CATALYST COMMENTARY

Accelerating innovation and protecting organizations: Pluralism in the COVID-19 age

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Editors: Charles H. Noble and Jelena Spanjol

Among logicians, pluralism is the view that under certain circumstances, such as when contending opinions over priorities and time horizons are present, there may be more than one correct logic to set what is most important (Beall & Restall, 2000). Organizational responses to complex social problems such as the COVID-19 pandemic and climate change qualify as such circumstances. On the one hand there are expectations, if not outright demands, from customers and other stakeholders for expedient and directed action by organizations. On the other hand, are the human and social system complexities and frailties that the circumstances bring to light. In a now classic paper, Weick (1984) pointed out that individuals and organizations are not well-equipped by evolution to address massive social problems, and he recommends that problem-solving approaches be sensitive to human limitations. Crises like the COVID-19 pandemic highlight the need for a more nuanced understanding of what organizations can do, and bring to light research opportunities to help address the seemingly ever-rising demands that externalities and stakeholders can place on organizations.

As the father of stage gate Bob Cooper points out in this issue (Cooper 2021), COVID-19 and the ensuing pandemic brought out some of the world’s best innovation talents and efforts, as exemplary organizations reconfigured initiatives and practices to develop products and services that allowed business and governments to respond effectively. Bob points out high-performance firms such as BioNTech, Pfizer, Heron Gruppe, and Corning Glass, to which we should add the likes of Ford, 3M, Amazon, L’Oreal, Anheuser-Busch (Pacific Legal Foundation 2020), and a myriad more large and small organizations that innovated not only their product offerings, but also employment practices, manufacturing operations, information networks, compensation and assessment systems, and other business aspects to provide continuing or enhanced value to customers and other stakeholders during the pandemic.

At the same time, it seems safe to argue that the pandemic brought to light significant shortfalls and deficiencies in many organizational and government systems when innovative solutions to novel problems were most needed. In the United States, for example, responses to the pandemic were hampered by the politicizing of regulation and practice across many levels, ranging from federal agencies to family businesses and across industry sectors. In circumstances where accelerated innovation was most needed, conflicts and neglect dominated instead. Elsewhere, the European Union saw early victories against COVID-19 erased by slow vaccine certification, confused responses to new viral strains, and bureaucratic hindrances to logistical innovation. Similarly, several Latin American countries (e.g., Peru, Bolivia) tragically misallocated health-care services and solutions, leaving millions untreated or poorly protected, in part because of institutional policies and practices in need of innovative overhaul. As we take stock of worldwide responses to COVID-19, it seems safe to say that results were at best mixed, and that the costs of slow innovation were significant.

Cooper (2021) argues convincingly that organizations across the business and government spectrum need to re-think innovation processes and methods, and move expediently...
toward new approaches. Furthermore, he prescribes that companies devote economic and human resources to adopting research-validated techniques such as (a) focused project teams, (b) working on fewer and better projects, (c) using digital (new) tools to accelerate knowledge generation, (d) lean development, and (e) agile development. He rightly points out that not all techniques are suitable for all organizations, but that the adoption of any subset can yield positive results and improved readiness for COVID-19-like new challenges.

Complementary to Cooper’s admonitions and recommendations are questions that should be addressed—questions pertaining to organizations’ readiness for change (Shea et al., 2014; Weiner, 2009). In the eyes of managers that are seeking accelerated innovation, organization readiness has two interrelated aspects: organization members’ shared resolve to pursue practices like those described by Cooper (2021); and members’ shared beliefs in their collective capability to organize and execute such courses of action. Discerning managers will not only want to know about techniques that can help them attain accelerated innovation. They will also want to know that their teams and organizations are ready to sustain accelerated innovation and the stresses and demands that it entails. Furthermore, they want to ensure the organization can continue to function under such pressures when responding to ill-defined and urgent problem situations like the COVID-19 pandemic. Coupling Cooper’s (2021) admonitions and the idea of organization readiness gives rise to several research opportunities.

