With New Eyes: The Recognition of Novelty and Novel Ideas

With New Eyes:
The recognition of novelty and novel ideas

Door een nieuwe bril:
De herkenning van nieuwigheden en nieuwe ideeën

Thesis

to obtain the degree of Doctor from the
Erasmus University Rotterdam
by command of the
rector magnificus

Prof. dr. R.C.M.E. Engels

and in accordance with the decision of the Doctorate Board.

The public defense shall be held on

Thursday the 10th of December 2020 at 11:30 hrs

by

Davide Bavato
born in Piombino Dese, Italy

Erasmus University Rotterdam

Doctoral committee:

Doctoral dissertation supervisor:	Prof. dr. D.A. Stam
Other members:	Prof. dr. J.C.M. van den Ende
	Prof. dr. L. Frederiksen
	Prof. dr. C. Mainemelis
Co-supervisor:	Cav. dr. S. Tasselli

Erasmus Research Institute of Management - ERIM
The joint research institute of the Rotterdam School of Management (RSM)
and the Erasmus School of Economics (ESE) at the Erasmus University Rotterdam
Internet: www.erim.eur.nl

ERIM Electronic Series Portal: repub.eur.nl

ERIM PhD Series in Research in Management, 500
ERIM reference number: EPS-2020-500-LIS
ISBN 978-90-5892-589-3

Cover image: ©Federica Del Proposto

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Certifications for the paper and the printing production process: Recycle, EU Ecolabel, FSC®C007225.
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Acknowledgments

While looking for an old draft, hoping to find some inspiration for the introduction of this thesis, I found a folder, dusted and forgotten in the depths of my hard disk drive. Inside, there was a wealth of writings: cryptic annotations, quixotic research projects, some surprisingly thoughtful insights, and plenty of naiveties. The oldest document of the bunch gave me especially reason to pause. A note from one of my first meetings with Daan, my supervisor, read: WHAT INNOVATION IS.

The note, quite concisely, was meant to remind me of my very first assignment as doctoral student: to define what innovation meant to me. The answer, quite prophetically, proved to be the underlying theme of my dissertation: innovation is what we come to perceive and socially define as such. This small discovery made me realize, if I needed any further reminder, of the debts I owe to the people who accompanied me and nudged me along the way, to help me find a path when I felt I had none, and to gain a sense of purpose, when the end of my doctoral journey was out of sight.

The first debt of gratitude is to my supervisors, Daan Stam and Stefano Tasselli. Daan, you showed me how a simple question and a word of encouragement can go a very long way. You empowered me to pursue my own research interests, always opening doors rather than setting expectations. And if the road to independence was not without setbacks, it was essential for my life journey and my professional identity, and it would have been impossible without your steady leadership and con-

tagious optimism. I genuinely look forward to our next walks and future projects. Stefano, it is hard to imagine how my PhD would have been without your mentorship. You took me under your wing, showed me the inner workings of academia, and never left my side. Working together was probably the most formative and maturing experiences of my doctoral studies. I hope we'll continue to share ideas, laughs, and the occasional trolling.

I also had the fortune of joining an extremely supportive and positive research environment. Much of the merit goes to Jan, my colleagues, and my fellow PhD students, who created an open atmosphere where I felt listened and encouraged to share (and take!) a honest opinion. The more time passes, the more I feel proud to have crossed paths with such a talented, good-humoured, and helpful bunch. Thank you for patiently dealing with my questions, quirks, and slips, and for always finding time for a chat, a joke, and a piece of advice. I am also grateful to the people who opened the doors of their organizations and trusted me and my co-authors with their time, experiences, and knowledge. Without their belief and interest in our work, my doctoral studies would have been little more than armchair speculation.

It is hard not to mention my family, my friends and all the people who I shared some fond memories with over the past five years, even if for a very short moment. But thinking back of the discussions, the travels, the drinks, the climbs, and the times together makes me feel too emotional, nostalgic and distant right now. I truly feel a debt of gratitude, because I received more than I could ever return, because you were part of my life, because you made these years unforgettable. Let's talk about the old good times together, preferably over a glass of wine. For now,

Grazie di cuore.

