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Learning from Critical Feedback: An Interdisciplinary Literature Review

Qualifying Paper

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Introduction

Feedback is a staple of organizational life, and open, honest, critical feedback on performance continues to be crucial in order for individuals to achieve valued goals, learn, and grow. However, critical feedback in general, continues to figure on most people’s list of the hardest conversations to have (Stone & Heen, 2014), and it remains difficult to give and receive it well. For example, there is tendency to give critical feedback that is vague and that obfuscates the real message, or voice it from a unilaterally controlling approach that risks provoking anxieties in the receiver (Schwarz, 2013). Receiving critical feedback productively is not any easier. It is extremely hard not to give in to our evolutionary priming to recognize and defend against threats and anxieties – disconfirming critical feedback that threatens our desired self-image is a perfect example of response to such a threat – through defensive coping actions that, while comforting, also limit learning (Kahneman, 2011).

Research and practice on feedback, in general though, have tended to emphasize how managers can give critical feedback that is more individualized, specific, focused, non-judgmental, regular and ongoing (Drago-Severson & Blum-DeStefano, 2016), to maximize the chances that the feedback receiver takes it in productively to improve performance. In contrast, the experience, responses and actions of the feedback receiver remain understudied in the feedback and organizational literatures.

While learning to give feedback more productively is undeniably an important piece of the feedback challenge, it is also insufficient on its own because, “if the receiver isn’t willing or able to absorb the (critical or negative) feedback, then there’s only so far persistence or even skillful delivery can go… the receivers are in control of what they do and don’t let in, how
they make sense of what they’re hearing, and whether they choose to change” (Stone & Heen, 2014, p. 5). The key challenge for anyone in the role of feedback receiver is to “pull value from criticism” (p.5) even when it feels personal and threatening. So what might this action of learning from critical feedback involve, and demand from the feedback receiver?

Research from the feedback and organizational literatures has primarily focused on how emotionally difficult disconfirming feedback can be, along with common refrains to not take critical feedback personally (Burris & Detert, 2016), not demonize the feedback giver, and instead perceive it as a worthy “investment” into one’s growth (Grenny, 2015). Insights for gaining deeper understanding of the factors and dynamics that surround and influence how the feedback receiver interprets, experiences, responds and learns from the feedback, are not only more limited in scope but also scattered across different disciplines. In addition, it is not immediately clear what less defensive, productive responses to critical feedback might look and sound like during a feedback interaction. What might be some salient characteristics of such responses to critical feedback that foster learning?

In this essay, I draw upon insights from a range of interdisciplinary theoretical frameworks and bodies of literature to investigate two questions. First, what salient psychological characteristics of the feedback receiver influence how she or he interprets and experiences the feedback, and learns from it? Second, what contextual factors in the feedback receiver’s workplace might shape his experience of the feedback, and learning? In addition, I also offer hypotheses for the kinds of behaviors and action strategies which individuals might deploy in the workplace to advance their learning from critical feedback.
This essay unfolds as follows. I begin by describing the underlying criteria that informed the choice of literatures and theoretical frameworks that I draw upon to propose my arguments. Next, I review research from feedback in the workplace to highlight salient personal characteristics that might affect how the critical feedback is received. Thereafter, I briefly review the burgeoning “employee voice” literature for its insights on the contextual factors that shape learning from the feedback. I then describe the key conceptual tenets of the Action Science framework that offer a synthetic perspective on the individual qualities and organizational characteristics that influence capacity to receive critical feedback with less defensiveness. Next, I briefly review central principles of the Constructive-Developmental theory, to highlight how developmental stage might influence learning from critical feedback. In the discussion section that follows, I synthesize insights into the internal and external features that inhibit or advance learning from critical feedback, and offer illustrative learning-oriented-responses to critical feedback. I conclude with contributions of this essay, and the hope that it highlights the urgency for advancing knowledge about how organizations can maximize the potential for learning from critical feedback.

Methodology: scoping the problem space and analytic strategy

The focus of my inquiry is on feedback interactions in the workplace and how members receiving the critical feedback, experience, interpret and learn from it. To do this, I draw upon three main bodies of research to identify the salient personal and contextual factors that influence how feedback receivers interpret, experience, respond and ultimately learn from critical feedback: 1) feedback at the workplace, 2) action science, and 3) Constructive-Developmental theory (CD theory). I also take a brief and targeted ‘excursion’ into the “employee voice” literature (Figure 1).
I begin the essay by reviewing literature on feedback interactions between adults in workplaces, which emphasizes the psychological characteristics that might predispose feedback receivers to respond to the feedback with more or less defensiveness (e.g. Ilgen & Davis, 2000; Ilgen, Fisher, & Taylor, 1979). In general I focus on studies of critical (also termed negative) feedback in contrast to positive or affirming feedback. To gather insights on salient personal characteristics of feedback receivers, I pay attention to literature that discusses critical feedback in relation to terms such as: receiving, perspective, experience, processing, interpretation, response and feeling. I only draw upon research that discusses the feedback giver’s perspectives or assumptions (as when discussing the Action Science framework) when it serves to illuminates a contextual factor that might influence how feedback is received. I expand my search to include research into feedback seeking (Ashford, 1986) that offers insights into contextual factors (e.g. who is initiating feedback) that can hinder or foster individuals in proactively seeking out (potentially critical) feedback from their environment. I complement this review with the rich body of research from employee voice and silence (Morrison, 2011) which explores personal and contextual factors that hinder organizational members from voicing challenging perspectives. This research suggests additional features of the feedback interaction that can influence learning from the feedback (e.g. dynamics of receiving critical feedback across an authority boundary), and allows us to imagine characteristics of learning-oriented responses to critical feedback.

Next, I draw on the Action Science framework of Chris Argyris and Donald Schon (1978) to illuminate the role of critical feedback in individual transformational learning. This framework is quite uniquely positioned to answer the questions guiding this essay, since it
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takes a synthetic, interactional perspective on how individual characteristics work alongside organizational dynamics and features to advance or hinder learning. To illustrate this, I sketch hypothetical vignettes of feedback interactions and ways of receiving critical feedback for two distinct scenarios – one based on a set of assumptions that limit learning (‘Model I’) and second based on a model that advances learning (‘Model II’). These vignettes highlight the image and competency risks that feedback receivers have to contend with in order to learn from critical feedback. I briefly review the ‘psychological safety’ research (Edmondson, 1999) to further flesh out these psychological risks, and to highlight some of the salient organizational factors (e.g. high quality interpersonal relationships) that can help in building an organizational climate that fosters the practicing of learning behaviors.

Figure 1: Mapping the choice of literatures and theories

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1 Note: Literatures noted in box with dashes were reviewed more briefly than others
Implicit in this research by both Argyris and Edmondson is the idea that acting in ways that advance learning in organizations involves more than technical skill that individuals can master. It is closer to developing and deploying greater psychological complexity. I explore this idea in a targeted review of the CD theory (Kegan, 1982; Torbert et al., 2004) to illustrate how the ways in which individuals interpret and respond to critical feedback is influenced by their developmental trajectory (or stage of meaning making). This literature also sheds light on how certain features and practices of an organization’s culture can amplify individual capacity to receive and respond to critical feedback in a learning-oriented manner.

Feedback at the workplace

Feedback on performance provides valuable information that individuals can use to redirect effort in pursuit of important goals and improved performance (Dweck & Leggett, 1988; Fishbach, Eyal, & Finkelstein, 2010; Ilgen & Davis, 2000). Historically, organizational scholars on feedback in the workplace have studied the feedback phenomenon primarily from the perspective and goal of improving future performance, whether that includes the outcome of performance or the way in which the task was performed (process feedback). There is an overwhelming consensus in this literature that the promise of critical feedback for performance improvement is tempered in practice by the threat it poses to the receiving individual’s desired self-image, and the ego-defensive reactions it can trigger (Carver, Antoni, & Scheier, 1985; Ilgen & Davis, 2000; Swann & Read, 1981). As a result, those at the receiving end tend to either resist the feedback (Ashford & Cummings, 1983), or try to dismiss it or attack the credibility of the source (Ilgen et al., 1979). This line of research also suggests that people, in general, prefer self-confirmatory feedback, and will tend to resist or
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reject feedback that is perceived to be inconsistent with their expectations of themselves. The potential of critical feedback thus appears to be much more challenging to realize in practice than theory would suggest (Ilgen & Davis, 2000).

In the last 35 years research on the topic of workplace feedback has progressed in two broad directions. One is the study of the feedback receiver’s individual psychological characteristics that influence how feedback is interpreted. A second prominent strand of research has studied how individuals proactively seek feedback from their environment in order to meet their desired goals. Both of these literatures advance our understanding of the dynamics that surround individuals learning from critical feedback.

Feedback researchers have studied personality characteristics of feedback receivers, such as self-esteem, locus of control, and goal orientation to explain some of the variation in how individuals experience, interpret or respond to feedback. For example, research suggests that an individual’s locus of control influences their response to feedback (see Baron, Cowan, & Ganz, 1974 in Ilgen et al., 1979). Individuals with an internal locus of control, defined as those “holding beliefs that events that happen to them tend to be due to their own behavior,” (Ilgen et al., 1979, p. 358) are likely to be more tuned to drawing feedback from the task they are performing, and to accept feedback (even critical). This is in contrast to the ‘externals’ who are likely to be “more motivated by feedback from powerful others” (p. 358) and rely less on self-generated data and interpretation.

The feedback recipient’s self-esteem is another personality characteristic that differentiates the ways in which feedback is interpreted and deployed to improve performance. While
critical feedback is overall more challenging to receive than positive feedback, those individuals high in self-esteem will interpret personal failure, or poor performance more graciously and mark themselves down less after such an event (Ashford & Cummings, 1983; Ilgen et al., 1979). Such individuals are also more likely to be open to and be less defensive in hearing critical feedback. This line of research further suggests that individuals high in self-esteem will rely less on job environment and more on self-perceptions to guide task related behaviors.

Ilgen & Davis (2000) draw on more recent psychological and motivation studies to demonstrate that the goal orientation of the feedback recipient, that is, the individual’s internal logic or rationale for why the task is being performed, also influences whether critical feedback is received in a way that advances future performance or not. This body of research, originally by Dweck and associates (Dweck, 1986; Elliott & Dweck, 1988), suggests that in a performance situation individuals can orient themselves either towards performance, or towards learning. When the emphasis is on performance, the individual’s primary concern is with “demonstrating high ability and appearing competent” (Ilgen & Davis, 2000, p. 556). In contrast, with a learning orientation, “the emphasis is on improvement, developing skills, and mastering the task”.

