages of epistemological understanding

(Perry, King & Kitchener, Kuhn & Weinstock, etc.).

The various existing models of epistemological growth differ from the ICS in their adaptive challenge (evaluating knowledge claims), logical equilibrium (intersubjective justifiability), and in the types of dilemmas used for generating observations (disagreements among experts). Although these models describe adaptive sequences that parallel the ICS's, these adaptations take the form of evolving attitudes as to the nature of knowledge, whereas ICS structures are methods of resolving discrepancies between norm legitimation perspectives.

The ICS's divergence from stages of moral development

(Kohlberg/Habermas).

For its cognitive approach to analyzing the growth of normative judgment, the ICS owes an obvious debt to Piaget's and Kohlberg's groundbreaking investigations of moral reasoning (Kohlberg, 1981a, 1984; Piaget, 1932/1965; Piaget & Weil, 1965/1995). Kohlberg's work in particular has generated understandings of the development of conventional and post-conventional reasoning that are absolutely fundamental to my analysis of internormative growth.

Although internormative thinking is closely related to the kind of post-conventional moral reasoning studied by Kohlberg, it responds to a distinct type of adaptive challenge. Whereas Kohlberg described the solutions subjects find to problems of equilibrating the conflicting *interests of different individuals*, the ICS describes the solutions they find to equilibrating the disparate *legitimacies of different norm systems*. Because the two models address distinct adaptive challenges, they have different core validity criteria (*reciprocity* vs. *internormative legitimacy*), and point to distinct sequential adaptations. Even at its higher, system-oriented levels, Kohlberg's model does not shift its attention to inter-*systemic* equilibration, but remains focused on how subjects organize the relationships of individual persons toward each other in creating a fair and equitable society. In contrast with this intrasocietal focus, the ICS describes solutions for integrating the irreducibly distinct normative orders that arise under different sets of conditions.

Even within an intra-societal scope, Kohlberg's work was not exhaustive of the moral domain, as several researchers have shown (Krebs, Vermeulen, Carpendale, & Denton, 1991; Pritchard, 1991; Rest, 1983; L. J. Walker, deVries, & Trevethan, 1987; L. J. Walker, Pitts, Henning, & Matsuba, 1995). Kohlberg ultimately came to argue (1986, pp. 499-500) that his theory investigated only one aspect of this domain:

> The research program of myself and my Harvard colleagues has moved …to restricting it to the form or cognitive-structural stage of moral judgment as embodied in judgments of justice….The restricted range of the moral domain as we have now come to define it for our own theory or research program does not imply that these restrictions should guide all fruitful moral psychology research. The moral domain is large and varied, and no one approach to is conceptualization and measurement will exhaust or explain the variance in it.

But even if one compared the internormative domain with a moral domain broader than that which Kohlberg studied, the internormative domain would remain distinct from the moral, because what primarily distinguishes it is not any difference between "normative" and "moral", but the task of legitimizing a judgment *across* norm systems. The heart of this task lies in *cross-contextual* integration, with a concern for legitimacy across diverse sets of conditions.

I have operationalized this challenge in interviews and questionnaires by inquiring into the possibility of cross-contextually valid principles of justice, governance, trade & competition, ethics, and historical interpretation. This problem of cross-contextual validation was not the basis for any of Kohlberg's classic moral dilemmas (Colby & Kohlberg, 1987). Nor was it a focus of his research on political reasoning, which posed intra-societal questions about housing laws, civil disobedience, press freedom, and income distribution, without invoking issues of conflict between norms of different communities rooted in different contexts (Kohlberg, 1975).

Because the ICS and the Kohlberg model attend to different adaptive problems, they describe distinct chains of adaptations. I will briefly describe how these chains differ.

Order 1 of the ICS is the least distinct from the corresponding Kohlberg level (Stage 4), precisely because this is where the ICS interfaces with the precursor sequence of sociocognitive development described in Kohlberg's first four levels (as informed by Selman and Mead). Because this level is where internormative cognition is grounded in a

foundational series of concrete perspective-taking adaptations, it adopts its core idea from Kohlberg 4: the subject's grasping of the internal logic of a social system. Consequently, the differences between ICS 1 and Kohlberg 4 derive only from the nature of the domains: Whereas Kohlberg 4 is defined in terms of an individual's reasons for doing right within a society, ICS 1 is defined in terms of the basis on which an individual establishes a consensus between norm systems.

This domain difference applies across all the stages. For example, where Kohlberg 3 speaks of interpersonal expectations and relationships (Kohlberg, 1976, p. 34), ICS 0 identifies a representational (concretistic) understanding of whole norm systems as very large groups of persons. The different types of thinking identified by Kohlberg 3 and ICS 0 are naturally associated with the different types of dilemmas presented to subjects: Just as an internormative dilemma would not logically lead subjects to justify a choice in terms of interpersonal relationships, so also a Kohlbergian moral dilemma would not cause them to speak of entire societies as if they were very large groups of persons.

I have suggested that Order 2 of the ICS parallels Kohlberg "Stage 4½", though Kohlberg did not regard this relativistic type of thinking as a genuine stage (i.e., a stable equilibrium). That the two models differ as to whether this structure constitutes a stage may perhaps reflect the difference between their domains. That is, a structure of thinking that seems equilibrated when coordinating diverse norm systems may not seem so equilibrated when coordinating the interests of different individuals. In this sense, the structural inconsistency between the two models may to some degree support the idea

that they are describing different types of adaptation. Kohlberg's model, seeking to identify foundations for consensually organizing social relations, regards the relativist's foundation-denying skepticism as a *non-answer*, whereas the ICS, seeking to identify foundations for consensually incorporating diverse norm systems, regards the relativist's insight as a *necessary step* toward genuine integration. Accordingly, the ICS regards this insight as a central ingredient of the system-organizing stages, whereas Kohlberg's model treats it as a permissible anomaly.

Therefore, Kohlberg's system-organizing Stage 5, unlike its counterpart ICS stage, is not defined in terms of how one hierarchically integrates this insight and overcomes its limitations. And so instead of arriving at non-arbitrary principles by coordinating context-dependent and context-independent relations, the Kohlberg Stage 5 subject appears to do so through abstract ratiocination upon the nature of society:

> The social system is seen ideally as a contract freely entered into by each individual in order to preserve the rights and promote the welfare of all members….Society is conceived as based on social cooperation and agreement. (Colby & Kohlberg, 1987, p. 29)

Such an equilibrium does not derive from integrating the perspectives of different contexts, but simply from taking a reflective attitude toward society. This "prior-to-society" perspective is shared with the corresponding ICS level. But, unlike its ICS counterpart, this perspective is not arrived at through a process of transcontextual legitimation, and therefore is not built upon the insight of irreducible context-based differences, as is perhaps betrayed by the characteristically Western concept of social contract in the preceding quote. By contrast, the ICS analogue, as I have defined it in the

previous chapter, arises specifically to build upon that insight and transcend its limitations:

> The Transcontextualist perspective overcomes [the previous level's problem of] incommensurability through the capacity to consider irreducible contextual differences and other types of variations *simultaneously*. This multivariate mode of comparison allows us to recognize the objective patterns that operate independently across context. Such systematic patterns underpin validly transcontextual normative principles, which provide a consensual, non-ethnocentric, and non-arbitrary basis for integrating norm systems.

A key distinguishing factor between the two domains is the need to resolve the legitimacy question across contexts that must be *simultaneously* accounted for. I emphasize "simultaneously" because one might liken the synchronic, cross-contextual comparison demanded by an internormative problem to the type of diachronic, "that was then but this is now" comparison demanded by a purely intra-societal normative problem in the context of historical change. For example, why should we not count the question of Second Amendment rights in the United States, which involves comparing the conditions of a 21st century informational society with those of an 18th century agricultural one, as an "internormative problem"? Certainly such a question involves intellectual challenges that are similar to those posed by an internormative problem. But what it does not involve, and what is central to the challenge of internormative thinking, is figuring out how the *same* normative principle could be applied *simultaneously* across both those contexts, and *justified within their own terms* while allowing for the irreducible differences between them. For, as the earlier historical era is no longer a present concern, there is no need to formulate a principle *integratively*; we simply allow one norm for the

past and demand another norm for the present, which amounts to a historical form of relativism—"that was then, but this is now" (though unfortunately even this formulation is too complex for many citizens). In contrast, a true internormative challenge can only be adequately resolved by understanding how a single principle can be applied in indeterminate fashion across multiple contexts at once, and justified within their own terms, as done by this interview respondent:

> So let's say that democracy is a relative concept. So I think of Vietnam, one of the few countries left that claims to be communist, yet they're embracing free market principles left and right. So while they're communist on paper, they seem to be getting the hang of capitalism pretty well. And I think there's a democratization of the market that capitalism is. So they might not call themselves a democracy, but I think they're evolving in that direction. And the extent to which say Internet-based media help spread free speech in a place like China or North Korea, that's adding more democracy, whether their governments call themselves that or not. That's a separate issue. Maybe one way to put it would be, I just have this feeling that the only long-term ethical use of power is empowerment, and the extent to which power structures become entrenched and self-serving, that's not serving the greater good. So the extent to which power can be distributed and more voices can be heard, whether you call it democracy or not, I think that's in humanity's best interests.
>
> …There are different flavors of democracies. American democracy is different from British democracy is different from Chinese democracy is different from Vietnamese democracy. So I think the culture can still be there even if the system is listening to more voices.

The final point I would like to make in distinguishing internormative development from Kohlbergian moral development is to propose that the former may simply be an advanced and specialized form of the latter. I will examine this proposition in the next section. Before that, I need to clarify the ICS's divergence from Habermas's model, which essentially follows Kohlberg's.

Habermas's stages of interactive competence

Because Habermas adopts the same structure as Kohlberg's model and analyzes the same empirical evidence drawn with the same experimental stimuli, everything that distinguishes the ICS from Kohlberg's model arguably distinguishes it from Habermas's as well, except as described below.

Habermas's sequence differs from Kohlberg's in its concept of Stages 5 and 6. Whereas Kohlberg had originally oriented these stages to specific types of principles, Habermas reinterpreted them in a stricter structuralist fashion as successive levels of reflective abstraction: "At stage 5, principles are viewed as being ultimate and beyond the need for justification. At stage 6 they are not only handled more flexibly but also explicitly made relative to procedures of justification" (1983/1990, p. 172). My conception of the ICS's final two stages is informed by this conception, but differs in not defining the levels strictly as structures of "justification". As an abductively derived, *psychological* model, the ICS attempts to account for the full variety of concepts that may appear at this level of adaptation. For this reason I conceive each level more broadly as a "holistic dimension" in which concepts at the previous level can be seen to have a coherent unity. This unity may take the form of a shared justification (following Habermas's conception), but it may also take the form of a shared categorization, animating principle, or logical framework. Habermas, likely because he approaches the same complexity levels with the goal of arriving at a developmental logic of ethical foundations, defines the levels more narrowly in terms of the types of *justifications* that each can present.

Another important difference is that Habermas constructs his sequence of moral development primarily from the standpoint of philosophical adequacy and reflective abstraction, rather than from a "skill" standpoint which would analyze arguments based on (a) the degree of abstractness of the concepts being related, and (b) the complexity of the logical relations being performed on those concepts. One outcome of this difference, I would suggest, is that Habermas's model omits an intermediate stage between the systems perspective (normative judgment) and systems-of-systems perspective (principled judgment), as I have suggested of Kohlberg's model.

Notwithstanding these differences, I would hasten to acknowledge that Habermas's analyses of Kohlberg's model in *Communication and the Evolution of Society* (1976/1979) and *Moral Consciousness and Communicative Action* (1983/1990), with their interweaving of cognitive and social-structural level of analysis, provided important clues for understanding how to apply a Kohlbergian model with philosophical rigor to cross-cultural questions.

I will now return to my earlier suggestion that internormative development may constitute an advanced and specialized form of Kohlbergian moral development.

Relation to more basic and general cognitive skills

General moral development as a necessary condition for internormative development

A parsimonious explanation for the simultaneous similarity and distinctness of Kohlbergian growth and internormative growth is to conceive the former as *necessary but not sufficient* for the latter. In this conception, we regard internormative thinking as a relatively specific and challenging skill that develops from applying more foundational Kohlbergian normative reasoning capacities in situations that require cross-contextual legitimation. Such a relationship would parallel that between Kohlberg's own sequence and the still more foundational skills of logic and social perspective-taking researched by Piaget and Selman. Here is how Kohlberg understood this relationship:

> There is a parallelism between an individual's logical stage and his or her moral stage. A person whose logical stage is only concrete operational is limited to the preconventional moral stages, Stages 1 and 2. A person whose logical stage is only "low" formal operational is limited to the conventional moral stages, Stages 3 and 4. While logical development is a necessary condition for moral development, it is not sufficient. Many individuals are at a higher logical stage than the parallel moral stage, but essentially none are at a higher moral stage than their logical stage (L. J. Walker, 1980).
>
> Next after stages of logical development come stages of social perception or social perspective- or role-taking (see Selman, 1976). We partially describe these stages when we define the moral stages. These role-taking stages describe the level at which the person sees other people, interprets their thoughts and feelings, and sees their role or place in society. These stages are very closely related to moral stages, but are more general, since they do not deal just with fairness and with choices of right and wrong. To make a judgment of fairness at a certain level is more difficult than to simply see the world at that level. So, just as for logic, development of a stage's social perception precedes, or is easier than, development of the parallel stage of moral judgment. Just as there is a vertical sequence of steps in movement up from moral Stage 1 to moral Stage 2 to moral Stage 3, so there is a

> horizontal sequence of steps in movement from logic to social perception to moral judgment. (1984, pp. 171-172)

Positing a similar relationship between Kohlbergian normative reasoning and internormative reasoning would require conceptualizing Kohlberg's sequence more broadly than can perhaps be justified, given (a) his specific focus on "justice operations" (Kohlberg, Levine, & Hewer, 1984a, p. 245) and (b) that I define the "normative" half of "internormative" as referring broadly to questions of practical reason, not simply to questions of "the obligatory or right" (Colby & Kohlberg, 1987, p. 10). Nonetheless, if we focus on the two domains' common features, then positing a "necessary but not sufficient" relation permits us to sort out the theoretical relationship between them. For although the skills called for by internormative dilemmas are identifiably distinct, it stands to reason, after all, that subjects who can resolve such dilemmas across *multiple* contexts must be able to resolve them within their *own local* context(s). The "necessary but not sufficient" hypothesis, moreover, accounts well for the frequently observed phenomenon of complex moral thinkers with limited international experience who become bewildered when challenged by the suggestion that their whole structure of argumentation is embedded within a particular culture or civilization. It seems to me that such thinkers, if capable of producing arguments at Kohlberg Stage 5 or 6, do possess the general, foundational capacities for overcoming such a challenge, and lack only the more specialized and advanced capacities demanded in the skill domain described by the ICS.

Relation between internormative development and existential development

In explaining the divergence between the ICS and Kegan's stages of existential development, I suggested that the generic self-reflective or "self-authoring" capacities identified by Kegan may in fact be a necessary (but not sufficient) condition of internormative skills at analogous levels of complexity. This is a question to be answered empirically once a reliable ICS measure exists. But for now, I want to briefly consider the relationship between the two domains from a theoretical standpoint. In conceiving the domain of "existential development", I will be thinking here not only of Kegan's model but also that of Loevinger (1966, 1976), as well as the more generic ego-constructive aspects of such models as Perry's (1970), Fowler's (1981), and Belenky et al.'s (1986).

Unlike the ICS, these models do not describe the growth of discrete, domain-specific skills, but instead tend to posit the holistic development of a unitary ego or overall meaning-organizing system encompassing broad aspects of the subject's relationship with reality (Gibbs, 1979; Kohlberg et al., 1984a). For this reason, research on the growth of such personal meaning-making or "self-authorship" tends to proceed on the assumption that it is domain-general and can be ascertained in discussing whatever topic the subject prefers (Creamer, Baxter-Magolda, & Yue, 2010; Lahey et al., 2011). Such unitary conceptions of development have value in illuminating the interconnections among different areas of growth (such as epistemological, interpersonal, moral, and spiritual) that relate in one way or another to a subject's self-understanding and self-

identification. On the other hand, I would suggest that this advantage comes at the cost of the strong empirical properties associated with more precisely defined stage sequences (see Heikkinen, 2011). In any event, I have chosen to define the ICS in terms of a single, discrete skill, and I do not claim that it advances only in tandem with other skills, as part of a unitary ego or meaning system.

That said, I do assume that a certain depth of self-understanding is necessary, though not sufficient, for every level of understanding in the internormative domain or any other *ego-proximal domain*. By this term I am referring to those objects of thought with which one engages from a self-identified perspective. As an example of what is *not* an ego-proximal domain, we can take conceptions of energy (Dawson, 2006): While my way of conceptualizing energy does constitute a perspective, I am not identified with this perspective, and no amount of ego development will advance my concept of energy if I do not study the subject. As an example of what *is* an ego-proximal domain, we can take civic commitments. These are ego-proximal because they relate to my civic identity and derive from my attempts to make a morally meaningful interpretation of my life (this effort toward life meaning, as Kegan (1982) has shown us, *is* the self). Other ego-proximal domains include religion/spirituality, morality, and, obviously, identity and self-understanding.

Because internormative understanding is an ego-proximal domain, I would expect it to depend on ego or existential development in the same way it presumably depends on general moral development. For example, I assume that one's capacity for post-conventional ICS levels would be limited if one were tribalistically self-identified with

one's community. Hence I expect to find that an ICS measure would covary relatively closely with such measures as Kegan's Subject-Object Interview (Lahey et al., 2011), Loevinger's sentence completion test (1985), or various measures of civic identity.

Moreover, I agree with those who point to a catalyzing, domain-general role for ego development as the *growth of the self that is finding its way through all the other domains* (Kegan, 1977). This argument emphasizes the self's sui generis role as the seat of consciousness, the "navigator" of development (Wilber, 2000b, p. 35). Existential development is thus more than a "domain", because self-awareness is necessary to or supportive of development in all the domains related to the self. In this view, the growth of self-awareness is of special importance to internormative development because it is the growth of the *subject* of that development, the *administrator* of a normative or inter-normative enterprise. In particular, I believe that ego development may largely account for the relative healthiness or pathology of the way a subject moves through the levels (see "Emergent pathologies" section on page 111). Whereas a subject with a highly developed (i.e., expansive and self-reflective) ego will be relatively open to criticism and learning from other's viewpoints, a subject with a poorly developed (i.e., narcissistic and self-defensive) ego will adopt each stage structure with a relatively self-satisfied, "know-it-all" attitude. For this reason, I assume that the general skills of ego detachment and self-reflection described in models such as Loevinger's and Kegan's may be vital in catalyzing growth across the ego-proximal domains. In the ICS, such skills seem especially important to avoiding closed-minded attitudes at each level (such as

ethnocentrism at Order 1, absolutistic relativism at Order 2, or absolutistic principlism at Order 3) that may hinder the breadth of thinking required to organize the next structure.

I will add one final distinction between the ICS and the existential growth models. Unlike what these models sometimes appear to do, I do not assume in the ICS that growth from one level to the next necessarily involves an explicit awareness of itself. Here I adopt the distinction Kohlberg et al. (1984a, pp. 243-244) noted between "reflective abstraction" and self-reflection:

> While Piaget observes that reflective abstraction accompanies movement from one stage to the next, this "reflection" is not to be interpreted as meaning that each later stage involves a self-conscious awareness of itself or of the previous stage. On the contrary, reflective abstraction is considered to be an unconscious structural process, not the conscious formation of a theoretical perspective on one's own development.

Recursiveness

The ICS as a cyclical recursion of intersubjective perspective-taking

My purpose in this section is to suggest that the growth of internormative reasoning may be an abstract, inter-systemic level recursion of the concrete, inter-subjective perspective-taking operations described by Selman (1980)—based in part on earlier work by Mead (1934, 1938)—and adopted into the models of Kohlberg (1976), Kegan (1982, 1994), and Habermas (1983/1990). If this suggestion is true, it allows us to conceptualize the two sets of operations as a repeating cycle with concrete and abstract phases, as shown in the table below. In the first cycle, we can align Kohlberg's first four stages of justice reasoning with Selman's four stages of intersubjective perspective-taking. In the second cycle, we can align Kohlberg's last four stages with the ICS's four stages of intersystemic norm legitimation, if we incorporate his ostensibly transitional "Stage 4½" as a full stage. The two cycles join at the point where the subject generates the abstract concept of societal order by an advanced coordination of individual justice perspectives, as described by Kohlberg (1976) and Habermas (1983/1990). A corollary outcome of conceptualizing this recurrent cycling of perspective-taking operations is to support the notion that the Kohlberg sequence does indeed require incorporating a full stage for "Stage 4½".

Table 7. Recursion of Perspective-taking Operations[a] *in Intersubjective & Intersystemic Cycles*

Concrete Perspectives (Intersubjective)			**Concrete/Abstract** (Intersubjective/Intersystemic)	**Abstract Perspectives** (Intersystemic)		
Unmapped (1st person) ··	*Mapped* (2d person) –	*Systematized* (3d person) └	*Metasystematized concrete/ Unmapped abstract* ↙ / ··	*Mapped* (2d person) –	*Systematized* (3d person) └	*Metasystematized* (3d psn-observing) ↙
Selman 1	Selman 2	Selman 3	[Selman 4][b]/ICS 1	ICS 2	ICS 3	ICS 4
Kohlberg 1	Kohlberg 2	Kohlberg 3	Kohlberg 4	Kohlberg 4½	Kohlberg 5	Kohlberg 6

Note. The shading indicates a single sequence of intra-societal and inter-societal normative reasoning, linking the first half of Kohlberg's sequence with the ICS. As already noted, neither Kohlberg's model nor the ICS can be reduced to the psychological skill of perspective-taking, because both models have a philosophical criterion at their core.

[a] The cycle of "perspective-taking operations" I take up here is that proposed by Selman (1980). I omit here any consideration of various other conceptions of the development of social perspective-taking, theory of mind, or internal simulation (Carlson & Moses, 2001; Davis & Franzoi, 1991; Dodge et al., 2003; Gehlbach, 2004a, 2004b, 2017; Gopnik & Wellman, 1994; P. L. Harris, 1994; H. Y. Kim et al., forthcoming; Pelletier, 2006; Perner, 1991; Ryskin, Benjamin, Tullis, & Brown-Schmidt, 2015; Schultz, Selman, & LaRusso, 2003). Selman's 1980 model remains current, insofar as it has been adopted largely intact within recent extensions or applications of the model (e.g., Diazgranados et al., 2016; H. Y. Kim et al., forthcoming; J. Martin et al., 2008).

[b] I bracket Selman's Stage 4 because it departs from the strict perspective-taking-based developmental logic of the first three stages. Due to this departure, Selman's Stage 4, unlike Kohlberg's Stage 4, is not in my view structurally analogous with ICS Stage 4.

To support the proposition that the ICS may constitute a cyclical recursion of interpersonal perspective-taking, I present in Table 8 (below) a side-by-side comparison of Selman's model and the ICS. The table highlights a large number of stage-by-stage parallels between the two models (**boldface** and <u>underlined</u> points correspond to similarly marked points in the opposite column, in sequence). Note that the table spans three pages.