Davide Bavato
Zürich, July 2020

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Chapter 1

Tales of Novelty Overlooked and Novelty Misconstrued

A visit to the Mauritshuis is a journey through one of the most exciting periods of Dutch art (it is not called the Golden Age without reason). A walk through its halls puts you in direct contact with the protagonists and masterpieces of the era: Rembrandt's *Anatomy Lesson*, Vermeer's *Girl with a Pearl Earring*, Brueghel's and Rubens' *Garden of Eden* are just some of the artworks on display. Surprisingly, these works of art were for a time out shadowed by another piece of the collection: *De Stier* by Paulus Potter (fig. 1.1).

Have a look at the painting. If it instills in you no sense of awe, no Stendhal-style feeling of ecstasy, no profound impression of originality, well, you are not alone. A person idly pausing in the hall where *De Stier* is displayed would note that most visitors spare it only a distracted glance. The fact is not surprising: Paulus Potter is not a household name, the painting is not the subject of a bestselling novel (unlike two other fellow Mauritshuis' residents), and the rural landscape mingles inconspicuously with the other naturalistic artworks in the collection.

Figure 1.1: De Stier by Paulus Potter (1647).
Oil on canvas, 236 x 339 cm. Den Haag: Mauritshuis.

Still, if you looked into the history of the painting, you would discover that in fact *De Stier* was a significantly *new* artistic contribution. Whereas its style, technique, and theme were commonly featured in 17th century art, its monumental dimensions (literally) stood out. Potter's contemporaries marveled at the painting because a canvas of that size was typically reserved only to the worthiest subjects, be it religious scenes, aristocratic figures or historical events (Walsh, Buijsen, & Broos, 1994). The artist's decision to magnify a pastoral scene openly defied the established hierarchy of genres: it raised an unassuming animal to the same size, and thus stature, of heroes, royalties, and divinities. It took decades, with the likes of Canaletto and Turner, before landscape painting gained full prominence (and scale) as a genre.

And even now, if we looked for the appropriate audience, we could argue that *De Stier* is still a remarkably new artefact. As Mark Tansey provocatively questioned in his artwork *The Innocent Eye Test* (fig. 1.2), a bovine audience would certainly be able to see Potter's bull, but would it recognize the animal as a familiar member of its species? Or would it rather perceive it as an odd, new artefact? Likewise, if we asked a livestock expert, who is similarly attuned to the anatomy of cattle, she would probably tell us that she has never seen the like of it: in drawing the features of the bull, the Dutch artist combined sketches of six distinct animals, widely differing in age, thus essentially creating a new specimen (Chwalkowski, 2016: 424).

To be clear, I do not intend to persuade you of the novelty nor of the artistic merit of this old painting. On the contrary, I wish to juxtapose our (lack of) response to *De Stier* with the historical and hypothetical reactions of other audiences, because I believe it is a powerful and personally significant illustration of the nature of novelty and its recognition, a theme which is at the heart of this dissertation.

First of all, *De Stier* offers a lesson on the dual nature of novelty. On the one hand, novelty has a substantive, objective basis. Any event, behavior, artefact or idea that is the first of its kind can be considered new, regardless of whether we are discussing the first life-size portrait of a bull or the first step on the moon. The fact

Figure 1.2: The Innocent Eye Test by Mark Tansey (1981).
Oil on canvas, 198.1 x 304.8 cm. The Metropolitan Museum of Art, New York.

that nothing alike exists or has ever occurred before is the testimony of its novelty. Of course, novelty comes under different forms and magnitudes – after all, there is a first time for everything. But the argument still stands: every "first" introduces an actual variation, a new alternative to the existing realm of possibilities (Campbell, 1960).

On the other hand, novelty is also something we subjectively experience: the awareness of a stimulus defying our expectations (Knight, 1996), the sudden and conscious feeling of understanding (Poincaré, 1913), the arousal resulting from forming a new mental connection (Schilling, 2005), or changing perspective and way of seeing (Yang & Loewenstein, 2019), the surprise and queerness when failing to make sense of something (Barber & Fox, 1958; Kahneman & Miller, 1986), the explicit acknowledgment of something as innovative or groundbreaking (Wijnberg & Gemser, 2000). Independently of whether *De Stier* was truly the first of its kind, it succeeded in provoking some of these reactions in its contemporaries (Walsh et al., 1994).