Research connecting these findings to feedback highlights that critical feedback on inadequate performance by an individual is interpreted very differently depending on the feedback receiver’s goal orientation, particularly in case of those with lower self-efficacy
A performance orientation highlights competence, and tends to position critical feedback as particularly threatening for those individuals with lower self-efficacy. However, when the emphasis is on learning and improvement the chances are lower that the feedback recipient’s self-concept will be threatened upon receiving the critical feedback. In addition, critical feedback is more likely to have a desired, positive impact if individuals are functioning from a learning goal orientation in contrast to performance goal. Performance actually worsens upon receiving critical feedback for individuals with lower self-efficacy who are oriented towards optimizing performance (Ilgen & Davis, 2000).

Responsibility-taking emerges as the final psychological characteristic that plays a role in how individuals learn from critical feedback. Ilgen & Davis (2000) note a generative tension between the feedback receiver acknowledging and assuming responsibility for the poor performance on which critical feedback is being offered, while not letting this responsibility-taking lower one’s self-efficacy.

In order to productively use the critical feedback for performance improvement, individuals need to believe in their personal capacity to improve performance; this can involve attributing poor performance to factors (internal or external) over which they have some control.

Feedback literature thus offers high self-efficacy, internal locus of control, a “learning” goal orientation and responsibility-taking, in contrast to lower self-efficacy more external locus of control, a performance goal orientation, and a tendency not to take responsibility for the

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Ilgen & Davis (2009) define self-efficacy as “set of beliefs people hold about their capability to perform a particular task (Bandura, 1982, 1997)” and distinguish it from self-esteem by “anchoring it to a specific task” (p. 557). The distinction is not significant for the arguments and concerns of this essay, and I use self-efficacy to reflect Ilgen & Davis’ choice of the terminology.
situation as the significant psychological antecedents for receiving critical feedback with less defensiveness which in turn can lead to better individual performance.

In addition, Ilgen and others (1979) also theorized the process by which feedback influences behavior of the individual receiving it, which indirectly highlights important, albeit hidden assumptions about the nature of the feedback receiver. Firstly, this process-oriented review is significant for its uncharacteristic (for its time) emphasis on the feedback receiver. In this model, feedback is conceptualized as performing two functions. It serves a motivational role by providing the feedback receiver with information about outcomes associated with rewards/punishments. In addition, it informs feedback recipients about those behaviors that the organization deems desirable and expects to be performed well.

But what is more relevant to this inquiry, is that in this model the feedback recipient is conceptualized as a “processor of information about his or her own past performance” (p. 352) who navigates the feedback in four stages: perception, acceptance, desire to respond, and intended response. This model suggests that characteristics of the feedback giver and receiver, in addition to the feedback message being sent, influence the outcome of each stage. For example, the model predicts that the perception of feedback, that is the accuracy with which feedback receiver perceives the feedback, is influenced by a range of factors such as: the proximity between the feedback receiver and sender; whether the feedback is positive or critical; and the receiver’s personal characteristics such as internal versus external locus of control. Similarly acceptance of feedback refers to the “recipient’s belief that the feedback is an accurate portrayal of his or her performance” (p. 356) and is hypothesized to be
substantially influenced by the credibility (combination of expertise and trust in intentions) that feedback receiver attributes to the feedback giver.

While Ilgen, et al.’s (1979) process-model is significant in that it is one of the few efforts to conceptualize the process of receiving feedback, it has limitations in advancing collective knowledge about learning from that feedback. For one, the model theorizes the feedback receiver’s response – perception-acceptance-desired response-actual response – as a linear sequence of moves on the part of the receiver. Doing so leaves little room to imagine the response in terms of an interaction between individuals who are giving and receiving critical feedback, that is likely to involve dialog, questioning, and reflection and is overall more dynamic in nature. Second, this model portrays the feedback receiver as a static information processor who either “does or does not respond in line with the message (received from the sender)” (p. 10).

But the biggest limitation of this model might be its suggestion that the (implicit) aim of the feedback process is for the receiver to modify behaviors to stay in role and respond in line with the feedback message being sent. The feedback-seeking strand of research offers an important alternative perspective in two ways. One, it accords a more agentic role to the feedback receiver, who is also seeking the critical feedback to meet personal goals. Two, this literature highlights certain contextual dimensions of the feedback interaction, such as who is initiating the critical feedback that can influence how the feedback receiver interprets and learns from the feedback.
Feedback-seeking

Research on the topic of feedback in organizational context has over time overwhelmingly pivoted towards feedback-seeking, which refers to individuals intentionally and proactively seeking feedback from their environment on desired goals and objectives (Anseel, Beatty, Shen, Lievens, & Sackett, 2015; Ashford, Blatt, & VandeWalle, 2003; Ashford & Cummings, 1983). Feedback-seeking scholars propose that feedback-seeking behaviors “have never been more important” (Ashford et al., 2003, p. 774) in today’s organizations where employees often work “temporally and physically distant” from their peers and supervisors and which challenges the traditional structures of in-person feedback interactions. Feedback-seeking is premised on the argument that feedback is a critical individual resource for achieving a wide range of valued goals. It enables individuals to be aware of the contingencies in their environment; know which behaviors are most appropriate for achieving important goals; and discern how these goals are being evaluated and perceived by others around them (Ashford & Cummings, 1983). Thus, in direct contrast to Ilgen, et al.’s (1979) characterization of the feedback recipient as an “information receiver,” scholars in the feedback-seeking tradition re-conceptualize those receiving feedback as autonomous agents who are “actively monitoring the environment and directly seeking personally relevant information which is infused into that environment from a variety of sources” (Ashford & Cummings, 1983. p. 379).

Central to feedback seeking is the tension between the instrumental value that can be gained by seeking feedback, and the ego defense motives that can be triggered by hearing potentially disconfirming feedback. The personal characteristics or motives that predict active seeking of the feedback can also provide insights into the dynamics of receiving and learning from
critical feedback. For example, consistent with the earlier discussion on relation between self-esteem and feedback, this research establishes that in contrast to those with high self-esteem, individuals with low self-esteem “do not have the emotional resilience to seek, and thus hear, negative feedback” (Ashford, Blatt, & VandeWalle, p. 780). In addition to the ego threats, feedback seeking can also threaten loss of face and image, particularly when feedback seeking is public.

Moving beyond the individual factors to the context in which feedback interaction occurs, this strand of research suggests that learning from critical feedback is impacted by how the feedback is initiated. That is, feedback seeking is premised on the belief that when individuals proactively solicit critical feedback they will be less inclined to disregard it, and the chances that they will hear the feedback less defensively or use it for improving performance will be higher; in contrast to “unsolicited feedback which may be readily discounted” (Ashford, Blatt, & VandeWalle, p. 779). However, the relational context between feedback giver and receiver/seeker influences the frequency of feedback seeking. Supportive inter-personal relationships, or a supervisor’s “considerate leadership style” (Ashford, Blatt, & VandeWalle, p. 783) can enhance or depress the fears of image costs, and thus the likelihood of seeking feedback. In the end, the larger organizational culture impacts seeking (and receiving) of feedback, in the meanings it gives to the act of seeking feedback (signals strength or insecurity).

This review of the feedback literature has highlighted personal characteristics of the feedback receiver, such as self-efficacy, locus of control, goal orientation and responsibility-taking, that can increase chances of receiving critical feedback less defensively. The
feedback-seeking literature contributes to this inquiry by proposing a more agentic role for the feedback receiver, where the individual engages actively in the feedback interaction to gain personally relevant learning, even though it involves the risks of appearing less competent or of going against the dominant organizational culture. It also suggests that the way in which feedback is initiated – proactively sought, versus unsolicited – affects how it is interpreted. Self-esteem and goal orientation of the individual seeking (and thus receiving) feedback are salient individual factors that modulate how individuals interpret disconfirming feedback and what they do with it.

In the next section, I review research on employee voice and silence, which contributes to this inquiry in two ways. One, it underlines why organizations need to invest in strengthening employee capacity to productively receive critical feedback. Two, it also brings to attention certain contextual dimensions of the feedback interaction, such as the direction in which feedback flows (downward from supervisor to team member, or upwards) and dynamics of receiving critical feedback across an authority boundary, that can influence people’s capacities to receive critical feedback productively and leverage it to advance their learning.

**Employee voice and silence: Dynamics of feedback flowing across authority boundaries**

A rapidly growing body of organizational research drawn from the area of “employee voice and silence” is collectively generating insights into individual and institutional factors that foster or hinder employees from speaking up with questions, concerns, challenges and critical feedback (Morrison, 2011). Voice is conceptualized here as “discretionary
communication of ideas, suggestions, concerns, or opinions about work-related issues with the intent to improve organizational or unit functioning” (p. 375). While this research is primarily about the challenge of getting employees to offer or give critical feedback (rather than receive it), it contributes to advancing an understanding of learning from critical feedback in three ways.

First and foremost, this literature offers a clear and compelling rationale for why we need to pay attention to building people’s capacity for receiving critical feedback. It suggests that organizational silence results from “managers’ fear of negative feedback,” especially from subordinates (Morrison & Milliken, 2000, p. 3). When organizational members resist receiving any critical feedback, it promotes conditions such as excluding employees from decision making to avoid dissent or feedback, and lack of formal upward feedback mechanisms, centralized decision making and hostility towards those carrying bad news or negative feedback. However, by blocking negative feedback, organizational silence compromises effective organizational change and learning, since it limits the organization’s ability to detect and correct errors (Morrison & Milliken, 2000). Without critical feedback, errors tend to persist and may even intensify because corrective actions are not taken when needed (Argyris & Schon, 1978). This research thus highlights that an organizational environment in which organizational members in a variety of roles can receive critical feedback with less defensiveness, in turn fosters other learning-oriented behaviors such as speaking up with disagreements or asking challenging questions.

Second, this research also opens up the question of how the direction in which feedback flows can influence ways in which the feedback is received, interpreted, and what feedback recipients might learn from it. In particular, the research highlights the unique set of
dynamics and assumptions that might influence learning from critical feedback across an authority boundary – either from the supervisor to team member (downward) or in the case of team members offering a challenging perspective or feedback to their managers as part of a 360-degree performance evaluation (upward).

Third, Detert & Edmondson's (2011) research into employee silence provides an additional lens to further unpack the ‘authority dynamics’ that might influence learning from critical feedback. This line of research suggests that individuals hold “self-protective implicit voice theories” which are “taken for granted beliefs about when and why speaking up at work is risky or inappropriate” (p. 461). The perspective rests on the fundamental idea that individuals engage in an organizational interaction involving someone in authority with implicit assumptions about the risks of speaking up and challenging those in authority positions. Workplace silence can then be explained by a few commonly held assumptions that include: 1) a challenging voice or perspective would be taken as a personal criticism by the individual receiving it; 2) the perspective being offered needs to be polished and backed by evidence before it is safe to speak up; 3) any form of challenge or questioning that publicly exposes or embarrasses the authority will make the interaction unsafe; and 4) any form of challenge is likely to lead to negative career consequences.