While I attempt below to present the ICS stages in a way consistent with how I have described them throughout this dissertation, I deliberately adopt the structure of Selman's (1980) stage presentation so as to illustrate the parallels. In reading the table, please consider whether the two models show a parallel sequence of development, and whether this presentation of the ICS is consistent with the way I have presented it elsewhere in this dissertation.

Table 8. Internormative Reasoning as a Cyclical Recursion of Interpersonal Perspective-taking

Stages of Interpersonal Perspective-taking (Concrete) Selman (1980, pp. 37-39)	**Orders of Internormative Reasoning (Abstract)** ICS
Level 0 Undifferentiated and Egocentric Perspective Taking	Order 0 Concrete Groupist Perspective on Norm Systems
Concept of Persons: Undifferentiated. **At this level, young children do not clearly differentiate physical and psychological characteristics of persons**. Feelings and thoughts can be observed and recognized, but the confusion between the subjective-psychological and the objective-physical leads to confusion between acts and feelings or between intentional and unintentional behavior.	*Concept of norm systems: Undifferentiated.* **At this level, subjects do not yet grasp the idea of a legitimate norm system**, either of their own society or of other societies. The existence of other norm systems is recognized, but their inner logic is not understood.
Concept of Relations: Egocentric. **Self and others are differentiated only as physical entities, not psychological entities**. Thus subjective perspectives are undifferentiated and that another may interpret the same situation differently is not recognized. Concepts of relations of perspectives are limited by inability to differentiate clearly and by concomitant reduction of differences in perspectives to mere differences in *perceptual* perspectives.	*Concept of Relations: Literal-concrete.* **Societies are conceived as literal entities – akin to groups of persons – not as abstract norm systems**. The idea that another society has its own norm system legitimacy is not understood, because the concept of a legitimate norm system is not yet understood even for one's own society. Internormative questions are handled by relating societies to each other as concrete entities, using the same thought structures used for interpersonal perspective-taking.
Level 1 Differentiated and Subjective Perspective Taking	Order 1 Conventional Perspective on Norm Systems
Concept of Persons: Differentiated. At Level 1, the key conceptual advance is the **clear differentiation of physical and psychological characteristics of persons**. As a result, intentional and unintentional acts are differentiated and a new awareness is generated that each person has a unique subjective covert psychological life. **Thought, opinion, or feeling states within an individual**, however, **are seen as unitary, not mixed**.	*Concept of Norm Systems: Differentiated*: Societies are **no longer conceived as concrete entities, but as organized systems of norms** (this recognition generates the concept of norm system legitimacy). Acts can be seen as valid or invalid within other systems. Other systems are now related to from the perspective of an internalized norm system within a global set of such systems. However, **each system is still seen as static**.
Concept of Relations: Subjective. The **subjective perspectives of self and other are clearly differentiated and recognized as potentially different**. However, another's subjective state is still thought to be legible by simple physical observation. Relating of perspectives is conceived of in one-way, unilateral terms, in terms of the perspective of and impact on one actor. For example, in this simple one-way conception of relating of perspectives and interpersonal causality, a gift makes someone happy. Where there *is* any understanding of two-way **reciprocity,** it **is limited to the physical-the hit child hits back. Individuals are seen to respond to action with like action**.	*Concept of Relations: Sociocentric.* The **existence of different internally ordered norm systems is grasped**, but the perspectives of two systems cannot be mapped into an overall possibilistic dimension. The norm perspectives of different systems can only be considered one at a time, so their legitimacies are still seen as sui generis, not as reversible variations. Because norm systems are not yet seen to be generated by a common process of norm construction, they are conceived as unrelated. Because their perspectives cannot yet be linked, **systems are seen as relating to each other through balance of power, competition, or zero-sum tradeoffs**.

Note for Levels 0-1. In both models, Level 0 is a precursor level in which subjects do not yet possess the core concept that gets coordinated in the remaining levels: *subject* or *norm system*. These concepts emerge at Level 1, but cannot yet be "mapped". That is, they can only be related via "one-way perspective-taking", leaving subjects/norm systems psychologically isolated: "To the extent others judge differently than I do, it is because they are in a state of misinformation or misunderstanding; they have not seen the reality that is there to be seen" (Kuhn & Weinstock, 2002, p. 126).

Interpersonal Level 2 (concrete) Self-reflective/Second-person and Reciprocal Perspective Taking	Internormative Order 2 (abstract) Reflective/Reversible Perspective on Norm Systems
Concept of Persons: Self-reflective/Second-person. Key conceptual advances at Level 2 are the growing child's **ability to step mentally outside himself or herself and take a self-reflective or second-person perspective on his or her own thoughts and actions *and* on the realization that others can do so as well**. Persons' thought or feeling states are seen as potentially multiple, for example, curious, frightened, and happy, but still as groupings of mutually isolated and sequential or weighted aspects, for example, mostly curious and happy and a little scared. Both selves and others are thereby understood to be capable of doing things (overt actions) they may not want (intend) to do. And **persons are understood to have a dual, layered social orientation: visible appearance**, possibly put on for show, **and the *truer* hidden reality**.	*Concept of Norm Systems: Reflective/Hypothetical.* With this order comes the ability to take a **reflective, hypothetical attitude toward norm systems, which are discovered to be contingent results of particular contexts and constructive processes**. Norm systems are seen to have multiple possibilities historically and comparatively, though such variations are not yet contemplated simultaneously. Within this new, system-thematizing dimension, norms are no longer seen as "naturally" legitimate, but only as legitimate in relation to a unique context and constructive process. **This constructive process, hidden behind the false appearance of a "natural" entity, is now understood to be the true seat of a norm system's legitimacy**. Yet this process remains inscrutable.
Concept of Relations: Reciprocal. **Differences among perspectives are seen relativistically because of the Level 2 child's recognition of the uniqueness of each person's ordered set of values and purposes**. A new two-way reciprocity is the hallmark of Level 2 concepts of relations. It is a reciprocity of thoughts and feelings, not merely actions. The child puts himself or herself in another's shoes and realizes the other will do the same. In strictly mechanical-logical terms, the child now sees the infinite regress possibility of perspective taking (I know that she knows that I know that she knows ... etc.). The child also **recognizes that the outer appearance-inner reality distinction means selves can deceive others as to their inner states, which places accuracy limits on taking another's inner perspective**. In essence, the two-way reciprocity of this level has the practical result of détente, wherein both parties are satisfied, but in relative isolation: two single individuals seeing self and other, but not the relationship system between them.	*Concept of Relations: Reversible.* **Differences between norm systems are seen relativistically because one recognizes that each system's legitimacy is relative to a particular context and creative process**. At Order 1 one can only take a single system's perspective at a time, so one sees systems as counterparts in zero-sum relation. But at Order 2, one can coordinate two norm legitimation perspectives within a single reversible dimension, in which their logics are interchangeable – mere variants of a single process with infinite equally valid possible outcomes. At this level one also **recognizes the distinction between what a norm system is and what it might be, giving it a new hypothetical quality**. The interchangeability of systems produces an attitude of mutual non-judgment, in the absence of a systematized perspective that would make it possible to adjudicate between or integrate systems.

Note for Level 2: In both models, the emergent skill is to "map" or reversibly interrelate multiple units of the core perspective; ie, the subject can take the perspective of two subjects/norm systems at once and see them as interchangeable. From this "two-way perspective-taking" the subject comes to appreciate the processes that lie behind outward appearances: the psychological process behind the actions of a subject or the social-constructive process behind the structure of a norm system. In this way the social-constructivist thinking of the abstract cycle (late teens-early 20s) parallels the constructivist theory of mind of second-person perspective-taking in the concrete cycle (roughly ages 7-12). Each is associated with a relativistic position of mutual non-judgment due to the absence of an objective, third-person point of view. Different subjects/ norm systems can be situated within their separate points of view, but these perspectives cannot yet be objectively compared or analyzed.

Interpersonal Level 3 (concrete) Third-person and Mutual Perspective Taking	Internormative Order 3 (abstract) Objective and Systematic Perspective on Norm Systems
Concept of Persons: Third-person. **Persons are seen** by the young adolescent thinking at Level 3 **as systems of attitudes and values fairly consistent** over the long haul, **as opposed to randomly changeable assortments of states as at Level 2**. The critical conceptual advance is toward ability to take a true third-person perspective, to step outside not only one's own immediate perspective, but outside the self as a system, a totality [perhaps this could be rephrased as, "outside the self as a generic category"]. There are generated notions of what we might call an "**observing ego**," such that **adolescents do (and perceive other persons to) simultaneously see themselves as both actors and objects, simultaneously acting and reflecting** upon the effects of action on themselves, reflecting upon the self in interaction with the self.	*Concept of Norm Systems: Objective.* From this perspective, **norm systems are seen not just to result arbitrarily from particular historical contexts, but also to result from a systematic constructive process composed of stable context-independent patterns**. At Order 3 one gains the ability to judge variations objectively, by stepping outside not only the perspectives of two systems in relativistic (historical or comparative) relation, but outside such relations themselves. At this level one is able to reflect on such reversible relationships as a **third-person observer, simultaneously operating on multiple relationships** to organize transcontextual systems in which each legitimation perspective can be seen to fit, even while being irreducibly unique. Each such element is now conceived *objectively*, as an outcome of a system, rather than as a randomly variable element.
Concept of Relations: Mutual. The third-person perspective **permits more than the taking of another's perspective on the self**; the truly third-person perspective on relations which is characteristic of Level 3 **simultaneously includes and coordinates the perspectives of self and other(s)**, and thus the system or situation and **all parties are seen from the third-person or generalized other perspective**. Whereas at Level 2, the logic of infinite regress, chaining back and forth, was indeed apparent, its implications were not. At Level 3, the limitations and ultimate futility of attempts to understand interactions on the basis of the infinite regress model become apparent and **the third-person perspective** of this level **allows the adolescent to abstractly step outside an interpersonal interaction and simultaneously and mutually coordinate and consider the perspectives (and their interactions) of self and other(s).** Subjects thinking at this level see the need to coordinate reciprocal perspectives, and believe social satisfaction, understanding, or resolution must be mutual and coordinated to be genuine and effective. Relations are viewed more as ongoing systems in which thoughts and experiences are mutually shared.	*Concept of Relations: Systematic.* Order 3 **no longer coordinates the perspectives of particular norm systems, but instead coordinates relationships among them into a generalized perspective that permits objective judgment across contexts**. Relativistic variations themselves come to be seen as relative to a broader set of possibilistic conditions that can be expressed in terms of specific principles. Whereas at Order 2 the notion of legitimate variation may extend to the simple relativistic conclusion of unlimited legitimacies, Order 3 discovers the limitations of this approach. Order 3 resolves this impasse by making the same move that created Order 2: contextualization/ relativization. The variations themselves come to be seen as relative to a broader system in which they fit. **By opening up a new dimension in which it is possible to *relate relationships*, the Order 3 perspective gains the capacity to critically evaluate variations that are perceived relativistically at Order 2**. Relationships across systems are understood in terms of a super-system, even as each system remains irreducibly unique.

Note for Level 3. The emergent skill at this level is to step outside the previous level's second-person, back-and-forth [–] perspective-relating and into a new dimension in which one can coordinate such relationships and take an observer's point of view upon them [⌞]. From this third-person perspective, one no longer simply sees perspectives from within two-way relationships, but can see both another's and one's own point of view as "just another point of view". This generalized vantage point permits one to recognize that two subjects/ norm systems are not what they are by virtue of their differences; they do not differ in an absolute way. Accordingly, one moves beyond a simple relativistic view of such differences. Taking an observer's point of view on Level 2's "reversibilities" leads to the discovery of objective, consistent, and non-arbitrary rules to follow – rules of interpersonal interaction (concrete) or transcontextual principles (abstract).

I have omitted Selman's Level 4 from the table, as he does not differentiate Levels 3 and 4 in terms of the progressive structuration of perspective-taking. This leaves one gap in the alignment of the concrete and abstract cycles. We can fill this gap by simply finding the parallel between the ICS's Order 3-4 transition and that of Kohlberg's model, which unlike Selman's carries the original perspective-equilibration logic through to the fourth stage. In both the Kohlberg model and the ICS, the Level 3 equilibrium derives from coordinating the relationships among all the individuals in question into various rules (in the concrete cycle) or principles (in the abstract cycle), whereas the Level 4 equilibrium derives from constructing a system in which all these rules/principles cohere. From this "4th-person" perspective, one no longer directly coordinates the perspectives of individual subjects or norm systems, but instead coordinates the systematic interrelationships among them.

And so with this small assist from Kohlberg's Stage 4, I believe Selman's sequence makes it possible to connect the ICS with a parallel, foundational sequence of concrete perspective-taking operations. Selman's model, which illuminates the foundational skills presupposed in Kohlberg's original model, makes good the potential for Kohlberg's theory of moral-cognitive development to delineate the precursor developments necessary for the growth of internormative understanding.

The inadequacy of domain-general metrics for measuring internormative cognition

The ICS would be of limited usefulness if it were possible to measure internormative cognition by simply applying existing domain-general metrics. The aim of this section is to explain why this is not possible. To do so I will describe the limitations of the existing domain-general metrics, first of the Integrative Complexity scale (Baker-Brown et al., 1992), then of the systems used for measuring complexity by the General Skill Scale and Model of Hierarchical Complexity.

Integrative Complexity scale

The Integrative Complexity scale is well established. It has wide currency within the field of political psychology, where it has been used to analyze such topics as decision-making (Gruenfeld, 1995), leadership style (Hermann, 2003), crisis management (Thies, 2009), and conflict resolution (Savage, 2012). It has also been used to investigate non-political domains including biculturalism (Tadmor et al., 2012), scientific thinking (Feist, 1994), honesty (Conway et al., 2008), and organizational management (Tetlock, Peterson, & Berry, 1993; Wong, Ormiston, & Tetlock, 2011).

Given that the Integrative Complexity scale is so well established, and seems to align so closely with the ICS, it is reasonable to ask if we could not obviate the ICS by simply applying this existing metric to internormative issues without further ado. There are two principal reasons this would not work.

First, the Integrative Complexity scale is not developmental, which means that *it cannot account for the genesis of new concepts or the evolution of logical relations over time*. This scale did not derive from studies of psychological development but from the synchronic analysis of information processing known as "conceptual complexity theory" (Driver, 1962; Harvey et al., 1961; Schroder et al., 1967). As Suedfeld and Tetlock (2014) have noted, the current Integrative Complexity scale is a modified version of a 1960s-era Conceptual Complexity scale. It has clearly inherited the original measure's synchronic and taxonomic (rather than ontogenetic) mode of analysis.

Instead of seeing complexity as arising from a learning process, the Integrative Complexity scale assumes it results from the combination of a *personality trait* (conceptual complexity) with a *situationally influenced performance* (the degree to which subjects integrate the concepts to which they have access) (Suedfeld et al., 1992). Research with this scale thus posits a static level of conceptual complexity as a fixed personal characteristic (which is ignored), and focuses only on how those unevolving concepts—whatever their contents—are influenced by circumstances such as political crises, military conflict, or other forms of stress (Suedfeld, 2010). This meaning-ignoring focus can be readily seen in the following analysis of the wartime correspondence of Gen. Robert E. Lee:

> Baseline measures derived from his pre-Civil War correspondence and other writings showed him to be very high in complexity. A temporary drop occurred when the war was imminent and he decided to join the Confederate Army. During his first few years in command, as he faced superior numbers and managed to defeat them (or at least to avoid being defeated), his [complexity] was consistently higher than that of the opposing commander. However, it began to slide downward with his increasing stress as the Confederacy ran out of manpower and other resources; and Lee finally met

> an opponent whose [complexity] was at least the equal of his own, Ulysses S. Grant…. The subsequent string of defeats ended with Lee's surrender at Appomattox. The decision to surrender was accompanied by his recovery to high complexity, which persisted until his death. (Suedfeld, 2010, p. 1685) (summarizing original research by Suedfeld, Corteen, & McCormick, 1986)

As this example illustrates, the Integrative Complexity scale takes the conceptual content of a text for granted, and analyzes it only in terms of its internal relations. Though it refers to these relations with the terms "differentiation" and "integration", it does not use these terms in the Piagetian sense of decentration. By "differentiation", it refers to taking multiple legitimate perspectives into account within a given argument; by "integration", it refers to forging conceptual links between those perspectives. Both terms are used in the purely synchronic sense of how a subject relates such perspectives within one argument; neither refers to a developmental process by which the subject generates new modes of thought over time.

Integrative Complexity thus ignores the actual process through which cognitive complexity emerges. Rather than attend to this process, it assumes that a subject's conceptual complexity is a fixed trait, and that the subject—far from adapting to environmental challenges by generating new concepts—will in fact adapt to them by using the *lowest* level of complexity possible in an effort to conserve cognitive resources under stress. This utterly un-Piagetian view rules out the very possibility of developing new modes of thought, because it assumes that environmental challenges can only stifle complexity, never beget it. Here the mistaken assumption is that complexity makes thinking more *difficult*, when in fact it emerges as a means of *simplification*. In this way

"Integrative Complexity" offers a thoroughly *un*-integrative view of complexity, because it understands complexity from the exclusive standpoint of logical relations while ignoring the dialectical formation of new *types* of thought through reflective integration of the old.

This brings me to the second shortcoming of Integrative Complexity, which is its lack of philosophical criteria for regarding one type of thought as more adequate than another. Its definition of "complexity" attends only to the manner in which concepts are related, while paying no regard to the intrinsic significance of the concepts themselves. Though this is done pursuant to the metric's structuralist orientation, the result is to disregard the concepts' *most basic structural quality*—their depth. Consequently, Integrative Complexity lacks a theoretical basis for understanding why subjects should tend to adapt to challenges *progressively* (by generating more logically adequate and comprehensive understandings), and instead assumes they can only adapt *regressively* (by reducing complexity in pursuit of stress relief).

By thus viewing environmental challenges exclusively as a source of synchronic structural distress, rather than as an impetus to diachronic structural adaptation, Integrative Complexity lacks a basis for recognizing the fundamental fact that *cognitive structure is adapted to the environment*. In this way the structure of objective reality, and the adequacy of the subject's adaptation to it, are entirely ignored. Integrative Complexity thereby comes to resemble a kind of semiotic structuralism, in that the meaning of any utterance can only be interpreted relationally rather than in terms of its intrinsic significance. Subjects move up and down the structural scale only according to

the stresses of the immediate situation, not by virtue of any meaning or conceptual adequacy available at each level on that scale. Such analysis resembles the semiotic in that it studies arguments purely as internally organized systems, without regard to any interactive, dialogic process by which such systems may evolve to more adequately account for reality. The result of this exclusive focus on internal relations is to ignore what subjects are in fact talking *about*, and why they have come to hold such an opinion.

In contrast with this view, the philosophic-developmental approach goes beyond identifying internal patterns to investigate what logical problems those patterns solve, and what new problems they encounter that can only be resolved by still more comprehensive patterns. Such understandings can come only from interpreting thought patterns with an ontogenetic logic based on validity criteria understood from the subject's perspective.

An incidental outcome of analyzing the shortcomings of Integrative Complexity has been to highlight the contrast between the dynamic, diachronic, dialogic structuralism of the Piagetian type and the static, synchronic, monologic structuralism of the semiotic type. Where the semiotic structuralist studies only internal, synchronic organization, the Piagetian analyzes both synchronic organization and the diachronic evolution of that organization. Because that evolution is understood as a progressive adaptation to the outside world, the Piagetian possesses a non-arbitrary criterion for evaluating the adequacy of thought structures and thereby accounting for the genesis of new concepts.

Integrative Complexity's lack of a philosophic-developmental perspective has resulted in a static, correlational research program largely focused on identifying relationships between Integrative Complexity and other variables—such as its possible

impact on the outcomes of political crises (Maoz & Astorino, 1992; A. G. Smith, Suedfeld, Conway, & Winter, 2008; Tetlock, 1985) or its possible regression under the stress of such crises (Koo & Han, 2006; Suedfeld, Leighton, & Conway, 2006; Suedfeld & Tetlock, 1977; S. G. Walker & Watson, 1994)—but with neither an internal explanation as to why superordinate thinking should be more capable of *resolving* these crises, nor a concept of how one might ultimately respond to perturbations by taking a more deeply equilibrated *perspective* rather than simply regressing.

General Skill Scale, Model of Hierarchical Complexity, Lectical Assessment System

I have claimed that ICS stages are domain-specific forms of the universal complexity structures described by the General Skill Scale (GSS) (Fischer, 1980) and the Model of Hierarchical Complexity (MHC) (Commons et al., 1998). And so if there were a way to measure universal complexity in internormative arguments with a domain-general instrument based on one of these scales, then one could argue that it would not be necessary to develop special measurement techniques for this one domain. But what I want to argue here is that no scoring system derived from domain-general scales can in fact accurately measure internormative thinking.

Two methods exist for measuring universal complexity by the GSS and MHC. For the MHC, Commons and his colleagues have published a method called the Hierarchical Complexity Scoring System (HCSS), while for the GSS, Dawson has published a method known as the Lectical Assessment System (LAS) (Commons et al.,

2002; Dawson, 2018; Lectica.org, 2018). The LAS is in fact a revised version of the HCSS that has been adapted to align with certain features of the GSS. Dawson (2001) has argued that the HCSS (and by extension the LAS) measures the "core structure" of logical arguments in any domain, and that this core structure coincides with the "surface structures" measured by domain-specific instruments. On this basis, she claims that the HCSS/LAS can be used to assess complexity *without reference to domain-specific normative evaluation or content*, though this requires a process of "mapping" the system to the qualitative conceptual content of the domain in question (Dawson & Gabrielian, 2003, p. 171).

The caveat just mentioned is significant. This unavoidable process of "mapping" the HCSS/LAS to the domain one wishes to study in fact means that it is the HCSS/LAS, not the domain-specific measure, that must justify duplication of effort (assuming a domain-specific measure already exists). Such justification might be undertaken on the grounds that the HCSS/LAS is better established, or that it has a more general significance, but in fact *the ad hoc domain mapping it depends on* would be no more established or generalizable than any domain-specific measure (while presumably availing of less domain expertise). And provided one takes care to align one's domain-specific measure to universal complexity, *there is no advantage to be gained from using a domain-general system in any event*. The question of how to measure newly researched domains, then, would seem to rest solely on whether one prefers to create a domain-specific measure aligned to universal complexity, or a domain-customized version of a universal complexity measure (through the use of "concept mapping" procedures).

