Keeping Creativity Warm:
Designing Positive Feedback Environments that Sustain Exploration

Oxford Handbook of Positive Organizational Scholarship

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Citation:
Gildehaus, J. M., & Berg, J. M. (in press). Keeping creativity warm: Designing positive feedback environments that sustain exploration. In K. S. Cameron, G. M. Spreitzer, & M. C. Worline (Eds.), *The Oxford handbook of positive organizational scholarship* (2nd ed.). Oxford University Press.

Abstract

Positive organizational scholarship traditionally emphasizes the generative power of positive feedback for creativity. Extending this view, we argue that whether positive feedback sustains or constrains creativity over time depends critically on how it is structured and delivered. Drawing on computational theories of reinforcement learning, we develop a theory of how repeated positive feedback progressively narrows the range of ideas creators are willing to pursue and able to succeed with over time. We describe four mutually reinforcing mechanisms through which this occurs: creator expectation updating, creator resource specialization, audience expectation updating, and audience resource provision. Together, these mechanisms create a self-reinforcing spiral that increasingly constrains creators' idea diversity and impairs their adaptability to the changing environments that characterize creative work. We conclude by offering actionable tactics for organizations to design feedback environments—adjusting the structure, frequency, granularity, and sources of positive feedback—that sustain exploratory behavior and balance immediate commercial success with long-term creative vitality.

Creative work—the "process in which ideas are generated, elaborated, evaluated, stored, discarded, or implemented into a product" (Harrison et al., 2022, p. 1)—is dense with feedback. Unlike many forms of work that are judged against objective performance standards, creative work is evaluated against the ever-changing, subjective preferences of audiences, including consumers, critics, and industry gatekeepers (Caves, 2003; Salganik et al., 2006). In this sense, success in creative work is often conferred by audiences. Organizations and managers are greatly implicated in these feedback processes, both as direct providers of feedback to creators (Hackman & Oldham, 1976; Zhou, 2003) and as conduits that gather and translate audience signals for creators to act on (Anand & Peterson, 2000; Hirsch, 1972). For example, a record label may share streaming numbers and ticket sales with its musicians, or a software manager may translate and report client reactions to their designers. While feedback has always been a central part of creative work, today's digitized world has made it increasingly immediate, salient, and granular.

A core premise of positive organizational scholarship is that positive states and processes generate upward spirals in organizations (Cameron et al., 2003; Fredrickson, 2003). Applied to creative work, research has indeed identified multiple ways in which positive feedback benefits creators. Positive feedback can strengthen creators' self-efficacy beliefs (Bandura, 1997; Tierney & Farmer, 2002), reinforce their identity as creators (Farmer et al., 2003; Swann & Read, 1981), and elicit positive affect that benefits creative thinking (Amabile et al., 2005; Fredrickson, 2001). Positive feedback, when framed informationally, can enhance creativity (Zhou, 1998), in part by sustaining intrinsic motivation on which creativity depends (Amabile et al., 2018). An artist manager described the enormous emotional weight positive feedback can carry for creators: "when they play it for the first time and to see that kind of feedback from somebody […] it's

almost like delivering a baby" (Hesmondhalgh & Baker, 2013, p. 134). Audience recognition also provides external resources, such as financial means, that creators can reinvest in subsequent creative work (Merton, 1968). From this perspective, positive feedback initiates virtuous spirals that promote both creativity and career advancement over time.

We extend this perspective by examining a less understood dynamic: how repeated positive feedback shapes creators' trajectories over time. Existing research has primarily examined the effects of feedback on creative work at the level of distinct episodes or within short time periods (Harrison & Rouse, 2015; Zhou, 1998), leaving open how repeated positive feedback affects creative work over time. Emerging evidence suggests that feedback to creative work may cast a longer shadow, influencing creators' trajectories in ways that are not always beneficial (Berg, 2022; Deichmann & Baer, 2023). Drawing on computational theories of reinforcement learning (Gittins, 1979; Sutton & Barto, 2018), we develop a theory of when and why positive feedback sustains versus constrains creators' long-term flourishing. Rather than treating positive feedback as uniformly beneficial (or costly), we suggest that its effects depend on the surrounding feedback environment. Under some conditions, positive feedback remains generative, whereas under other conditions it constrains creators' long-term adaptability. This perspective positions organizations not only as feedback providers and translators, but also as designers of the conditions under which positive feedback sustains rather than constrains creators' success.

At the heart of our theory is the concept of *exploratory temperature*—a creator's tendency to explore novel directions. We borrow the term from reinforcement learning models, where a temperature parameter sets how broadly an agent samples its options: at higher temperatures the agent explores many options, whereas at lower temperatures the agent focuses

on options that have proven successful in the past (Kaelbling et al., 1996). We propose that by default, repeated positive feedback progressively lowers exploratory temperature, narrowing both the range of ideas creators pursue and succeed with over time. In particular, we describe four mutually reinforcing mechanisms through which positive feedback lowers exploratory temperature across repeated idea-feedback cycles. Creators increasingly concentrate their attention and resources on proven directions, while audiences reward consistency and direct resources toward creators' established work. We then turn to a question central to positive organizational scholarship: how can organizations design feedback environments that sustain creators' exploration over time? We propose several organizational "warming tactics" aimed at encouraging a healthy dose of exploration, including curiosity bonuses that reward experimentation, cultivating tolerance for early failure, counterfactual feedback on unchosen alternatives, exploration escrows that protect resources for new directions, diversified feedback sources, and adjustments to the frequency and granularity with which feedback is delivered.