This theoretical construct of implicit-voice theories can thus serve as a lens for understanding the kinds of undiscussed assumptions feedback receivers might bring into a feedback interaction. This is particularly the case when feedback is flowing ‘downward’ from a manager to her supervisee, and in the scenario that the team member responds to the critical feedback with perspectives that challenge the dominant view. The response to critical
feedback in such a case can be thought of as having ‘voice’ characteristics such as ‘speaking up,’ ‘navigating the authority boundary,’ ‘being constructive in intent’ and yet be a ‘challenging extra-role behavior’ (Morrison, 2011). For example, the feedback recipient might assume that she needs to have a polished and backed-by-evidence response to the critique, otherwise she should stay silent; or that any kind of questioning of the feedback being offered might embarrass the authority and should thus be avoided. Additionally, the feedback receiver might assume that he will come across as defensive or unresponsive to the feedback if he offers any response that might be seen as challenging. This can be particularly so in an organizational climate that does not encourage its members to speak freely, or that, in its desire to be supportive of its members (“culture of nice”), ends up stifling dissenting, uncomfortable perspectives.

Envisioning ways in which the feedback receiver might be functioning from such assumptions not only highlights the dynamics of learning from critical feedback across an authority boundary, but it also lends meaning to the risks of responding to critical feedback with questions or challenging perspectives. Further, it complicates our understanding of how contextual factors (supportive interpersonal relationship, open boss, or decentralized organizational structure) might impact ways in which feedback is received and interpreted. For example receiving critical feedback from an older male manager might be a cue that automatically and unconsciously triggers for the feedback receiver a deeply embedded implicit assumption that says, ‘challenging an older male authority figure can lead to undesirable consequences,’ which can lead the feedback receiver to respond in a way that is geared towards self-protection rather than learning. This is in contrast to a response that
might be anchored in an intentional assessment and consideration of the reality in their particular context.

To summarize, so far this essay suggests that a feedback receiver's interpretation and experience of critical feedback, and learning from it, is impacted by personal factors such as goal orientation, locus of control, and self-esteem, and self-efficacy; alongside contextual dimensions of the feedback interaction such as dynamics of receiving critical feedback across an authority boundary, and whether the critical feedback is proactively sought out by the feedback receiver. In the next section, I review the action science framework that contributes to this inquiry in two crucial ways. First, it further cements the urgent need for organizations to strengthen individual and organizational capacities for receiving critical feedback and learning from it. Second, it takes a more integrated view on how individual capacities interact with organizational practices and features to influence the ways in which organizational members respond to critical feedback and learn from it. In doing so, the action science framework also provides heuristics for conceptualizing the kinds of behavioral responses and action strategies that feedback receivers can deploy in a feedback interaction, that can advance transformational, double-loop learning in organizations.

**Action Science framework: Nature of critical feedback to advance transformational learning**

The action science framework, proposed by organizational learning theorists Chris Argyris and Donald Schon, advances our understanding of learning from critical feedback in a few different ways. As a starting point, the theory provides a firm argument regarding the essential role that critical feedback plays in “double-loop” learning, that is learning
characterized by reflection on and transformation of individuals’ core assumptions, values and meaning-making frames, resulting in “ripples of change throughout the entire system” (Argyris & Schon, 1974). Second, the framework describes personal assumptions and resulting behavioral strategies that impede individual transformational learning. Finally, and perhaps the theory’s most significant contribution, it offers heuristics for conceptualizing behaviors that can foster such transformational learning for the individual and in the organization.

This model rests on the fundamental hypothesis that all human behavior results from “Theories of action” – a set of implicitly held assumptions and causal schema of if-then statements that guides action in any situation and interpersonal interactions by prescribing values that must not be violated (Argyris & Schon, 1974). For example “in situation W if you want to achieve consequence X, under assumptions Y, do Z” (p. 5). Such theories-of-action are of two kinds: espoused theories and theories-in-use. Espoused theories reflect the values and beliefs that individuals say they hold. In contrast, theories-in-use are best inferred from observing actual behavior. They are the “master programs that individuals hold in order to be in control” (Argyris, 1990, p. 13). In the sections that follow, I briefly describe the two main kinds of “master programs” that Argyris argues people tend to reason and act from, along with hypothetical feedback interactions based on these theories-in-use.

Model I theory-in-use

Argyris and Schon (1974, 1990) propose that organizational interactions, especially during times of embarrassing or threatening problems, tend to be based on assumptions of interpersonal diplomacy and unilateral control, which they call “Model I”. This dysfunctional
Model I theory-in-use instructs individuals to not upset others, to win and appear rational and objective. The resulting action strategies are directed at saving face by suppressing feelings, telling white lies or withholding valuable information, but without making this intention transparent and testing for its validity. People will tend to persuade and cajole others to agree with their interpretation of a situation and use personal power/authority to prevent others from acting in ways that might leave oneself vulnerable. Further, people will seek to protect themselves from potential embarrassment by speaking in abstractions and without concrete references to events or data that are personally observed. Such behaviors in turn can reinforce misunderstandings between individuals since the motives that are attributed (negative in particular) will go entirely untested since its discussion would cause embarrassment.

However, these “unilateral, authoritarian features” (Argyris, 1990, p. 13) of Model I sharpen the defensiveness in individuals and interpersonal relationships, leading to behaviors that tend to “control others and prevents one from being influenced by others” (Argyris & Schon, 1974, p. 73). Organizational defensive routines are “… any policy or action that prevent someone from experiencing embarrassment or threat, and simultaneously prevents anyone from correcting the cause of embarrassment or threat” (Argyris, 1999, p. 58). Such routines are anti-learning and overprotective, and “encourage[s] individuals to keep private the premises, inferences, and conclusions that shape their behavior and to avoid testing them in a truly independent, objective fashion” (pg. 131).

Paradoxically, the outcome of such defensive routines is to cover up errors and mistakes and manage individual impressions. Thus Model I theory-in-use fundamentally hinders any
learning for the individual or the organization, be it single or double-loop. In single-loop learning the mismatch between intentions and outcomes is acknowledged, investigated and corrected by changing actions, though the underlying assumptions or beliefs are left untouched. In contrast, double-loop learning hinges on individuals developing awareness of the assumptions guiding their actions, and then publicly testing them to gather information from the environment that confirms or disconfirms the assumption. However, this would require people to confront their own and others’ defensiveness and ineffectiveness – actions that go against the principles of Model I theory-in-use and also risk leaving individuals vulnerable to feelings of incompetence and embarrassment.

In the section below I offer an illustrative, hypothetical feedback interaction in which both parties, the feedback giver and the feedback receiver, are functioning from Model-I theory-in-use. This hypothetical vignette has two goals. One, it helps to illustrate how the abstract Model I principles such as “competitive, win/lose, rational, and diplomatic behavior that is self sealing” (Argyris & Schon, 1974, p. 86) translate into actual behaviors. Two, it highlights how learning from critical feedback is hindered by the Model-I logic, with particular attention to the kinds of behavioral responses that tend to limit the learning potential of critical feedback in organizations.

Hypothetical “Model I inspired” feedback interaction

Argyris & Schon (1974) note that one consequence of Model I is that “it rewards suppression of feedback (which people need if they are to modify their behavior) and suppresses the negative consequences of that suppression” (pg. 84.) Receiving critical feedback often triggers feelings of embarrassment, threat and incompetence, in an
organizational culture where certainty, knowing and not making mistakes is incentivized. In such situations the Model I theory-in-use offers a defensive shield against the feelings of vulnerability and incompetence, bolstering “individuals’ sense of competence, self-confidence and self-esteem [that] are highly dependent upon their Model I theories-in-use” (Argyris, 1993, p.54).

I outline an imaginary feedback interaction where Mandy, a manager in an organization is offering critical feedback to Tia, her team member, with the assumption that both individuals are reasoning and acting from the Model I theory-in-use. For both Mandy and Tia, I envisage what their actions might look like, including the invisible internal thought process.

Mandy is likely to perceive the critical feedback interaction as a potentially embarrassing experience for Tia and herself, and thus face-saving will be a (undiscussed and untested) priority. In order to protect them both, Mandy might couch the critical feedback in positive terms or offer sympathies that are not meaningful. She also frames the feedback as ‘truths’ that should be obvious to everyone, including Tia, but without explicitly stating the assumptions inherent in that feedback, or inviting Tia to examine these assumptions. Mandy also fails to anchor the feedback in directly observable illustrations or concrete examples of behaviors/actions. Instead the feedback is stated in ambiguous terms, with the hope that the criticism stays unclear and open to multiple interpretations (that should also remain undisclosed). Consistent with this, Mandy will also keep to herself any negative inferences that she makes of Tia, either as reflected in her feedback or emerging from the actual interaction. For example, she might think that Tia’s reaction to the feedback is defensive, not
poised enough or aggressive. But consistent with Model I’s central tenet of ‘undiscussability,’ these inferences are not shared or made open to joint scrutiny in that interaction. Even more problematically, Mandy is unlikely to consider the possibility that the inferences she is making (in her head) might not reflect the whole ‘truth’ of the interaction or Tia.

In yet another expression of Model I principles, there is little acknowledgement from Mandy that this interaction is emotionally challenging for either of them. Instead, she communicates the critical feedback and presents herself as objective and rational, and in the process provides little opportunity for Tia to express anything that might be deemed emotional or ‘negative’. Mandy also hopes she can avoid any conflict surfacing in the interaction by turning a blind eye to subtle cues of underlying discomforts or ‘negativity’.

In a Model I framework, Tia will interpret the act of being offered critical feedback as embarrassing and threatening to her status and worth in the organization (and perhaps in her own eyes). She will thus (silently) collude with Mandy in the face-saving enterprise to minimize any further losses from this situation. She plays her part by hiding her true feelings of anger or disappointment. Similar to Mandy, Tia also guards against appearing defensive, emotional or out of control, by projecting a persona of being objective, rational and poised in the way she receives the feedback. This might translate into deferring to Mandy and not openly confronting her reasoning through questions or clarifying doubts about the feedback.

Instead, Tia is also likely to make negative attributions and evaluations of Mandy’s actions but keep them private. For example she might think that Mia is untrustworthy, that the critical feedback is unfair, it is being offered at the wrong time or framed inaccurately. She
might disagree with the interpretation of the events on which she is receiving the feedback. But none of these concerns will be voiced and available in the interaction for scrutiny and testing. Instead, Tia will also assume, as Mandy does, that these evaluations pretty accurately represent the way things really are. She will thus go on to drawing negative and problematic conclusions about Mandy, the organization’s culture and handling of feedback processes, or her own capacities, that seem entirely inevitable and natural. However these actions resulting from defensive routines also fester helplessness, mistrust and pessimism in organizational life (Argyris, 1990, p. 31).

This fictitious feedback interaction resonates with Argyris’ (1999) reflection that:

> Human beings have theories-in-use that make it likely that they will inhibit their own and others’ double-loop-learning; that they are largely unaware of these theories-in-use; and that both the unawareness and the counterproductive actions are due to highly skilled, internalized, and hence tacit, automatic reactions. (p. 82).