Whatever rigor one may seek to attain with these "concept mapping" procedures, I believe that a domain-general scoring system such as the HCSS/LAS is ultimately too reductionist to viably evaluate growth in a normative domain. The fundamental problem for a domain-free system is that, to apply across diverse domains, it must systematically reduce everything it analyzes to a combination of *concept ratings* (each concept pre-mapped to an "order of abstraction" (Dawson & Gabrielian, 2003, p. 174)) and, as Dawson notes, *syntax* (2004, p. 34). The problem with relying on concept ratings is that a particular concept cannot be reliably assigned to a specific complexity level without knowing what a subject *means*. For example, a subject can use the word "ideological" in the simple sense of suggesting that an argument is "dogmatic" or "knee-jerk", or in a much more complex sense of suggesting that it is not simply composed of ideas, but of holistic systematizations of ideas (Adelson, 1971, 1975). Critically, the effort to pre-rate the complexity of concepts is liable to result in drastically underrating the complexity of advanced ideas expressed in simple terms, such as "conflict" when used in the Marxian sense of "class conflict", or "sphere" when used in the Weberian sense of "value sphere". Particularly in a philosophic domain, evaluating the complexity of such concepts requires having a theory of what kinds of concepts are more adequate than others.

As for relying on syntax as a proxy for logical relations, the problem is similar—we cannot reliably evaluate such relations without knowing what a subject means, and the logical complexity of that subject's argument is not reducible to the syntactic relations of its component sentences. It can only be understood in the context of the entire argument,

which in turn cannot be evaluated without a theory of the domain. This is especially true of philosophic domains, because the syntactical complexity of an utterance does not suffice to account for the intrinsic logic of normative statements.

The problem with the "concept mapping" procedures that underpin the HCSS/LAS is that they proceed inductively, rather than from a philosophy of the domain (unless they are performed, redundantly, by a domain expert). Without a theory of what development in the domain means, *it is impossible to know what one is observing* (Bellah, 1970a, 1983; Habermas, 1981/1987, 1986/1990; Kohlberg, 1982; Valsiner, 2006). Meaningful observation can only proceed from a philosophy of what is being observed. This is why reliance on empiricism to chart philosophic domains leads to the kind of misinterpretation I described earlier in Hinton's (2012) account of the development of "cosmopolitan skills" among high school students.

To accurately observe philosophic thinking and growth requires evaluating arguments within the same dimension in which they are produced—the *normative*. The HCSS/LAS cannot do this. As Dawson and Gabrielian note, "unlike domain-based stage scoring systems, the Hierarchical Complexity Scoring System incorporates no normative statements about the conceptual content of performances. The claim that one stage is 'higher' than another simply means that it is more hierarchically complex" (2003, p. 171). But in a domain like the ICS's, such complexity is *itself* normative, because it is based on the organization of *consensus structures*, not the organization of concepts. This is why the ICS rates Shweder's mature position accepting universalism "without the

uniformity" (2012, p. 88) as more developed than his youthful relativist polemics (1982a, 1982b), even though it was couched in less elaborately intellectual language.

My guess is that an HCSS/LAS rating of a representative segment from each of these Shweder essays would not observe growth. For by reducing his arguments to a syntactic relation of pre-rated concepts, it would miss the very points he is making. In its effort to assess complexity *without reference to domain-specific normative evaluation*, the HCSS/LAS deprives itself of the only possible basis for actually *understanding* the nature or complexity of a normative argument, which is to evaluate it according to the validity criterion that generates it. Evaluating normative thinking requires a philosophical understanding of the nature of subjects' validity claims, which cannot be effectively reduced either to syntactical relations or to pre-determined concept ratings. It can only be understood in terms of an argument, from the subject's viewpoint, as to why one way of thinking makes more sense than another.

To this Dawson could respond by pointing to her finding that the mean HCSS scores her group gave to Kohlberg transcripts were "within one complexity order" of the original Kohlberg scores 95% of the time, despite not being based on normative evaluation (Dawson & Gabrielian, 2003, p. 174). But this statistic is not particularly meaningful, considering that, on Kohlberg's six-order scale, a simple guess of "Stage 3" is likely to be "within one complexity order" of the vast majority of the sample. In typical Kohlberg samples, Stage 1 is relatively rare and Stage 6 is virtually non-existent. Leaving these two stages aside, a guess of "Stage 3" is "within one complexity order" of three of the remaining four stages, and the remaining one (Stage 5) is itself relatively

rare. Thus if I am interpreting the authors correctly, the confidence interval they cite is likely to be so broad as to encompass the majority of their sample (this would not be the case if the two measures scored 95% of the data at the *same* complexity order). On this basis, it does not seem to me that the HCSS/LAS can confidently be substituted for the domain-specific measure.

For all the reasons just explained, I do not believe it would be possible to use the HCSS/LAS as a substitute for an ICS measure. It could be used concurrently as a test of convergent validity, but as noted above, this would require a special process of domain customization, essentially duplicating the analysis already embodied in the ICS.

Bennett's Developmental Model of Intercultural Sensitivity

Milton Bennett has made an important contribution toward a developmental understanding of intercultural competence with his Developmental Model of Intercultural Sensitivity (DMIS) (J. Bennett & Bennett, 2003, 2004; M. J. Bennett, 1986, 1993).

The DMIS posits a sequence of six stages of increasing sensitivity, beginning with three Ethnocentric stages (Denial, Defense, Minimization) and concluding with three Ethnorelative stages (Acceptance, Adaptation, and Integration). Although the DMIS cannot be understood as a structural-developmental model, one can extract a logic of Piagetian stage growth from the overall Ethnocentric-Ethnorelative shift, interpreted as decentering from an ethnocentric perspective into a reversible relation of multiple cultural perspectives (similar to the °1-°2 transition in the ICS). But with the exception of the transition to the first Ethnorelative stage (Acceptance), no such developmental logic of hierarchical complexity can be extracted from the six sub-stages, nor can they be understood as structural wholes according to any consistent criterion of internal organization. Instead the stages are defined in terms of a changing series of cognitive, affective, affiliative, and circumstantial criteria, such as reliance on Darwinian explanations of difference, feeling that one is "under siege", acknowledging superficial differences, entering a situation of intense cultural contact, and developing a more culturally marginalized identity (J. Bennett & Bennett, 2004, pp. 154-157; M. J. Bennett, 2004, pp. 62-77). Table 9 below lists a selection of stage criteria from the DMIS, intended not to summarize the model but only to illustrate that its stage specifications do not follow a consistent structural criterion or developmental logic.

Table 9. Selected Stage Criteria for Bennett's Developmental Model of Intercultural Sensitivity

Stage	*Selected criterion*
Denial	The implicit use of genetic or social Darwinism to justify the existence of naturally superior people who are either born into or achieve membership in the dominant group.
Defense	The prevailing attitude is one of being under siege…Power is exercised by attempting to exclude the interlopers from institutions.
Minimization	Superficial cultural differences in etiquette and other customs are acknowledged, but the assumption is made that 'deep down, we are all the same'.
Acceptance	One's own ethical position becomes one of several possible positions, depending on cultural context.
Adaptation	Typically occurs when casual contact with other cultures becomes more intense, such as in a posting abroad or when working on a multicultural team.
Integration	At [this stage], the developmental emphasis is entirely around cultural identity.

Note. Stage criteria quoted from J. Bennett and Bennett (2004, pp. 154-157).

The influence of William Perry's (1970) model of intellectual and ethical growth on the DMIS can be seen in its late-stage shift to an identity focus, and in its topping out at relativistic thinking (J. Bennett & Bennett, 2004, pp. 155-156; Deane, 2015, p. 376; Hammer, 2015, p. 485). As noted earlier, these are precisely the features of Perry's model that may be regarded as shortcomings if one's goal is to produce a complete and internally consistent model of intercultural development.

Despite this partial influence from a Piagetian model, the DMIS does not—except for the overall Ethnocentric-Ethnorelative transition—fulfill the conditions of a cognitive developmental sequence of intercultural learning. That is, it cannot be understood as a series of hierarchically organized and progressively comprehensive solutions to the

logical problem of cross-cultural discrepancies. It defines stages largely in terms of the *content* of subjects' *knowledge or attitudes* rather than their *structure of reasoning*, and shifts through a series of diverse criteria across the six stages. Hence I would argue that while the DMIS offers numerous useful insights into cognitive, affective, and behavioral features associated with ethnocentric and ethnorelative thought structures, it does not provide a true cognitive-developmental understanding of intercultural learning.

The next chapter will describe a research program for validating the ICS.

Chapter 6. Future Research Program: A Neo-Restian Strategy

The first goal of this chapter is to describe a program of investigation aimed at generating a valid, detailed, and generalized picture of internormative development. Toward this end I present an organized structure of complementary methods, studies, and analytical procedures.

Along the way, I seek to accomplish a broader purpose, which is to offer a synthetic and meta-methodological reflection on the goals, history, possibilities, demands, challenges, and unique advantages of structural-developmental assessment. To do so, I combine lessons drawn from this study with the cumulative insights and innovations of several long-standing research programs.

The title of this chapter honors the work of James Rest and his colleagues, who blessed us with a methodologically redemptive interpretation of the Kohlbergian approach, and a remarkably detailed roadmap for validating philosophic-developmental stage models.

Guidelines for structural-developmental assessment

To produce a valid, detailed, and generalized picture of growth in this domain, the ICS research program should be guided by the following methodological principles (to avoid repetition, I have omitted citations for the many points for which citations were provided in earlier chapters):

1. *Constructivism*. Developmental assessment involves presenting subjects with cognitive challenges and analyzing their responses. But the meaning of these challenges and responses is mediated by the way subjects interpret them. Researchers have typically managed this problem by assessing subjects' reasoning through face-to-face interviews, using follow-up questions to check interpretations and progressively test hypotheses. Written assessments must seek similar recursiveness, and pay meticulous attention to potential ambiguities in responses. Multiple-choice assessments require a complex structure to satisfy constructivist assumptions; simple self-reports of one's reasoning are not valid (e.g., asking subjects the extent to which they agree with the statement, "I consider different cultural perspectives when evaluating global problems" (GPI, 2011, p. 2)).
2. *Formalism*. Structural-developmental assessment is not concerned with the content of responses, but with the logical procedures that generated them. Hence scoring must attend to the formal structure of these procedures rather than the substantive choices expressed.

3. *Multilinearity*. Assessment measures must be capable of tracking development along distinct pathways shaped by gender, culture, personality and other factors. Coherent structures must be recognized whatever their concrete expression.
4. *Standardization*. The present study was an exploratory one for rationally reconstructing the domain. This required open-ended clinical interviews. For validation and intervention studies, it will be important to control extraneous performance factors by standardizing the content, administration, and scoring of assessment measures.
5. *Methodological variation*. Notwithstanding the requirement for standardization, this research program should combine a variety of operations and methods. Assessment is subject to bias if it relies on a single operationalization of a variable (such as an issue statement and question set), or even a single mode of measurement (such as interviews) (S. A. Miller, 2007; Shadish, Cook, & Campbell, 2002).
6. *Attention to microdevelopment*. Without frequent sampling, the true shape of growth trajectories cannot be ascertained (Fischer & Bidell, 2006). To better understand microgenetic patterns and what factors produce and inhibit growth, growth should be assessed with frequent snapshots, and observed as it occurs (Adolph, 2008).
7. *Attention to individual trajectories*. Given the inherently non-linear nature of development, individual growth trajectories cannot be inferred from group averages, but require longitudinal study at appropriate sampling intervals (Thelen & Smith, 2006).

8. *Fallibility of individual assessment*. Because reasoning cannot be observed directly, all structural-developmental assessment is fallible. Brief interviews or tests may not reliably disclose the stage status of any given respondent. Even if future ICS-based assessments prove reliable according to test-retest and other criteria, they will not be appropriate for high-stakes individual testing.
9. *Assumption of performance variability*. Subjects are not "in" a stage. Instead, they use different stage structures to different degrees. Development takes the form of a gradual progression of overlapping waves rather than a rigid staircase (Davison, 1979b; Davison, King, Kitchener, & Parker, 1980; Yan & Fischer, 2002). Therefore, researchers should expect a subject's arguments not to reflect a single stage location but instead a bell-curve profile of different frequencies of stage usage. Several methodological injunctions follow from this variability:
    a. *Design research to detect variations*. While standardized measurement is important for validating the ICS and measuring the impact of interventions, the broader research program should include a separate line attending to the way in which performance is affected by various contextual factors. Uncovering the extent of variability can ultimately be used to isolate underlying regularities and sources of growth (Fischer & Bidell, 2006).
    b. *Do not assume that variations in performance represent measurement error*. Such measured variations may in fact be revealing underlying true variation (Fischer & Bidell, 2006).

c. *Avoid stage typing*. Assuming that a subject is "in" a specific stage leads researchers to overlook non-conforming performances, thereby losing valuable data, such as further reductions in a subject's use of an already surpassed level (Rest, 1979), or information about a subject's developmental range (Fischer & Bidell, 2006).

d. *Attend to whether optimal or functional level is measured*. Both levels are useful to know, but they must be assessed differently. A multiple-choice test is more likely to measure subjects' optimal level, whereas an unscaffolded questionnaire or interview is more likely to measure their functional level (Rest, 1979). The ICS program of studies will need to account for this, and avoid comparing unlike measurements.

e. *Use continuous variables*. Kohlberg (1976) argued that only quantal measurement was appropriate for assessing structural development, with its qualitatively distinct stages. This strategy was rooted in his assumption of a strict, ladder-like stage progression. Because the ICS instead assumes that each subject uses a combination of different stage structures, this program should measure growth with continuous variables so as to account for the relative frequency of all stages used. This will also make it easier to detect significant growth even over shorter intervals. Because completing a full stage of growth can take many years, quantal measures are often too coarse to detect short-term or medium-term growth (Rest, 1979).

Instrumentation

This section describes various complementary tools of developmental measurement, and how the ICS research scheme will integrate them to generate useful knowledge in this domain.

Before describing the tools, I need to introduce a central distinction among measures of reasoning.

Production tasks vs recognition tasks

Production-task measures, such as clinical interviews and essay questions, require subjects to show competence by spontaneously articulating competent thinking. Such measures are useful for theory construction, because they allow subjects to express their own thinking in an open-ended way (King, 1990). However, spontaneously articulating complex thinking is difficult, so production tasks are seen as liable to underestimate subjects' competence (King & Kitchener, 1994; Rest et al., 1999b; Shweder et al., 1990). Rest et al. (1999b) suggest that this may account for the scarcity of post-conventional reasoning Kohlberg observed with his interview method (Colby et al., 1987).

Unlike production-task measures, recognition-task measures (multiple-choice tests) allow subjects to show competence by simply identifying competent thinking in a list of response options. Accordingly, they are more likely to capture passive abilities, and are thus less likely to underestimate competence (Rest et al., 1999b). Indeed, all three of the principal existing philosophic-developmental recognition tasks have on

average observed more complex reasoning than the production-task measures they were built upon (King & Kitchener, 2004; Lind, 2008; Rest et al., 1999b). Moreover, such measures are easy to administer, and can be scored automatically. However, recognition-task measures may be liable to *over*estimate competence (Rest et al., 1999b). In addition, they force respondents to select among pregiven options, limiting their ability to express their own thinking, and closing the research process to new input.

From the standpoint of performance variability, production tasks are likely to be better at measuring subjects' functional level, whereas recognition tasks are likely to be better at measuring their optimal level.

The research program will include two production-task measures (clinical interviews and open-response questionnaires) and one recognition-task measure (the Internormative Cognition Test, or **ICT**). Before considering the specific role of each instrument, I need to list a number of design criteria they have in common.

Design for issue statements (vignettes)

All three instruments incorporate issue statements. Among the first tasks will be to produce new issue statements, in order to diversify the model's data base. All statements should realize the following design principles:

1. *Content validity*. In keeping with the model, issues must present an internormative conflict subject to resolution through progressively universalized norm legitimation structures. They must support a wide range of reasoning.

2. *Cross-contextual relevance*. One lesson of this study is that it is very challenging to come up with issues that have content validity across a wide range of nationalities. Even when one finds an issue that works well across diverse groups, it may work in different *ways* with different groups. The effort toward cross-contextual relevance inevitably draws one toward framing issues in more abstract terms, reducing their salience. The only solution to these problems is to generate a long list of issues and pilot them extensively with a diverse group.
3. *Multilinearity*. Issues must be resolvable along different socially shaped pathways through those structures (Vygotsky, 1956, 1981).
4. *Issue diversity*. No single operationalization can fully capture a target construct (Shadish et al., 2002). Moreover, no issue statement is without biases due to its specific wording or subject matter (P. K. Wood, 1997). To cancel out such biases and capture internormative reasoning in all its guises, it will be important to include a variety of issues within and across instrument types.
5. *Standardization*. The issues should be strictly analogous in testing the same underlying series of equilibration patterns. Also, they should be as equal as possible in terms of their verbal difficulty (Rest, 1979).
6. *Balance*. The process of developing the questionnaire for this study highlighted the need to distribute issue statements evenly across several characteristics, including what type of reasoning they "pull" for, and how their themes interact with subjects' ideological preferences. For example, an environmental issue may pull for nationalism among economic conservatives, whereas a trade issue may pull for

nationalism among economic progressives. In balancing issues on political ideology, it is important to use a bidimensional framework incorporating both economic and social ideology (S. Feldman, 2003; S. Feldman & Johnston, 2014). The ways in which issues generate bias by political ideology and other factors will need to be measured in the process of selecting which issues to use.

7. *Verbal simplicity*. To avoid confounding ICS level with verbal ability, the issues should be expressed in simple language. In accordance with the phenomenon of "chunking" noted on page 103, complex concepts can be expressed in simple terms yet be recognized as complex by advanced reasoners.

Design for questions

1. *Unambiguity*. Questions must be written in such a way that they are not likely to be understood differently by different subjects, particularly based on their educational or ICS level. Careful piloting will be important.
2. *Discrimination*. Questions must be designed to "spread" subjects across a wide range of reasoning, and not "pull" for a particular structure (Fischer & Bidell, 2006).
3. *Cognitive challenge*. People have a natural tendency to conserve cognitive resources (Selye, 1956; Suedfeld, 1992, 2010). Consequently, investigators must purposefully push subjects to their upper limits. This can be achieved in the ICT (multiple-choice test) by presenting response options at all levels of complexity. This can be achieved in the interviews by the use of dialogic probing, including countersuggestion, which researchers have found especially helpful in identifying subjects' true level of

competence (Keasey, 1974; Kohlberg, 1958; Lind, 2005; Rest, 1979; L. J. Walker, 1983). The open-response questionnaire is weakest in this regard, because it neither presents response options nor permits dialogic probing. To compensate for this (albeit in a limited way), questionnaires must include simulated follow-up questions, such as the one used in my China questionnaire:

> Now think about your answers to the previous two questions, and the reasons you gave to justify your views. Digging even deeper now, **how do you justify those reasons?** For example, if you wrote something like "I agree with Group __ because X", **why is "X" itself important?**

Clinical interview assessment

Clinical interviews have laid the foundation of the ICS research program. But they can also play a long-term role, complementing the virtues of the other instruments. Within an integrated, multi-method empirical strategy, interviews can perform several indispensable functions:

1. *Continuous exploration*. It will be necessary to continue exploring thought in this domain, both to fill in existing gaps and to remain current with changing world issues. The method best suited to such open-ended exploration is the clinical interview, with its flexible, dialogic structure (Damon, 1977).
2. *Keeping the system open to new information*. For practical reasons, the majority of data gathering will be done through multiple-choice tests, which are unable to reveal new patterns of thinking. Retaining the interview method will ensure that the research program remains an open system, admitting of new observations that generate new hypotheses as well as evidence with which to re-evaluate old ones.

3. *Observing development as it occurs*. Interviews sometimes reveal the genesis of new thought patterns, as subjects gradually work out a problem solution in real time. Unlike other methods, interviews allow researchers to observe the other solutions subjects consider along the way, and why they reject them (King, 1990). They also allow researchers to directly ask subjects how their thinking has changed.
4. *Attending to individual trajectories*. At least a portion of the longitudinal studies should have an interview component, to allow a full exploration of subjects' thinking, including their reflections on how and why their thinking has evolved over time.
5. *Probing variability.* While unscaffolded interviews are suitable for assessing subjects' functional level, researchers can add dialogic scaffolding to assess the entire developmental range from functional to optimal, and to generate hypotheses as to which kinds of scaffolding may be effective.
6. *Providing empirically derived responses for multiple-choice tests*. Following the DIT, the ICT should derive items from responses spontaneously expressed by subjects. This will help ensure that the options reflect psychological reality rather than armchair speculation as to what a given level of complexity should sound like (Rest, 1979). To generate a more globally representative variety of responses than has been gathered so far, it will be necessary to complete interviews with a more diverse global sample.
7. *Multilinearity*. Unlike the ICT, interviews will make it possible to discover new pathways and culturally distinct expressions of ICS structures.

8. *Control*. Interviews will provide a cross-check on the findings of the non-dialogic methods, allowing the research program to identify method-specific biases (S. A. Miller, 2007). This is particularly important given that recognition tasks inevitably assesses a somewhat distinct set of cognitive skills (King & Kitchener, 2004; Rest et al., 1999b; P. K. Wood, Kitchener, & Jensen, 2002).

For all these reasons, clinical interviews should be a permanent component of the ICS empirical scheme.

Nevertheless, I believe interviews are relatively unsuitable for the validation studies and other quantitative aspects of the research program requiring large-scale, standardized, objective assessment. There are several reasons for this.

First, in my own interviews I have found it difficult to ensure task comparability. Respondents interpreted tasks in idiosyncratic ways, requiring me to use different follow-up questions in order to guide them in the desired direction. Often it was difficult to elicit dispositive answers without being directive in some way.

Second, objective scoring is difficult. Researchers must divide transcripts into scoring units in a consistent and non-arbitrary way. Different subjects' transcripts may not be comparable, and some may lack information necessary for objective assessment (Rest et al., 1999b). Systematic stage scoring is possible but time-consuming, as attested by the 977-page scoring guide for the Kohlberg group's Moral Judgment Interview (Colby et al., 1987).

Third, as noted above, interviews may underrepresent subjects' competence. Interviews are confounded by subjects' abilities to accurately represent their own way of

thinking (Brainerd, 1973; Lewicki, 1986; Uleman & Bargh, 1989) or speak articulately on demand (King & Kitchener, 1994; Rest et al., 1999b). "People know more than they can tell" (Shweder et al., 1990, p. 16, cited in Rest et al., 1999, p. 20). Defenders of this method have pointed out that interviewers can narrow the gap between comprehension and performance by pushing respondents to their upper limits, and scoring only the most well developed expressions of reasoning (Colby & Kohlberg, 1987; Damon, 1977; Gibbs, Widaman, & Colby, 1980). But these remedies themselves represent sources of inconsistency and bias.

Finally, interviews are inefficient. For one thing, they require more time of subjects than do multiple-choice tests. They also demand copious researcher time for interviewing, transcribing, scoring, and training. Consequently, interviews are hard to use at the scale required for adequate statistical power.

These factors contribute to my conclusion that the ICS research program should rely primarily on the ICT, while utilizing interviews in a complementary role.

Open-response questionnaire

In the last chapter I described an online, long-answer questionnaire that I used in China (the questionnaire itself appears in Appendix D). The format is that of a structured interview in written form. Respondents read three internormative dilemmas, each followed by a standardized set of open-response questions to be answered with a paragraph or so of text. They answer a separate set of cross-issue questions at the end.