A Reinforcement Learning Perspective on Creative Careers

In computational reinforcement learning, often studied in so-called multi-armed bandit problems, actors sequentially choose among a set of options whose underlying reward distributions are unknown (Sutton & Barto, 2018). Multi-armed bandit problems can be understood through the analogy of a gambler who stands in front of a row of slot machines—each a one-armed bandit—and must decide whether to keep playing the machines that have yielded the highest returns thus far or explore those not yet played. The actor learns the value of each option only by trying and observing the outcome. Much like the gambler choosing which bandit arm to pull, creators face choices about how to allocate their resources—which ideas to initiate, develop, and ultimately release—without knowing how audiences will react.

Specifically, each "arm" represents a distinct creative direction a creator could pursue, a particular style, genre, or technique, whose audience reward is uncertain at the time of generation and only revealed through audience response.

Actors in multi-armed bandit problems face a trade-off between exploiting known options and exploring new options (March, 1991). Early on, little is known about any option's reward. Each option's payoff can only be learned by sampling broadly. Over time, repeated action-feedback cycles update actors' beliefs about which options are most rewarding (Skinner, 1963; Sutton & Barto, 2018). The exploratory temperature tends to go down, meaning that the actor increasingly favors proven options and samples unfamiliar ones less often. In stationary environments, where the rewards associated with options remain stable over time, this is the optimal strategy—to first explore and then gradually shift toward exploitation (Sutton & Barto, 2018).

However, the standard multi-armed bandit framework rests on two assumptions that do not hold for creative work. First, it assumes the Markov property, whereby an arm's reward depends on its intrinsic value, independent of the actor's past choices (Gittins, 1979). Creators, by contrast, as we will describe in more detail below, face a history-dependent reward function. That is, the likelihood that a given idea succeeds depends not only on its intrinsic qualities but increasingly also on its distance from the creator's prior portfolio—the set of ideas they have developed over time (Berg, 2022; Sternberg & Lubart, 1991). Second, creative industries are non-stationary, as reward distributions shift with evolving audience preferences. As we elaborate below, creators' decline in exploratory temperature over time becomes consequential given the conditions they face in their environment.

How Positive Feedback Lowers Exploratory Temperature

We propose four mutually reinforcing mechanisms through which positive feedback progressively lowers creators' exploratory temperature across repeated idea-feedback cycles (see Figure 1). On the creator side, positive feedback narrows expectations about which directions are worth pursuing (1. Creator Expectation Updating) and concentrates resources around established directions (2. Creator Resource Specialization). On the audience side, audiences form increasingly specific expectations about creators' work (3. Audience Expectation Updating) and direct resources accordingly (4. Audience Resource Provision).

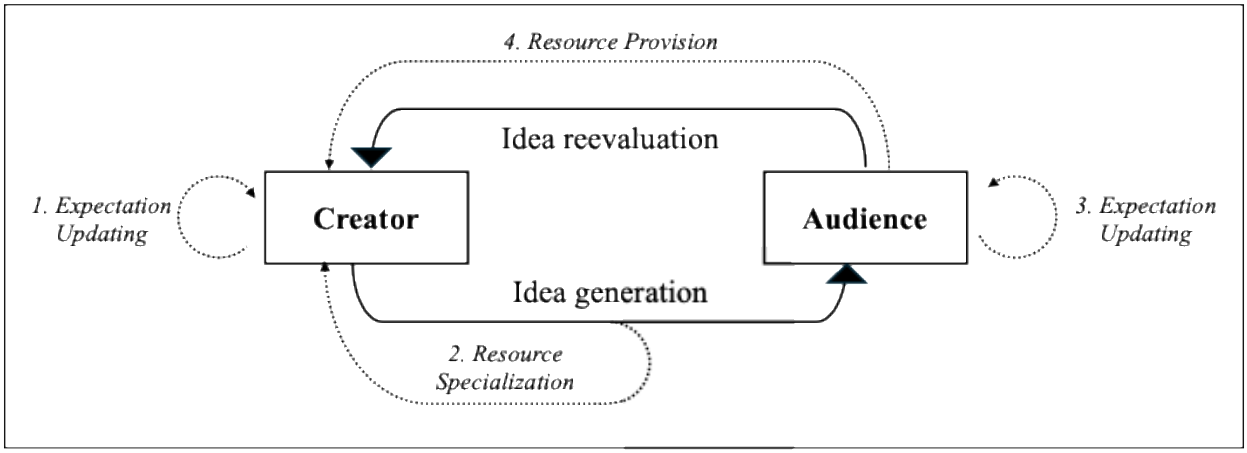
1. Creator Expectation Updating

Creators begin their careers much like an agent facing slot machines with unknown payoffs—with unclear expectations about what audiences reward, what they themselves can achieve, and what kind of creator they are. Positive feedback helps resolve these uncertainties.