This hypothetical feedback interaction adds to our understanding of the feedback-recipient’s personal characteristics that have an effect on learning from critical feedback. That is, when the feedback receiver engages in the interaction from principles, assumptions and action strategies that are inspired from Model I theory-in-use, the experiences of personal defensiveness, anxiety and threat will be amplified. The individual receiving the feedback will tend to create a self-sealing loop that shields him or her from taking in any disconfirming evidence or data about the effectiveness (or otherwise) of her actions.

In addition, this vignette also reveals an additional contextual dimension of the feedback interaction that impacts how the critical feedback is received – the set of orienting assumptions that the feedback giver is functioning from. That is, when the person giving the
feedback is guided by Model I theory-in-use, it can hinder the feedback receiver’s ability to learn from the feedback. It will tend to heighten the feedback receiver’s sense of risk and discomfort at engaging in any way that deviates from face-saving tactics, or can be perceived as challenging or questioning of the status quo.

Argyris (1974, 1993) offers an alternative theory-of-action, “Model II”, which if internalized and acted from not only generates and supports double-loop learning in individuals, but also fosters organizational learning processes and systems to facilitate such transformational learning.

**Model II theory-in-use**

Fundamental to Model II’s potential to generate learning oriented, productive action, are its governing values which infuse it with the crucial “ability to not be self-sealing and permit progressively more effective testing of assumptions” (Argyris & Schon, 1974, p. 86). The primary drive here is to maximize valid information. Thus individuals act in ways that enable others to infer and interpret the meaning in their actions as accurately as possible. This may involve for example, providing others with accurate reports of how they are feeling or thinking, rather than withholding it. As Argyris (1993) clarifies, the purpose of openly sharing emotions is not to be self-indulgent or reinforce the problematic defensive reasoning that is triggering the feelings in the first place. The idea of not covering up emotions is that one can take responsibility for them by understanding what kinds of assumptions or reasoning processes might be driving these emotions. This emphasis on individuals taking responsibility for their actions is a central tenet of the Action Science model, since people “do not just happen to act in a particular way. Rather their action is designed and as agents, they are responsible for the design” (Argyris, Putnam, & Smith, 1985, p. 82).
Valid information is important because it allows individuals to make choices and decisions that are as well informed as they can be. However, arriving at an informed choice based on valid information is a crucial first step only, since learning ultimately results from action. This freedom to act intentionally in ways that are anchored in valid information is greater when individuals can choose and act on objectives that are within an optimal range of discomfort. In contrast, anti-learning and defensive behaviors are reinforced when people are either repeatedly overwhelmed and confronted with failure, or not sufficiently challenged; their actions and responses will tend to be compulsive and repetitive, at the mercy of their defenses.

Finally, free and informed choices increase the odds that individuals will assume internal responsibility for their choices and actions, rather than be dependent on external incentives as in Model I. Such responsibility-taking involves “monitoring how well they design and implement their decisions in order to detect and correct errors” (Argyris, 1990, p. 104). This self-responsibility in turn, invites individuals to more proactively seek and receive feedback from the environment to ensure the integrity of their decisions. These values of a Model II framework are realized by individuals 1) advocating their positions while also encouraging inquiry or confirmation of it, 2) speaking in directly observable categories and 3) making protection of self or other a joint operation. In a Model II world individuals will tend to evaluate, advocate and make attributions during interpersonal interactions. But the key distinction from the Model I theory-in-use is that people are more forthright in expressing their views and the logic behind their advocacy or thinking is shared openly. They will also be vigilant about being aware of any unrecognized inconsistencies in their thinking.
In addition, unlike Model I in which conversations tend to be at high level of inferences, the Model II framework directs individuals to provide rich and concrete illustrations of data that is observable (for example, referring to what someone said). The result of such specific, open ‘talk’ is that others can see more clearly how someone arrived at his or her conclusions or premises, and draw better informed interpretations of his or her actions and motives. This in turn is likely to trigger a virtuous reinforcing cycle of trust in the interaction. It also enables individuals to surface and confront the inconsistencies in their theories-in-use – an important lever for double-loop learning.

Unilateral face saving tactics to protect the other are an “act of mistrust of [the] other person’s capacities” (Argyris, 1990, p. 104), and compromise the freedom to act of everyone involved. Thus, in this more interdependent construction of the world, individuals will avoid such unilateral face-saving actions. If undertaken, these actions will be conscious, explicit and based on data that indicates its value.

These three action strategies of Model II “openly illustrate how the actors reached their evaluations or attributions and they crafted them to encourage inquiry and testing by others . . . Embarrassment and threat are not bypassed and covered; they are engaged” (Argyris, 1993, p. 55). The impact of acting from this theory-in-use is quite distinct from the overly protective and self-sealing consequences triggered by Model I actions. Instead of being defensive, individuals will be perceived to be “minimally defensive and open to learning” (Argyris & Schon, 1974, p. 91). Intergroup relations and interactions will tend to become more open to learning and reciprocity, so that individuals are more willing and able to help each other or express unpopular, challenging ideas. Finally, actions based on Model II foster
the possibilities for single and double loop learning. Individuals have the capacity and inclination to critically interrogate the governing values for how they might be contributing to the errors, and modify them if required to reduce the gap between reality and intentions.

So what would a feedback interaction guided by Model II theory-in-use look like? That is, if the feedback receiver were operating from a Model II set of assumptions and priorities, how might he or she engage differently in the feedback interaction, what might the responses to feedback look like? Below, we revisit the case of Mandy offering Tia, her team member, critical feedback on some aspect of Tia’s performance. In what ways would Tia receive the critical feedback, interpret it and respond to Mandy, if she were functioning from a Model II perspective that values generating valid information, making informed choices, and assuming internal responsibility for one’s actions?

_Hypothetical vignette of response to critical feedback based on Model II theory-in-use_3

Tia enters the feedback interaction with her manager Mandy in a fundamentally different stance in this Model II world. Critical feedback no longer triggers the same level of anxiety, embarrassment or concerns about impression management as it did in a Model I world. On the contrary, feedback is intrinsically consistent with Model II values and woven into the action strategies; it signals the opportunity to realize more effective personal actions to lower the gap between one’s intentions and the actual outcomes that are generated by one’s behaviors.

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3 The illustrative examples are inspired from conversations reported in Chapter 6 of Argyris (1990).
During the interaction, Tia is unlikely to collude with any implicit and unilateral efforts at saving her face. This might mean for example, pushing against Mandy’s efforts to keep the critical feedback ambiguous by asking questions, specific clarifications and illustrations of what was said or done, and repeating her understanding of what Mandy is saying as a way of being concrete in her talk and collaboratively testing her thinking. These responses won’t stem from a naïve sense of desiring authenticity in interactions. Instead, they are likely to reflect Tia’s greater self-confidence in her capacities to engage with discomforting conversations, and confronting unsurfaced assumptions and fears. These action strategies also derive from the Model II commitment to attribute to others this same high capacity for self-reflection and self-examination.

Thus while Tia might be drawing inferences, making interpretations and coming to conclusions on a wide variety of topics during the interaction, there is no longer the urge to keep them guarded, defend those positions or see wavering as a sign of weakness and losing. Instead, Tia can hold her evaluations lightly, as possibilities, reflect on the underlying assumptions and seek out ways to test jointly with Mandy how valid they are. In addition, she will also encourage Mandy to make her independent interpretations of Tia’s thinking and actions explicit which should enhance mutual trust and increase the chances that Mandy will feel safe and be willing to share her true thinking and feelings on the issues. Tia acknowledges the vulnerability that she feels from not having firm positions to hold on to during the conversation, and from encouraging Mandy to inquire into her thinking. Unlike in a Model I world of extremes, Tia does not feel compelled to operate under the false binary of ‘suppression of feelings’ or ‘indulgent expression with little discernment’. Tia will attempt to draw on her emotions, such as anger, fear, disappointment or frustration, as a way of
enhancing mutuality in that interaction.

To conclude this vignette, consider this somewhat extended monologue from Tia to illustrate how she might balance making evaluations or fears open for inquiry.

On the one hand, Mandy, I can understand more clearly that this is how you framed the goals of the project. On the other hand I would like to illustrate with examples my concerns about them and get your reactions. Mandy, I feel conflicted about the criteria underlying the feedback you are offering me. These are some examples of how I hear and understand your and the organization’s expectations around taking in and acting on feedback. But these are two examples of how I have experienced them with you and I see a disconnect. Can we work together to make those criteria more explicit, so that we can jointly and perhaps more substantively explore the relative merits of these criteria?

This discussion on Model II theory-in-use, and of the action science framework more generally, offers two crucial insights on salient factors that influence learning from critical feedback. One, this body of research opens up the question of how an organization’s culture and its practices can either stoke defensiveness and self-sealing tendencies that limit learning (Model I), or support people to strengthen the capacity to engage in learning-oriented behaviors (Model II). That is, in order for individuals to respond to critical feedback in ways that are resonant with Model II theory-in-use, versus the Model I logic, an organizational climate that reflects the Model II values is essential. One way that a Model II environment might nurture people’s capacities to engage in behaviors that can otherwise feel threatening and interpersonally vulnerable, is by enhancing the degree to which individuals feel
“psychologically safe” (Edmondson, 1999). Below I briefly discuss the origins of this construct, and ways in which responding to critical feedback in a learning-oriented and less defensive manner, can involve significant interpersonal risks. This in turn makes psychological safety an indispensable contextual dimension whose presence can enable (or lack of it can hinder) learning from critical feedback.

“Psychological safety” (Edmondson, 1999) is the term most commonly applied to characterize an environment in which people can focus on productive discussions rather than impression management or self-protection, to allow early detection of problems and the accomplishment of shared goals. It describes the perceptions that individuals in an organization hold about the “consequences of interpersonal risks in their work environment” (Edmondson, 2002, p. 6.) This concept originates from early research by Schein & Bennis (1965) who argued that people need to feel psychologically safe to manage the anxiety that results when they are confronted with disconfirming data about themselves, and expected to learn from it. As Edmondson (2002) notes, quoting Argyris & Schon (1978), “negative evaluation or criticism that is needed to trigger learning, is inherently psychologically threatening” (p. 130). Psychological safety has thus emerged as foundational for “enabling learning behaviors essential to learning whether the entity that needs to change is a person, a team, or an organization” (Edmondson & Lei, 2014, p. 4).

Edmondson (2002) suggests that individuals confront four kinds of image risks at work: being seen as ignorant, incompetent, negative or disruptive. The paradox is that each of these risks is triggered by behaviors that are central to how individuals and organizations learn. I suggest that responding to critical feedback in learning-oriented ways involves some
of these image risks. For example, learning means that the feedback recipient has to engage with the issue rather than deferring to the feedback giver or blindly protecting one’s position. It also involves individuals taking responsibility for the outcomes and reflecting on how implicitly held assumptions might be contributing to it. However, any of these actions can signal personal incompetence if the organizational climate values being right.