Based on my experience of creating and using this questionnaire, and on the experience of a group making a similar questionnaire for the Reflective Judgment Model (P. K. Wood et al., 2002), I believe this kind of tool is best suited for qualitative research, developmental self-testing, and formative assessment. On the whole I find it less suited for quantitative research than a multiple-choice test.

As a production task, the questionnaire offers some of the same advantages for qualitative inquiry as the interview. Subjects are able to express their thinking in an open-ended way, without being constrained by pregiven options. Distinctively, the questionnaire makes it possible to harvest subjects' spontaneous thinking in bulk, without having to conduct or transcribe interviews.

Within an integrated, multi-method empirical strategy, I believe a fitting role for the questionnaire is to *efficiently gather a large volume of authentic responses from a wide and diverse sample*. These responses can help capture internormative reasoning in all its variety, and can be used in formulating answer choices for the ICT.

Like the interview, the questionnaire can offer a cross-check on findings the ICT generates.

Alongside the research function, the questionnaire is ideally suited as an educational tool. Students can work through an issue online, and then use a drop-down menu to pick out the type of answers most closely resembling their own, receiving educational feedback about the type of reasoning they used, and other types that are more and less complex (Z. Stein, Dawson, & Fischer, 2010). Having read the feedback, they can try the next issue, or re-take the same task again a few weeks later. Teachers can also

use the students' responses to inform developmentally appropriate adjustments to their teaching. Such developmental self-testing and formative assessment are among the ways this research program can advance education even as it gathers data.

I believe the questionnaire, like the interview, is relatively unsuitable for purposes of objective statistical comparison. This is for a somewhat different set of reasons.

First of all, a "written interview" is even more likely than an oral interview to underrepresent subjects' competence. Although the written format may include simulated "follow-up" questions, it does not offer the same opportunity to push respondents to their upper limits. Respondents are less likely to express the full extent of their thinking if no one is listening to them. Not surprisingly, the responses to my questionnaire tended to be shorter than the spoken answers to the same questions when posed in interviews, even though the online system required a minimum number of characters for each answer. Some questionnaire respondents indicated in subsequent focus groups that they found it taxing, and felt eager to finish. By contrast, interviewees often said they enjoyed the experience. Unlike questionnaire respondents, they can extend their responses without necessarily prolonging the session. These facts suggest that interviewees are more likely to share the full extent of their thinking.

Second, of all the formats, the questionnaire is the most prone to invalidity due to task misinterpretation. I found that respondents to my questionnaire were more likely to generate unratable responses for having answered too briefly or obliquely. Similarly, Wood et al., after experimenting with a written format of the Reflective Judgment Interview, found that "some individuals attempt to dismiss the entire essay exercise by

saying that they do not have sufficient information about the issue, cannot have an opinion on the matter, and/or are not interested in the topic" (2002, p. 286). They also found that respondents to the written format were much more likely to "avoid the controversy that each problem poses", despite this being the very focus of inquiry. Such task misinterpretations are less problematic in an interview, where the researcher can correct them. They are also less problematic in a multiple-choice test, which can be designed to directly elicit the information sought.

Finally, questionnaire data require time-consuming manual scoring, and present the same scoring challenges as noted above for interview transcripts. Consequently, a questionnaire is more difficult than a multiple-choice test to deploy in large-scale studies with high statistical power.

All these factors further contribute to my inclination to rely on the ICT for the validation studies and other quantitative components of the research program, while using the questionnaire instead for large-scale qualitative data collection, developmental self-testing, and formative assessment.

Multiple-choice test (ICT)

The experience of this study, along with the lessons drawn from the related research programs initiated by Kohlberg, Rest, Lind, and King & Kitchener, suggests that the primary tool for investigating internormative reasoning should be a multiple-choice test.

Precedents

The three principal research programs in the philosophic-developmental tradition have been those based on James Rest's Defining Issues Test (DIT), Patricia King and Karen Strohm Kitchener's Reasoning about Current Issues test (RCI), and Georg Lind's Moral Judgment Test (MJT). The DIT, along with the very similar RCI, offer the most appropriate model for the ICS program.

Rest's Defining Issues Test (DIT)

Rest's dissertation study demonstrated that Kohlberg's stages of moral development formed a Guttman scale of hierarchical comprehension and preference; that is, it showed that subjects tend to choose judgments expressing the highest Kohlberg level they are able to understand (Rest, 1969; Rest et al., 1969) (replicated by L. J. Walker, 1982). This pivotal finding suggested that moral judgment could be effectively measured with a *recognition task*, by simply presenting subjects with reasoning at different levels and asking them to indicate their preferences (Rest, Cooper, Coder, Masanz, & Anderson, 1974). Because such a task would eliminate the inherent subjectivity of interviewing and scoring, it promised to be not only more efficient than Kohlberg's lengthy interview, but perhaps more reliable as well (Rest, 1979).

The strategy Rest used to achieve this "alchemy" was to present subjects with Kohlbergian moral dilemmas and then ask them to rate and rank a series of structurally representative "issue questions" (i.e., considerations) by their importance to judging the issue. For example, subjects read a vignette about an impoverished man who must decide

whether to steal food from a hoarder to save his family from starvation, and then are asked to rate the importance of considerations such as “Isn't it only natural for a loving father to care so much for his family that he would steal?”, “Shouldn’t the community’s laws be upheld?”, and “What values are going to be the basis for governing how people act towards each other?” (Rest & Narvaez, 1998). These short issue questions represent the type of underlying, structure-evincing justification that an interviewer might uncover with a follow-up question. Consequently, they allow subjects to directly indicate a structure-typical preference, which, per Rest’s dissertation, should indicate their level of cognitive development in the domain.

If a model is correct in reality and accurately captured in the test items, this kind of test should work in principle, because more complex reasoners will have a comprehension advantage. They will understand the full reasoning behind a wide range of items, and be able to rank them properly because they have *personally experienced the limitations of the simpler-stage items.* Less complex reasoners might find something appealing in a higher-stage item, but won’t recognize it as a way they have typically thought in the past. Consequently, they are less likely to give it adequate weight.

Rest (1979, 1980) explains several ways in which the DIT supports content validity. First, the issue questions are adapted from real responses given during interviews using the same dilemma. Second, they avoid confounding with verbal ability by being equalized on length, syntactic complexity and vocabulary. Third, they avoid attracting subjects of a particular substantive preference by being phrased as questions or considerations, without arguing for a particular course of action (though they might

improve in this regard by avoiding rhetorical questions like "Isn't it only natural that…"). Finally, by being short, they are less likely to give rise to differing interpretations than response options consisting of longer stage-prototypic arguments (Lockwood, 1970), such as Rest had used in his dissertation study. Indeed, two studies found that replacing stage-prototypic arguments with neutral, one-sentence issue questions dramatically improved discrimination (Rest, 1973; Rest et al., 1974). All these features make the responses more likely to reflect subjects' complexity of moral reasoning and less likely to reflect spurious factors. This expectation was born out by a study in which DIT subjects confirmed in follow-up interviews that their rankings of each item were largely determined by their ability to understand the item, and their opinion as to its conceptual adequacy (Lawrence, 1978).

Consider, for example, the item "What values are going to be the basis for governing how people act towards each other?" This question encapsulates, succinctly and in simple language, a high-complexity perspective. It seems unlikely to be selected on the basis of being long, having impressive-sounding language, expressing a concrete preference to one's liking, giving rise to an unexpected interpretation, or any other spurious factor. Instead, it seems likely to be selected on the basis of the moral viewpoint it reflects.

As I will explain further in describing the ICT's design, I believe Rest's innovative format has solved the main challenges of multiple-choice assessment of normative reasoning skills. Empirical studies have repeatedly substantiated the DIT's claim to be a valid and reliable measure of moral judgment (Rest, 1975a, 1979, 1986;

Rest, Davison, & Robbins, 1978; Rest et al., 1999b). Moreover, the format lends itself to use in researching any philosophic-developmental domain, as King & Kitchener have done in the domain of epistemological reasoning (King & Kitchener, 2002; University_of_Michigan, 2018). For these and other reasons, I believe the ICT should be modeled primarily on the DIT.

Lind's Moral Judgment Test (MJT)

Other than the DIT, the principal and best validated recognition-task measure of moral judgment is Lind's Moral Judgment Test. Like the DIT, the MJT was developed by a Kohlberg protégé/collaborator to measure development as defined by Kohlberg's model. It uses a similar format of presenting subjects with moral dilemmas and asking them to rate a series of statements bearing upon how one ought to judge the issue.

Unlike the DIT, the MJT records the subject's substantive opinion on each issue, and then presents items reflecting arguments pro and contra the subject's own view (as opposed to the DIT's neutral "issue questions"), which the subject must rate from "completely unacceptable" to "completely acceptable" (Lind, 1999, p. 23). The MJT's central and distinctive feature is to focus on the degree to which the subject evaluates the pro and contra arguments on the basis of their moral depth regardless of whether they align with the subject's own expressed view. This method allows the test to incorporate the emotional and ego-defensive challenges that accompany real-life moral challenges in civic settings, reflecting a sociopolitical focus that distinguishes the German research program based on the MJT (Lind, Hartmann, & Wakenhut, 1985). Because it focuses on

measuring the subject's consistency in using the same logical evaluative criteria despite substantive preference, Lind (1995) argues that the MJT is a cleaner measure of moral reasoning ability, less confounded by substantive preference than either the DIT or Kohlberg's Moral Judgment Interview.

Like the DIT, the MJT has been validated by numerous empirical studies (Lind, 2005, 2008, 2016). On the other hand, Rest, Thoma, and Edwards (1997) found that the MJT's consistency-based indexing method showed weaker trends than the DIT's preference-based method on criteria such as cross-sectional and longitudinal validity.

My own conclusion is that an MJT-like format would not be appropriate for the ICT. Rest, Thoma, and Edwards (1997) note several problematic assumptions of the MJT's consistency-based indexing method. For example, it penalizes subjects for grouping items in a way that differs from Kohlberg's stage definitions. It also penalizes them for using different stage structures on different issues, even though evidence from several instruments (including the MJT) indicates that different issues tend to pull for slightly different structures (Lind, 2008; Rest et al., 1999b; P. K. Wood, Kitchener, & Jensen, 2003).

But my conclusion has less to do with the indexing method than with concerns over the validity of the ratings on which the consistency index is based. For one thing, MJT's strategy of quantifying one's way of judging arguments in terms of how vigorously one approves or rejects them seems likely to confound judgment with personality characteristics such as temperament. In this respect, I believe the DIT's scheme of importance rankings is more appropriate. Importance rankings seem better

able to reflect a hierarchy of preference, because one is likely to rate the considerations of one's previous stage as more important than the considerations of still earlier stages (Rest et al., 1974). Conversely, one would not necessarily reject one's previous stage less vigorously than long-surpassed stages, because one may be likely to find the most recent stage more threatening or insidious. This is due not only to concerns of ego defense (Kegan, 1982), but also to subjects' desire to combat errors they see as likely to mislead others (Englebretson, 2007). Because I believe these factors compromise the validity of item ratings, I am inclined to accept the conclusion by Rest, Thoma, and Edwards (1997) that the MJT's empirical success is largely an artifact of its including a particularly discriminating factor in its scoring index—namely, the extent to which subjects reject lower-stage responses.

Moreover, I believe that the DIT's method of presenting neutral considerations is more appropriate than the MJT's method of presenting stage-typical arguments. Like Rest and colleagues, I found that such arguments are easier to interpret in multiple ways reflecting different stage structures (Rest, 1979; Rest, Thoma, & Edwards, 1997). By contrast, neutral "questions" or considerations are more likely to unambiguously reflect specific structures.

The MJT is expressly designed to incorporate an emotional component to the moral competence task, and to measure that component independently of the cognitive component. However, other than for testing the hypothesis that cognitive and affective aspects covary, I see no reason to structure the ICT to measure the two independently, and they are already widely regarded as inseparable (e.g., Damasio, 1994; Greene &

Haidt, 2002; Greene et al., 2001; Haidt, 2007; Pinker, 1997; E. O. Wilson, 1998). In any event, their relationship is not of central interest to the ICS research program as I currently envision it.

While I believe the MJT format is mostly inappropriate for the ICT, I do believe it would be beneficial to adopt its practice of recording the subject's substantive viewpoint prior to presenting the scored items. This information could be used to control for viewpoint or to examine relationships between viewpoint and stage structure.

I also concur with Rest, Thoma, and Edwards (1997) that Lind's innovation of indexing lower-stage rejection represents an important advance. Like the DIT's N2 score, the indexing method for the ICT should incorporate this contribution from Lind's pioneering analysis of Kohlberg interview data (1979).

King & Kitchener's Reasoning about Current Issues test (RCI)

Where Rest had discovered a hierarchy of comprehension and preference in moral judgment based on Kohlberg's stage model, King & Kitchener discovered such a hierarchy in epistemic reasoning—their Reflective Judgment Model (1994, 2002). After disappointing attempts at converting their initial interview-based measure into an open-response questionnaire format, King, Kitchener, and colleagues ultimately adopted a DIT-like multiple-choice test for their program of studies (P. K. Wood et al., 2002).

King & Kitchener's description of the RCI indicates its close relationship with the DIT:

> In the RCI, respondents are asked to read a dilemma similar to those used in the [Reflective Judgment Interview]…The RCI first asks respondents to write

> a short statement describing their response in their own words. These written statements serve to "prime the pump" by encouraging respondents to start thinking about their views on the given topics. Respondents are then asked to rate and rank in order a series of short statements to indicate the statements' similarity to the respondents' own views; each statement reflects the epistemic assumptions of one of the reflective judgment stages (2004, p. 13).

Following the DIT, the RCI's multiple-choice format is grounded in a simultaneous hierarchy of comprehension and preference: "the ability to discriminate between statements that represent more and less sophisticated epistemic assumptions about a given issue, and the ability to endorse more sophisticated statements as being similar to one's own from among several alternatives" (P. K. Wood et al., 2002, p. 285).

Given the RCI's close similarity with the DIT, there is no need to further elaborate on why its features offer a suitable model for the ICT. I will only add here that I intend to adopt the RCI's feature of "priming the pump" by asking subjects to write their own response prior to answering the scored questions. I anticipate that this feature will give the scored questions more content validity, because I believe subjects will be more likely to understand the relative importance of the issue questions having already thought carefully about the issue.

Role

As I have been suggesting, I believe a recognition-task instrument (the ICT) is better suited for the validation studies and other quantitative aspects of the research program requiring large-scale, standardized, objective assessment.

First, it offers greater "content validity" (i.e., accurate assessment of the posited aptitudes):

1. *Greater tendency to measure full competence*. As noted above, recognition tasks are able to measure competent thinking without imposing the additional burden of spontaneously articulating it. Rest et al. (1999b) highlight recognition tasks' capacity to activate competences embedded in those unacknowledged processes that encode the lessons of past reflection. Such "schemas", like imprints left by forgotten ideas, are unconscious cognitive structures that permit subjects to make meaningful discriminations they may be unable to put into words (Fiske & Taylor, 2013; S. E. Taylor & Crocker, 1981). For subjects with this passive access to a given stage structure, the DIT and RCI are able to activate their unarticulated wisdom with cryptic one-sentence items presenting a mere fragment of an argument (King & Kitchener, 2004; Rest et al., 1999b). As Rest et al. note,

   > The items of the DIT balance "bottom-up" processing (stating just enough of a line of argument to activate a schema) with "top-down" processing (stating not too much of a line of argument, such that the subject has to fill in the meaning from a schema already in the subject's head. (1999b, p. 6)

   In principle, by presenting a core component of a logical structure in a highly condensed way, the items are recognizable as logical only to those who already have the structure in which the component fits. And because the short items omit all supporting details and rationale, there is little in them to draw spurious interpretations.

2. *Less propensity for measurement error*. Recognition tasks clarify the unit of analysis, eliminate spurious variations arising in the processes of interviewing and rating (Rest et al., 1999b; Rest, Thoma, & Edwards, 1997).
3. *Greater standardization*. By definition, standardized tests improve comparability across respondents. They make assessment less subject to the peculiarities of a given testing situation, such as what an interviewee wants to talk about (Rest, 1979).
4. *Greater task clarity*. Recognition tasks focus subjects' attention on specific questions of interest (King & Kitchener, 1994). Also, the presence of answer choices eliminates ambiguity by clarifying what kinds of answers can be considered. For example, the presence of post-conventional items in the DIT lets subjects know that the basic organization of society is fair game (Rest et al., 1999b).
5. *Cognitive challenge*. Both the DIT and RCI present items for every stage structure in their models. This pushes subjects to their limits and records subjects' reactions to concepts at all levels.
6. *Broader scope of measurement*. Whereas production tasks assess only the ability to spontaneously articulate structures, DIT-style recognition tasks assess both comprehension and preference, and in relation to the full range of structures (Kohlberg, 1979). With their rating and ranking features, they also quantify the degree to which subjects prefer one structure over another (Lind & Wakenhut, 1985, p. 83).

Moreover, by being less labor and cost intensive than production tasks, the ICT will permit many more studies to be conducted at the scale required for adequate statistical power. As noted by Wood & Kardash (2002), many research questions require the analysis of performance pattern differentials, entailing sample sizes much larger than those typically feasible for production-task measures. Finally, an inexpensive and easy-to-use multiple-choice test will also offer more opportunities to collaborate with other researchers and access a broader data pool. For all these reasons, the ICT should be the core tool of the ICS research program.

Design

Naturally, a multiple-choice test presents its own problems. Rest et al. (1999b) succinctly list several:

> (a) participants may randomly check off ratings and rankings without attending to the task…; (b) participants may respond to aspects of the test stimuli that are not intended by the test designer; (c) test items may be ambiguous, or reactions to items may be idiosyncratic; and (d) …a recognition task probably *over*estimates a person's development. (p.52)

The DIT and RCI address problem (a) by including some meaningless items as honesty checks, and by checking that the item rankings do not contradict the way each individual item was rated (offending tests are invalidated). They address problem (b) by including some ornate but irrelevant items to catch subjects who select for impressive verbiage; by balancing items on length, sentence complexity, and vocabulary level; and (in the DIT's case) by maintaining items' neutrality as to the moral judgment made. They address problem (c) by using short items permitting little scope for interpretation, and by

adhering closely to the actual wording used by interview subjects. And they address problem (d) by using the shortest fragments possible that are still recognizable to those predisposed to them (King & Kitchener, 2004; Rest et al., 1999b; P. K. Wood et al., 2002).

Examining the DIT only, Rest and colleagues found evidence that these design features were effective (Rest, Thoma, & Edwards, 1997; Rest, Thoma, Narvaez, & Bebeau, 1997). The ICT will adopt similar strategies to address problems (a) through (d).

I would add four additional problems to those listed by Rest et al. (1999b):

1. *The test is subject to error if items do not accurately represent a given stage structure*. Addressing this is a challenge of test construction. The issue questions will need to be chosen and perfected by an iterative process resulting in items with superior psychometric properties, interpretable at only one level. Items should be extensively pre-tested in interviews to ensure that subjects consistently interpret the them at the level intended, addressing problem (c).

2. *Each item captures only one among several typical qualities of a stage structure*. This problem can be managed theoretically, if we are willing to grant that comprehending and preferring one or two structural qualities is adequate for disclosing the structure used for the issue in question. This assumption is analogous to that made when assigning a stage score to a short interview segment.

3. *The test predetermines the nature of problem-solving activity and is closed to new input from subjects*. I will address this problem through the concurrent use of production tasks, as described earlier.

4. *To the extent the test items use concrete issues as proxy indicators of logical procedures, they risk assessing the content of subjects' reasoning, rather than its structure*. I will address this in the next section.

Naturally, given that ICT items will be adapted from authentic responses given in production tasks, its issue statements must also be drawn therefrom, following the design principles described earlier.

Indexing

"Indexing" refers to the process of integrating the information obtained from a test into a single score for each subject. Indexing would be unnecessary if each subject used only one stage structure (Rest, 1979). But because their stage usage varies across issues and in response to numerous contextual factors, we must decide upon some meaningful way to summarize this varied performance in a statistic. Many indexing methods have been used: stage of predominant use (King et al., 1994), highest stage used (Damon, 1977), mean stage usage (King & Kitchener, 1994), weighted mean stage usage (Kohlberg, 1958), structure of stage usage (P. K. Wood, 1993b), tendency to use the highest stages (Davison, 1979a), tendency to reject the lowest stages (J. Carroll & Rest, 1981), tendency

to use the highest and reject the lowest stages (Rest, Thoma, & Edwards, 1997), relationship between rating of higher-level items and rating of lower-level items (Davison, 1979a), preference for a particular stage (Thoma & Rest, 1999), and, distinctively, systematic use of logical evaluative criteria despite substantive preference (Lind, 2008).

In light of what these researchers have observed and argued, I would suggest that the best indexing method would be *that which generates the strongest theoretically expected empirical trends without either violating theoretical logic or defying straightforward interpretation*.

Determining which index produces the strongest empirical trends is simply a matter of seeing which one best fulfills the various validity criteria described in the "Validation studies" section later in this chapter (e.g., cross-sectional validity and longitudinal validity). But from a theoretical standpoint, I would be strongly inclined against using any index that, like the formerly used "P" index for DIT data, focuses only on the subject's tendency to use the highest stages (Davison, 1979a). Learning is not simply a matter of acquiring a new way of thinking, but also occurs when we deepen our understanding of why an old way of thinking is inadequate. For this reason, the impact of an educational program may sometimes lie more in leading subjects who are most comfortable with Stage N to further reduce their usage of Stage N-1, than in increasing their usage of Stage N+1. This is precisely what Rest, Thoma, and Edwards (1997) found when they reassessed the impact of an intervention by Bebeau and Thoma (1994) by incorporating the data on respondents' rejection of the lowest stages.

Another theoretical assumption that should guide indexing is that of performance variability. As explained earlier, this assumption discourages us from using quantal indexes—such as modal stage or highest stage used—because they do not allow us to account for the relative frequency of all stages used. They also make it harder to detect short-term or medium-term growth.

At this stage, based on the lessons of the DIT, MJT, and RCI research programs, I would suggest that the ICT should begin its career with an index that combines information on systematic preference for high-stage items and systematic rejection of low-stage items (King & Kitchener, 2004; Lind, 2008; Rest, Narvaez, Thoma, & Bebeau, 1999a; P. K. Wood et al., 2002).

Challenges to formalist assessment with recognition tasks

Developmental assessment must attend to the logical procedures used in arriving at judgments, not the specific content of the judgments made. At the same time, all developmental assessment must use specific content to create a realistic stimulus for the structures of reasoning we hope to observe. This presents a constant analytical task of unraveling structure from content.

This task is notoriously challenging. For example, Kohlberg's system was criticized for reliance on conceptual content (Lind & Wakenhut, 1985), with the effect of, among other things, ruling out post-conventional ratings for conservative communitarian reasoning (Emler, Renwick, & Malone, 1983; Reicher & Emler, 1984) or care-oriented ethics (Gilligan, 1977, 1982). In the face of such criticism, Kohlberg spent much of the

latter part of his career overhauling his scoring system so as to capture pure structure. The result was a complicated procedure involving four sequential operations designed to gradually tease out structure from content, for example, to determine whether a subject has invoked a norm of law on the basis of self-interest, the broader social order, protection of rights, et cetera (Colby et al., 1987). The sheer arduousness of this procedure, and the fact that it still did not escape criticism for being insufficiently structural (Dawson, 2001; Lind, 1995; Rosenberg, 2002a), attests to the enormous difficulty of valid formalist assessment.