1 | FOCUSED PROJECT TEAMS

For a traditional product development organization to successfully redeploy people and other resources into focused teams, it is important that an inventory of existing projects and the people involved be undertaken, along with an analysis of employee and team attachment (i.e., affective commitment (Allen & Meyer, 1990)) to existing projects. Affective commitment is by definition emotion laden, and has implications for self-identity and sense of self. It implicitly contributes to the shared resolve that determines the organizational readiness. As Cooper (2021) points out, individuals in product development organizations are often affiliated with multiple project teams, and it seems likely they would hold different attachment levels to them. For focused project teams to succeed, it is important that team members have relatively high and compatible attachment levels (i.e., shared resolve) to solving focal problems. It seems highly possible, however, that the focused team’s ability to coalesce effectively will be affected by how well individual members disengage from old assignments. If shared resolve is not uniform, conflicts over effort being expended and priorities seem more likely. In addition, split loyalties and emotional distractions are likely to undermine shared beliefs about the team’s capabilities. To preemptively address these potential problems when forming focused teams, all that may be required is a self-assessment instrument that helps team members list their current projects and attachment levels. Self-assessments can be used by team members to re-prioritize their efforts, and by managers to better assemble the focused teams and redeploy preexisting responsibilities. Furthermore, transparency and awareness, as would be expressed by senior management when asking such questions, may in itself contribute to elevated shared resolve and beliefs about team capabilities.

Developing and validating a standing projects attachments survey instrument seems a worthwhile endeavor for innovation researchers. It must be noted, however, that project attachments by definition would involve emotional bonds that are based on beliefs about the project, the team, and the organization. This being the case, the development and validation of such an instrument will demand considerable research effort. Project attachments could be internalized (task focused), identification (project affiliation focused), or compliance (rules focused), suggesting that different beliefs and desired outcomes may be at play (Bennet & Durkin, 2000), and different approaches may be needed to alter the attachment. Moreover, different attachment types can be present in team members concurrently, which suggests that managers need to be sensitive to the individual differences involved. Some plausible research questions that would be involved in developing the scale are:

- Is team member attachment internalized, identification, or compliance dominant?
- What is the relationship between project attachment and the team member’s relationship to the team?
- To what degree is project attachment connected to team member organizational commitment, and can forced attachment or detachment affect commitment levels?

2 | WORKING ON FEWER AND BETTER PROJECTS

Deciding on what program initiatives to advance, postpone, or eliminate is easy to talk about and hard to do (Hollister & Watkins, 2018). Cooper (2021) argues for programmatic and recurring project reviews by senior management, and for recalibrated metrics (e.g., productivity indexing and qualitative scoring) being applied to new initiatives. Some of these techniques help to address recognized problems like impact blindness, cost myopia, and unfunded mandates (Hollister & Watkins, 2018), all of which could undermine team member faith in team capabilities when recognized to be present. In addition, the disciplined thinking required for implementing Cooper’s recommended techniques would likely enhance the likelihood of sound decision making, or at a minimum, reduce the influence of distractions such as political logrolling and unrelated tasks being made urgent by administrative fiat. Team members being confident that senior managers will make good decisions enhance their self-assessed capabilities. None of this is possible, however, if detrimentally high arousal levels are triggered by new initiatives...
and allowed to persist. Summarizing decades of research, Staw et al. (1981) point out that when arousal levels become too high, the emotional load can disrupt thinking and lead to people trying to cope with challenges by reverting to first learned actions. This suggests that if senior management mandates to prioritize projects and implement new metrics lead to detrimentally high stress levels, it could get in the way of the thinking required to make things work. (Staw et al., 1981) also point out that most recently learned (e.g., innovative) responses are the first to disappear when arousal is too elevated, which suggests that even if new metrics and prioritization parameters are used once, they may not be elicited in future decisions if arousal remains high. Furthermore, they also suggest that new knowledge (i.e., novel stimuli) is more likely to be seen as identical to preexisting knowledge under high arousal, suggesting that subtle clues about how markets are changing and responding can be missed.