The distinction between the substantive and experiential character of novelty is more than an abstract sophism. It holds practical significance, which becomes especially plain every time substance and experience contradict each other. New theories that advanced our knowledge and inspired entire streams of research were originally rejected on the ground of being considered trivial or mere derivations of prior work (Gans & Shepherd, 2016). Technological inventions that provided a demonstrably new recombination of existing knowledge were not granted a patent because the appointed examiner judged them to be obvious (Teitelbaum & Cohen, 2019). New artworks that departed from the dominant artistic canons and scientific discoveries that defied available explanations were treated as oddities or inconsequential abnormalities (Barber& Fox, 1958; Sgourev, 2013)

Cases of substantively new ideas not being perceived as such represent only one part of the story. People can perceive novelty in what is in fact old, obvious, familiar

and already known. History is full of instances of 'new' discoveries – unexplored lands, unknown species, original concepts and theories – which were later disputed or proved to be otherwise (Bryson, 2003). In fact, the most powerful evidence of the disassociation between substantive and experiential side of novelty comes from our personal experience, when we look at an idea we previously judged as trivial under a new light, or idiomatically discount something as "old wine in a new bottle".

The merit of this lesson does not lie in its originality – others already observed that novelty is in the eye of the beholder, and it can be treated in both objective and subjective terms (Adarves-Yorno, Postmes, & Haslam, 2006; Amabile, 1982; Rogers, 1983; Simonton, 1998). Instead, the dichotomy and the related stories of novelty overlooked, and novelty misconstrued are instrumental to appreciate the centrality of the recognition of novelty and its study in the context of creativity and innovation.

Whereas substantive novelty introduces an opportunity for change, it is the experience of novelty that permits innovation to thrive and flourish. New knowledge recombinations are unlikely to produce lasting effects unless selectively retained by the social system (Campbell, 1960; Csikszentmihalyi, 1999). New information would not trigger innovation if organizations were unable to recognize it and assimilate it (Cohen & Levinthal, 1990). It is the subjective experience of novelty, rather than its objective counterpart, that determines how people respond to an idea, practice or artefact, and whether they will accept it and use it (Rogers, 1983).

Understanding the basis of recognition of novelty should therefore offer the key to bridge the substantive and the experiential, the objective and the subjective sides of novelty. Knowing why an idea is more likely to be recognized as new than another, or when people are more predisposed to recognize and appreciate its originality would help ideators and inventors to reduce the risks associated with their craft (Adarves-Yorno et al., 2006; Trapido, 2015; Zhou, Wang, Song, & Wu, 2017). Realizing the cognitive biases and social influences that affect perceptions

and judgments of novelty could serve managers and decision-makers to detect and respond more timely to emerging threats and covert opportunities (Maula, Keil, & Zahra, 2013). More in general, studying the recognition of novelty can provide invaluable insights in the ability of an individual, organization, or society to adapt and innovate by allocating attention and resources to new endeavors (Boudreau, Guinan, Lakhani, & Riedl, 2016).

Still, the dominant narrative surrounding innovation is one of genesis rather than recognition. The emphasis is on the individual genius or creative talent, the generation of ideas, the personal traits and contextual factors that unleash the creative potential of people (Anderson, Potočnik, & Zhou, 2014; Shalley & Gilson, 2004). This comes at the expense of the beholder, the evaluation and selection of ideas, the ensemble of cognitive and social processes that lead a person to recognize something as new and worth pursuing.

The narrative is endemic and misleading. A particularly instructive exercise is to ask someone the name of the most innovative person they can think of, or which symbol they would choose to depict innovation. When I ask my students, their answers unfailingly bring to the fore the collective image of a man who is the epitome of ingenuity and visionary leadership (Elon Musk recently surpassed Steve Jobs in popularity), with the *eureka*, the sudden moment of illumination, as the origin of his journey (the light bulb being the cliché image).

At this moment of the class, I usually share two anecdotes. The first is the famed visit of Steve Jobs at Xerox PARC, back then a hot-spot for computer science. As the story goes, Jobs discovered at Xerox several innovations that would later become defining features of the Macintosh, including the mouse and elements of its graphic user interface. The second and related anecdote is about the later altercation between Jobs and Bill Gates – with the former accusing Microsoft's founder of stealing Apple's ideas. Gates's allegedly answered to the accusation with these words (Isaacson, 2011: 178):

> *Well, Steve, I think there's more than one way of looking at it. I think it's more like we both had this rich neighbor named Xerox and I broke into his house to steal the TV set and found out that you had already stolen it.*

These accounts (or better tales, since their historical accuracy has been doubted), are instructive because they present a clear alternative to the dominant narrative depicting innovation as the result of creativity and generation. These modern equivalents of the Promethean myth[1] show that great innovations started with an act of discovery and (mis)appropriation. At their origin was the human ability to recognize and act upon novelty.