Recognition tasks face particular methodological obstacles in this regard (Rosenberg, 2002b). Specifically, it is challenging to prepare items that do not slide into measuring substantive opinions rather than logical procedures, thereby risking the possibility of giving equal ratings to subjects who interpret the same substance in structurally different ways (Gibbs, 1992; Kohlberg, 1984, 1985). And yet the items must, perforce, invoke substance, because they always address a concrete dilemma. Presenting the questions in a substantive context is inevitable, for cognitive-structuralist theory does not assume that subjects will be consciously aware of their own stage structure or those which preceded it (Kohlberg, 1979; Rest, Narvaez, Thoma, & Bebeau, 2000). We cannot simply present the stage structures themselves and ask subjects to point to one. The challenge, then, is to produce items whose content unambiguously embodies a single structure of thought.

To some degree, the DIT achieved this objective by drawing the structure-content distinction less strictly than did Kohlberg. For example, the DIT assumes that items

expressing a concern for supporting a social institution such as law (i.e., content) can be regarded as embodying the conventionalist stage (structure), without need of further analyzing the justification by the highly abstract structural criteria of "justice operations" (Rest et al., 1999b). The DIT group justifies this move by arguing that it is not necessary to purge all content in the absence of the simple (staircase-like) stage assumption (p. 47), and by rooting structural criteria in the content-bound concept of "schema" (pp. 135-137). By "abandoning the strong view on the content and structure distinction", they are able to base their methodology on the recognition of structure-representative content (Thoma, 2006, p. 87).

This approach has been criticized on the grounds that it confounds structure and content. Kohlberg (1985) contended that the DIT is unable to distinguish, for instance, among the various structural procedures that may underpin a concern for law. Moreover, Rosenberg (2002b) has argued that the DIT group's use of the "schema" concept inappropriately limits their structural criteria to the specific concrete expressions that schemas encode. By recasting their theory in substantively situated terms, says Rosenberg, they sacrifice their capacity to explain the most general modes of thought (p. 381).

Here my view is that one need not attenuate one's structuralist assumptions for the sake of operationalizing structure in semi-substantive terms, provided one's operationalization proves empirically to "*pull" for only one structure*. For all the reasons already explained, I believe that the DIT's innovations do make this condition achievable through psychometric refinement. While Rest took the further step of shifting his

conceptual foundation from stage to schema, this step is not required by the decision to use a recognition task, and appears to have derived instead from his rejection of simple stage assumptions (Rest et al., 1999b, pp. 135-137). But in light of the evidence from dynamic structuralist research that stage assumptions do hold for *optimal* performance, the decision to yield the concept of structural stages seems unwarranted (Fischer & Bidell, 2006; Fischer & Kenny, 1986; Rose & Fischer, 2009; Thelen & Smith, 1994, 2006; van Geert, 2000; van Geert & Fischer, 2009). Indeed, I would suggest that the dynamic structuralist approach—which accounts both for stagelike regularities *and* the cross-stage variation that led Rest to seek a replacement for the stage concept—better suits the developmental assumptions of the DIT program. As Rest himself acknowledged, schema theory is a poor fit for a developmental model, leading him to seek ways to bridge the conceptual gap, with terms such as "meta-schema", "schema of schemas", "developmental schema", and "general knowledge structure" (Rest et al., 1999b, pp. 137-138).

To provide theoretical support for the expedient of operationalizing structure in semi-substantive test items, we may turn instead to Dawson's concept of "layers of structure" (2001). In this view, we can interpret a recognition task item like "Shouldn't the community's laws be upheld?" as the superficial, but still identifiably structural, form that a deeper structure takes in the context of a particular substantive issue. The item does incorporate content ("laws"), but is difficult to choose on any other basis than the normative perspective it reflects.

Were this item a transcript segment from one of Kohlberg's moral judgment interviews, his four-tiered scoring procedure would ultimately ascertain that the item does not—in the context of the stimulus vignette—express either an I-thou interpersonal exchange perspective (Stage 2), or a third-person interpersonal relations perspective (Stage 3), or a contractarian/utilitarian perspective (Stage 5), or a "moral musical chairs" perspective (Stage 6), but rather a social system-maintenance perspective (Stage 4). The recognition task simply pre-selects the item on this basis, and assumes that subjects will interpret it as intended. With either method, we rely on this content-linked "surface structure" to mediate between the subject's "core structure" of basic logical operations and the instruments we use to measure them (Dawson, 2001, p. 10).

There are several reasons to believe that recognition task items of this type can measure what they intend to. First, as just noted, they are selected and edited so as to capture a distinct structural perspective. Also, they are not simply "content", but the embodiment of structuring activity on content (the kind of bedrock justification an interviewer would uncover with follow-up questions). Moreover, they are short and unambiguous; equalized on length, syntactic complexity, and vocabulary; and phrased as neutral considerations. Finally, they are pre-tested to ensure respondents interpret them as intended, and the entire instrument is subjected to the test of whether it produces data following the predicted developmental pattern.

To ensure the neutrality of items, I would suggest replacing rhetorical questions like "Shouldn't the community's laws be upheld?" with objective either-or statements like "The community's laws are, or are not, upheld". The more concise "Whether the

community's laws are upheld" is perhaps most appealing, but the "Whether…" structure seems to have been jettisoned in the evolution of the DIT, perhaps for making items too abstract.

As a test intended for cross-cultural use, ICT items will need to meet a high standard of formalism, being abstract enough to encompass a wide diversity of cultural content within each structure. This will be possible only if the issue statements are highly generic.

Phases of modification and stabilization

The ICT will need to begin with an intensive period of design, pre-testing, modification, and pre-validation, including follow-up interviews with testtakers and Rasch assessment to test item reliability. An interim version should be made available to researchers interested in using such a measure, who can provide feedback for iterative improvements.

Eventually, however, the test should be stabilized in order to permit a full cycle of research with the measure held constant. This is necessary in order to establish the validity of the measure and generate a "stable record" of data that can be evaluated by other researchers (Rest et al., 1999b). It is also necessary in order to subject the theory to data, which would not occur were the measure continually modified so as to produce the data desired (Thoma, 2006).

Once such a cycle is completed, new modifications may be considered, according to strict validating criteria both theoretical and empirical (Thoma, 2006). Items retained

or added must contribute to the test's validity as measured by the criteria defined later in this chapter.

Instructional laboratories

An important part of my vision for ICS research is to create an online Master's program in Global Public Policy designed to generate, and simultaneously investigate, the kind of learning described in this thesis.

Role

An instructional laboratory of this kind would add a unique dimension to the research program, making it possible to:

1. observe development as it occurs, in its natural setting, and in all its variation and diversity (Mascolo & Fischer, 2015);
2. directly ask subjects about their development as they are experiencing it;
3. experiment with various instructional methods, to generate hypotheses about what works and what does not;
4. vary conditions of challenge and support, to attend to the way in which performance varies in accordance with contextual factors (Lerner, 2002; van Geert & van Dijk, 2002);
5. study development in a social setting, to observe the impact of collaboration and gain access to descriptions of internal processes as these are externalized in group

communication (Bronfenbrenner & Morris, 2006; Fischer & Granott, 1995; Scardamalia & Bereiter, 1999; Vygotsky, 1956, 1978).

Design

Microgenetic studies. The lab program should incorporate various methods for generating microgenetic data, such as reflective journals, analyses of classroom discussions, and frequent measurement of student performance (sometimes even at the beginning and end of a single discussion).

Macrogenetic studies. The lab program should be kept small enough to permit randomized controlled trials based on selective admissions. The application process should include completing an ICT. Some or all students should participate in a clinical interview before and after the program, and be followed longitudinally with one or more ICS measures.

Integrating the instruments

The tools described above would perform complementary roles within a comprehensive inquiry into internormative development.

Production tasks would allow this inquiry to remain open to new information, changing realities, and cultural variations. Within this category, clinical interviews would provide an element of active, dialogic exploration, while open-response

questionnaires would make it possible to efficiently gather genuine, undirected responses from a large and diverse sample.

Meanwhile, the recognition task would permit large-scale, standardized, objective assessment of the sort required by the validation studies and other quantitative aspects of the empirical scheme. By being more efficient and economical, it would also offer more opportunities to collaborate with other researchers and access a broader data pool.

Finally, a lab program would make it possible to observe and experiment with development as it occurs, in a natural, socially embedded setting.

Together these interlocking modes of inquiry would make it possible to investigate internormative development unfettered by the bias or weakness of any one method.

Validation studies

The validity of a developmental measure may be defined as true measurement of invariant longitudinal sequential change (Kohlberg, 1976). In this section, I outline a process for testing the validity of the ICS instruments and, by extension, the model itself. I begin by presenting a series of validation criteria, and then describe the empirical procedures aimed at satisfying those criteria.

Validation criteria

For the ICS to be deemed valid, the instruments measuring it must satisfy the following criteria (adapting from Rest et al.'s (1997) criteria for a test of moral judgment, in consultation with criteria outlined by Bond & Fox (2001), Colby and Kohlberg (1987), Lind (1999, 2008), S. A. Miller (2007), and Wilson (2005)):

1. *Comprise content that accurately assesses the posited aptitudes;*
2. *Generate observations that adhere to assumptions of unidimensional, stage-like, cognitive-developmental hierarchy;*
3. *Differentiate among groups expected to perform differently;*
4. *Show a significant upward longitudinal trend without stage skipping or unexplained regression;*
5. *Capture the effects of targeted interventions;*
6. *Correlate with other evidence of increasing understanding;*
7. *Not simply re-measure what is captured by an established instrument;*

8. *Significantly predict to relevant attitudes, choices, and behaviors;*
9. *Work similarly across diverse persons and groups;*
10. *Demonstrate adequate reliability*.

Criteria 2-6 together comprise the more general task of demonstrating the cognitive-developmental nature of the model.

Because I intend to perform quantitative measurement primarily with a recognition task, the criteria below apply mainly to the ICT rather than the production tasks. However, the criteria would apply also to the production tasks to the extent that they are used quantitatively, and the first criterion below applies to all instruments equally.

Content validity

Validity criterion 1: Must comprise content that accurately assesses the posited aptitudes.

The criterion of "content validity" requires that responses given to ICS instruments faithfully represent distinct levels of internormative cognition as defined in the model. The issue statements must present genuine internormative conflicts subject to resolution through progressively universalized norm legitimation structures, and must support a wide range of reasoning. Meanwhile, the questions must be designed to "spread" subjects across that range, and not "pull" for a particular structure (Fischer & Bidell, 2006).

Much of the "Guidelines" and "Instrumentation" sections above has been dedicated to describing the ways in which the ICS instruments have and will be designed to satisfy this criterion. These include qualities of formalism, constructivism, standardization, sensitivity to multilinear growth, cognitive challenge, verbal simplicity, neutrality, unambiguity, and tendency to measure full competence.

The previous chapter described how the issue statements are presumed to activate internormative cognition. Chapter 4 explains how responses given in clinical interviews can be seen to represent the logical structures posited in the model.

ICT items should undergo cognitive pre-testing to ensure that respondents of diverse backgrounds interpret the items as intended. Some respondents should be asked to rephrase the items in their own words. Others should be asked, after completing the test, to describe how they interpreted the items.

To ensure the ICT items are sensitive to many culturally distinct expressions of ICS structures, it will be necessary to gather production-task data from a diverse global sample.

Cognitive-developmental nature of the scale

The first test of whether the ICS represents a cognitive-developmental scale is one of logic. That is, it must posit a series of hierarchically integrating stage structures that pass a test of logical sequentiality and internal coherence. I have argued in Chapter 4 that the ICS passes this test.

However, this is not enough to overcome the assertion that such plausibly developmental structures may be nothing more than a variety of disconnected patterns (Hogan, 1970; Kurtines & Grief, 1974). The next step, then, is to show that ICS measures generate the kinds of observations we would expect to see if people truly passed through the stages of thinking described. There are several such criteria.

Unidimensional, stage-like, cognitive-developmental hierarchy

Validity criterion 2: Must generate observations that adhere to assumptions of unidimensional, stage-like, cognitive-developmental hierarchy.

Cognitive-developmental hierarchy.

The ICS generates the prediction that the specified levels should be empirically measurable as a hierarchy of comprehension. For example, subjects competent at Order 3 should comprehend Orders 0-2, but not necessarily Order 4, and should prefer Order 3 over the lower levels. The prediction of hierarchical comprehension can be tested with comprehension tests and fakeability tests.

One reason such tests are needed is to anticipate the charge that the ICS levels may simply represent age-related preferences rather than cognitive capacities, a claim that was raised against Kohlberg's model by Alston (1971) and Mischel and Mischel (1976). Rest and other investigators ruled out this possibility with a series of studies demonstrating that Kohlberg's stages did not simply represent a series of shifting

preferences, but also constituted a sequence of increasing cognitive challenge (R. B. Bloom, 1977; McGeorge, 1975; Rest, 1973, 1979; Rest et al., 1974).

Rest and his colleagues have generated a variety of ways to test subjects' comprehension of philosophic reasoning, including asking them to paraphrase stage-prototypic arguments (Rest, 1973; Rest et al., 1969), match such arguments (Rest, 1975b), or recall and reconstruct them (Narvaez, 1998). Rest ultimately settled on a method resembling a reading comprehension measure, in which subjects select which of several statements best expresses the logic of a specified argument (Rest et al., 1999b). If a model reflects true development, such methods **should generate a Guttman scale of cumulative comprehension**; that is, subjects should have no difficulty understanding stages below the level at which they spontaneously produce answers, but should not comprehend stages more than one level above it (Guttman, 1954). Moreover, in a test like the DIT or ICT, subjects **should tend to show a preference for responses representing the highest stages they are able to comprehend** (Rest, 1983).

To test these hypotheses, some subjects should be administered the ICT along with a separate comprehension test. This test might take a form similar to that of the reading comprehension-style measure ultimately adopted by Rest. Subjects could be asked to read five stage-prototypic position arguments on an internormative issue, adapted from answers given in interviews. After each position statement, they could select which of five summary statements best expresses the argument's logic. To **test the hypothesis that the comprehension and preference hierarchies coincide**, subjects could be asked to rank the answer choices in order of preference. The same hypothesis

could be tested by comparing comprehension results with the stage preferences subjects express on the ICT.

Another method for testing cognitive-developmental hierarchy is the "fakeability" study. If the ICS instruments are valid measures of internormative competence, it should not be possible to increase subjects' scores by instructing them to select the "most universally legitimate judgments" or otherwise encouraging them to "fake high" (Emler et al., 1983; Lind, 2002, 2008). If subjects' scores rose significantly under this condition, we would then have to wonder to what extent scores may be affected by faking under normal conditions (Rest, 1979). To **test whether ICS measures may be confounded by faking**, it would be useful to perform studies similar to those performed by McGeorge (1975) and Hau (1990), who found that subjects were able to fake low on the DIT, but not high, supporting the measure's validity.

The prediction of cognitive-developmental hierarchy should also be tested by Rasch analysis, as described below.

Stage-like structure.

The ICS specifies a series of orderly relationships among discrete reasoning patterns, giving rise to testable predictions. One such prediction is that the growth of internormative reasoning should exhibit a discontinuous, stage-like structure. This prediction can be tested with Rasch modeling, a type of psychometric statistical analysis.

Rasch modeling uses the information from subjects' collective performance across all test items to build ladder-like interval-scale maps depicting both the relative

difficulty of the items and each subject's position on the ladder (Bond & Fox, 2001; Rasch, 1980). The central and distinguishing feature of Rasch modeling is that it uses a logarithmic transformation to convert the ordinal data of item difficulty and subject performance into an *interval* scale whose units represent equal increases in difficulty (B. D. Wright & Masters, 1982). Unlike ordinal data, interval data allows us to evaluate whether the items and subjects move up the scale of difficulty in a smooth way or in an intermittent way (Bond & Fox, 2001). Critically, this makes it possible to test the assumptions of developmental model, by ascertaining (a) whether the scale exhibits discontinuities in the expected places (that is, between the items associated with different stage structures), and (b) whether the ladder has the number of developmental gaps specified in the model (Mislevy & Wilson, 1996; M. Wilson, 1985, 1989). Because the number and size of intervals are not determined theoretically, but instead derived from the item and subject performance data, Rasch analysis constitutes a powerful validity test of developmental metrics (Bond & Fox, 2001; U. Müller, Sokol, & Overton, 1999; M. Wilson, 2005).

With its ability to specify both the steps and segmentation of a growth scale, Rasch modeling is, along with longitudinal testing, the most rigorous existing method for testing whether cognitive capacities develop according to a theoretically specified order (Bond & Fox, 2001; U. Müller et al., 1999). It has become a standard procedure for assessing the accuracy of developmental models (Dawson, 2002b; Dawson et al., 2003). Armon and Dawson (2002), for example, used Rasch analysis of Armon's earlier (1984) study of evaluative reasoning to identify a sequence of developmental discontinuities that

supported Armon's original stage model. Similarly, Dawson et al. (2005) used Rasch analysis on a composite sample of eight moral reasoning studies to show that growth in this domain conforms with stage assumptions. In such analyses, the procedure used is to identify statistically significant gaps between locations where subjects and items tend to cluster within a scale. Such gaps can be interpreted as quantitative confirmations of qualitative leaps in understanding.

Rasch analysis, which should be performed once the ICT is stabilized, will offer **a test of two distinct hypotheses**. First, it will offer a test of **a strong version of the ICS with firm assumptions of structural wholeness and stage-like development**. It will also offer **a weaker test, of simple cognitive-developmental hierarchy**, not dependent on structuralist assumptions. A Rasch model conforming to the ICS sequence but not having statistically significant between-stage segmentation would strengthen the ICS's claims as a developmental hierarchy, but would weaken its strong structuralist claims.

The second, weaker test is similar to, and could be supplemented by, a **test of "quasi-simplex" structure**, that is, a test of the hypothesis that any given stage structure tends to appear together with evidence of adjacent stage structures, but not non-adjacent ones (here "quasi" refers to the allowance of measurement error) (Davison, 1979a; Guttman, 1954; Lind, 2005).

Unidimensionality.

Interval-scale analysis is not possible unless subjects and items can be arranged along a single line. So for a developmental metric to maximize its rigor and usefulness, it should be unidimensional. It should measure a single construct.

Rasch analysis can be used to **test the hypothesis that the ICS is unidimensional**. Indices of item fit can be used to ascertain whether items comply with the expected pattern of difficulty and contribute to the measurement of a single attribute. The ICS may be regarded as unidimensional to the degree that a single continuum adequately explains item & subject performance patterns on the ICT (Bond & Fox, 2001).

As noted earlier, I began this study with a construct which proved, to my mind, to comprise two distinct types of growth. Though they were clearly functionally related, I eventually concluded that they were empirically distinct and could not be aligned on a single, rigorous developmental continuum. Just as I hope that decoupling the two attributes will permit the kind of empirical validation that is possible through Rasch analysis, I would also suggest that a similar maneuver may help resolve the difficulties facing other quantitative measurements of multidimensional constructs, such as the three-part "self-authorship" measure of Creamer, Baxter-Magolda, and Yue, who lament the "difficulty of separating the three dimensions to clearly stand apart from each other during the measurement process" (2010, p. 553). Many abilities described in the psychological literature as general capacities turn out to be summary variables of items that are in fact weakly correlated (Fischer & Immordino-Yang, 2002). Researchers who propose a general construct bear the burden of providing evidence of a "central

generalized structure that generates common activity across a wide array of tasks" (Fischer & Bidell, 2006, p. 352).

Criterion group/Cross-sectional validity

Validity criterion 3: Must differentiate among groups expected to perform differently.

If people develop in the manner posited in the ICS, we should expect to find higher ICS scores among subjects who have more education and experience related to this domain. This prediction can be tested with a "criterion group" study comparing a group of subjects expected to score very high (such as professors of international law) with a group expected not to score high (such as college freshmen). A similar design is the "cross-sectional" study, which compares cohorts drawn from either end of a presumably developmental experience (such as college). Such "between-subject" comparisons are the first line of evidence to support developmental claims (Dawson-Tunik et al., 2005).

Rest et al. (1978) describe two ways in which cross-sectional studies may be used. In the first variant, we assume that the two cohorts are roughly the same, except for the developmental experience that separates them. In my Chinese university sample, for instance, some might be willing to assume that the difference in scores between the undergraduate seniors and freshmen is the effect of education and experience, rather than other conceivable factors. Because all the students were recruited with the same procedure, from the same department, this assumption might not be ludicrous, especially if we matched the two cohorts on relevant covariates. In this way, a cross-sectional

(between-subject) study could be used as a rough substitute of a longitudinal (within-subject) study.

However, such a study cannot rule out alternative causes for the score difference between the cohorts, such as selection bias (unobserved covariates that might upwardly bias the scores of the higher-educated cohort) and cohort effects (historical differences between older and younger groups). For this reason, researchers often prefer the second, more limited way of using cross-sectional data, which is to treat it as a form of criterion group data.

Another way to use between-subject data, though not for purposes of this "validity criterion 3", is of course to apply Rasch analysis. This technique generates data that is arguably similar in usefulness to longitudinal data, but using between-subject data at a single time of measurement.

For the ICS program of studies, criterion group and cross-sectional data should be used as a first step, to prove the model's viability prior to embarking on longitudinal studies. The following describes a possible approach for this first step, incorporating the Chinese university data and adding a complementary US sample:

Cross-sectional studies using open-response questionnaire.

1. Chinese sample

The open-response questionnaire shown in Appendix D was completed by 119 freshmen, 75 seniors, 37 doctoral students, and 4 professors. To improve comparability among the

cohorts, use key observed covariates[6] such as such as parents' education and length of foreign experience to create matched cohorts of 37 subjects each from the three student groups, and exclude the professors. **Test the hypothesis that ICS scores tend to increase with education**.

All subjects in this sample were of the same nationality, had received a roughly similar national high school curriculum, and were studying in the same department at the same university. The response rate in all student cohorts was over 50%. The matched undergraduate cohorts would offer a highly comparable sample, with limited historical cohort effects. The doctoral student cohort cannot be compared straightforwardly to the undergraduate cohorts, as it is drawn from a different population. However, this sample would offer a greater age/education differential vis-à-vis the freshmen.

2. US sample

Administer the English version of the same questionnaire to three similar cohorts at a US university, modifying the demographic questions as appropriate. **Test the same hypothesis**, again matching the cohorts on key covariates.

In addition to supplementing the existing China data, this sample would provide data for a qualitative comparison of the thinking of US and Chinese university students.

3. Addressing selection bias

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[6] Gender, age, educational level, parents' education, parents' occupation, length of foreign experience, number of siblings, birth order, high school and university GPA, foreign language ability, ethnicity, rural vs. urban household registration. In the Chinese context, the last two largely capture SES.