Detrimentally high arousal, in effect, can easily shortchange innovative thinking and erode team decision quality, which would in turn deplete organizational readiness. Concurrent with following Cooper’s (2021) advice, therefore, there must be a concerted effort to manage team member arousal (e.g., Edmondson & Nembhard, 2009).

Building on Staw et al. (1981), it can be argued that identifying sources of arousal and measuring existing levels prior to issuing calls for radical change, and implementing ways for managing it, might be a good idea. Because arousal can be in part self-created and beneficial, however, (i.e., people can sometimes complicate or accelerate tasks to get themselves motivated), managerial efforts to manage arousal should be individually tailored. The field seems to need a set of managerial practices, likely involving some version of managing by wandering around (Peters & Waterman, 1982). Research is needed to develop these managerial practices, research that answers questions such as:

- How much time and effort should managers expend to ascertain team member arousal levels and whether or not they have crossed the dysfunctional arousal threshold?
- What inquiry techniques (i.e., observation, direct and indirect questions, eliciting narratives, and artificial intelligence of team member communications) work best for managers to make such assessments?
- How would managerial efforts to assess and manage arousal levels affect team member trust and commitment to the organization?

3 | USING DIGITAL TOOLS TO ACCELERATE KNOWLEDGE CREATION

Cooper (2021) encourages product development organizations to adopt new tools such as rapid prototyping, digital simulations, virtual and augmented reality applications, and artificial intelligence/machine learning technologies to both speed up and increase the volume of internally generated knowledge. His arguments seem straightforward—the more you know, and the earlier you know it, the greater your success. As the speed and volume of knowledge grow exponentially, however, it seems inevitable that organizational (Cohen & Levinthal 1990) and team (Backmann et al., 2015) absorptive capacity will be taxed, and that finding ways to expand that capacity should be a high priority for innovation scholars. Backmann et al., (2015), for example, showed that work-style similarities (e.g., behavioral scripts and routines, modes of communication, etc.) and technical knowledge complementarity contribute to the absorptive capacity of development teams, and that absorptive capacity contributes in turn to team innovative outputs.

They also found that absorptive capacity can be affected by team composition and stability, and that it can be overtaxed by work and environmental demands. How absorptive capacity deficiencies ultimately affect shared resolve and capability beliefs among team members, however, has not been explored. Organizations that are considering the adoption of digital tools like those suggested by Cooper (2021) are well-advised to assess the absorptive capacity of teams for which such investments are planned, and to protect teams from being overburdened with new information. Moreover, if the taxing of absorptive capacity is unavoidable in the short term, acknowledgment from senior management seems important to protect team member resolve.

Taxing absorptive capacity for long periods of time seems ill-advised under all circumstances. It is also important that the antecedents of team absorptive capacity be even better understood, along with process factors that will enhance or deplete absorptive capacity. It seems safe to argue that increases in the speed and volume of new information without corresponding increases in the ability to process and integrate that knowledge may undermine organizational readiness for accelerated innovation, and ultimately do more harm than good.

Building on Backmann et al.’s (2015) exploration of absorptive capacity in innovation teams, some potentially fruitful avenues for research come to light. Backmann et al. (2015) explore the influence of workstyle (i.e., mental scripts and heuristics) similarities and knowledge complementarity on interorganizational product team effectiveness. Because the mind mechanisms that underlie homophilic effects on how people behave and collaborate are fundamental, however, there is nothing to suggest that homophily effects could not be present in interorganizational innovation teams. Cross-disciplinary teams within one organization, or task force teams that draw from multiple divisions in large organizations, for example, could exhibit significant variance in how people think and learn and collaborate. One possible research question here suggested is:
How does homophily uniquely influence innovation team performance when team composition involves interorganizational as against intraorganizational collaborations and exchanges?