The purpose of the present dissertation is to bring to the front stage this important topic of research and contribute to the scholarly conversation on creativity and innovation by consolidating, critically reviewing and hopefully advancing existing evidence on the recognition of novelty. In the thesis I will specifically discuss the *perceptual* recognition of novelty – the cognitive detection of substantive novelty in a target, be it an artefact, behavior, or idea. In this acceptation of the term, recognition implies that a person not only sees or is exposed to novelty, but she identifies and becomes aware of it. Here, the underlying assumption is that novelty is an intrinsic property of a target, and thus *independent* from the beholder, and her *evaluation*. It points to the importance of understanding accuracy in the recognition of novelty and originality (Rietzschel, Nijstad, & Stroebe, 2006), the cognitive processes and individual differences in the formation of novelty and creativity perceptions (Elsbach & Kramer, 2003; Zhou et al., 2017), and systematic biases in evaluating new ideas, products or ventures (Chai & Menon, 2019; Criscuolo, Dahlander, Grohsjean, & Salter, 2017; Fuchs, Sting, Schlickel, & Alexy, 2019).

[1] One version of this ancient Greek myth narrates that fire was donated to mankind by Prometheus, who stole it from the workshop of Hephaestus, god of metallurgy, craftmanship and technology.

At the same time, I will also touch upon the *performative* recognition of novelty – the social attribution of 'newness' or 'novelty' to a target. Broadly speaking, recognizing novelty means that a person, organization, or field affirms, often through a symbolic act, that an idea is novel and unique (Wilf, 2014; Cattani, Falchetti, & Ferriani, 2020). This acceptation starkly differs from the former for its implications: the novelty of an idea is *dependent* on the judgment of the beholders, and their *valuation*. Consequently, it becomes interesting to understand the social processes and conditions under which an idea and its ideator gain acknowledgment and legitimacy for its novelty (Cattani, Ferriani, & Lanza, 2017; Csikszentmihalyi, 1999; Sgourev & Althuizen, 2014; Sorah & Godart, 2018; Trapido, 2015; Wijnberg & Gemser, 2000). The choice and ambiguous use of the word recognition in this thesis is intentional. It aims to expose the distinct ontological premises (the former positivist and the latter constructivist) that characterize this line of scientific research, but also to highlight the opportunity for integrative efforts and a unitary, socio-cognitive perspective, as I will further express in the following paragraphs.

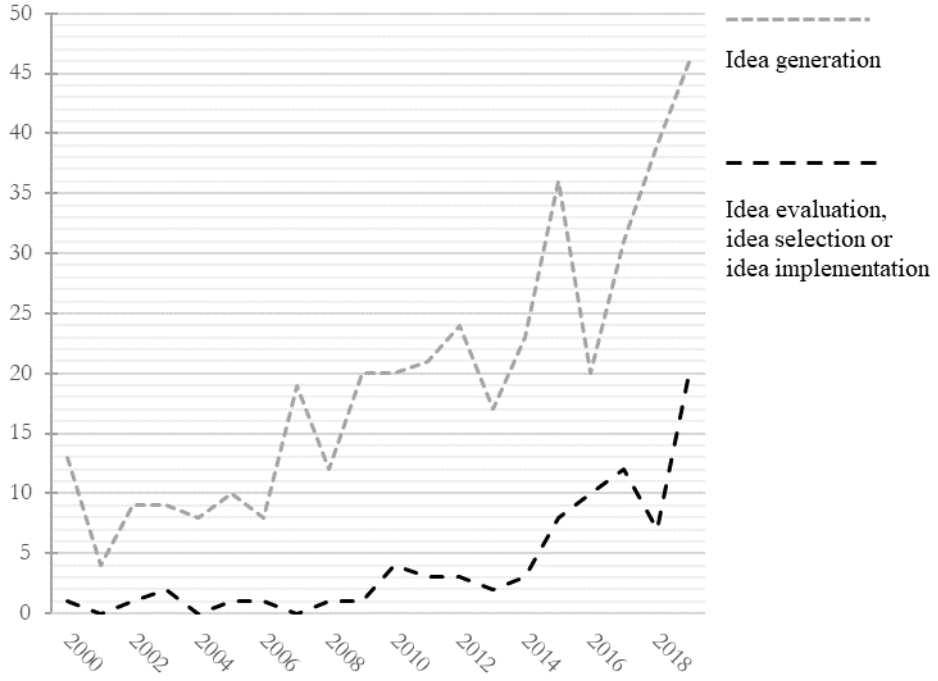
Dissertation overview

The core of the dissertation consists of two studies that address both social and cognitive perspectives on the study of novelty and its recognition.