First, positive feedback updates creators' expectations about what audiences reward. When a particular idea receives audience recognition, such as through sales or media attention, creators update its estimated value upward and become more likely to develop similar ideas in the future (Berg, 2022; Skinner, 1963). Ed Catmull, co-founder of Pixar, describes this, reflecting on how creators producing movies often rely on approaches that have proven successful in the past: "You figure something out, it works, so you keep doing it—this is what an organization that is committed to learning does. And as we become successful, our approaches are reinforced, and we become even more resistant to change" (Catmull & Wallace, 2014, p. 112). Over time, repeated positive feedback narrows creators' expectations about which directions are worth pursuing, increasing their likelihood of generating ideas similar to those that have already succeeded in the past.

Figure 1

Idea-Feedback Cycle



Note. The idea-feedback cycle illustrates how creators generate ideas, release them to audiences, receive feedback, and update their expectations and develop resources before generating subsequent ideas.

Second, positive feedback updates creators' expectations about what they can or should achieve. Following audience recognition, creators adjust their aspirations upward (Cyert & March, 1963). Creators' past success now serves as a new reference point against which new ideas are evaluated. Directions that appeared valuable early in a career become less attractive over time as creators' success raises the threshold a new idea must clear to appear worth pursuing. The prospect of forgoing success by pursuing unfamiliar ideas weighs more heavily than what the creator could potentially gain from venturing into new directions (Kahneman & Tversky, 1979). As a result, positive feedback lowers creators' exploratory temperature by raising their performance standards.

Third, positive feedback updates creators' expectations about who they are as creators. Recognition not only teaches creators which ideas succeed but can also affect how they view themselves—that is, their creative identity. A filmmaker who receives acclaim for

documentaries, for example, not only updates beliefs about audience preferences but also comes to understand herself as a documentary filmmaker. In a study on toy car designers, one designer described the merging of their style and their identity: "I like to think of my designs as sophisticated and ultra cool. […] It's important that this cool style comes across in my cars, because that's sort of who I am as a designer" (Elsbach, 2009, p. 1060). Once such a self-concept forms, it may constrain exploration, since pursuing unfamiliar ideas can be experienced as a departure from the self (Grimes, 2018; Swann & Read, 1981). Prior research suggests that such constraints can arise even after a single audience recognition event. Deichmann and Baer (2023) found in an archival study that first-time cookbook authors who won an award for novel work were less likely to publish a second book than non-winners. The authors suggest this occurs because the recognition makes a particular creative identity salient, rendering subsequent exploration threatening insofar as it risks failing to live up to what the award has established.

2. Creator Resource Specialization

Positive feedback over time not only narrows what creators are willing to do, but also what they are able to do effectively. Creators draw on different resources in developing their ideas. Domain-relevant skills and knowledge provide creators with the cognitive schemata and connections they recombine when generating ideas (Amabile & Pratt, 2016; Mannucci & Yong, 2018), while social relationships supply inspiration, novel information, and collaborators who offer feedback or access to their own resources (Burt, 2004; Granovetter, 1973; Perry-Smith & Shalley, 2003; Uzzi, 1997). Early in a career, these resources are limited and tend to be relatively evenly distributed across the different options they could pursue (Figure 2). Creators have not yet developed deep domain knowledge and professional networks are typically small. No direction yet holds a strong resource advantage and creators have little to lose from exploring broadly—for

example, a novice fashion designer experimenting across fabrics and silhouettes faces roughly equal resource costs across directions.

Over time, however, positive feedback directs creators' engagement toward recognized directions, and that sustained engagement in turn develops resources associated with them (Levinthal & March, 1993). As creators continue to pursue directions that have received audience recognition, their domain knowledge and skills associated with those directions grow (Ananth & Harvey, 2023; Mannucci & Yong, 2018). Their networks also grow denser, as existing contacts introduce creators to similar others (Perry-Smith & Shalley, 2003). Repeated collaboration can generate complementarities—synergies that arise as creators learn to combine their interrelated resources (Sydow et al., 2009)—making collaboration with familiar others increasingly efficient and with unfamiliar others comparatively costly (McPherson et al., 2001; Sydow et al., 2009).

Resource specialization thus shifts the relative returns of available options. Continuing to engage in familiar directions becomes increasingly rewarding, as established resources lower the cost and raise the proficiency of that work (Levinthal & March, 1993; March, 1991). Exploring unfamiliar directions becomes comparatively costly, as it requires building new resources. The difference between what creators can gain from familiar directions versus unfamiliar directions has increased. The same fashion designer, now specialized in a particular style, finds that departing from their established style would require substantial investment in new resources.

3. Audience Expectation Updating

Just as creators update their expectations, audiences too form expectations over time that affect how creators' subsequent ideas are received. Early in creators' careers, when they begin building their idea portfolios, creators typically have limited audience visibility and not

necessarily a consistent audience across ideas. As a result, audience reactions are less influenced by expectations based on prior work. Without a track record to distinguish promising directions from unpromising ones, the odds of success across different ideas remain largely uncertain.