It seems plausible that absorptive capacity considerations are germane to innovation team beyond those that involve interorganizational collaboration, which would further expand the applicability of absorptive capacity to innovation team management. Consequently, studies that replicate Backmann et al.’s (2015) approach to establishing how homophily influences the innovation team performance using intraorganizational teams seem highly desirable.

Further building on Backmann et al. (2015), and closely related to Cooper's (2021) recommendations, are questions linked to potential ebbs and flows in team absorptive capacity based on demanding work circumstances. Backmann et al. (2015) used survey methods in their exploration, and captured a broad-brush retrospective view on how the teams functioned and their perceived work style similarity and knowledge complementarity. When we consider the idea that the adoption of knowledge accelerating tools can in effect destabilize work style similarities and knowledge complementarities, at least in the short term, it seems possible that if absorptive capacity is temporarily depleted throughout the knowledge tool implementation process, shared resolve, and capability beliefs among team members will be compromised. Two research questions arise from these possibilities.

- What is the sensitivity of innovation team absorptive capacity to novel work processes (i.e., new knowledge tools) and the speed with which such processes are adopted?
- What happens to shared resolve and capability beliefs among team members when work style similarities and knowledge complementarities are destabilized by new work processes?

One additional factor to consider in this arena is how adopting accelerated knowledge tools impacts shared resolve and capability beliefs among team members are affected by whether the team is allowed to choose adopting the tools or is forced to adopt them. Conversations in both the accelerated innovation and absorptive capacity domains would benefit from these and similar questions being explored.

4 | LEAN DEVELOPMENT AND AGILE DEVELOPMENT

Lean and agile development are well-researched methodologies that help organizations be more productive, faster-to-market, and ultimately more effective. They should be in all innovation organizations’ arsenals. Cooper (2021) makes compelling arguments for their integration into project management plans and strategies, and provides rich explanations of how they operate and examples of their successful implementation. It must be acknowledged, however, that implementing either technique could be disruptive to teams and their organizations. Both prescribe significant changes to established work and information flows, to creation and validation activities, and to team composition and dynamics. The potential problems that could arise from unrecognized team member attachments, high arousal levels, and overtaxed absorptive capacity already discussed are also possible when either lean or agile development methodologies are being adopted, even if the methodologies are well explained to team members before implementation. Moreover, if senior management fails to explain what is being done, and why it is being done, before implementing lean or agile development techniques, further damage to organizational readiness is likely. Explorations of lean and agile development implementation failures seem scarce, perhaps because it is difficult to talk about failures, and more difficult when failures can be attributed to an avoidable lack of organizational readiness. Difficulty collecting data about failures, however, should not keep innovation scholars from meeting this need. In fact, such difficulties should spur innovation scholars into action, given that at least some of the difficulties can be linked to management and team members behaviors and motivations. Innovation researchers could start by addressing questions such as:

- What are consciously recognized and measurable factors, at both individual and organizational levels, that contribute to innovation teams and their managers not documenting project failures and conditions precipitating them?
- What are hidden and yet measurable factors, again at both individual and organizational levels, that contribute to innovation teams and managers failing to document project failures?
- How should failure narratives, once made available to project teams and managers, be presented to enhance (instead of reduce) shared resolve and capability beliefs among team members?

Sutton (2002) and Kelley (2005), among others, strongly advocate for innovation-seeking organizations to embrace learning from failures, and point to IDEO as an example of the benefits that can flow from such practices. IDEO is an organization that celebrates failures and yet seems to have enduring shared resolve and capability beliefs among its team members. Systemic investigations into how some organizations can manage learning from failures without hurting their readiness, and why other organizations fail to learn from failures and suffer for it have been missing from the conversation. If the field advocates significant structural and
process change, such as lean and agile development, it should seek to better understand what managers should do to ensure and preserve organizational readiness for those changes, and some of those lessons can and should be learned from an honest look at what went wrong.