There are several unobserved covariates that should be expected to upwardly bias the scores of the higher-educated cohorts (such as IQ, intellectual curiosity, diligence, etc.), particularly the doctoral students vis-à-vis the freshmen. However, these differences could be seen as reinforcing the design rather than undermining it, because these differences would also presumably support the development of higher-order reasoning. Differences found between groups of lower and higher education would support the hypothesis that internormative reasoning does change along a prescribable course. As Rest et al. (1978) point out in relation to cross-sectional studies of cognitive development,

> The differences of the [more highly educated] group in terms of age, and probably IQ, SES, and intellectual interests, all suggest higher [developmental] scores for the [more highly educated] group: a higher age affords more time for development to have progressed, higher IQ suggests faster learning and development, higher SES may indicate greater opportunities and richer stimulation, and greater interest in intellectual matters would indicate greater motivation to attain adequate conceptualizations and a focus on cognitive processing of information. Therefore, cognitive-developmental theory would predict the direction of difference between the …samples. (p. 265)

Criterion group study using clinical interviews.

Conduct the clinical interview with a group of 20 freshmen, using a sample matched to the existing expert sample. **Test the hypothesis that the expert sample's scores will be higher**.

Criterion group studies using the ICT.

When a version of the ICT is available, distribute it widely and gather data from other researchers to form large composite samples at different levels of education, following the method used by several researchers in validating the Defining Issues Test (Davison, 1979a; Rest et al., 1999b; Thoma, 1986). Either match the composites on covariates or simply aim for the largest possible composite sample size. Subdivide the overall composite into narrow bands by education and relevant experience (Rest et al., 1999b), and **test the hypothesis that these factors will tend to increase ICS scores**.

Analysis.

In all cross-sectional studies, education is naturally confounded with age. The analysis should therefore focus on education, and should not assume ICS level to increase with age independently of education. Using samples of older adults, researchers have found formal education to be far more predictive of DIT score than age, which is sometimes even found to be negatively correlated with test performance (Coder, 1975; Rest, 1979).

For the purpose of validity criterion #2, all cross-sectional data and criterion group data should also be analyzed with Rasch modeling. It will thus be possible, even

with this non-longitudinal data, to test the extent to which performances by subject and item conform to the hierarchical sequence postulated in the model.

Longitudinal validity

Validity criterion 4: Must show a significant upward longitudinal trend without stage skipping or unexplained regression.

For all the strengths of Rasch modeling, confirming a developmental sequence ultimately requires longitudinal data demonstrating invariant sequentiality within subjects. Because invariant sequentiality cannot be shown with between-subject data, within-subject longitudinal studies should form the core of the ICS validation program.

Confounds.

That said, longitudinal data is subject to its own types of confounds (Baltes, 1968; Baltes & Nesselroade, 1972; D. T. Campbell & Stanley, 1966; S. A. Miller, 2007; Rabbitt, Diggle, Holland, & Mcinnes, 2004; Rest, 1979; Schaie & LaBouvie-Vief, 1974):

1. *Time of measurement*. Longitudinal changes in subjects may be affected by sociohistorical changes in the intervening years, such as a strong globalizing trend, or a wave of national isolationism.
2. *Cohort*. The changes observed may reflect the trajectory of a particular generation (such as Britons who came of age during Brexit), and not others.

3. *Selective attrition.* Unlike between-subject studies, within-subject studies generate no selection bias. However, a bias may arise if subjects who *drop out* midway differ in ways that relate to internormative growth patterns.
4. *Repeated testing*. Subjects may gain proficiency simply by virtue of repeated testing. For example, Mayhew, Pascarella, Trolian, and Selznick (2015) found that re-taking the DIT did increase scores. Alternatively, subjects may become habituated to responding in certain ways. If interviews are used, differences may arise in how the interviews were conducted at different times of measurement.
5. *Non-generalizability*. Subjects who agree to participate in longitudinal studies may be atypical.

For these reasons, longitudinal data may not straightforwardly reflect developmental change in the population.

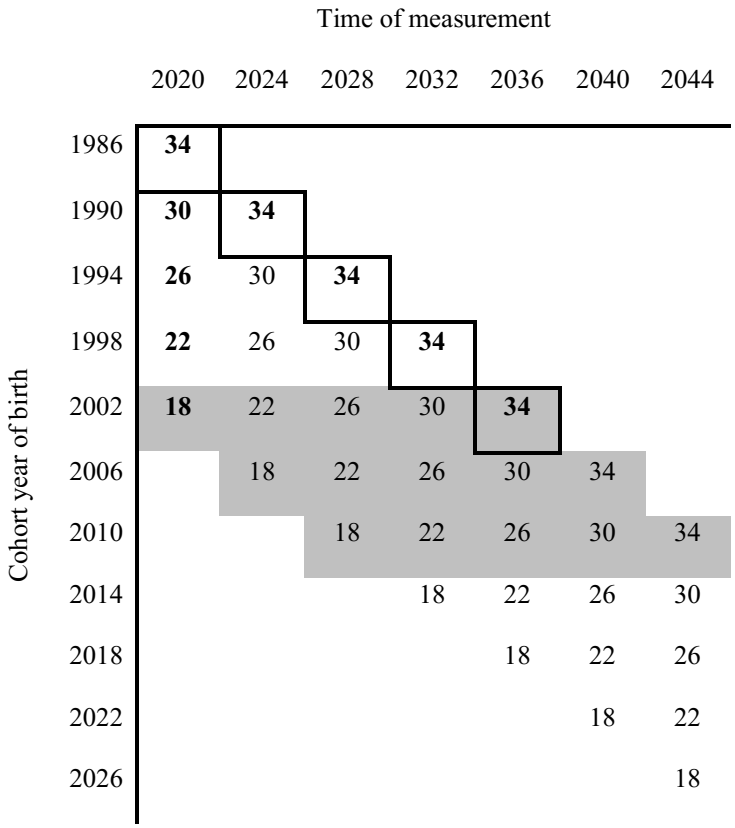
Another problem besetting longitudinal studies is that the instrument used may become obsolete over time. In the ICS's case, this threat looms particularly over the subject matter of the vignettes. Kohlberg (1958) anticipated this problem by choosing classic philosophical dilemmas that had already stood the test of time. But the issue is thornier for the ICS, whose theme is especially sensitive to changes in world affairs.

Addressing confounds.

To gain leverage over the cohort and time-of-measurement factors, the research program should ideally conduct "cohort-sequential" longitudinal studies (S. A. Miller, 2007;

Schaie, 1965). This would permit "time-lag" comparisons of subjects of the same age tested at different times. For example, the three shaded rows in Table 10 below permit diagonal comparisons of the growth trajectories of subjects born in 2002, 2006, and 2010. This makes it possible to estimate the impact of cohort effects on longitudinal growth patterns. (To simplify the presentation, I have used "age" as the independent variable in Table 10, but the actual analysis should be done on the level of education of the subjects of the ages listed.)

Table 10. Illustration of Sequential Study Designs



Note. Illustration of cohort-sequential design (shaded rows) and time-sequential design (all columns). Two-digit numbers indicate subject ages at time of measurement. Adapted from Miller, S. A. (2007). *Developmental research methods*. Los Angeles: Sage. Pp. 39-41.

The "time-lag" (diagonal) comparisons can also be used to unravel cohort effects from sequential cross-sectional studies, shown in the columns in Table 10. For example, differences in the scores at age 34 of cohorts born in 1986 through 2002 (indicated by the diagonal boxes) can be factored out of the cross-sectional data gathered in 2020 (bold).

A comparison of sequential cross-sectional studies is known as a "time-sequential" design (S. A. Miller, 2007; Schaie, 1965).

Reviewing Table 10, we see that it presents a 24-year research cycle of quadrennial between-subject cross-sectional studies (columns) that accumulate into an overlapping series of within-subject longitudinal studies (rows). The table is intended to be illustrative; similar objectives could be achieved with less data, strategically selected. For example, the "time sequential" design could be limited to three waves (e.g., 2020, 2028, and 2036), but with a large sample. Meanwhile, the "cohort-sequential" design could be limited to the topmost and lowest shaded rows, and using a much smaller sample than is used for the cross-sectional comparison (Rest et al., 1978).

The sequential studies would **test the following hypotheses**:

1. **Subjects show an upward longitudinal trend with invariant sequentiality** (no stage skipping or unexplained regression);
2. **Effect of education far outweighs effects of confounds** (cohort, time of measurement, selective attrition, and repeated testing).

Although I predict an upward trend, I also expect to find that subjects gradually increase their "mortgage" on lower levels as they go up; that is, that higher-scoring subjects will produce a higher percentage of responses below their modal level (King & Kitchener, 2002; P. K. Wood, 1997).

The sequential studies will address the effects arising from cohort and time of measurement. I will also need to address possible effects of selective attrition and

repeated testing. One available strategy to rule out the former would be by comparing the "ins" and "outs" on relevant covariates. Another would be to compare the results of separate analyses based on (a) only subjects who completed every round of longitudinal testing, then (b) including subjects who missed only one round, then (c) including subjects who missed multiple rounds. The analyses would then be based on the largest sample whose results are similar to the most restricted sample.

Rest et al. (1978) list several strategies to check for effects of repeated testing. The first is to add an extra issue in a late round of data collection, whose results are used only to check for a familiarity effect. If scores are not significantly higher on the familiar issues than on the unfamiliar one, the familiarity hypothesis is not supported. The second strategy is to add some same-age subjects to a cohort sample partway through, and compare their scores with subjects who are already familiar with the measure. The third strategy is to retest some subjects after a short period of time. If they show no short-term retesting effects, then long-term retesting effects can be ruled out. Finally, one can simply test whether giving a pre-test prior to the baseline test produces any effect (D. T. Campbell & Stanley, 1963).

Design considerations.

Among the key design considerations are at what age to begin testing longitudinal subjects, how frequently to test them, and for how long. I would suggest that the first undergraduate semester would be a reasonable starting point, although starting with high schoolers would produce more variation between Orders 0 and 1. Based on the large

amount of quantitative, within-stage assimilation that is required before a new qualitative stage is possible, I would suggest that testing every three or four years will be often enough. An advance of two full stages is unlikely during that duration (Brabeck, 1984; Brabeck & Wood, 1990; King, 2009). Based on King & Kitchener's review of studies on epistemic reasoning (2002), it would be reasonable to expect students' progress during four years of undergraduate study to be less than one full stage. Given this slow pace of growth, the longitudinal studies should span at least 16 years, and preferably longer, especially if the baseline measurement takes place during high school.

To attend to microdevelopmental questions, such as the precise shape of growth trajectories, a portion of the longitudinal studies should be conducted at shorter intervals, such as one year.

For the reasons already described, I would suggest that the sequential studies use the ICT for measurement. At the same time, some portion of the longitudinal studies should have an interview component, to allow a full exploration of subjects' thinking, including their reflections on how and why their thinking has evolved over time. This would also offer a cross-check on the ICT, especially if the interviews were conducted with subjects who have also taken the test.

Sensitivity to interventions

Validity criterion 5: Must capture the effects of targeted interventions.

This can be assessed in two ways, both using pre/post testing with the ICT. The first would be to use randomized controlled studies based on selective admission to the lab program. The lab program would offer a lengthy, highly targeted intervention with a large degree of control over what students learn. Controlled studies of the lab program would address the question, "Can a specifically targeted intervention generate significant growth in this domain?" (Rest et al., 1999b).

However, this approach would be vulnerable to the criticism that subjects are choosing responses by simply parroting the types of statements they have heard from their teachers in the lab program. Therefore, it would be useful to also test for impacts of other programs providing similar types of learning, such as a graduate program in international law. Assuming randomized control is not available, alternative methods of control could be used, such as causal modeling or quasi-experimental designs.

Even with a highly targeted program, the nature of structural development is such that even one full stage of growth may be unlikely over a two-year period. However, it is not unreasonable to expect the difference in growth to approach a full standard deviation (King & Kitchener, 2002).

Most intervention studies would not be designed to test the ICT's sensitivity to interventions, but to evaluate the effectiveness of different curricula. These studies will be described in a separate publication.

Convergent validity

Validity criterion 6: Must correlate with other evidence of increasing understanding.

This concludes the series of validation criteria (numbers 2-6) comprising the more general task of demonstrating the cognitive-developmental nature of the model.

If the ICS reflects true development (not just age-based change), **scores on ICS measures should be expected to correlate with other measures of cognitive growth**, particularly in related areas. To test this hypothesis, groups of subjects should be asked to complete an ICS measure along with a Reasoning about Current Issues test (epistemic reasoning), a Defining Issues Test (justice reasoning), a verbal skills test, an IQ test, and a Need for Cognition test (tendency "to engage in and enjoy effortful cognitive activity") (Cacioppo, Petty, Feinstein, & Jarvis, 1996, p. 197). When possible, subjects' ICS scores should be compared with measures of their academic aptitude, such as SAT score, GRE score, and GPA. In principle, ICS scores should correlate more tightly with closely related measures like the RCI and DIT than with less related measures like verbal skills or GPA (Rest, 1986).

Finally, some scored segments of production-task measures should be cross-scored on the General Skill Scale (Fischer, 1980) or the closely related Lectical Assessment System (Dawson, 2018), both domain-general measures of hierarchical complexity based on a combination of conceptual and of internal logical complexity. Cross-scoring should also be done with the Integrative Complexity scale (Baker-Brown et al., 1992), a popular domain-general metric that captures internal logical complexity, but not conceptual complexity.

Discriminant validity

Validity criterion 7: Must not simply re-measure what is captured by an established instrument.

Even if the ICS metrics satisfied the other criteria above, there would remain the possibility that their measurements be attributable to a more basic variable such as general intelligence or academic aptitude, or to a related construct with an established metric, such as moral judgment or epistemic reasoning. To justify using a new type of assessment, it is important to show that it measures a type of growth that is not yet captured by existing instruments.

Because the number of existing measures is virtually unlimited, the choice of which measures from which to show divergence must be theory-driven. Logic dictates to start with the same measures used for testing convergent validity (RCI, DIT, verbal skills, IQ, Need for Cognition, academic aptitude), for these are the most likely to be measuring a common underlying construct. **The test of discriminant validity will be to show that the ICS measures maintain statistically significant trends on the aforementioned validation criteria** (criterion group validity, cross-sectional validity, longitudinal validity, sensitivity to interventions) **even after controlling individually for each of these established measures**. While removing the effect of these other measures should reduce the effect of ICS scores (convergent validity), the ICS effect should nonetheless remain significant (ideally, the ICS measures should account better for the validity trends

than any of these existing measures alone). This approach has been used successfully, for example, by Thoma, Narvaez, Rest, and Derryberry (1999) to demonstrate the distinctiveness of moral judgment as a cognitive-developmental construct.

Here I must note that ICS scores should *not* necessarily be expected to prove statistically independent of the domain-general complexity scales, the General Skill Scale (GSS), Lectical Assessment System (LAS), and Integrative Complexity scale. This is because such scales would have to first develop qualitative concept maps of this domain in order to be applied to it, essentially duplicating the analysis the ICS embodies (albeit with far less depth of philosophic evaluation). Such measurement should be expected to converge closely with that of the ICS.

Because the domain-general scales cannot be applied to this domain without a separate process of qualitative domain analysis, in addition to the whole process of generating valid domain-specific issue statements and questions, the ICS measures can by no means be considered redundant of them. Moreover, such scales require manual scoring and are not capable of generating recognition-task measurement. For these reasons, the ICS measures would not be a superfluous enterprise even if a domain-general scale could, with sufficient exertion, be applied so as to produce identical measurement.

Predictive validity

Validity criterion 8: Must significantly predict to relevant attitudes, choices, and behaviors.

If ICS measures reflect true growth, they should correlate with the kinds of attitudes, behaviors, and problem-solving capacities expected to flow from that growth (Thoma, Rest, & Barnett, 1986). Finding such relationships would show us that ICS development is not merely a matter of cognition, but also correlates with moral problem-solving activity. It would also show us that such growth is not just an increase in a score, but has a meaningful impact in the real world.

To **test the hypothesis that ICS growth relates to issues in the real world**, some subjects should be asked to take surveys measuring their attitudes toward global institutions as Amnesty International, the International Court of Justice, the World Bank, and the Nobel Peace Prize. The same surveys might measure the extent to which subjects engage in advocacy related to issues of international or global concern.

To **test the hypothesis that ICS growth predicts to complex normative problem-solving**, some subjects should be tested with internormative challenges in a laboratory setting, and others should be measured on their success addressing such challenges in the real world. In the lab, subjects might be split into groups by ICS score, then assigned a simulated internormative dilemma involving a number of antagonistic international constituencies, each one represented by one of the group members. Here the prediction would be that higher-stage groups would generate more integrative and deeply equilibrated solutions.

While lab-based scenarios can be precisely crafted to test hypotheses about ICS growth, it is important to design studies that measure the value of growth in resolving

real-world challenges, not simply problem-solving as measured in a lab (Rich, 2009). One approach might be to measure the professional effectiveness of officers at an organization such as the World Bank, and test for a relationship with their ICS scores after controlling for key predictors of professional success. Another predictable relationship would be that of ICS score with professional success in overseas postings for diplomats, businesspeople, and professionals, possibly measured by rates of promotion or early return. Similarly, ICS scores of lab program students could be compared with a measure of the depth of internormative integration evinced in their capstone projects. To test the impact of ICS growth in scholarly success, academics' ICS scores could be compared with a measure of their interdisciplinary success, such as the number of cross-disciplinary citations of their work. Yet another approach would be to interview subjects about internormative challenges they encountered in real life, and code the transcripts for the depth at which subjects integrated diverse normative perspectives in addressing the challenge.

Measuring the real-world "cash value" of ICS growth would be a difficult task fraught with complex interactions and confounds. It may be necessary to break down distant cause-effect relationships into hypothetical causal chains of more tractable intermediate links (Jacobs, 1977). Because we should not expect simple, linear relationships between ICS growth and real-life behaviors, establishing "predictive validity" should be a goal to achieve in the long term, once the fact of ICS growth itself has been proven (Rest, 1979).

External validity/universality

Validity criterion 9: Must work similarly across diverse persons and groups.

ICS measures must be able to track similar structural development along distinct trajectories shaped by gender, culture, personality, political persuasion, and other factors. **To demonstrate this universality, the ICS will need to satisfy the aforementioned validation criteria** (longitudinal validity, cognitive-developmental hierarchy, etc.) **across diverse samples**. The ICS levels should be similarly represented across similar education levels in diverse societies, except insofar as these societies do not expose their people to complexity (e.g., due to cultural isolationism in the United States or internal homogeneity in East Asian nations). **The variance in ICS scores explained by gender, culture, and other factors independent of education should be very small compared to that explained by education** (Thoma, 1986).

Satisfying the criterion of "content validity" (i.e., accurately assessing the construct) across cultures entails special difficulties. In one sense, this should not be the case. After all, since ICS growth is precisely about learning to reason *across* cultures, then the task should be supracultural; it should not matter which culture one starts from. But there are two reasons why culture remains a challenge to validity. The first is that there appear to be different culturally shaped pathways through the ICS's structural progression. The second is that ICS assessment requires instruments, which must be written in a particular language and contain particular issues and particular ways of asking questions.

This study has already demonstrated that it is possible to gather valid ICS data with translated interview protocols and questionnaires, given adequate cultural expertise and substantial piloting. But developing valid translations of the ICT will demand still greater rigors, due to its reliance on the expedient of using short, cryptic argument fragments to activate supposedly pre-existing thought patterns. It is unreasonable to expect that these fragments can be straightforwardly translated and activate the same type of thinking in a very different cultural context. Therefore, the localized ICT items should be harvested from spontaneous production-task responses in the local language, based on a close comparison with the original English items (or less ideally, vice versa). Localized versions should be evaluated by native speakers familiar with the ICS and developmental theory, and pass tests of reverse translation and think-aloud interpretation by subjects (Lind, 2005).

It is important to show that ICS growth proceeds similarly among persons of different political persuasions. Rest et al. (1999b) note the charge by Simpson (1974) and Emler et al. (1983) that Kohlberg's model simply reflected his liberal politics. Critics could similarly charge that I am merely projecting my own view as developmentally superior. Disproving that claim requires satisfying the various validation criteria across different political persuasions, and showing that ideology explains ICS variance much less powerfully than does education.

It does not, however, require showing that ICS score and ideology are unrelated, for we would not expect different ideological groups to be exactly identical in their cognitive capacities. Indeed, numerous studies have found connections between

philosophic development and political attitudes (Emler, Palmer-Canton, & St. James, 1998; Narvaez, Getz, Thoma, & Rest, 1999; Thoma, 1993). In particular, there is reason to expect a measure of cognitive development to correlate with libertarian leanings (S. Feldman & Johnston, 2014; G. E. Marcus et al., 1995; McClosky & Brill, 1983).

Reliability

Validity criterion 10: Must demonstrate adequate reliability.

ICS measures will need to work consistently and with acceptably low levels of random error. **Reliability should be tested by comparing within-subject scores on different (or repeated) measures, as well as between-rater scores on the same measure**.

Parallel-forms reliability.

Parallel forms of each measure (e.g., ICT variants containing different issue statements) should correlate very strongly (ideally, $r \geq 0.9$).

Intermethod reliability.

Here the standard is lower, because recognition tasks and production tasks measure different types of competence (King & Kitchener, 2004; Lind, 2008; Rest et al., 1999b). The ICT should show moderately strong correlation with the production tasks (ideally, $r \geq 0.5$). The two production tasks (interviews and open-response questionnaires) should

correlate more strongly (ideally, $r \geq 0.7$), but questionnaire scores should be expected to be systematically lower, as explained earlier.

Interrater reliability.

Different expert raters should, under full-blind conditions, rate production-task responses within a single stage score of each other at least 70% of the time.

Test-retest reliability.

"Test-retest reliability" refers to the degree to which subjects' scores on the same measure remain consistent over a short period. Test-retest reliability should be high if an instrument is accurate and measures a stable trait, which ICS development is expected to be. ICS measures should show a retest reliability of ≥ 0.7, using different forms of the same measure within a few weeks of each other.

Internal consistency.

"Internal consistency" refers to the uniformity of individual subjects' scores across different issues within a measure, or across different items of presumably equal difficulty. Because the ICS claims to describe holistic, structural rules of thinking applied consistently across widely varying content, we should expect subjects' scores to be consistent across different parts of an ICS measure. If their scores varied wildly, it would call into question either the content validity of the measure or the claim that the model describes holistic structural growth. However, some degree of variation is to be

expected. Evidence from the DIT, MJT, and RCI suggest that different issues on these tests tend to pull for slightly different scores (Lind, 2008; Rest et al., 1999b; P. K. Wood et al., 2003), a finding that matches my impressions from the present study, in which environmental issues seemed to pull for more universalistic thinking than human rights issues.

Rasch analysis should be performed to assess the internal fit of ICT items and the extent to which they contribute to the measurement of a single attribute (Bond & Fox, 2001). Both issues and items should show an internal consistency (Cronbach's alpha) of ≥ 0.7.