The first study surveys scientific advancements made on the **'receiving side of creativity'**, a topic which broadly encompasses the individual and collective responses to novel and creative targets, including ideas, products, people, and ventures. The choice of this conceptual umbrella is motivated by the objective to cover, and when possible to integrate findings on the intimately related concepts of creativity and novelty. It also allows to take a more comprehensive view on the broad spectrum of behavioral and cognitive reactions that researches have studied across scientific disciplines and fields of inquiry.

The rationale behind the study is that management research has mainly attended to the *sources* of new and useful ideas rather than to their *audiences*. The subjectivity of novelty and usefulness and its antecedents have been often downplayed (Adarves-Yorno et al., 2006; George, 2007), due to a more contingent focus on the generation of ideas, rather than on their evaluation, selection and implementation (fig 1.3). And even when subjectivity in the perception and evaluation of creativity has been studied, it was often for its instrumental role in operationalizing the ideation performance of individuals, teams and organizations, instead of appreciating it as a variable of theoretical interest.

Figure 1.3: Research on the Generation and Evaluation of Ideas
Number of articles published in business or management journals that included in the abstract the keywords "idea generation", "idea evaluation", "idea selection" or "idea implementation" in SCOPUS database.



This is not to say that the topic has been completely neglected. Original work has been conducted in the past century on the sociology of science (Davis, 1971; Kuhn, 1970), the adoption and diffusion of innovations (Hirschman, 1980; Katz & Allen, 1982; Rogers, 1983), individual predispositions towards novelty seeking and openness to experience (Rogers, 1954), and the social psychology of creativity judgments (Amabile, 1982; Katz & Giacommelli, 1982). A recent vein of research has also revived this field of study. Recent investigations addressed the cognitive biases against creativity and novelty (Mueller, Melwani, & Goncalo, 2012; Zhou et al., 2017), the collective forms of novelty evaluation resource allocation, and creativity attributions (Boudreau et al., 2016; Criscuolo et al., 2017; Harvey & Kou, 2013; Koppman, 2014), and the social determinants of novelty recognition and creativity judgments (Cattani et al., 2017; Sorah & Godart, 2018; Trapido, 2015; Wijnberg & Gemser, 2000). Yet management interest has remained limited compared to other social sciences, and each line of research has yet to fully benefit from advancements made in others due to interdisciplinary boundaries and idiosyncrasies in terminology, methodology, and theoretical perspectives.

The contribution of the study thus lies in its effort to review and consolidate four decades of findings scattered across disparate fields and research communities. It provides a simple framework to understand the factors shaping how people respond to creativity: characteristics of the creative target, its ideator, audience and context. It offers also a critical analysis of the main limitations of the studies reviewed with regards to conceptual clarity, methodological precision, and theoretical integration. Finally, it discusses unresolved questions and emerging opportunities for future research, especially concerning cross-disciplinary fertilization and intersecting work on the creating and receiving side of creativity.

The second study empirically investigates organizations' propensity to bestow **recognition to controversial ideas**. The study builds on two simple premises. The first one is that people differ in the way they perceive and evaluate new ideas – differences that are rooted in the subjectivity of novelty recognition introduced

in this chapter, and explainable through the natural variability in characteristics of the idea, ideator, audience, and evaluative context that I am going to discuss in the second chapter. This premise departs from the widely held assumption that appropriate observers should be able to consensually determine the novelty and usefulness of an idea (Amabile, 1982)[2]; an assumption that holds practical relevance, given the widespread utilization of subjective ratings to measure the creative performance of employees and groups (Hennessey, Amabile, & Mueller, 2011)[3], but at odds with empirical evidence from other disciplinary fields (Cicchetti, 1991; Marsh, Jayasinghe, & Bond, 2008).