Over time, however, success likely attracts and builds a consistent audience that follows the creator across ideas. Audiences form expectations about the kind of work the creator produces and tend to prefer ideas that are consistent with the image they have formed (Hsu, 2006; Zuckerman, 1999). The reward a new idea can expect no longer depends only on its intrinsic qualities but also on its similarity to the creator's prior work (Berg, 2022). Familiar ideas receive a premium, whereas ideas that depart greatly from their established portfolio incur a categorical penalty. For instance, after achieving success with Sherlock Holmes, Arthur Conan Doyle sought to write historical fiction, yet his readers continued to demand the detective stories for which he was known. The likelihood of success for historical fiction was determined not by its quality alone but by its distance from the portfolio that had made the author famous. Such audience expectations can become very immediate in creators' performances. In a qualitative study of jazz musicians, one musician recounted how their attempt to explore original work was met with audience resistance: "Playing a few originals on a jazz gig and someone shouts out: 'Play a standard!' . . . someone in the audience [who] feels they know more than you" (Brand et al., 2012, p. 643). Changes in audience composition following positive feedback can further exacerbate this dynamic, as creators' success attracts new followers whose expectations are tied to the recognized work (Kovács & Sharkey, 2014) and who would be more likely to penalize departure from it.

4. Audience Resource Provision

Audience expectations also shape creators' future idea generation indirectly by influencing the resources allocated to them. Audience recognition can generate unspecific resources, such as financial means, that creators can reinvest in subsequent idea generation (Merton, 1968). Yet, these resources are often linked to others' expectations about the creator. Gatekeepers, like managers or publishers, rely on their image of the creator when allocating support (Hirsch, 1972). Creators known for a particular direction are more likely to receive opportunities, such as funding, projects, and collaborations, that presuppose and further reinforce that direction. Successful ideas attract resources that further enable the development of similar ideas.

Over time, resource allocations based on audience expectations can become self-fulfilling (Rosenthal & Jacobson, 1968). Creators who receive greater support in established directions are more likely to produce stronger work in those domains, thereby confirming gatekeepers' expectations that these directions are the right bet (March, 1991). In contrast, unfamiliar directions, pursued with fewer resources and less organizational support, may yield weaker outcomes, not necessarily because they are intrinsically less promising but because the resource asymmetries disadvantage them. Performance differences between unfamiliar and familiar directions may thus be, in part, a product of the resource allocation itself. A creator who attempts to explore new directions will find that their environment has reorganized around their established portfolio.

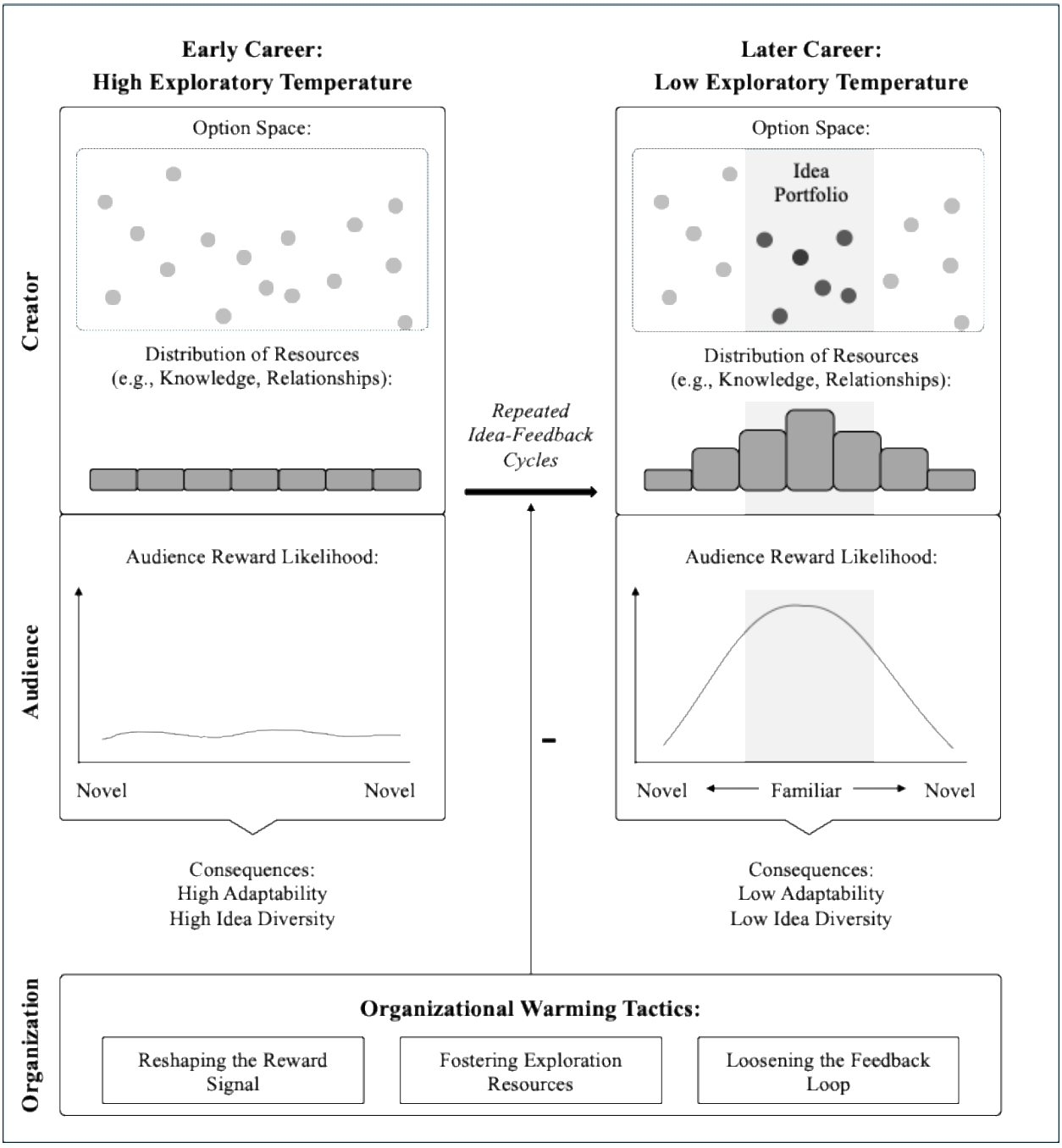
Together, these four mechanisms are mutually reinforcing, progressively lowering creators' exploratory temperature across repeated idea-feedback cycles. On the creator side, expectations narrow toward familiar directions and resources become increasingly concentrated