Other image risks are triggered if the feedback-recipient does not simply play along with face saving tactics. For example, the feedback receiver risks being perceived as negative and disruptive, if he were to voice doubts and anxieties, or talk with concrete illustrations and references to specific actions rather than gracefully hear the feedback. In essence this places people in a defensive double bind such that the very behaviors essential for the learning are also considered to be defensive and self-protective.

This very brief foray into the psychological safety research establishes the crucial importance of an organizational climate in which feedback receivers can feel secure and capable of engaging in behaviors that can advance their learning from critical feedback (suggested for example by Model II discussion) without the fears of retribution, embarrassment, ridicule or being penalized.

In addition to shedding light on this important contextual factor that impacts learning from critical feedback, the action science model also points to additional dimensions of the feedback receiver’s personal capacities and psychological characteristics (Model I or Model II) that have a substantial effect on how he or she interprets the feedback, responds to it and learns from it. However, an important distinction here, is that personal capacities that are
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alluded to in discussion of Model II theory-in-use are more than just technical skills; instead “employing Model II in interpersonal interactions requires profound attentiveness and skill for human beings socialized in a Model I world” (Edmondson & Moingeon, 1998, p. 15). The action strategies associated with Model II theory-in-use, and which, I have suggested can advance learning from critical feedback, thus reflect a fundamentally different set of underlying assumptions and cognitive program.

In the next section, I draw upon research from the field of adult development more broadly, and constructive-developmental (CD) theory more specifically (Kegan, 1982; Torbert et al., 2004) to extend this inquiry into learning from critical feedback, in two important ways. First, CD theory demonstrates that the way in which critical feedback is heard, interpreted and responded to will vary based on where the individual is in her developmental trajectory. In doing so, the framework provides insights into the first question of salient personal characteristics and capacities that influence learning from critical feedback. Second, the framework extends the discussion thus far on the salient contextual factors that influence learning from critical feedback by its suggestion that the organizational culture needs to support its members with a developmentally optimal balance of stretch and support to strengthen capacity to engage productively in the feedback interactions.

**CD theory: Developmental dimensions of learning from critical feedback**

The neo-Piagetian Constructive-Developmental theory (Kegan, 1982; Torbert et al., 2004) provides a powerful lens for framing change and development at the individual and organizational levels. It draws on a long tradition of developmental theorists such as Piaget (1952), Perry (1970) and Kohlberg (1969). Two ideas are central to this theoretical
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perspective. One is constructivism – that people and systems construct their own realities and give meaning to experiences in terms of a coherent internal logic. As Piaget (1977) notes “each of us is continually creating our knowledge…organizing what we know, structuring and restructuring our knowledge” (p. 24). The second idea is developmentalism – that these internal logic systems or constructions undergo fundamental reorganizations through the lifespan and become more complex. As Kegan (1982) argues, development is to be seen as change in how a person knows rather than what a person knows. The shifts in the internal logic system, however, which is development, are not just an individual, isolated experience or process. A central assumption in the CD theory is that development is a dynamic interplay between the organism and the environment.

The organism responds to events in its environment in ways that can maintain a state of equilibrium, gradually developing more adequate ways of understanding and interacting with the environment through multiple disequilibria and re-equilibrations (Piaget, 1977). Change can be understood as the consequence of the individual’s difficulty in maintaining this equilibrium, when the current way of putting the world together is inadequate in responding to the pressures and reality of the environment. Therefore, when one’s usual responses to a situation meet resistance in the surrounding context, then the opportunity arises for a fundamental transformation of the individual’s internal logic system. However, the presence of dissonance between the individual and her environment is essential but not sufficient for a fundamental shift in the meaning-making frame. How the individual interprets these experiences of conflict or dissonance with the environment matter, which in turn, CD theory suggests is shaped by the developmental stage.
Stages of development

The distinct patterns of organizing meaning are termed orders of consciousness (Kegan, 1982) and action-logics (Torbert et. al., 2004) in the CD theory. Kegan (1982) proposes six distinct “evolutionary balances” across the lifespan that shape how people construct the world and their place within it, and which are reconstructed over time. Of these six, Kegan posits that the majority of adults in today’s world and in workplaces are making meaning from three orders of consciousness – socialized mind (stage 3), the self-authoring mind (stage 4), and the self-transforming mind (stage 5). While stage descriptions in Kegan’s proposed stage theory are focused on the six fully equilibrated stages, the theory also recognizes between-stage transitions, “disequilibrial developmental positions evincing two subject-object structures in relation to each other – the older structure being transformed and the new structure just emerging” (Lahey, Souvaine, Kegan, Goodman, & Felix, 1988, p. 26). Specifically, between any two fully equilibrated stages (say X and Y), lie four empirically identifiable transitional periods depending on which structure (X or Y) is more dominant and to what extent. Adults tend to spend a significant proportion of their adult life in the transitions between these three meaning making stages.

At each of these developmental orders, there is some context that the individual is subject to, psychologically fused with, which he cannot reflect or take perspective on. But at each stage there is also the capacity to take as object some other aspects of the environment and be able to consider it from some distance. Developmental movement is reflected in the individual’s new capacity to reflect on that which the person was earlier embedded in. Each developmental order is characterized by a distinctive subject-object balance, and the increasing differentiation from embeddedness signals the individual's move away from ego-
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centrism. With each developmental transition, the individual is able to interact with and interpret her surrounding environment more adequately, and with greater complexity.

Developmental Action Inquiry (DAI) (Fisher & Torbert, 1995; Torbert, 1987; Torbert et al., 2004) is a theory of human and organizational development, under the umbrella of the constructive-developmental theory approach, that is anchored in the theoretical framework of action science (Argyris & Schon, 1978). The DAI framework explicates stage theory of individual development in which each stage is termed an “action-logic,” because it represents a unique set of assumptions that govern individuals’ “ways of interpreting their surroundings, and reacting when their power or safety is challenge[d]” (Rooke & Torbert, 1998, p. 1). Individuals learn from the gap they experience between their intentions/values and their actions or outcomes. In contrast to Kegan’s six evolutionary balances, Torbert lays out nine action-logics that people can occupy across the life span. Significantly, and relevant to this inquiry, seven of these action-logics in the DAI framework – Diplomat, Expert, Achiever, Strategist, Alchemist and Ironist – map onto the three fully equilibrated orders of consciousness in Kegan’s stage theory – socialized, self-authoring and self-transforming – that adults are most likely to be making meaning from (Yeyinmen, 2013).

Table 1: Mapping Kegan’s and Torbert’s stages of development

<table>
<thead>
<tr>
<th>Tier</th>
<th>Kegan’s Orders of Mind</th>
<th>Torbert’s Action-Logics</th>
</tr>
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<tbody>
<tr>
<td>Conventional</td>
<td>Socialized (stage 3)</td>
<td>Diplomat</td>
</tr>
<tr>
<td></td>
<td>(3-4 Transition)</td>
<td>Expert (or Technician)</td>
</tr>
<tr>
<td></td>
<td>Self-authoring (Institutional, stage 4)</td>
<td>Achiever</td>
</tr>
<tr>
<td>Post-conventional</td>
<td>(4-5 Transition, early stages)</td>
<td>Individualist</td>
</tr>
<tr>
<td></td>
<td>(4-5 Transition)</td>
<td>Strategist</td>
</tr>
</tbody>
</table>

*This table is adapted from Yeyinmen (2013).*
In this essay, I focus on those four developmental stages that adults and managers in workplaces are most likely to be making meaning from—socialized/diplomat; 3-4 transition/expert; self-authoring/achiever; early 4-5 transition/individualist. I do not delve into the nuanced differences (and similarities) between stage descriptions across these two frameworks that both draw from CD theory, since it is not relevant to the scope of this inquiry. In following pages, I first review the capacities and limitations of each of these (highlighted) four orders of consciousness. In doing so I attend to three aspects of receiving critical feedback: how do individuals at each of these stages orient to critical feedback; what kinds of feedback register or not; and what might potential responses to receiving critical feedback look like at each of these developmental stages. The discussion on each of these dimensions offers crucial insights into how the feedback receiver’s ‘internal/psychological’ world fundamentally impacts learning from the feedback.

**Socialized/Diplomatic developmental stage**

At this meaning-making stage, the individual is psychologically embedded in mutuality and interpersonal agreement (Kegan, 1982). The person derives her sense of self from the confirmations by and connections to important relationships with individuals, institutions or religious traditions in her eco-system. The achievement of the developmental transition to this stage is the capacity to understand others’ expectations, preferences and needs, and adapt one’s own actions to succeed by others’ terms. However since individuals at this stage are fundamentally oriented towards conforming to group norms, group harmony, loyalty and stability (Torbert, 1987), “public conflict and loss of face” (p. 15) can be experienced as threatening to the individual’s sense of self. Disapproval of important stakeholders at work,

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5 In the rest of the section, I refer to the stages in the following way: stage as named in Kegan’s framework/corresponding stage in Torbert’s DAI framework.
home or community can feel very punishing and disorienting, and is thus to be avoided at all costs. Because individuals at this stage are so oriented to sensing and aligning to the priorities of important others in their environment, they are particularly vulnerable to feeling conflicted and torn when these key stakeholders have potentially competing and conflicting agendas. At this developmental touchpoint, individuals experience the conflict internally, and struggle to find within themselves some criteria or orienting principles that can help them to mediate these conflicting perspectives; this is however challenging at this stage as “value is defined not by oneself, but by others” (Torbert, 1987, p. 54). This way of constructing the self should sound familiar, and echoes insights from feedback literature about how the individual’s (feedback receiver’s) locus of control (internal vs. external) influences ways in which feedback is received and interpreted. In this case, individuals who are organizing their experiences from a socialized stage, can also be seen as vulnerable to relying more on feedback and inputs from others, and less on one’s own insights and interpretations.

Against this developmental backdrop of avoiding conflict, preserving relationships and others’ goodwill toward oneself, individuals are unlikely to seek out or productively take in critical feedback directed at them. Any negative reporting and feedback on one’s performance is more likely to be experienced as punishing and as a loss of face. Emphasizing the learning potential of critical feedback, or framing it constructively to help one achieve her goals, might also not be “heard,” because goal achievement is not the primary developmental orientation at this stage. As Torbert (1987) notes, “no particular goal is as compelling to them as the implicit rule against losing face” (p. 60). On the contrary, critical feedback interaction can be perceived by the recipient as triggering a conflict that is hard to navigate effectively and productively at this stage. At the same time, individuals might be
open to trying out the feedback suggestions if it helps to maintain harmony of the relationship with the feedback giver; if it is consistent with values of the institutional culture; or if it might help to re-establish (in their eyes) the goodwill of the person giving the critical feedback.