It is important not to write a narrow range of issues in the pursuit of a high Cronbach's alpha, for doing so would support the alternative explanation that the subject's choices simply reflect social learning within that thematic range (Rosenberg, 2002a). On the contrary, issue sets should be varied enough that social learning theory would predict answers to vary in accordance with the subject's prior exposure to each issue. A diverse set of issues will thereby give credence to the assumption that subjects tend to apply a similar structure across different substantive types of internormative issues.

Summary of validation project

Taken together, the studies described above would adequately test the claim that the ICS describes a distinct, morally meaningful, and universal form of cognitive growth.

Several lines of study would test **the claim of cognitive growth**. First, comprehension tests, fakeability tests, and Rasch analysis would test whether the ICS constitutes a hierarchy of comprehension and preference having the properties of a unidimensional learning scale. The Rasch analysis would also test the stronger claim that ICS growth should exhibit a segmented, stage-like structure with quantitative evidence of periodic qualitative leaps in understanding. Second, criterion group, cross-sectional, and intervention studies would test the expectation that ICS scores should increase with relevant expertise, education and complexity of experience. Third, a series of cohort-sequential longitudinal studies—with checks on attrition and testing effects—would test whether ICS scores show the expected invariant upward trend, independent of the usual longitudinal confounds. Fourth, a series of studies comparing ICS scores with established cognitive skills metrics would further test the expectation that ICS growth is developmental.

Separate studies of discriminant validity, predictive validity, and external validity would test **the claims that ICS growth is distinct, morally meaningful, and universal**.

Finally, a set of reliability measures would test **the claim that the instruments used in the foregoing groups of studies are acceptably accurate and consistent**.

Conclusion

Knowing how something is put together is worth a thousand facts about it.

- Jerome Bruner

Cognitive-developmental models offer the most powerful and practically useful framework for understanding people's ideas—a framework that is at once deeply qualitative and empirically quantifiable. To the extent that they are accurate, developmental models allow us to "witness the genesis of structures of consciousness" (Habermas, 1983/1990, p. 5). Through them we can know *where a person's way of thinking has come from* (the antecedent ideas from which it has grown, and the logical contradictions it was designed to solve), *where it is now* (the problems it leaves unresolved, and the new problems it creates), and *where it may be headed* (the types of concepts that would resolve the contradictions presently faced). Developmental models also help us in the pedagogical task of identifying the kinds of cognitive stimulus that are needed for growth at each point along a given person's learning pathway. Finally, developmental models shed light on the overall nature and directionality of change in people's way of thinking, offering each of us a plausible view of how our own way of thinking may be able to grow. Developmental models offer us answers to the question of what learning means.

I have pursued one such answer, in the area of cognition about internormative issues. To do so I have used the investigative tools of Piagetian structural

developmentalism. This approach offers three powerful lenses for discerning logics of growth connecting diverse interpretations of reality: (a) a *constructivist* lens, which allows us to see how different individuals generate vastly different interpretations of the same internormative challenge; (b) a *developmental* lens, which allows us to see how each interpretation represents a generative transformation of a simpler one; and (c) a *normative* lens, which allows us to see how such transformations represent real advances, in that they give us ways of thinking that are more cognitively autonomous, more deeply reflective, more potentially self-correcting, more internally coherent, more ethically generalizable, and more powerfully able to address complex problems.

Applying these lenses to people's ways of reasoning about internormative issues has generated the ICS, a construct that can be used in further empirical study of the learning in this domain. The ICS forms the foundation of a long-term research program through which I hope to make a number of theoretical and practical contributions, including (a) to advance our understanding of how to educate complex, integrative thinkers capable of managing the cognitive demands of globalized society; (b) to provide effective tools for measuring the development of such thinking; (c) to leverage these measurement tools in supporting educational assessment and empirically examining relationships between internormative complexity and other variables; and (d) to provide curriculum and self-study tools with which people can learn and practice more integrative approaches to internormative problems. In these ways I hope this research program might help us on our way to a new kind of learning that would enable us to reason at the level of complexity at which the world is now structured.

Appendix A. Guiding Orientation: Particularism and Universalism

As noted in the main text, an initial conception that guided my research into internormative cognition was that ethical and epistemic reasoning that is *particularistic* (i.e., based on concrete social relations) is less developed than that which is *universalistic* (i.e., based on abstract principles). These were the developmental starting and end points with which my investigation into internormative cognition began. Because a researcher's preconceptions can tautologically pre-determine the entire process of data collection and analysis—particularly in an interpretive research enterprise such as this one—it is important to justify these initial preconceptions. Are these ideas accepted by a credible community of researchers? What kinds of data are they based on? Is this data broadly cross-cultural, or is it mostly derived from data collected in one part of the world?

The notion that universalistic reasoning is not only normatively but developmentally superior to particularistic reasoning is widely supported across the range of disciplines that examine the relationship between individual cognition and sociocultural authority. In the field of sociology, Max Weber's comparative study of civilizations identified what he referred to as "world rejection"—the notion that sacredness resides not in one's particular social community but in transcendent values—as a critical evolutionary factor in the development of modern societies (Weber, 1922/1963, 1924/1946). Karl Jaspers, Talcott Parsons, Robert Bellah, S.N. Eisenstadt, and other comparative sociologists favoring Weber's point of view have also emphasized the development of socially disembedded, ethically universalizing and therefore logically comprehensive value systems as an important breakthrough in the evolution of human thinking (Bellah, 1957/1985, 1962; Eisenstadt, 1986; Jaspers, 1953; Parsons et al., 1953).

Similar support for the notion of development from concrete relationships toward abstract principles can be found in the fields of social anthropology (D. Brown, 1991; Hallpike, 2004; Kato, 1982; Kluckhohn, 1960), comparative religion (Geertz, 1966; Humphreys, 1975; Niebuhr, 1932/1995; B. Schwartz, 1975a, 1975b; H. Smith, 1958/1991; Tillich, 1957; Voegelin, 1956), political culture (Inglehart & Welzel, 2005; Welzel, 2013), moral philosophy (Habermas, 1983/1990, 1986/1990; Kant, 1785/1995; Rawls, 2001), intellectual history (Berlin, 1990; Popper, 1962/1971), and education (Vickers, 2005). In their own distinctive idioms, these varied fields have offered mutually corroborating accounts of the development from particularistic to universalistic modes of reasoning.

In sum, the notion that universalism is developmentally more advanced than particularism has been arrived at from many paths of philosophical and scientific investigation. Its status is therefore not that of an unfounded preconception, but that of an empirical finding that has repeatedly arisen from observing the development of social institutions, cultural values, and individual consciousness. I have made use of this finding as a basic theoretical orientation regarding the general directionality and shape of development I have attempted to observe in this study.

Appendix B. Initial Interview Protocol ("Foreign NGO" issue)

Introduction

This survey contains questions designed to explore the way you reason about public issues. Your responses will be analyzed based on the structure of reasoning employed, rather than their content, so there are no right or wrong answers.]

The purpose of the survey is to understand the kind of thinking you actually use to make judgments about the issue presented. So the important thing is to describe clearly and thoroughly your best thinking about the issue.

You will first be asked to provide some personal data. I will then ask you to read about a challenging international issue. After you read a description of the issue, you will be asked to analyze it, identify relevant considerations, and suggest how to address it. You will then be asked to discuss your thinking about the nature of things like knowledge, justice, civic duty, and/or intercommunal differences.

Issue statement

A foreign non-governmental organization (NGO) that advocates human rights has just published its annual "World Human Rights Report". In its recent report, the global NGO has pointedly criticized your country for human rights violations. The report echoes criticisms that some foreigners have long made of your country. The members of this NGO come from many countries, although only a few come from your own country, and all the members live overseas. In response to the report, some people in your country (Group A) claim that the organization's criticisms are part of an effort to disparage your country and reduce its influence around the world. Other people in your country (Group B) claim that the criticisms simply reflect a misunderstanding of your country's history, culture, and values. Many members of both Groups A and B are now criticizing the citizens of your country who joined foreigners in preparing this disparaging report.

Questions:

1. Do you agree with Group A's claim that the NGO's criticisms are part of an effort to disparage your country and reduce its influence around the world? Why or why not? Explain your view in full.
    - Why do the people in Group A think this way?
2. Do you agree with Group B's claim that the NGO's criticisms reflect a fundamental misunderstanding of your country's history, culture, and values? Why or why not? Explain your view in full.
    - Why do the people in Group B think this way?
    - What is meant by, "Chinese culture and values"?
    - What makes cultures similar to or different from each other?
    - Who is best qualified to understand what Chinese culture and values should be like?
3. Different cultures generate different perspectives on the issue of so-called "human

rights". Why?

- Given that these different perspectives exist, is it possible to determine a most reasonable and objective way of thinking about this issue? If yes, how? If not, why not?
- On what basis would you personally decide your position on this issue?

4. From your perspective, is it appropriate for the foreign NGO to pass judgment on your country's practices? Why or why not?
    - In response to question #4, some people try to make the claim that there is such a thing as 'universal values.' In your view, do so-called 'universal values' exist? Why or why not?
5. Is your way of thinking about these issues different from what it would have been in the past? If so, how has your thinking developed over time, and why?
    - [USE IF NEEDED] If you can, please describe a specific event (such as an international or domestic incident, a personal experience, a lecture, a book, or a conversation) that shaped your way of thinking about these issues.
6. Did the citizens of your country who participated in preparing this report do anything wrong? Why or why not? What should they have done differently, if anything?
    - What do you think should be the most fundamental aims for a citizen of your country? Why?

Appendix C. Sample Latter-stage Interview Protocol

"Evaluating governance" issue

Introduction

This survey contains questions designed to explore the way you reason about public issues. Your responses will be analyzed based on the structure of reasoning employed, rather than their content, so there are no right or wrong answers.]

The purpose of the survey is to understand the kind of thinking you actually use to make judgments about the issue presented. So the important thing is to describe clearly and thoroughly your best thinking about the issue.

You will first be asked to provide some personal data. I will then ask you to read about a challenging international issue. After you read a description of the issue, you will be asked to analyze it, identify relevant considerations, and suggest how to address it. You will then be asked to discuss your thinking about the nature of things like knowledge, justice, civic duty, and/or intercommunal differences.

Issue statement

A group of international "good governance" activists (Group A) has just published a "World Governance Report". In this report, the activists pointedly criticize your country for certain aspects of its constitution and basic laws. The report echoes criticisms that some foreigners have long made of your country.

In response to the report, many people from your country (Group B) argue that the criticisms reflect a misunderstanding of your history, culture, and values. They say that citizens should be committed to their country and its special way of life, not to the demands of international activists. Some suggest that the Group A's criticisms are intended to damage your country's reputation.

Group A says its purpose is to apply a universal approach to judging what form of government different countries should have. However, people in Group B reject this purpose. They argue that there is no way to come up with generalized standards for judging the political systems of all societies, because different societies are rooted in different cultural and historical traditions. Furthermore, they argue that to attempt to apply a set of universal standards would be unfair to some countries, including yours.

Questions:

1. What do you think about the views of Groups A and B? What is your own position on this issue, and how do you justify that position?
2. Thinking about your answer to the previous question, how did you come to hold that point of view? Where have the opinions and/or purposes you expressed come from? How have they evolved over time?
3. Groups A and B express very different purposes and commitments in relation to this issue. Which purposes and commitments do you think should take priority in this issue? What lets you know that these are most important?

4. There is a tension in this issue between your society's own standards for making choices about [issue title] and international standards that could be imposed from the outside. Do you believe it is possible for a person from one society to judge another society's choices on this issue? If no, why not? If yes, on what basis?
5. There is a tension in the issue of [issue title] between the ideal of intergroup cooperation and the ideal of self-determination. What is the best way to address this tension in relation to [issue title]? Justify your approach.
6. As you can see in the issue statement, some people in your country say that the proper approach to [issue title] depends on each society's particular culture, values, and point of view. Do you agree? If yes, why? If no, on what basis could you justify applying the same approach to different societies?
7. Why are different societies' approaches and values with respect to [issue title] different from (or similar to) each other? Where have these differences or similarities come from?
8. Can you say that one society's approach is in some way better than another's? If no, why not? If yes, how can you justify that one society's approach is better than another's?

Appendix D. Sample Questionnaire

This questionnaire represents a localized version adapted for Chinese university students. The Chinese translation appears at the end of this Appendix.

Introduction and personal data questions

SCREEN 1

Hello!

Thank you very much for participating in this survey! The purpose of this survey is to explore the way you think about international issues. It will take about 90-120 minutes to complete this survey. The survey will take about 1.5-2 hours, depending mainly on how much you have to say.

The survey will begin with some personal data questions. Your name and other identifying information will be stored separately from your responses to the survey questions, which will be kept confidential. The survey will save your answers in real time. Your participation in this survey is completely voluntary, and you may withdraw at any time without penalty.

1. Code number
   [Subjects fill in 3-digit number assigned by research assistant]

2. What is your gender?
   [Radio buttons: Female, Male]

3. Please enter your date of birth:
   [Fill in: Year, Month, Date]

4. Please select your present educational [professional] level:
   [Drop-down list: Five options for undergraduates (U1-U5+), three options for master's students (M1-3), six options for doctoral students (D1-D6), one option for postdocs, six options for professors (first year through sixth year), one option for other.]

5. Please select the highest level of education your father COMPLETED:
   [Drop-down list: Did not complete primary school, primary school, middle school, vocational school, high school, bachelor's, master's, doctorate]

6. Please select the highest level of education your father COMPLETED:
   [Drop-down list (see #5)]

7. Please enter your father's occupation (if he no longer works, list his last occupation)

8. Please enter your mother's occupation (if he no longer works, list his last occupation)

9. What best describes the place of your parents' household registration? (if your parents have separate household registrations, base your answer on the parent with whom you spent more time growing up):
   [Drop-down list:]
   - Beijing, Shanghai or Guangzhou
   - Hong Kong
   - Other large city (metro area population above 5 million)
   - Medium-sized city (metro area population between 500K and 5 million)
   - Small town
   - Village

10. Please enter the province where you graduated from high school

11. Please enter your ethnicity

12. How much time have you spent outside of Mainland China? (Please choose the shortest appropriate time period)
   [Drop-down list:]
   - I have never been outside of Mainland China
   - Less than one week
   - Less than one month
   - Less than three months
   - Less than six months
   - Less than one year
   - Less than three years
   - Three years or more

13. How much time have you spent in Western countries? (Please choose the shortest appropriate time period)
   [Drop-down list:]
   - I have never been to a Western country
   - [Follows #12 drop-down list]

14. How many siblings do you have?
   [Drop-down list with ten options, 0 to "More than 8"]

SCREEN 2

14a. [*Appears only if 14 is answered*] How many OLDER siblings do you have?
[Drop-down list with ten options, 0 to "More than 8"]

15. The next question asks for your undergraduate GPA on a scale of 0-4. If your undergraduate program used this 0-4 scale, please move on to the next question. IF your undergraduate program GPA was NOT on a scale of 0-4, please enter your undergraduate GPA AND scale below.
- Your college GPA (for example, 4.33): _____
- The GPA range for your college (for example, 0-5): _____

SCREEN 3

15a. [*Appears only if 15 is not answered*] Please enter your undergraduate GPA (scale of 0-4). If you do not recall your GPA, please estimate it to the best of your recollection.

16. Speaking objectively, how would you rate your overall English language ability, if 0 means "no ability" and 10 means "native level of ability"?

17. How many foreign languages are you conversant in, besides English?
[Drop-down list with five options, 0 to "More than 4"]

Issues and issue-specific questions (asked after each issue)

SCREEN 4

MAIN INSTRUCTIONS

The remainder of the survey will explore the way you think about international issues. There are no right or wrong answers. The important thing is to describe clearly and thoroughly your best thinking about the issue presented. Please respond in Chinese only.

Some questions ask you to type out your thoughts. In most cases, these questions require answers of at least 40 characters. If one of your answers is not long enough, the survey will tell you.

In the next section of the survey, you will read descriptions of three international issues, each followed by a short series of questions. At the end, you will be asked to answer a final series of questions that look across all three issues. **The final series of questions is the most important**, so please save some energy for the end.

SCREEN 5

ISSUE 1 (of 3): HISTORY CURRICULUM

A group of international educators (Group A) is urging your country to join the World Organization on History Curriculum (WOHC). If it joins, the history curriculum and textbooks used in your country's schools will be subject to accreditation by a committee of historians and education professionals from around the world. Group A points out that by joining the WOHC, your country will gain access to advanced teaching materials, prepared by some of the world's leading scholars, and widely respected for developing students' critical awareness. It will also gain access to expert international advice on how to improve its curriculum.

A group of educators from your country (Group B) strongly opposes this plan. They say it is wrong for the nation to submit its history curriculum to 'accreditation' by global elites. They emphasize that history curriculum is critical to maintaining your national identity, and that you must educate your young people in accordance with your own culture, values, and point of view. Moreover, they point out that many of the history textbooks approved by the WOHC include accounts from your country's historical adversaries criticizing your country's role in various international disputes. Group B argues that WOHC textbooks are unsuitable for the children of your country, because they pay too much attention to its alleged mistakes, and too little attention to its achievements and the ways it has been victimized by other countries.

1. How similar is each group's way of thinking to your own way of thinking on this issue?[7]

   Group A's way of thinking

   [Five radio buttons from "Extremely similar" (left) to "Extremely dissimilar" (right); middle three buttons unlabeled.]

   Group B's way of thinking

   [same]

2. If you had to support either Group A or Group B, which group would you support?[8]

   [Two radio buttons]

   - Group A
   - Group B

3. Thinking about your answer to the previous two questions, how did you come to hold

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[7] Purpose of Question 1: Gather Likert data on respondent's view toward each position.

[8] Purpose of Question 2: Makes it possible to measure: (a) the relationship between the position respondents prefer and their ability to explain the logic underlying both positions (see Comprehension question below); and (b) the relationship between the position respondents prefer and their level rating over the entire questionnaire. My hypothesis is of course that respondents who score higher will prefer universalistic arguments. This tautological finding would offer only very weak empirical evidence for the normativity of these arguments; however, respondents could disconfirm my hypothesis if higher-scoring folks did not tend to prefer the universalistic positions.

this view? If your view in these matters has changed over time, how has it changed, and what caused it to change? Be specific.[9]

[Text box requiring a minimum of 40 characters. (Note that 40 Chinese characters is roughly equivalent to 150-160 English characters.)]

4. Now think about the position of the group you said in Question 2 that you would NOT support. Why do you believe this position is wrong or inappropriate?[10]

   [Text box requiring a minimum of 40 characters]

5. Now think about the position of the group you said in Question 2 that you would SUPPORT. Why do you believe this position is preferable to that of the other Group?

   [Text box requiring a minimum of 40 characters]

6. Now think about your answers to the previous two questions, and the reasons you gave to justify your views. Digging even deeper now, **how do you justify those reasons**? For example, if you wrote something like "I agree with Group __ because X", **why is "X" itself important?**

   [Text box requiring a minimum of 40 characters]

7. Question 2 asked you to choose between the positions of Group A and Group B. Now imagine that you must defend the position you did NOT choose in Question 2. What is the best justification you can think of for that position? Explain.[11]

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[9] Purposes of Question 3: (a) To find out the extent to which respondents can reflect critically on their civic identity and political socialization, (b) to learn how they describe the evolution of their thinking (this is helpful for considering whether the model accurately describes how subjects' thinking evolves over time).

[10] Purpose of Questions 4-6: To find out whether respondents prefer the more particularistic or universalistic view, and at what level of abstraction they can construct their position. Respondents' level of reasoning is discernible not in which group they favor, but in how they construct their justification for the position they take.

[11] Purpose of Question 7: This question, combined with Question 2 and respondents' level score over the entire questionnaire, offers two ways to measure the relationship between comprehension and perceived normativity:

a. If respondents who prefer the universalistic option in the Preference question show a greater average capacity to explain the opposite position than their particularistic counterparts, this will offer evidence that the preference for the universalistic option is developmental and normative. In other words, it would suggest that people who can independently construct *both* arguments tend to prefer the universalistic one. If people at higher levels *prefer* those levels, this offers empirical evidence for the normativity of those levels.
b. If more respondents scoring °3-°4 (over the whole questionnaire) are able to construct °1-°2 arguments than vice versa, this will also offer evidence that these patterns of reasoning are developmental. This provides a second source of developmental evidence for the model, supplementing the age/education trend study.

Although the primary purpose of this question is to look for evidence of a developmental pattern as well as empirical evidence for normativity, it will also generate additional qualitative data for rating respondents, based on their capacity to explicitly describe the logic underlying a given argument.

[Text box requiring a minimum of 40 characters]

SCREEN 6

ISSUE 2 (of 3): INVESTMENT

A group of foreign countries (Group A) is urging your country to adopt a law that will make it easier for foreigners to own things in your country, including land, natural resources, and local companies. Group A argues that the new law will attract foreign ideas, expertise and investment, and will promote economic growth benefiting both sides.

Some people in your country (Group B) oppose the new law. They note that if your country adopts this law, there is likely to be more foreign involvement in economic decisions affecting your country's future. They say that foreign investors are unable to judge what is best for your country's progress, because after all, local values are different from foreign values. They argue that only locals understand what kind of development is appropriate to your unique culture and way of life, and that local investors should be the ones to benefit from investment opportunities in your country.

[Followed by same seven questions as in Issue #1]

SCREEN 7

ISSUE 3 (of 3): ENVIRONMENTAL MANAGEMENT

Representatives from your country are attending an international conference on the environment. At this conference, a number of international scientists and environmentalists (Group A) are demanding that your country agree to sharply reduce its consumption of fossil fuels over the next thirty years. They also demand that your country submit to an international regime that will include inspections of each country's fossil fuel consumption as well as rules restricting certain kinds of economic activities, personal consumption, and resource use. They argue that this regime is essential to preserving the world's environment for all humanity.

Your country's representatives (Group B) oppose these demands, arguing that they violate your country's rights as a nation and will unfairly impact its freedom, development, and traditional way of life. They also assert that the proposed regime favors certain other nations that are attempting to manipulate the world's balance of power to their own advantage. They claim that this is unfair to your country and will make it impossible for your country to keep up (or catch up). Finally, they argue that each nation has its own values and interests, which can differ from those of international scientists and environmentalists.

[Followed by same seven questions as in Issue #1]

Issue-general questions (asked once at the end)

SCREEN 8

This is the final section of the survey. The questions in this section ask you to think across all three issues you have read. The issue statements are copied below in case you would like to refer to them.

[Issue statements 1-3 copied here for reference]

1. Now think for a moment about the positions of Group A and Group B across all three issues you have read (shown above). Across the three issues, "Group A" expresses purposes such as
   (1) developing students' critical awareness;
   (2) accessing ideas and expertise from abroad;
   (3) promoting economic growth; and
   (4) preserving the world's environment.

   "Group B" expresses purposes such as
   (5) maintaining national pride and identity;
   (6) preserving your country's unique culture, values, and way of life;
   (7) national self-determination; and
   (8) fair competition among nations.

   Thinking about the purposes of Groups A and B across all three issues, what purposes are most important to you? Why are these purposes most important?