around them. Creators become more inclined to pursue what has worked previously and less equipped to pursue anything else. On the audience side, audiences penalize departures from the established idea portfolio, while gatekeepers direct support toward recognized directions. The two sides reinforce each other. As creators pursue a narrower range of work, audiences are exposed to less variety and form narrower expectations about what the creator produces. In turn, this heightens the penalty for unfamiliar ideas and further strengthens creators' incentives to pursue familiar work.

We next turn to why a decline in creators' exploratory temperature is consequential, before outlining organizational approaches to maintaining higher levels.

Figure 2

Positive Feedback, Exploratory Temperature, and Organizational Warming Tactics



Note. This figure illustrates how positive feedback can lower exploratory temperature over time—narrowing creators' options and resources and concentrating audience rewards on familiar work, thereby reducing adaptability and idea diversity. Organizational warming tactics in the feedback environment can counteract this process and sustain exploration.

The Consequences of a Lower Exploratory Temperature

Reduced Idea Diversity

A lower exploratory temperature over time reduces the variety of ideas creators generate, which is problematic because variation is a vital precursor to translating creativity into successful innovation (Aldrich, 1999; Amabile, 1988; Campbell, 1960; Simonton, 1999, 2011; Staw, 1990). Novel ideas commonly emerge from the recombination of information that does not co-occur. Exploring unfamiliar directions exposes creators to non-redundant information that enables such recombination. As exploratory temperature decreases and creators increasingly rely on familiar directions, they draw on progressively narrower and more overlapping knowledge bases (Dane, 2010). As a result, the novelty and diversity of their ideas tend to decline.

Impaired Adaptability to Change

A low exploratory temperature has important consequences for creators' adaptability to environmental change. Creative domains tend to be non-stationary. Audience preferences shift over time as trends emerge and fade, and as new technologies alter what audiences desire (Caves, 2003; Salganik et al., 2006). In this sense, creative domains resemble a "restless bandit" (Whittle, 1988), in which ideas that performed well yesterday may no longer be successful today because reward distributions drift (Posen & Levinthal, 2012; Sutton & Barto, 2018). Digital platforms may add to this instability by speeding up the diffusion and duration of trends, shortening the time window in which a creative direction remains timely (Lorenz-Spreen et al., 2019). A creator's reduction in exploratory temperature that is beneficial in stable environments thus becomes costly in non-stationary ones.

A low exploratory temperature can constrain creators' ability to detect environmental change in several ways. First, it limits exposure to signals of change. As creators explore less,

their networks grow more homogeneous, leaving them better connected within their established domain and less connected to peripheral contacts who could provide non-redundant information about emerging trends (Burt, 2004; Granovetter, 1973; McPherson et al., 2001). Second, even when such signals are available, creators may be less likely to recognize their relevance. When creators remain focused on familiar directions, trends that do not connect with what they already know may be easier to overlook (Shane, 2000). Third, even signals recognized as potentially relevant may be difficult to interpret and use. Interpreting novel signals may require cognitive schemata that creators who explore little have not developed (Cohen & Levinthal, 1990; Corbett, 2007). Finally, even when change is detected and understood, creators whose reduced exploration has narrowed their creative identity may resist accepting that core aspects of their work are losing audience appeal, as doing so may threaten that identity (Swann & Read, 1981).