3-4 transition/Expert developmental stage

Developmental research suggests that a sizable chunk of managers in workplaces are likely to be in a developmental transition between the socialized/diplomatic stage in which personal relations and others’ perspectives dictate how one feels and thinks, and the next fully equilibrated, self-authoring/strategist stage, where actions are derived from an internal seat of judgment. This transitional stage maps onto the expert stage in Torbert’s developmental framework. One study has suggested that 47% of the senior managers, 43% of the junior managers, and 68% of the first-line supervisors in an organization were making meaning at the expert stage of development (Torbert, 1987). More recently, a study of the developmental distribution of 497 managers across industries and organizational levels suggests that close to 45% of managers were making meaning from this transitional expert stage (Torbert, et al., 2004).

At this developmental balance individuals have gained some psychological distance from the perspectives and preferences of their stakeholders, so that views and feelings of others start becoming “variables” in their decision-making rather than the “determinants” of how they should act and feel in a given situation (Torbert, 1987, p. 97). They are now not entirely subject to the mutuality of these relationships but can reflect on and mediate amongst these possibly conflicting, divergent perspectives and opinions – a significant developmental leap.
They are also not entirely at the mercy of group norms, loyalties and pressures but start considering and reflecting on their *own distinctive* capacities, wishes and judgment as a metric for decisions. However this shift towards self-differentiation from group norms and preferences can resemble the late adolescent who is “defiantly and dogmatically counterdependent… defying all forms of authority” (Torbert, 1987, p. 76). If the socialized stage (stage 3 in Kegan’s hierarchy) is dominant in this transition, while the individual can exercise her own judgment, there still might be feelings of guilt and self-blame that comes from holding others responsible for her own feelings or seeing herself as a source of others’ feelings (Lahey, et. al., 1988).

Individuals at this developmental place can be ambivalent about receiving feedback on their performance or themselves (Torbert, 1987; Torbert, et. al. 2004). On one hand they are not entirely oriented towards the purposes of feedback for goal achievement. Nevertheless, the orientation has shifted from integrity of relationships, to personal skills and expertise, which is now intricately woven with one’s sense of identity (Torbert, 1987). Individuals can be very focused on setting perfectionist standards and avoiding mistakes, not so much because they risk losing face, but because “developmental movement is towards internalizing the source of his actions within himself” (p. 84). Individuals don’t want to be disappointed against their own emerging internal metrics. Hence any suggestion that the larger goal may be achieved through other strategies or means can be experienced as a “personal criticism of their skill” (p. 79) and thereby of their personhood.

At the same time, the counter dependence towards authority evident at this developmental stage also results in challenging, and resisting, the criteria that should guide behavior. During this transitional phase, “the process of de-identifying with the prior action-logic initially leads
to a devaluation of what the prior action-logic holds most dear” (Torbert, et. al., 2004, p. 80).

Thus, the resistance to feedback can be interpreted as a push back against the notion of being influenced by the views, and perspectives of the feedback giver. It reflects the anxiety of reverting to the meaning making principles of the earlier socialized/diplomatic stage. Maintaining the psychological differentiation from others’ viewpoint is hard work since it is vulnerable to being breached if the other pushes his or her view too strongly (Lahey, et. al., 1988).

Despite this tendency towards strong boundary maintenance, individuals at this stage are likely to have a greater willingness to receive critical feedback from “acknowledged masters of the craft” (Torbert, et. al. 2004, p. 80), since perfecting skills holds developmental significance. But receiving feedback from peers, or in areas outside of one’s expertise, can feel more challenging. For example, one study shows that from those managers assessed at expert stage who asked for feedback, nearly half experienced “explosive emotional reactions during the feedback session” (Torbert, 1987, p. 85).

*Self-authoring/Achiever developmental stage*

At this stage of development the individual achieves “one’s own identity” as the self is now constructed as a system that “generates its own values, administers itself by regulating and evaluating its values in accordance with its own standard” (Lahey, et al., 1988, p. 46). The self is now subject to this internal governing system that is fundamentally oriented towards achieving personally authored and relevant goals (Kegan, 1982; Torbert, 1987). At this stage people can start taking responsibility for actual goal accomplishment, with an emphasis and attention towards being effective in one’s surroundings. There is now an implicit desire to
understand any non-performance in relation to these valued goals, and address it.

Individuals now are more likely to seek out and welcome critical, behavioral feedback about whether they are accomplishing these internally authored beliefs. In addition, they are open to modifying behavior to meet those goals, the hallmark of single-loop learning (Argyris & Schon, 1978). Critical feedback has new developmental significance – unlike prior stages where it primarily signaled loss of face, conflict with important others, or personal imperfection, it can now be reimagined as a resource. Feedback on relevant issues can help to plan, test outcomes and change performance, and thus contribute to achieving personally relevant goals. It is at this self-authoring/achiever stage, that “one learns that one’s actions are not achieving the goal and then proves the learning by adjusting one’s actions to increase the probability of achieving the goal” (Torbert, 1994, p. 67). Thus developmental theory illuminates how the capacity to engage in single-loop feedback and learning, while seeming obvious, is so hard-won and takes time to have developmental resonance and relevance for the individual. This new appreciation for feedback and the capacity to perceive it as personally valuable at the self-authoring stage also resonates with the psychological construct of internal locus of control. In that earlier discussion on feedback literature (Ilgen, et. al., 1979), those functioning from an internal locus of control could perceive a more instrumental value in even critical feedback and hear it less defensively.

However, the shadow side of this stage is the individual’s embededness in the system of values and principals which govern its actions, with the misplaced assumption that this internal system reflects an objective truth of the way the world functions, rather than a subject perspective. It follows that functioning from this action-logic, individuals are unable
to step back and reflect upon their belief-generating system, which in turn limits what and how they learn from feedback. Thus someone who is actively welcoming any critical single-loop feedback, that can help in meeting personal goals, will nonetheless tend to resist, reject or re-interpret any feedback that “could throw the very framework within which he was operating into question” (Torbert, 1987, p. 112). At this stage, any double-loop feedback which can surface the limitations, inconsistencies and gaps in one’s internal system is likely to be heard and implicitly re-interpreted as behavioral single loop feedback to be used for advancing goals, without disturbing the framework that generated the goals in the first place. The capacity to take in double-loop feedback and engage with the incompleteness of one’s belief-generating system emerges in the developmental movement towards the self-transforming or strategist developmental logic (Rooke & Torbert, 1998).

4.5 transition/Strategist developmental stage

In this much less frequently seen move beyond the self-authoring stage, individuals are not as firmly tethered to their belief-generating frame. They can begin to intrinsically understand (in contrast to intellectually appreciate) the idea that all governing systems, including their own, are subjective and relative, that they take shape through human interaction, and none is right or best from an absolute, objective sense (Lahey, et al. 1988; Torbert et al., 2004). This new orientation can also leave people at this stage feeling unanchored, or paralyzed in taking action in a given situation, since the action-generating system is no longer readily available as an unwavering guide. But the developmental growth also brings with it greater internal freedom and flexibility to assume a wider range of role-identities, since identity is not as firmly derived from the prescribed values of the governing system.
Individuals who are stretching towards this self-transformational developmental order are interested in feedback to help them identify the gaps and inconsistencies in their belief-generating system. Unlike at the previous, self-authoring stage where the self was threatened by any disconfirmations of one’s self-evaluations, now the individual’s “sense of efficacy or success is not exclusively a function” of establishing the rightness of its internal governing system (Lahey, et al., 1988, p. 48). In contrast, in the move beyond self-authoring, there is a self that is more expansive than the governing system; it can take perspective, not only on the strengths, but also on the ways that this internal algorithm is limiting freedom of action.

Thus individuals can now hear and take in critical feedback that is double-loop in nature, which might challenge their internally authored goals and value assumptions. Such feedback resonates with the overall re-orientation towards the relative, subjective nature of one’s internal meaning-making logic. Further, individuals can pay more attention to exploring one’s role and responsibility in a given situation or outcome. They are more skilled now at inviting and orchestrating conversation among divergent voices, and can engage in and sustain paradoxical understanding of situations, rather than submit to the urge (at, say, the self-authoring stage) to resolve them into objective right and wrong scenarios (Torbert, 1987).

Developmental theory thus offers an additional lens through which we begin to unpack how individuals might interpret critical feedback and respond to it. In particular, it contributes to answering the first research question about the kinds of internal features that impact response to critical feedback and learning from it. CD theory is particularly helpful in illuminating what might feel challenging or threatening about getting critical feedback at each
of these major developmental touch-points.

In the next section, I present some recent, cutting-edge research into a kind of organization where the culture is intentionally oriented towards the supporting individual’s development. This research bridges the developmental theory presented above, with organizational culture, across a range of industries and sectors. Crucially, it highlights the central role that critical feedback interactions have, in sustaining a developmental culture that advances individual growth and learning. In doing so, it allows us to unpack, even further, those salient practices and features of an organization’s culture that promote learning from feedback.

Case of Deliberately Developmental Organizations: Feedback as an explicit developmental tool in organizations

Recent research by Kegan & Lahey (2016) offers rich empirical sketches of three organizations, termed Deliberately Developmental Organizations (DDOs), in which the culture is intentionally oriented towards personal growth of employees; in particular, the development of greater individual psychological complexity. Importantly, in each of these organizations, critical feedback is a pervasive and an integral practice aimed at supporting personal growth of all employees in the organization. In contrast to more typical organizational instances, feedback in DDOs is not offered with the goal of correcting and fixing behavior alone. Instead it is continuous and oriented towards surfacing and illuminating individuals’ deeper assumptions and mind-sets underlying their behavior.

For example, at Next Jump, an e-commerce organization and one of the DDOs featured in
the book, people are placed in roles that might be a stretch for them, but in which they also receive a “steady stream of feedback to grow into those roles” (Kegan & Lahey, 2016, p. 16). Every member at Next Jump receives regular, detailed feedback on their limitations and weaknesses with the philosophy that, “when we take risks and experience ‘loss’ or failure, we create the conditions for learning and enhance our flexibility” (p. 16). Feedback is positioned as a way of conveying care for the employee’s growth and wellbeing. Thus a common response to receiving critical feedback here is “remaining calm, nodding, agreeing, and finally thanking” (p. 20). In addition, the character traits or capacities that employees are evaluated upon – humility, helping others grow and grit at Next Jump – are articulated clearly and made transparent right at the start.

DDOs leverage feedback as a developmental tool by requiring members to give feedback regardless of position or tenure. For example feedback offered by a team member to a senior leader can be an opportunity to question deeply held assumptions and beliefs about “what it means to be a leader, to be a mentor, to be with a community and to count on other people” (p. 39). This is most vividly illustrated at Bridgewater, an investment banking firm. In this DDO feedback is situated within the larger goal of “learning about the sources of one’s limitations by asking the deeper whys – the root causes and deeper limitations in thinking that lie behind a failure, or mistake. Diagnosing the problem right is then the key to learning, and feedback is a step towards surfacing the assumptions and biases underlying the unhelpful behavior. Everyday, employees at Bridgewater get opportunities to give and receive feedback from multiple sources on their performance. Bridgewater recognizes that critical feedback can trigger their members’ self-protective ego-defenses, which compromises learning and growth. The organization addresses this in part, by offering its members
opportunities to record and share any emotionally challenging experience that surfaces in context of an interpersonal interaction on a Pain Button that is available on company provided iPads. The hope is that openly recording and sharing these challenging emotions can help employees in gaining a degree of psychological distance from the triggering interaction. The goal is for people to learn about the deeper reasons for their reactiveness.