   [Text box requiring a minimum of 40 characters]

2. In each of the three issues shown above, there is a tension between your society's own criteria for making choices about the issue and international criteria that could be imposed from the outside. Do you believe it is possible for a person from one society to reasonably judge another society's preferences on these issues? If no, why not? If yes, on what basis?[12]

   [Text box requiring a minimum of 40 characters]

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[12] Purpose of Question 2: Purpose: To find out the extent to which respondents are able to articulate context-independent standards generating balanced judgment, and to take an objective viewpoint toward both outgroup and ingroup views. "If no, why not?" is aimed at splitting Levels 1 and 2. "If yes, on what basis?" is aimed at splitting Levels 3 and 4.

3. As you can see in the three issues shown above, some people in your country say that the proper approach to issues like these depends on each society's particular culture, values, and point of view. Do you agree? If yes, why? If no, on what basis could you justify applying the same approach to different societies?[13]
   [Text box requiring a minimum of 40 characters]

4. In responding to this survey, some people might say, "I support Group __ because different societies have different (or similar) cultural values". Digging even deeper, why are different societies' cultural values different from (or similar to) each other in the first place?[14]
   [Text box requiring a minimum of 40 characters]

5. Can you say that one society's cultural values with respect to issues like these are in some way better than another's? Why or why not?[15]
   [Text box requiring a minimum of 40 characters]

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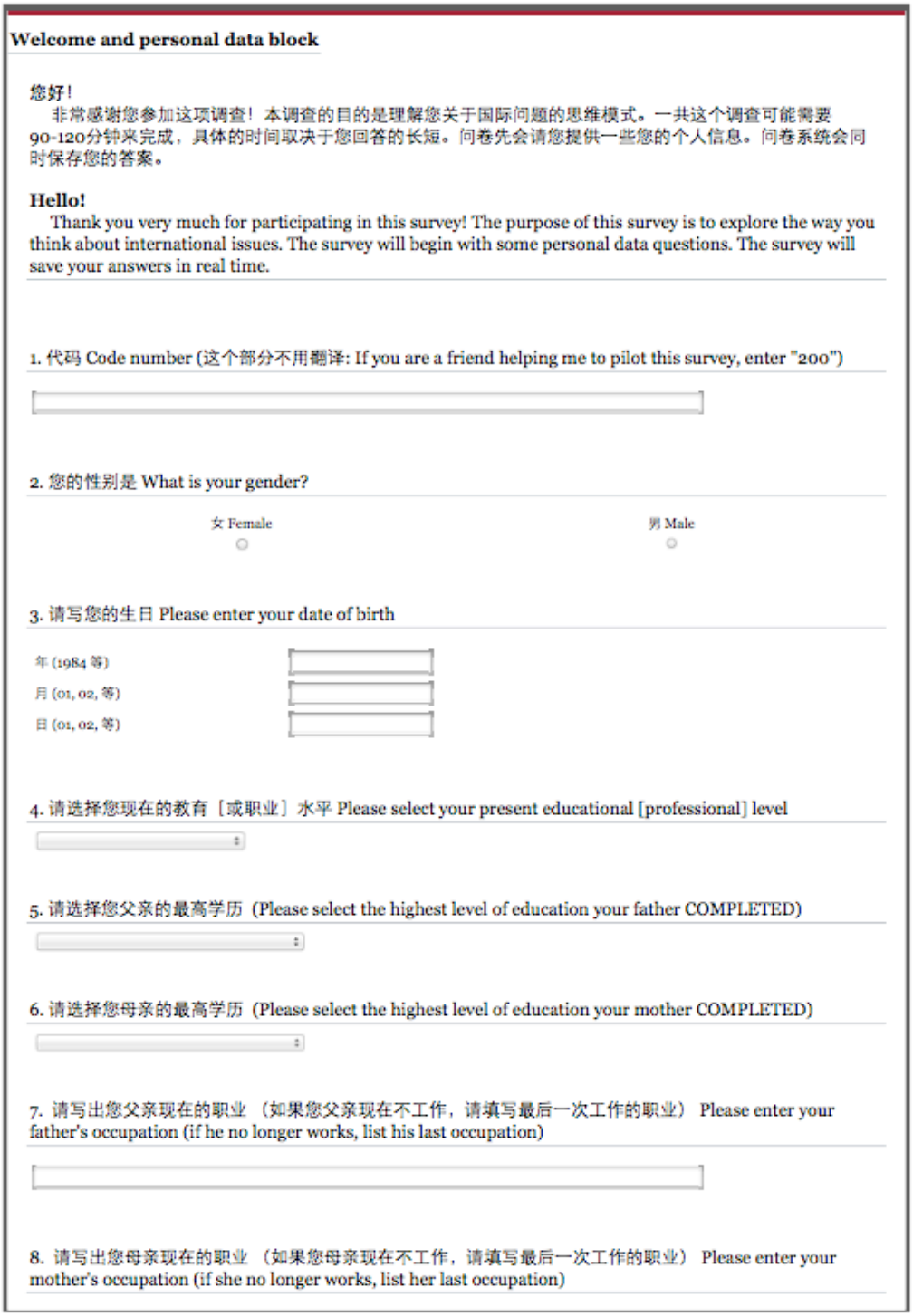
[13] Purpose of Question 3: To find out the extent to which participants are able to conceptualize and justify context-independent criteria for making judgments across cultures, and how free they are from ascribed notions of identity and intercommunal difference.

[14] Purpose of Question 4: To find out the level of abstraction and generalization at which respondents interpret the origins of cultural differences and similarities, and how free they are from ascribed notions of identity and intercommunal difference.

[15] Purpose of Question 5: To find out the extent to which respondents are able to conceptualize and justify context-independent criteria for making judgments about cultures, and how free they are from ascribed notions of identity and intercommunal difference.

Chinese translation of sample questionnaire

Screen 1



Welcome and personal data block

您好！
非常感谢您参加这项调查！本调查的目的是理解您关于国际问题的思维模式。一共这个调查可能需要90-120分钟来完成，具体的时间取决于您回答的长短。问卷先会请您提供一些您的个人信息。问卷系统会同时保存您的答案。

Hello!
Thank you very much for participating in this survey! The purpose of this survey is to explore the way you think about international issues. The survey will begin with some personal data questions. The survey will save your answers in real time.

1. 代码 Code number (这个部分不用翻译: If you are a friend helping me to pilot this survey, enter "200")

2. 您的性别是 What is your gender?

女 Female　　男 Male

3. 请写您的生日 Please enter your date of birth

年 (1984 等)
月 (01, 02, 等)
日 (01, 02, 等)

4. 请选择您现在的教育［或职业］水平 Please select your present educational [professional] level

5. 请选择您父亲的最高学历 (Please select the highest level of education your father COMPLETED)

6. 请选择您母亲的最高学历 (Please select the highest level of education your mother COMPLETED)

7. 请写出您父亲现在的职业 （如果您父亲现在不工作，请填写最后一次工作的职业） Please enter your father's occupation (if he no longer works, list his last occupation)

8. 请写出您母亲现在的职业 （如果您母亲现在不工作，请填写最后一次工作的职业） Please enter your mother's occupation (if she no longer works, list her last occupation)

Screen 2

9. 您父母的户口在哪里？（如果您父母不在同一个地区居住，请按照和您在一起生活时间较长的双亲中的一位来做出选择）(如果您不确定城市圈人口，请尽量估计一下) What best describes the place of your parents' household registration? (if your parents have separate household registrations, base your answer on the parent with whom you spent more time growing up)

- 北京或上海
- 香港
- 其他大城市（城市圈人口五百万以上）
- 其他城市（城市圈人口五十万到五百万）
- 城镇
- 乡村

10. 您高中是从哪个省毕业的？ Please enter the province where you graduated from high school

11. 请写出您的民族 Please enter your ethnicity

12. 在中国大陆之外的地方待过多久？ How much time have you spent outside of Mainland China?

13. 您在西方国家待过多久？How much time have you spent in Western countries?

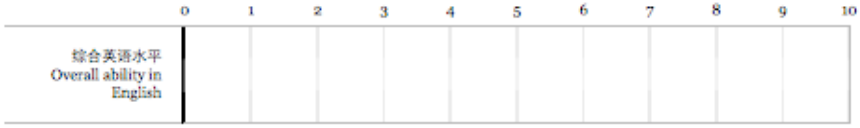
14. 您一共有几名兄弟姐妹? (不包括堂兄弟或表兄弟之类) How many siblings do you have?

14a. 一共有几名比您大的兄妹？ How many OLDER siblings do you have?

Screen 3

15. 大学本科平均学分绩点 Undergraduate GPA
* 如果您不记得平均学分绩点，请尽量估计一下
* 如果您是毕业生，请填您本科四年的平均学分绩点。
* If you do not recall your GPA, please estimate it to the best of your recollection.
* If you are a college graduate, please list your final undergraduate GPA.

16. 客观的说，您的综合英语水平怎样？0代表"一点也不懂"，10代表"母语为英语人的英语水平"
Speaking objectively, how would you rate your overall English language ability, if 0 means "no ability" and 10 means "native level of ability"?



17. 除了英语以外，您会说几国外语？ How many other foreign languages are you conversant in, besides English?

主要指示 Main instructions block

主要指示

问卷剩下的部分将会探索您关于国际问题的思考方式。这些问题没有所谓"正确"或者"错误"之分。重要的是，您能清楚而透彻地描述您关于这些问题的思考。请只用中文来回答。

一些问题会请您写下您的想法。大部分的问题需要您写下至少40个字。如果您的回答太短的话，问卷系统会提醒您。

在问卷的下个部分，您会看到三个国际案例概说和关于每个案例的一些问题。最后，将会针对这三个案例统一提问。因为最后的部分最重要，请您将热情保持到最后。非常感谢！

MAIN INSTRUCTIONS

The remainder of the survey will explore the way you think about international issues. There are no right or wrong answers. The important thing is to describe clearly and thoroughly your best thinking about the issue presented. Please respond in Chinese only.

Some questions ask you to type out your thoughts. In most cases, these questions require answers of at least 40 characters. If one of your answers is not long enough, the survey will tell you.

In the next section of the survey, you will read descriptions of three international issues, each followed by a short series of questions. At the end, you will be asked to answer a final series of questions that look across all three issues. **The final series of questions is the most important**, so please save some energy for the end.

Screen 4

第一案例部分 Issue 1 block

第一案例：历史课程

现在，一组国际教育工作者（我们称其为A组）正在说服贵国加入世界历史课程组织（后面简称WOHC）。如果贵国加入这个组织，那么用于学校教学的历史课程和历史教科书就必须通过一组委员会的检定（该组委员会由来自世界各地的历史学家和教育专家组成）。A组指出，通过加入WOHC，贵国可以获取由世界顶尖学者所提供的先进教学材料，这些教材因促进发展学生的批判意识而好评如潮。此外，国际性的专业意见也会帮助贵国改善课程。

另一组来自贵国的教育工作者（我们称其为 B组）却强烈反对这个计划。他们认为，将国家自己的历史课程上交给国际社会进行所谓的"检定"是不对的，并强调历史课程对于维护贵国的民族特性非常关键，因此必须按照本国的文化、价值观和立场来教育下一代。此外，他们还指出，许多WOHC历史教科书涉及敌国对贵国在各种国际冲突中的负面评价，太注重他国所指的贵国的过失，但过于忽视其成就以及受他国压制的方式，不适合用于贵国青少年教育。

ISSUE 1 (of 3): HISTORY CURRICULUM

A group of international educators (Group A) is urging your country to join the World Organization on History Curriculum (WOHC). If it joins, the history curriculum and textbooks used in your country's schools will be subject to accreditation by a committee of historians and education professionals from around the world. Group A points out that by joining the WOHC, your country will gain access to advanced teaching materials, prepared by some of the world's leading scholars, and widely respected for developing students' critical awareness. It will also gain access to expert international advice on how to improve its curriculum.

A group of educators from your country (Group B) strongly opposes this plan. They say it is wrong for the nation to submit its history curriculum to 'accreditation' by global elites. They emphasize that history curriculum is critical to maintaining your national identity, and that you must educate your young people in accordance with your own culture, values, and point of view. Moreover, they point out that many of the history textbooks approved by the WOHC include accounts from your country's historical adversaries criticizing your country's role in various international disputes. Group B argues that WOHC textbooks are unsuitable for the children of your country, because they pay too much attention to its alleged mistakes, and too little attention to its achievements and the ways it has been victimized by other countries.

1.对于上述的案例，您的想法跟A组 、 B组的想法有多相似?
How similar is each group's way of thinking to your own way of thinking on this issue?

	非常相似Extremely similar				非常不相似 Extremely dissimilar
A 组的想法 (Group A's way of thinking)	○	○	○	○	○
B 组的想法 (Group B's way of thinking)	○	○	○	○	○

2. AB 两组中，如果您不得不选择支持一个组，您会支持哪一个?
If you had to support either Group A or Group B, which group would you support?

- ○ A组 Group A
- ○ B组 Group B

3. 回想您对前两个问题的回答，您的看法受到了哪些因素的影响? 如果您的看法从过去发生了改变，那请您描述一下发生了何种变化，以及为什么发生此种变化? 请具体说明其原因。
Thinking about your answer to the previous two questions, how did you come to hold this view? If your view in these matters has changed over time, how has it changed, and what caused it to change? Be specific.

Screen 5

4. 就您在第二个问题不支持的那个组的看法来说，为什么您认为那个组的看法是错误的或者说不恰当的?
Now think about the position of the group you said in Question 2 that you would NOT support. Why do you believe this position is wrong or inappropriate?

5. 就您在第二个问题所支持的那个组的看法来说，为什么您认为那个组的看法更加容易接受? Now think about the position of the group you said in Question 2 that you would SUPPORT. Why do you believe this position is preferable to that of the other Group?

6. 现在请回想一下您对前两个问题的回答，以及您做出这种评判的理由。现在进一步探索您的推理，**您怎么辩解您所提出的理由呢?** 例如说，如果您写出了"我同意__组的想法，因为XXX"，**那么XXX本身又为什么重要呢?**
Now think about your answers to the previous two questions, and the reasons you gave to justify your views. Digging even deeper now, **how do you justify those reasons**? For example, if you wrote something like "I agree with Group __ because X", **why is "X" itself important?**

7. 第二个问题要求您回答支持A组还是B组。但是现在假设您必须维护您不支持的那一组，您该如何对其进行最好的辩护呢? 请说明一下。
Question 2 asked you to choose between the positions of Group A and Group B. Now imagine that you must defend the position you did NOT choose in Question 2. What is the best justification you can think of for that position? Explain.

第二案例部分 Issue 2 block

第二案例：投资
国外一组专家(A组)敦促贵国通过一项法律,将方便外国人在贵国拥有财产,包括土地、自然资源和本土公

Screen 6

司。A组认为,新法律将吸引来自国外的理念、专业技能和外商投资,以促进经济增长，惠及双方。
贵国有些人(B组)则反对这项新法律。他们指出,如果贵国通过这项法律,将可能有更多外资参与经济决策，影响贵国的未来。他们说,外商无法判断什么最利于贵国进步,毕竟贵国价值观不同于他国价值观。他们认为只有当地人了解什么样的发展最适合贵国的独特文化和生活方式,因此本地投资者应当受益于贵国的本土投资机会。

ISSUE 2 (of 3): INVESTMENT
A group of foreign countries (Group A) is urging your country to adopt a law that will make it easier for foreigners to own things in your country, including land, natural resources, and local companies. Group A argues that the new law will attract foreign ideas, expertise and investment, and will promote economic growth benefiting both sides.
Some people in your country (Group B) oppose the new law. They note that if your country adopts this law, there is likely to be more foreign involvement in economic decisions affecting your country's future. They say that foreign investors are unable to judge what is best for your country's progress, because after all, local values are different from foreign values. They argue that only locals understand what kind of development is appropriate to your unique culture and way of life, and that local investors should be the ones to benefit from investment opportunities in your country.

第三案例部分 Issue 3 block

第三案例：环境管理
来自贵国的代表参加一个国际环保会议，一组与会的国际科研专家和环保主义者（A组）要求贵国同意，在未来三十年大幅度减少化石燃料的消耗量。同时，他们还要求你们服从一项国际制度，这项制度包括检查每一个国家化石燃料的消耗，限制一些特定经济活动、个人能源消耗和控制资源利用。A组认为这项制度能非常有效的保护世界环境。
但贵国的代表们（B组）反对这样的要求，认为这会侵害贵国权利，很不公平的影响贵国的自由发展和传统生活方式，并断言这种国际制度是有利于其它某些国家的，这些国家正试图操控世界力量的平衡来为自己制造优势，而这对贵国来说是非常不公平的，使你们难以赶上（或跟上）世界步伐。总之，他们认为每一个国家都有自身的价值观和首要任务，而这跟A组的价值观和首要任务大相径庭。

ISSUE 3 (of 3): ENVIRONMENTAL MANAGEMENT
Representatives from your country are attending an international conference on the environment. At this conference, a number of international scientists and environmentalists (Group A) are demanding that your country agree to sharply reduce its consumption of fossil fuels over the next thirty years. They also demand that your country submit to an international regime that will include inspections of each country's fossil fuel consumption as well as rules restricting certain kinds of economic activities, personal consumption, and resource use. They argue that this regime is essential to preserving the world's environment for all humanity.

Your country's representatives (Group B) oppose these demands, arguing that they violate your country's rights as a nation and will unfairly impact its freedom, development, and traditional way of life. They also assert that the proposed regime favors certain other nations that are attempting to manipulate the world's balance of power to their own advantage. They claim that this is unfair to your country and will make it impossible for your country to keep up (or catch up). Finally, they argue that each nation has its own values and priorities, which can differ from those of international scientists and environmentalists.

三个案例统一部分 Cross-issues block

这是本问卷的最后一个部分。下面的问题需要您将前面涉及到的三个案例综合起来思考。三个案例都再次列在下方，以供您参考。
This is the final section of the survey. The questions in this section ask you to think across all three issues you have read. The issue statements are copied below in case you would like to refer to them.

[Issue statements copied here]

Screen 7

1. 现在通过您所读到的这三个案例（以上表示), 请回想一下AB两组所表现出来的目标。通过三个案例，“A组”的目标包括
(1) 发展学生的批判性意识；
(2) 从外界吸收理念和专业意见；
(3) 推动经济发展；
(4) 保护世界环境；

则“B组”的目标包括
(5) 维护国家尊严与民族认同；
(6) 保护贵国独特的文化、价值观和生活方式；
(7) 国家自主；
(8) 国家之间的公平竞争。

考虑到上述三个案例中AB两组所表现出来的目标，您认为哪些目标是最重要的？为什么呢?

Now think for a moment about the positions of Group A and Group B across all three issues you have read (shown above). Across the three issues, “Group A” expresses purposes such as (1) developing students’ critical awareness; (2) accessing ideas and expertise from abroad; (3) promoting economic growth; and (4) preserving the world’s environment. “Group B” expresses purposes such as (5) maintaining national pride and identity; (6) preserving your country’s unique culture, values, and way of life; (7) national self-determination; and (8) fair competition among nations. Thinking about the purposes of Groups A and B across all three issues, what purposes are most important to you? Why are these purposes most important?

2. 关于您所读到的这三个案例中，在贵国自身社会的准则与来自外界的国际准则之间，存在着一定的张力。如果A社会的人民对某些问题做出了选择，您觉得，那么来自B社会的人能够对A社会的选择进行合理的评判吗？请详述一下，其可能与不可能的道理是什么？

In each of the three issues shown above, there is a tension between your society’s own criteria for making choices about the issue and international criteria that could be imposed from the outside. Do you believe it is possible for a person from one society to reasonably judge another society’s preferences on these issues? If no, why not? If yes, on what basis?

3. 您所读到的这三个案例所表示，在贵国有些人认为处理这些议题的适当方式取决于不同社会特定的文化、价值观和观点。您同意这样的说法吗？为什么同意？若是不同意，您怎么辩护将统一的方法运用于不同的社会呢?
As you can see in the three issues shown above, some people in your country say that the proper approach to issues like these depends on each society’s particular culture, values, and point of view. Do you agree? If yes, why? If no, on what basis could you justify applying the same approach to different societies?

Screen 8

4. 回答这份问卷时，有人会说，“我同意__组的想法，因为不同社会的文化价值观会互相不同（或相同）”。那么进一步分析，为什么不同社会的文化价值观会互相不同（或相同）呢?
In responding to this survey, some people might say, "I support Group ___ because different societies have different (or similar) cultural values." Digging even deeper, why are different societies' cultural values different from (or similar to) each other in the first place?

5. 对待类似问卷内容的一些问题，您觉得我们可以说一个社会的文化价值观优于另一个社会的文化价值观吗?为什么?
Can you say that one society's cultural values with respect to issues like these are in some way better than another's? Why or why not?

*This survey is being conducted by Harvard students and is not affiliated with official Harvard business.

Appendix E. Aligning the ICS with Existing Models

ICS	*Kohlberg (1976): Views of justice*	*Rest et al. (1999): Views of justice/social cooperation*	*Habermas (1983): Views of right interaction*	*Wilber (2000): Worldviews*	*Beck & Cowan (2014): Spiral dynamics*	*Commons et al. (2007): Hierarchical complexity*	*Fischer (1980): General Skill Scale*
0: Concrete groupism	3: Interpersonal relations	Norm maintenance schema	3: Primary group perspective	Mythic	Absolutist-religious	Concrete	Systems of representations [L_]
1: Conventionalism	4: Social system		4: System perspective	Static systems	Individualistic-achiever	Abstract	Sets of abstractions [⊻] / [· ·]
2: Contextualism	4½: System-questioning	--	4½: System-dissociated perspective	Pluralistic systems	Relativistic	Formal	Mappings of abstractions [–]
3: Trans-contextualism	5: System-organizing	Postconventional schema	5: Principled perspective	Paradigmatic	Systematic-integrative	Systematic	Systems of abstractions [L_]
4: Universal paradigms	6: Ideal moral consensus		6: Procedural perspective	Cross-paradigmatic	Global-holistic	Metasystematic	Metasystems of abstractions [⊻]

ICS	*King & Kitchener (1994): Views of knowledge*	*Kuhn & Weinstock (2002): Views of understanding*	*Kegan (1994): Views of self*	*Perry (1970): Views of knowledge & values*	*Love & Guthrie (1999): Ways of knowing*	*Belenky et al. (1986): Ways of knowing*	*Baxter Magolda (1992): Epistemological reflection*
0: Concrete groupism	3: Concrete	1: Realist	3: Interpersonal	1-2: Dualism	1: Unequivocal	2: Received	2: Transitional
1: Conventionalism	4: Abstract	2: Absolutist	4: Institutional	3-4: Multiplism	2: Radical subjective	3-4: Subjective/ Procedural	3: Independent
2: Contextualism	5: Context-dependent	3: Multiplist	5a: Deconstructive	5-6: Relativism	3: Great accommodation	5: Constructed	4: Contextual
3: Trans-contextualism	6: Context-independent	4: Evaluativist	5b: Reconstructive	--	4: Generative	--	--
4: Universal paradigms	7: Processual	--		--	--	--	--

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