A low exploratory temperature also impairs creators' ability to act on detected change. Creators may lack the resources—skills, knowledge, professional networks—required to venture into new directions, because building a narrow idea portfolio offered little opportunity to cultivate them. Instead, these resources must be built, at a disadvantage relative to creators who maintained broader portfolios. The costs of adaptation rise with the degree of prior portfolio narrowing. Even when creators possess or develop the necessary capabilities, audiences and gatekeepers with expectations anchored in their established portfolio may penalize such shifts. That is, although general audience preferences may change (e.g., from rock to pop music), expectations about a creator's work tend to remain tied to past output. A rock musician who pivots to pop may encounter resistance because the shift jars with the image established by earlier work. In contrast, creators who have previously worked across multiple directions face fewer categorical penalties when they adapt (Berg, 2022; Hsu, 2006). Their broader portfolios

not only make them appear more multifaceted but also give them more established areas they can fall back on when adapting.

Organizational Warming Tactics: Structuring Feedback Environments That Maintain Exploratory Temperature

Having described mutually reinforcing mechanisms through which positive feedback lowers creators' exploratory temperature over time—and the consequences this has for creativity and adaptability—we return to a question that is central to positive organizational scholarship: How can organizations design feedback environments that sustain creative careers? The reinforcement learning perspective suggests that the goal is not to withhold positive feedback, which remains an important source of self-efficacy, identity affirmation, and resources, but to design the conditions surrounding it so that it does not narrow the range of directions creators are motivated and able to pursue. Organizations are in a privileged position here, because they often act as direct feedback providers or as intermediaries that translate audience signals. We propose a set of organizational "warming tactics" that operate on three levels of the reinforcement cycle: reshaping the reward signal, fostering exploration resources, and loosening the feedback loop.

Reshaping Organizational Reward Signals

Curiosity Bonuses. A first organizational approach to maintain higher exploratory temperature is to introduce parallel external reward signals that incentivize exploration. In standard reinforcement learning, exploration is hard to maintain because it often produces no immediate reward to reinforce it. To address this, "exploration bonuses" can be added to encourage agents to continue sampling unfamiliar areas (Burda et al., 2018; Sutton & Barto, 2018, p. 204). Organizational curiosity bonuses can reward creators for venturing beyond their established portfolio, not only for succeeding within it, thereby recognizing experimentation and

risk-taking as valued organizational behaviors. Curiosity bonuses could take the form of exploration goals agreed upon alongside outcome goals in performance evaluations, similar to the idea of learning goals (Dweck, 1986).

For example, organizations might implement distance-weighted curiosity bonuses, in which the reward for an idea increases with how far it departs from the creator's past idea portfolio. This is similar to so-called intrinsic reward functions in reinforcement learning that incentivize "curiosity" by rewarding prediction error or using visitation counts to discourage agents from returning to options they have already chosen in the past (Burda et al., 2018). For creators, curiosity bonuses may introduce a second reference point against which they evaluate new ideas. Without curiosity bonuses, creators tend to judge new ideas against expectations formed by their past work, making departures feel risky or threatening. Curiosity bonuses instead prompt creators to not only ask whether an idea meets prior standards or audience expectations, but also how far it extends beyond their past portfolio—how bold, novel, or experimental it is relative to the work they have done before. By pairing curiosity bonuses with continued incentives for developing ideas within their established portfolio, organizations can calibrate the balance between exploration and exploitation rather than privileging one over the other.

Cultivating a Culture of Tolerance for Early Failure. Another organizational approach is to absorb the short-term costs that exploration generates (Manso, 2011). Creators are unlikely to explore if unsuccessful attempts are penalized, for example, through negative performance evaluations, or when they cannot afford to explore because economic pressures require them to achieve immediate success to remain active in their field. Under such conditions, creators quickly learn to avoid unfamiliar directions and narrow their subsequent efforts to proven ones. This is especially consequential early in creators' careers because their exploration prior to initial

success lays the foundation for their long-term chances of staying successful (Berg, 2022). Specifically, creators who build more diverse idea portfolios early on develop a broader set of resources, while audiences form broader expectations about the creators whose early work is varied. As environments change, creators with more varied early portfolios may have more opportunities to adjust than those who specialize early, even though early specialization may accelerate initial success.

Organizations can therefore support creators by reducing pressure to specialize early, for example, by providing fellowships, long-term compensation plans, and job security. Indeed, prior research has found that scientists funded by programs more tolerant of early failure and oriented toward long-term success publish more high-impact articles than those funded by programs with short review cycles (Azoulay et al., 2011), with similar findings in the contexts of R&D patenting and innovation among VC-funded start-ups (Lerner & Wulf, 2007; Tian & Wang, 2014). Yet these measures primarily address the material costs. Creators may still experience failure as threatening—interpersonally, when they fear harsh judgment, or intrapersonally, when failure feels threatening to their identity (Edmondson, 1999; Eskreis-Winkler & Fishbach, 2019). When organizations and managers frame failure as a common byproduct of exploration and reduce its costs, they may help make exploration something creators can afford both materially and psychologically.