Thus feedback in DDOs is a “rich curriculum” for developing individual employees’ psychological complexity, wherever they might be in their developmental trajectory (Kegan & Lahey, 2016). For example, for individuals at the limits of the socialized developmental order, feedback interactions can be an opportunity to “evaluate, rather than be defined by, the feedback” (p. 79). DDOs in their own ways tend to support individuals to question, challenge and make their own independent assessment, irrespective of age or seniority, an important “developmental provocation” (p. 157) for those at the limits of socialized developmental order. However, for an individual stretching beyond the limits of the self-authoring stage, the challenge is to interpret the critical feedback for double-loop learning, that is, to resist co-opting the feedback to further “fortify his personal theory” (p. 79). For such individuals, the organization challenges and supports them in using the critical feedback for gaining awareness of how their beliefs and internal metrics might be limiting the capacity to improve and learn. Thus, research into DDO’s illustrates how critical feedback can be deployed as an essential practice and mechanism to advance employee learning and growth in organizations.

Discussion
This essay has two goals. The first is to review and synthesize the salient individual features of the feedback receiver, and key dimensions of the feedback context, that might collectively impact learning from critical feedback. The second purpose of this essay is to hypothesize learning-oriented responses to critical feedback. In this discussion section I will 1) summarize the salient personal characteristics of the feedback receiver, and external features of the feedback context, that might enhance or inhibit learning from feedback, 2) hypothesize relationships and interconnections between some of these personal and contextual features, and 3) propose feedback-learning-responses which draw on the action science and CD theory frameworks as heuristics.

Salient factors that impact learning from critical feedback

The essay highlights six personal characteristics of the feedback-receiver that might influence how he or she receives, interprets and experiences critical feedback: 1) self-esteem, 2) locus of control (internal or external), 3) goal orientation (learning or performance), 4) responsibility-taking (degree of boundedness), 5) developmental order (socialized, institutional or post-institutional), and 6) theory-in-use (Model I or Model II).

I begin this discussion with the final two personal factors, developmental stage and theory-in-use, that I hypothesize can influence learning from critical feedback in somewhat similar ways – by implicating the fundamental set of assumptions and logics that shape a person’s worldview and drive behavior⁶. I propose that taking a developmental lens to study learning

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⁶ A limited body of research that has explored the connections between these two frameworks (Souvaine, 1999), has conceptually demonstrated how the principles and features of Model II theory-in-use align with the developmental capacities associated with the self-transforming developmental stage (stage 5) in CD theory. In this discussion I assume this parallel between Model II and stage 5, and draw mostly on stage 5 descriptions when discussing post-institutional capacities.
from critical feedback has significance because organizations are composed of rich
developmental diversity, with members who are likely to inhabit a range of developmental
positions. It then becomes relevant to ask: what does responding to critical feedback in a less
defensive and more learning-oriented manner, really demand, psychologically, from the
feedback-receiver, and how does this vary across developmental orders? It offers the
possibility that learning from critical feedback, at its core, can be viewed as a
developmental action, and an expression of how the individual receiving feedback makes
meaning of experiences. This theoretical lens guides attention to questions such as: what is at
stake for the feedback-receiver during the interaction, what can he or she reflect on, and
what aspects are beyond the individual’s capacity to take perspective on? I therefore
hypothesize that much can be learned by reconsidering, through a CD theory lens, the
personal factors (e.g. personal responsibility, locus of control, self-esteem and learning
orientation) that literature suggests might influence how feedback-receivers experience and
respond to critical feedback.

To begin with, CD theory calls into question the common assumption that individuals at the
workplace can orient to learning from critical feedback as means to achieving valued goals.
For example, the review of feedback literature in this essay suggests that for individuals with
an internal locus of control (versus external), critical feedback serves the important purpose of
helping to meet personally valued goals, thus bolstering capacity to resist automatic
defensive reactions to the critique. However, CD theory opens up the intriguing, albeit
theoretical possibility that valuing feedback as a means for achieving personally valued goals
is in and of itself, a developmental capacity that cannot be taken for granted. Put differently,
further research that richly describes the different ways that individuals at the socialized,
institutional and post-institutional stages orient to goal achievement, can usefully inform a deeper understanding of how feedback-receivers make sense of goal achievement as an instrumental driver for learning from feedback.

This same line of reasoning can be applied to considering personal responsibility: as discussed earlier, feedback literature suggests that in order for feedback-receivers to use critical feedback to improve performance, they need to take just the right degree of personal responsibility for the inadequate performance; it should be enough to galvanize learning, but not be overwhelming. What does ‘taking the right degree of personal responsibility’ demand psychologically from the feedback-receiver, and how does its expression behaviorally vary across different stages? At the socialized stage, where an individual’s sense of meaning is derived from relationships and others, there is a tendency to assume greater personal responsibility for others’ actions, while also holding others responsible for one’s actions (Kegan, 1982; Lahey, et al., 1998). However, at the self-authoring stage, CD theory offers that an individual is more discerning of what is ‘my piece of the mess,’ and who else needs to take responsibility. At the self-transforming stage, or in the Model II world, individuals move beyond the binary conceptions of responsibility-taking evident at the previous stage. Armed now with the capacity to perceive cause and effect in a more complex, interdependent manner, and no longer tasked with protecting and promoting one’s internal value system, the person can hold both one self and others (feedback giver, culture informing the feedback interaction, organizational climate) responsible for the outcome in a more nuanced way. CD theory thus offers a rich hypothesis that individuals, depending on their meaning-making order, will orient differently to assuming responsibility in any interaction. Further research that offers rich empirical descriptions of what personal responsibility taking looks like, in actual behaviors and experience, for people at different stages of development, and its
impact of learning from feedback, would be valuable.

Finally, this review suggests that a *learning orientation* (vs. a performance orientation) can provide the feedback-receiver some immunity against the anxiety resulting from receiving critical feedback, by reframing the motivation for engaging in the work. As the review suggests, shifting the attention from getting performance right towards what can be learned from doing the work, can make critical feedback a useful data gathering mechanism. This leads to the question: how do individuals at different developmental orders make sense of, or exhibit and enact ‘learning orientation’ while receiving critical feedback? Drawing on the stage descriptions from CD theory, I hypothesize that individuals stretching towards the post-institutional/self-transformational order might be more ‘primed’ for realizing a learning orientation, since at this stage there is a developmentally anchored interest in understanding the limitations of their goals and actions. This is in contrast to the prior self-authoring stage where there is a strong, internal drive to defend internal goals and values, and where the ease or difficulty of taking a learning orientation, or its shape and texture might depend on the nature of particular values and beliefs that are elements of the self-authoring individual’s meaning-making system.

In addition to the individual factors, this review also highlights some salient aspects of the context in which the feedback receiver is functioning which might have an effect on learning from critical feedback. For example, is the critical feedback *self-initiated* or voluntarily offered? The review offers the possibility that there is greater likelihood of responding to critical feedback that is proactively sought, with more openness and less defensiveness. The underlying assumption here would be that the individual is invested in learning from the
feedback interaction, anticipates the gains from the process, and thus is better prepared to deal with difficult feelings and defensive reactions.

However, as our prior discussion suggests, a developmental perspective adds a layer of complexity here. Individuals at different levels of meaning-making orders might have different psychological rationales for seeking the critical feedback which would then inform their response to the feedback (even if it is proactively sought). In addition, while feedback literature suggests that voluntarily offered critical feedback (that is feedback not self-initiated) can be more triggering or difficult to learn from in general, a CD theory lens challenges this assertion. It is possible that for individuals at the self-authoring stage voluntarily offered critical feedback could be valuable because it helps advance personal goals or meet a desire for improved performance. Beyond the self-authoring stage, the theory suggests that individuals are even more developmentally attuned to hearing feedback on their assumptions and actions, in whatever form this may come. Voluntarily offered critical feedback is likely to also be heard with openness.

This essay proposes that embedded authority dynamics in the feedback interaction can also influence the feedback-receiver’s response to critical feedback. One way these dynamics might be expressed is in the direction that feedback is flowing – downward from manager to her team-member, or upward from subordinate to manager. Drawing on related research from employee silence and implicit-voice-theories, I have proposed the possibility that when feedback is flowing downward (manager to team member), implicit assumptions about what it means to speak up to authority (perhaps with a challenging perspective) might influence the feedback receiver’s response. What such assumptions might be, specifically in the
context of a feedback interaction, and how might they influence the response for individuals at different developmental orders, are open questions for further research. While research from employee voice suggests that implicit voice theories tend to inhibit people from speaking up to an authority with challenging perspective, it is not entirely clear how this would vary based on individual’s developmental order.

Feedback research also highlights how receiving critical feedback (upwards) from subordinates can threaten managers’ ego defensiveness, particularly in conditions of interpersonal uncertainty, leading them to respond to the feedback in ways that stifles challenging perspectives and creates conditions of organizational silence. Here too, the managers’ (feedback-receiver’s) developmental order is likely to influence the nature of this threat and ego-defensiveness.

Finally, the nature of the organizational culture is likely to also shape how organizational members receive critical feedback and respond to it. For example how might organizational norms around revealing mistakes or not, and airing challenging perspectives freely or not, influence how individuals receiving critical feedback respond to the feedback, or what they learn from it?

**Conceptualizing feedback-learning-responses**

A second goal of this essay is to provide hypotheses for responses to critical feedback that foster learning, and at a minimum to conceptualize what a range of responses to critical feedback along a spectrum from less productive/defensive, to those responses which are more oriented towards learning, might look like. My review of literatures revealed a paucity
of research in the feedback and organizational learning literatures that can offer rich behavioral descriptions of responses to critical feedback, particularly ones oriented towards learning. This is not surprising since feedback research has emphasized other areas such as feedback-seeking behaviors and organizational factors promoting or hindering such behaviors. The hypotheses I offer in this section would need to be empirically tested, and I thus offer them as foundation on which to build future empirical research.

I use the term response to include concrete behaviors (e.g., asking questions, sharing emotions, holding back, sharing assumptions), as well as the interpretations and meaning that the individual gives to the feedback being offered. In addition, temporally, this response to critical feedback can refer to the behaviors or interpretations made either during the interaction, or after.

Action science and CD theory are frameworks that to my knowledge have not been directly applied to the study of critical feedback, and which, as I have started demonstrating, provide unique opportunities to conceptualize behavioral responses to critical feedback that can advance individual learning and growth. In this essay I argue that a feedback receiver’s interpretations of the feedback and action strategies in response to the feedback are likely to vary based on his or her developmental order, and that CD theory provides rich insights for mapping the diversity of responses to critical feedback, particularly when considering the question — what are these responses oriented towards? In Table 2, I offer hypothetical responses to critical feedback depending on feedback-receiver’s developmental stage.