The second premise is that certain ideas are disproportionately subject to discording evaluations, and this controversy is a potential marker of their likeliness of earning recognition. This insight originates from the observation of anecdotal evidence and historical accounts of scientific discovery, artistic achievement, and commercial endeavors. *On the Origin of Species* triggered heated, and to a certain extent still ongoing discussions on its validity (Bryson, 2003). *Der fliegende Holländer* divided the critics on its novelty, being regarded as either genre-defining or tasteless and trivial (Grey, 2000: 68); *Priest and Nun* iconic advertisement similarly polarized consumers and critics when it was released. The disagreement surrounding

[2] As eloquently stated by Amabile in her seminal paper on the social psychology of creativity: "A product or response is creative to the extent that appropriate observers independently agree it is creative. Appropriate observers are those familiar with the domain in which the product was created or the response articulated.[…] although creativity in a product may be difficult to characterize in terms of specific features, it is something that people can recognize when they see it" (1982: 1001).

[3] The consensual assumption was theoretically and methodologically significant. In a truly socio-cognitive spirit, it proposed that novelty and usefulness are something that certain people can perceptually recognize, and at the same time it acknowledged that creativity recognition holds performative value. This justified and possibly encouraged the widespread utilization of subjective ratings to measure the creative performance of employees and groups (Hennessey et al., 2011). Ironically, it may also have stifled the earlier development of a science of novelty and its recognition. As later stated in the same paper (1982: 1001): "It may indeed be possible to identify particular objective features of products that correlate with subjective judgments of creativity or to analyze the nature of subjective correlates of those judgments, but this [*consensual, nda*] definition makes it unnecessary to attempt to specify those objective features or the characteristics of those subjective reactions beforehand."

these ideas is hardly dismissable as mere noise, since it appears to indicate underlying differences in opinions and interests (Lee, 2012), which in turn might inform us on an ideas' tendency to attract heterogeneous attention, stimulate debate, and to be sanctioned as a valuable and original contribution.

The study further investigates these insights in the context of idea tournaments. An idea tournament represents a bounded and well-defined arena where ideas and their creators compete against one another to earn financial and symbolic awards, typically bestowed by an organization or another institution searching for new solutions and suggestions (Bayus, 2013; Boudreau & Lakhani, 2013). An important feature of these tournaments is that participants can partake in both the generation of ideas, but also in their evaluation: their comments and ratings are useful for organizations, since they can inform their awarding decisions; and at the same time they provide a valuable field setting to study the relation between controversy and recognition.

The study specifically advances the theoretical arguments that disagreement, especially when associated with idiosyncratic biases and other potential sources of measurement error, should put an idea at a higher risk of being overlooked by an organization. Vice versa, when disagreement occurs within an audience that displays dissimilar interests, an idea is likely to attract more attention, debate and to ultimately have a better probability of being awarded. These hypotheses are tested by analysing archival data on 26'480 ideas submitted across 156 distinct tournaments and information on the evaluation activities of its participants, who cumulatively shared over 900'000 idea evaluations.

The intended contribution is manifold. The study aims to highlight the value of treating disagreement in idea evaluations as a variable of theoretical interest, rather than as a mere statistical prerequisite for the operationalization of creativity and innovation performances. The level of disagreement surrounding an idea can help to predict an idea's chances to access critical resources, and play a role in determining

which ideas an organization will recognize as new and valuable. In addition, the study reconciles alternative conceptualization of disagreement that characterize extant research traditions. Disagreement can represent both noise and plurality of interests, and accounting for its ambivalent nature can lead to very different predictions on whether an idea is worth of recognition.

Authorship disclaimer

In writing this dissertation I benefited from the generous feedback and productive collaboration of numerous colleagues and experts. Their insights, dedication and guidance have been instrumental to the betterment of this work and its writer. Specifically, I would like to acknowledge the following contributions.

In the first introductory chapter, I incorporated the feedback and comments from my supervisors and members of the doctoral committee. The text is otherwise the result of my own reflections, extracts from unpublished writings, and I wrote it independently.

The second chapter is the result of a joint project with Jing Zhou, Xiaoye May Wang, Stefano Tasselli, and Junfeng Wu. The collaboration originated from a research proposal Stefano and I wrote on the cognitive and social foundations of creativity perceptions, and a research proposal developed by Jing and Xiaoye for a multidisciplinary review on the evaluation of creativity. The overarching framework of the chapter, the introduction, and the core of the review sections were developed by Jing, Xiaoye, and Junfeng. I contributed to the review of studies from adjacent streams of literature, and to the core of the discussion. All authors provided input on the full manuscript and actively participated in its revision. We also benefited from the feedback of Luis Martins (the Editor), the anonymous reviewers, and participants to a seminar at RSM. A version of this chapter is published in the *Journal of Management* (Zhou, Wang, Bavato, Tasselli, & Wu, 2019). Jing is the

first author, whereas Xiaoye, Stefano, Junfeng and I contributed equally and share second authorship.