Institutionalizing Counterfactual Feedback. Organizational feedback typically focuses on realized outcomes of work that creators have already pursued, such as customer responses, sales, or reviews. An alternative approach is to also provide counterfactual feedback (Bell, 1982; Loomes & Sugden, 1982)—that is, information about the performance of alternative directions, even if the creator did not pursue them. In contrast to standard reinforcement learning, in which

creators update their beliefs only based on chosen actions, counterfactual feedback exposes creators to information about the performance of "unchosen arms." For example, a film studio might show a director not only the box office results of their documentary but also how action films performed in the same period. Organizations can institutionalize this practice by building counterfactual comparisons into performance reviews, allowing creators to track whether unchosen alternatives are rising in appeal without bearing the risk of pursuing each one themselves.

Fostering Exploration Resources

Exploration Escrows. Another organizational approach addresses the resources generated by audience recognition. Resources are often tied to a creator's past portfolio, and even when they are not, creators and their organizations may hesitate to spend hard-earned resources on directions that might prove unsuccessful. To counter this, organizations can introduce an *exploration escrow* that redirects a fixed percentage of the commercial reward generated through successful ideas into a protected fund allocated to exploration. This is similar to ε-greedy strategies in reinforcement learning (Sutton & Barto, 2018), where a fixed percentage of actions is reserved for random exploration to prevent agents from exploiting best-known options too quickly. For example, an ε of 0.1 means that there is a 10% chance that an agent will explore randomly. Just as ε-greedy strategies protect a share of actions for exploration, an exploration escrow protects a share of creators' resources for exploratory efforts. Time-based policies like 3M's "15% time" and Google's "20% time" free up work time for exploration. Exploration escrows go further by tying a portion of exploration resources to success. That is, as creators succeed, they accumulate not only more resources overall, but specifically more

resources that must be used for exploration, responding to the narrowing effect of positive feedback.

Diversifying Feedback Sources. Organizations can support creators in widening the sources of feedback they are exposed to. One way to do so is by encouraging creators to pursue a second creative domain alongside their primary one—exploiting established resources in one domain while exploring novel ideas through side projects that are less exposed to audience pressures (O'Reilly & Tushman, 2013). For example, a novelist who also writes for the stage engages with literary critics when publishing novels and theater audiences and reviewers when showing plays. Each of these activities has a different audience with different evaluation criteria and different reward functions, reducing the likelihood that creators settle too quickly into a single path and supporting continued exploration.

It may be tempting for both creators and organizations to instrumentalize one domain for the other, treating it as a feeder, or to allow reputation built in one domain to spill over. If this occurs, the second creative domain can inherit expectations formed in the other domain, which recreates the same constraint. Thus, it may be necessary to shield the second domain, for example, by experimenting with new ideas outside the view of the established audiences, such as by publishing work under pseudonyms (Phillips & Kim, 2009). For example, Agatha Christie published romance novels under the pseudonym Mary Westmacott, which allowed her to experiment with a new genre outside the expectations associated with her reputation as a crime writer.

Organizations can also help diversify the feedback sources within one creative domain. As creators' social networks become more homogeneous over time, the feedback they receive becomes increasingly correlated. Audience members, mentors, and collaborators likely hold

similar expectations and converge in their evaluations (Burt, 2004; McPherson et al., 2001). They similarly evaluate work more favorably when it is consistent with the creator's prior portfolio (Hsu, 2006; Kim et al., 2025), and react skeptically to departures from it (Mueller et al., 2018). Organizations can address this by actively exposing creators to more diverse evaluators. For example, organizations may support cross-disciplinary collaborations, engagement with new audiences, or reverse-mentoring programs (Guillén & Kunze, 2019), in which experienced creators receive feedback from younger creators while providing feedback in return. A record label could share how listeners in an entirely different genre reacted to a musician's work. Exposure to diverse receivers of creative work will reduce homogeneity of feedback, helping sustain exploration.

Loosening the Feedback Loop

Feedback Frequency. The frequency of feedback provision can affect how quickly creators form associations between their actions and observed outcomes. Research on reinforcement schedules shows that continuous feedback produces faster learning (Skinner, 1963; Sutton & Barto, 2018), thereby lowering exploratory temperature. Contemporary feedback environments, with their real-time analytics (Kellogg et al., 2020), likely amplify this convergence toward familiar work. By contrast, introducing delays between idea generation and feedback can slow down reinforcement learning. Organizations can leverage this by configuring when and how often feedback is delivered, for example, by introducing buffers between a release and the reporting of performance metrics. Such delays also create space for creators to form their own evaluations of their work—whether they value it, enjoyed creating it, or feel proud of it—before exposure to audience reactions. Delayed feedback may therefore slow the decline in exploratory temperature and limit the extent to which audience feedback outweighs creators'

internal evaluations. Organizations can treat feedback timing as a design parameter of the feedback environment, tuning up or down how strongly creators converge on familiar work.