5 CONCLUDING OBSERVATIONS

Market conditions where there exist contending opinions over priorities and time horizons, such as have been seen with the COVID-19 pandemic, demand a more pluralistic approach from management scholars, one that embraces the principle that there may be more than one correct logic as to what is most important to pursue. That seems to be the case when it comes to accelerated innovation. If innovation scholars are going to study and promote breakthrough techniques and methodologies, it seems fair that the field also strive to understand and communicate the factors that should be considered, measured, and managed to sustain team and organizational effectiveness and well-being. It seems unavoidable that as technologies advance and markets evolve, the pressure for breakthrough innovation will increase, along with the severity and radicality in how companies are expected to change. Accelerated innovation practices, in other words, will not be optional, which suggests that organizational readiness will not be optional either. Organizational readiness must be in place for accelerated innovation practices to be successful. Accelerated innovation and protecting the organizations that make it happen should be inseparable.

REFERENCES
Allen, Natalie J., and John P. Meyer. 1990. “The Measurement and Antecedents of Affective, Continuance, and Normative Commitment to the Organization.” Journal of Occupational Psychology 63(1): 1–18.
Backmann, Julia, Martin Hoegl, and John L. Cordery. 2015. “Soaking It Up: Absorptive Capacity in Interorganizational New Product Development Teams.” Journal of Product Innovation Management 32(6): 861–77.
Beall, Jeffrey C., and Greg Restall. 2000. “Logical Pluralism.” Australasian Journal of Philosophy 78(4): 475–93.
Bennett, Haydn, and Mark Durkin. 2000. “The Effects of Organisational Change on Employee Psychological Attachment: An Exploratory Study.” Journal of Managerial Psychology 15(2): 126–46.
Cohen, Wesley M., and Daniel A. Levinthal. 1990. “Absorptive Capacity: A New Perspective on Learning and Innovation.” Administrative Science Quarterly 35(1): 128–52.
Cooper, Robert G. 2021. “Accelerating Innovation: Some Lessons from the Pandemic.” Journal of Product Innovation Management. https://doi.org/10.1111/jpim.12565
Edmondson, Amy C., and Ingrid M. Nembhard. 2009. “Product Development and Learning in Project Teams: The Challenges are the Benefits.” Journal of Product Innovation Management 26(2): 126–38.
Hollister, Rose, and Michael D. Watkins. 2018. “Too Many Projects: How to Deal with Initiative Overload.” Harvard Business Review 96(5): 64–71.
Kelley, Tom. 2005. The Ten Faces of Innovation. New York: Currency/Doubleday.
Pacific Legal Foundation. 2020. Ten Examples of Companies Innovating to Make Our Lives Better During COVID-19. https://pacificlegal.org/companies-innovating-during-covid-19/
Peters, Tom, and Robert H. Waterman. 1982. In Search of Excellence. New York: Harper Collins.
Shea, Christopher M., Sara R. Jacobs, Denise A. Esserman, Kerry Bruce, and Bryan J. Weiner. 2014. “Organizational Readiness for Implementing Change: A Psychometric Assessment of a New Measure.” Implementation Science 9: 7.
Staw, Barry M., Lance E. Sandelands, and Jane E. Dutton. 1981. “Threat-rigidity Effects in Organizational Behavior: A Multi-level Analysis.” Administrative Science Quarterly 26(4): 501–24.
Sutton, Robert I. 2002. Weird Ideas That Work. New York: Free Press.
Weick, Karl. 1984. “Small Wins: Redefining the Scale of Social Problems.” American Psychologist 39(1): 40–9.
Weiner, Bryan J. 2009. “A Theory of Organizational Readiness for Change.” Implementation Science 4: 67.

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How to cite this article: Rosa JA. Accelerating innovation and protecting organizations—Pluralism in the COVID-19 age. J Prod Innov Manag. 2021;38: 233–237. https://doi.org/10.1111/jpim.12568