The third chapter is the result of a collaboration with Mark Boons, Daan Stam, Inga Hoever and Christian Fieseler. I am the first and lead author of the manuscript. The original idea, research question and hypotheses are the product of my own personal reflections. Daan, Mark and Inga helped me to further develop the theoretical framing and foundation of the paper. Christian conducted the data collection, as part of an EU project on the sharing economy. I performed the analysis and wrote the manuscript. In developing the project, we received feedback from numerous people. I am especially thankful for the critical insights on earlier versions of this paper from seminar participants and colleagues at Aarhus University, EPFL, ETH, RSM and TUM. I am also in debt with the convenors and attendees of the AOM Symposium 'Nurturing Novelty: Understanding, Developing, and Evaluating Novel Ideas' and EGOS Sub-track 'The Emergence, Evaluation, and Legitimation of Novelty and Novel Ideas'.

The fourth and final chapter was written independently, and I am the sole author. Once again, I benefited from the comments and wisdom of my supervisors and the doctoral committee.

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Chapter 2

The Receiving Side of Creativity: A Multidisciplinary Review[1]

People working across all functional areas and job levels have the potential to be creative (Anderson et al., 2014; Zhou & Hoever, 2014), and managers should harness their creativity. Because of this significant need, creativity research has grown exponentially, advancing our knowledge of the factors that affect creative idea generation and employee creativity (Anderson et al., 2014). Yet this knowledge rests on the largely untested assumption that creativity can enhance organizational performance. In fact, a recent study suggests that higher creativity does not necessarily relate to better performance (Gong, Zhou, & Chang, 2013), raising the need to understand what happens to a creative idea after its generation.

Investigating how people receive creativity has both scientific and practical value. Scientifically, it is crucial to develop a systematic understanding of the personal and

[1] A version of this chapter is published in the *Journal of Management*. See: Zhou, J., Wang, X. M., Bavato, D., Tasselli, S., & Wu, J. (2019). Understanding the receiving side of creativity: A multidisciplinary review and implications for management research. Journal of Management, 45(6), 2570-2595.

contextual factors influencing the perception, evaluation and eventual adoption of creative ideas. Practically, though some workers might generate and realize new ideas by themselves, the implementation of new ideas is often a social process that involves the support, collaboration and sponsorship from other people. As such, only after a creative idea is recognized and positively evaluated by others, can the idea add value to the organization.

Surprisingly, limited research has been conducted in the field of management on the receiving side of creativity, especially compared to other business fields and social sciences, such as education, entrepreneurship, marketing, psychology, and sociology. In this paper, we provide a multidisciplinary review of research on the receiving side of creativity, and show that there is a tremendous opportunity for management scholars to study this topic. To the best of our knowledge, no published paper has systematically reviewed research into the perception and evaluation of creativity. We hope this review will inform and inspire management inquiry in this important field of study.

Background

An Organizing Framework

We review and discuss research on the receiving side of creativity, or more simply, *creativity receiving*. Creativity receiving broadly refers to the ensemble of individual or group responses to creative targets, including creative ideas, products, and people. Because this is the first review on the topic, we applied the concept of creativity receiving inclusively. We covered constructs that are intimately related to creativity, such as novelty and usefulness, to reveal and, when possible, to integrate complementary lines of inquiry. We also treated creativity receiving as a non-homogeneous construct. People engage in various patterns of cognitive, behavioral, and social responses when confronted with creativity. Several constructs have been used in prior research to try to capture the different facets of this phenomenon, yet with-

out sufficiently clarifying their theoretical distinctions. To help readers navigate through this literature, we present here the main constructs covered in the review together with a *prima facie* definition. In the Discussion section, we further address definitional issues, as well as research opportunities that stem from the complex and multifaceted nature of creativity receiving.