Feedback Granularity. Organizations can choose not only what to reward but how precisely they specify what succeeded. Reinforcement learning suggests that the more precisely feedback specifies the attributes underlying success, the more narrowly it determines what creators do next (Sutton & Barto, 2018). Much like an optimization algorithm that follows a precise signal converges quickly on a local peak while potentially overlooking higher peaks elsewhere, feedback that pinpoints the exact attributes behind an idea's success encourages creators to concentrate subsequent work around the same attributes. Importantly, digital platforms have made feedback increasingly granular. For example, e-readers track which sentences readers highlight, how fast they read different chapters, or at what page they abandon a book, providing authors with granular data at the sentence level. Similarly, a pop songwriter in Polak and Schaap (2025, p. 4781) describes how she tailors her music granularly in response to reception on music platforms: "I think it's the first thirty seconds [of a song], if those are listened to then it counts as a stream. […] I might think 'let's cut out the intro,' or 'oh, what if we do start with the chorus?'"

By contrast, feedback that abstracts away from concrete details and instead addresses more underlying principles leaves creators with greater room to explore. For instance, rather than learning that a specific scene or melody drove success, a creator who learns that audiences responded to the emotional arc of their work can pursue that principle across a wider range of directions. Organizations can adjust feedback granularity by abstracting upward—translating attribute-level data into feedback on the deeper principles at work—or by aggregating across

multiple audience signals before passing feedback along, so that idiosyncratic reactions wash out and broader patterns emerge.

Future Research Directions

Beyond testing our predictions empirically, especially the organizational warming tactics we propose, our theory opens several exciting directions for future research. First, our theorizing focuses on how exploratory temperature declines within individual creators, but creators may also learn vicariously, updating their expectations in response not only to feedback on their own work but also to the exploration and outcomes they observe in others. Indeed, recent research suggests that individuals may explore more when observing exploration in others (Danwitz & Von Helversen, 2025). Yet, observing the outcomes of others' exploration could have the opposite effect. When creators learn from other creators' choices, they may reduce their own exploration and exploit valued directions earlier (Toyokawa et al., 2014). At the same time, creators often observe only a sample of other creators' work—the ideas that reached audiences (Denrell, 2003)—whereas abandoned directions and the exploration behind their success remain less visible. Research could examine the conditions under which observing other creators' work encourages broader exploration, and when it instead prompts creators to narrow around seemingly proven directions.

Second, complementing our focus on individual creators in organizations, future research could extend the concept of exploratory temperature to teams. In organizations, creative work is often collective. Creators in teams generate ideas jointly (Harrison et al., 2022), yet feedback is often directed at the idea as a whole. This raises questions about whether positive feedback affects all team members' exploratory temperature equally, or mainly those who feel stronger ownership over the idea (Gray et al., 2020) or become publicly associated with it. Research could

also examine how exploratory temperature emerges across levels—when it remains an individual-level property of creators, when it becomes shared within teams, and when it aggregates into broader organizational expectations about which directions are worth investing in. Examining exploratory temperature across multiple levels could clarify whether the effects we describe stay contained within individuals or influence broader creative trajectories in teams and whole organizations.

Finally, future research could examine exploratory temperature in increasingly quantified and algorithmic feedback environments. Creators often bring their ideas to audiences through digital platforms, which may affect different components of the idea-feedback cycle. Feedback in digital environments tends to be immediate, frequent, and granular (Kellogg et al., 2020)—characteristics that, as we discussed, likely accelerate not only creators' learning but also the decline in their exploratory temperature. At the same time, algorithmic recommendation systems also influence which ideas are shown to audiences in the first place, so the reward a creator receives depends not only on audience preferences but also on what the platform makes visible (Fleder & Hosanagar, 2009). Digital platforms may therefore help creators reach audiences for novel ideas, while also prompting them to narrow around visible success or ideas that seem favored by the algorithm. It will be important for future research to examine how digital feedback environments can be designed to keep exploratory temperature warm, supporting both creators' continued exploration and the diversity of ideas in the field more broadly.

Implications for Practice

The central implication of our theory is that organizations should attend not only to the content of the feedback they provide or transmit to creators, but also to the design of the feedback environment: when, how, and how often feedback is conveyed. Feedback systems that

reward creators too narrowly for successful ideas may improve short-term performance but also weaken the exploration on which creators' and organizations' long-term adaptability depends. Because the mechanisms that lower creators' exploratory temperature can reinforce one another, isolated warming tactics may be insufficient. Organizations may need to combine multiple methods across resource allocation, feedback timing, incentive systems, and work design. The challenge for organizations is to celebrate creators' success without letting success define the boundaries of future creativity.

Conclusion

The question for organizations is not whether to give creators positive feedback, but how to structure the environment around it. Organizations that act only as conduits for audience signals risk accelerating the very narrowing dynamics we have described. Those that take a more active design role—reshaping reward signals, protecting exploration resources, and loosening the tightening feedback loop—can help creators stay adaptive in industries defined by change. As creative work grows more data-rich and feedback cycles accelerate, the need for deliberate environmental design will only intensify. More broadly, this chapter encourages positive organizational scholarship to see positive feedback for both its warmth and its long shadow, recognizing that the same feedback that sustains creators can quietly cool the very exploration that keeps creativity alive.

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