**Table 2: Responses to critical feedback based on developmental stage**
## Learning from Critical Feedback: An interdisciplinary literature review

<table>
<thead>
<tr>
<th>Developmental stage</th>
<th>Response oriented to</th>
<th>Illustrative actions during feedback interaction</th>
</tr>
</thead>
</table>
| Socialized (3)      | - Maintaining, re-establishing face and harmony of the relationship with the feedback giver and/or the institution.  
- Feedback not experienced as data to meet valuable (internal) goals.  
- Aligning with expectations of the feedback giver and/or the dominant culture on this matter. | - Focus on ‘fixing the mistake’ versus interpreting it in context of goals to be achieved.  
- Blame the feedback giver for making him feel ‘bad’ or ‘guilty’ about the feedback.  
- Don’t challenge the feedback. |
| Transition to Self-authoring (3-4) | - Reliance on self to fix what is being critiqued, and to assess criteria on which critique is based.  
- Emerging capacity to take in single loop feedback, that is – change behaviors to meet internally valuable goals. | - Feedback experienced as personal critique and tendency to respond with resistance and pushback.  
- Closely scrutinize feedback-giver’s suitability and expertise to give feedback |
| Self-authoring (4)  | - Critical feedback (single-loop) valued as data for course correction and for meeting internally authored goals and values  
- Feedback content is filtered through the self’s internal regulating system  
- Feedback that challenges the goals themselves or highlights discrepancy between stated goals and reality (double loop feedback) unlikely to register | - Feedback that is deemed valid and useful for meeting important goals will be pursued and taken in; rest likely to be ignored or challenged.  
- Inclination to achieve a resolution on the topic. |
| Transition to Self-transformational (4-5) | - Feedback interaction is approached as an opportunity to discover the nuances and limits of one’s internal governing system; test the validity of the assumptions and way of seeing things. This is in tension with the self-authoring inclination to defend the rightness of one’s beliefs and values. | - More questions are asked; closer attention is paid in the conversation to points of conflict and dissonance; thinking (and assumptions that guide those perspectives) on issue, decisions is shared more transparently; need to defend the self against the feedback or agree/disagree much less sharp. |
In particular, I hypothesize what the response at each of these stages might be fundamentally oriented towards. That is, ‘asking questions’ can be a useful response to receiving feedback at any of the developmental stages. However, the significance of asking questions, what it achieves for the feedback recipient, and what is it psychologically motivated by (understand feedback giver’s expectations vs. challenge the critique, vs. test assumptions) is likely to vary based on the developmental stage.

Action science, in turn, I argue highlights three dimensions of an interaction that can be significant for learning: emotions, talk and evaluations/assumptions inherent in the response. Thus in table 3, I present hypothetical illustrative responses to critical feedback along each of these dimensions that can either foster or hinder learning.

Table 3: Learning-oriented responses to critical feedback based on the Action-Science framework
Learning from Critical Feedback: An interdisciplinary literature review

<table>
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<tr>
<th>Aspects of responses</th>
<th>Hinders learning</th>
<th>Supports learning</th>
</tr>
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</table>
| Emotions             | - Hide emotions (embarrassment, anger) with goal of projecting persona of being in control, poised, rational and not defensive.  
                        | - Indulge in self-expression of emotions in a way that distracts from the work at hand. | - Recognize the experience of difficult emotions during the interaction, and use them to help pause a potentially defensive and anti-learning reaction; use the emotions as data for hidden assumptions and evaluations that are being made in the interaction. |
| Thinking on the matter, assumptions & evaluations | - Make negative attributions about the feedback-giver in private (e.g. in parallel dialog in head during the interaction); draw (negative) assumptions about the feedback interaction but keep these private.  
                        | - Consider these assumptions and evaluations as representing facts, and undeniable truths about the feedback- giver and/or the situation. | - Make assumptions, evaluations explicit; acknowledge that they result from your vantage point on the situation and hence might be valid, but are also inherently incomplete. Treat them as one amongst several possible interpretations.  
                        |                                                                                 | - Share them as a way of getting information about the their validity: do they result in the outcome you anticipated, what surprised you? |
| Talk                 | - Talk in vague generalizations that cannot be verified or engaged with.         | - Draw on shared illustrations, and examples when speaking so that there is specific data on which perspectives can be shared and compared.  
                        |                                                                                 | - Emphasis on framing/sharing around perspectives rather than speculations on feedback-giver's motivations and intentions. |

These hypothetical response and orientations towards feedback presented in tables 2 and 3 above should not be seen as binaries, but instead as heuristics and bookends, which I suggest might scope an imagined spectrum of learning-oriented responses to critical feedback that are richer and more nuanced. Take as an example the domain of managing emotions during a critical feedback interaction (Table 3). Using emotions as data can include, first, being able to recognize that one is experiencing strong emotions during the interaction but not being able to pause the reaction nor being able to use it productively. But gradually that can evolve
into being able to not just detect the emotions before it results in action, but also being able to use it in the moment to surface assumptions or evaluations embedded in the interaction. There might be other ways that deploying emotions when receiving critical feedback in certain ways can advance or hinder learning. Constructing richer and more nuanced tableaus of responses to critical feedback that are empirically derived and tested is a potential area of future research.

Further interesting hypotheses that require empirical testing emerge from juxtaposing these learning-oriented responses to critical feedback based on CD theory and action science framework. First, responses that advance and hinder learning, as derived from the action science framework, can be expressed at a broad range of developmental stages. However, depending on the individual’s developmental trajectory, they are likely to be expressed differently, and can have distinct rationales. As an example, consider the behavior ‘hiding difficult emotions’ which as per the framework can hinder learning. Seen through a CD lens however, one possibility is that individuals with a socialized orientation might hide emotions, such as embarrassment when receiving critical feedback, if they perceive that staying in control and not expressing difficult emotions is the expected norm in the relationship with the feedback-giver, or the dominant norm in the organization. However, someone transitioning to self-authorship (3-4) might also be inclined not to display, or share difficult emotions given the desire at that stage to feel self-reliant and in control.

Second, particular kinds of responses that hinder learning might be more likely, and pose greater threat at certain developmental orientations. For example, at the self-authoring stage,
individuals might be more susceptible to approaching a feedback interaction (as the receiver) with the goal of remaining in control and not expressing 'negative' emotions, especially if the critical feedback touches on a topic that has internal salience to them.

Finally, depending on developmental trajectory, individuals have distinct learning frontiers in responding to critical feedback in a learning-oriented way. As noted earlier, organizational culture and practices can help by offering individuals the context, relationships and opportunities that not only leverage the capacities of each stage, but also provide a challenge that is developmentally optimal. For this, the organization’s culture needs to provide its members with the “holding vessel” (Heifetz, 1994; Kegan, 1982) that can productively manage the conflict, anxiety and vulnerability likely to surface when individuals don’t simply act out of self-protectiveness; acknowledge difficult emotions, or make their thinking and assumptions transparent during the feedback interaction.

**Implications**

“The real leverage is creating pull” (Stone & Heen, 2015). This essay arose in part as a response to the somewhat lopsided fascination with the “push” approach to feedback; that is, improving how we give critical feedback in order to not make the receiver defensive. But organizations today are experimenting with new forms of feedback interactions, which unshackle feedback from the domain of performance reviews and instead embed them in regular organizational interactions. Weekly “manager check-ins” for example, are either replacing or complementing yearly performance reviews in some organizations (Buckingham & Goodall, 2015; Burkus, 2016). During these check-in conversations, employees can receive targeted, relevant and on-going feedback in relation to goals and objectives that are mutually agreed
upon. An important consequence of this shift towards more timely and regular feedback processes is that organizational members are likely to receive frequent feedback from a variety of sources.

The “pull” approach to feedback, squarely reframes the emphasis on the feedback-receiver, who has the opportunity with every feedback interaction to take responsibility for her learning. Research that focuses on the feedback receiver’s perspectives on critical feedback is largely missing from literature on feedback at the workplace, resulting in inadequate theorizing of how people interpret, experience and respond to critical feedback to advance learning.

The goal of this essay is to understand more deeply what kinds of individual and contextual factors may shape how people receive, interpret and respond to critical feedback; and imagining what might receiving critical feedback productively look like in a feedback interaction. As seen from the review, these insights are typically spread across different literatures. In addition to presenting a fuller picture of these various factors that shape how critical feedback is received, the essay also highlights conceptual relationships amongst various factors, such as developmental stage and constructs such as self-esteem and responsibility taking.

This essay contributes to the literature by offering hypotheses of feedback-learning-responses – action strategies deployed by feedback receivers upon receiving critical feedback that foster learning. This is made possible by the interdisciplinary review of CD theory and action science frameworks, literatures that to my knowledge have not been explicitly used for
study of feedback interactions, and yet are ripe with possibilities. As discussed earlier, these
theories of human development and learning have synergies that have been infrequently
leveraged, and which collectively offer distinctive perspectives into the experience and
meaning of receiving and learning from critical feedback.

The ultimate purpose of this essay is to redirect attention to the potential and challenges of
feedback for learning purposes. Transformative learning is not possible if individuals and
organizations remain caught in a web of self-sealing processes, where they buffer against and
bounce off any corrective feedback. Feedback can offer people insight into how their
behavior produces the very results that they do not like or want. However, as the essay
reveals, organizations cannot take this potential of feedback to advance human growth for
granted. It makes demands on individual’s psychological capacity for perspective taking; and
responding to critical feedback in non-defensive, learning-oriented ways can entail personal
and relational risks. Ultimately, organizations need to acknowledge the losses, conflict and
vulnerability that this implies, and “hold” their members through the process of
strengthening personal growth. At its core, feedback reflects the deeply personal, and life-
enhancing act of one individual offering deep attention to another.
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Learning from Critical Feedback: An interdisciplinary literature review


Appendix I: Reflections on useful personal practices in reviewing and synthesizing literatures

I wish to briefly discuss two practices that have provided a holding structure to this long, organic and emergent review process and also enabled me to attempt a somewhat systematic review of the literatures. First, I have doggedly maintained a research journal over the last six months that I updated at the beginning and the end of almost every writing/reading session. I used it primarily to document three kinds of data: 1) where am I currently in the review process and what question am I trying to answer, 2) what are the most pressing insights, questions or dilemmas related to the goals of the study and 3) what are the next steps (article to read, keywords to pay attention to). I produced periodic memos based on these data, largely as a self-check mechanism to evaluate the relevance of a particular theoretical framework or body of research. The journal has also helped me to maintain perspective of
the larger arc along which this review has progressed, including important decision points along the way.

Second, I complemented the research journal and memos with summaries of key articles. I incorporated this practice primarily for the feedback, employee voice and psychological safety literatures, which I was new to and which included numerous articles (in contrast to a few key books). I used these summaries to capture central insights as it related to my research questions and focused on explicitly articulating these connections.