The terms *creativity perception* and *creativity recognition*, often used interchangeably, refer to the extent to which individuals or groups perceive a target as novel or creative (Mueller, Melwani, Loewenstein, & Deal, 2018; Zhou, Wang, Song, & Wu, 2017). They are similar to the concept of *creativity judgment*, which usually refers to whether individuals categorize a target as creative (Elsbach & Kramer, 2003; Mueller, Wakslak, & Krishnan, 2014). *Creativity forecasting* relates to the prediction of whether a creative product, idea, or activity will deliver its intended effect at a future time (Berg, 2016). *Evaluation accuracy* indicates whether a perception or judgment of a target's creativity is actually correct, for example based on a comparison with experts' perceptions or judgments (Silvia, 2008; Herman & Reiter-Palmon, 2011). This group of evaluative responses, which fall within the broader concept of *creativity evaluation*, precedes a second group of adoptive responses, including creativity adoption and creativity implementation. *Creativity adoption* is related to the acceptance or intention to accept a creative target (e.g., intention to purchase a creative product, Rubera, Ordanini, & Griffith, 2011). *Creativity implementation* refers to the extent to which individuals or groups realize or put to use a creative idea (Axtell et al., 2000). It encompasses both behaviors and behavioral intentions.

We organize findings on these different facets of creativity receiving by looking at the type of factors influencing them. Specifically, we divide studies into several subsections that focus on characteristics of the target, the creator, the perceiver, and the context, respectively. This framework delineates the intuitive building blocks of the receiving side of creativity. The structure is also consistent with the bulk of extant research, which tends to emphasize the independent effect of these four types of

factors on creativity receiving. We conclude the review by analyzing limitations in extant work, suggesting future research directions, and bringing attention to the implications of this body of knowledge for practitioners.

Review Strategy

In order to accelerate management research in this area, we had to survey broadly and learn from other fields. We thus searched electronic databases covering academic journals from a wide range of scientific disciplines (e.g., Google Scholar, ProQuest, PsycINFO, Scopus, and socINDEX). We used combinations of keywords capturing a comprehensive set of creative targets (e.g., new or creative idea, product, venture, and person) and responses to creativity (e.g., perception, recognition, evaluation, judgment, forecasting, selection, adoption, and implementation). We also conducted a complementary backward reference search to avoid exclusion of seminal papers or important cross-references. We limited our search to papers published between 1970 and 2018. We obtained an initial broad set of 8'346 papers from over 400 journals, representing several business and social science fields, including anthropology, education, entrepreneurship, information systems, management, marketing, neuroscience, psychology, sociology, and interdisciplinary sub-fields, such as cross-cultural psychology.

After careful examination, only a fraction of the initial set of papers was deemed pertinent. We used several criteria to assess papers' relevance. First, they need to investigate the receiving side of creativity. A large share of the papers found instead studied the antecedents of creativity, and dealt with creativity evaluation merely for operationalization purposes. We excluded these papers. Second, we focused on scientific research, and thus omitted opinion pieces intended for practitioners, speculative writings lacking scientific rigor, teaching cases, and papers intended to attract prospective consulting clients. Third, we focused on research with clear implications for creativity receiving at the individual- or group-level. Research on innovation adoption and implementation at the firm-, industry-, or country-level

was excluded. Fourth, we selected papers whose findings are generalizable beyond a single domain or segment of the population. Papers on non-adult population or factors idiosyncratic to a certain industry were excluded. Finally, although we prefer to select papers published in leading journals as their review processes tend to lead them to accept papers that provide valid findings, because this is the first review on creativity receiving, we also included papers published in lower-tier journals, if they addressed unique research questions and did not present any evident validity issues. This process led us to focus on 107 papers, which we review and discuss in the following sections.

Review of Empirical Studies

Target's characteristics

Ideas, products, and people are all potential targets of creativity evaluation. In organizations, managers and employees evaluate new ideas or technologies; in the marketplace, consumers judge new products or services; in educational institutions and personnel departments, instructors and recruiters need to recognize creative abilities. The common denominator across these settings is the role that target's characteristics play in shaping how people respond to creativity. Below we review studies on these characteristics, organized by type of targets.

When the target is a stimulus. Neuroscience and cognitive studies revealed that novelty triggers unique neurological responses compared to other salient dimensions of a stimulus, such as rarity, task relevance and emotional valence (Bunzeck & Düzel, 2006), and it has important effects on individuals' attention and perception (Schomaker & Meeter, 2015). Research on the effect of creativity in advertisement echoes these findings. A study testing the effect of advertisement originality and familiarity showed that originality improved attention to the advertised brand; in turn, attention was positively related to accuracy in brand recognition (Pieters, Warlop, & Wedel, 2002). Advertisements that were judged as both original

and familiar were most likely to capture attention (Pieters et al., 2002). Another study showed that the interaction between advertisement divergence and relevance positively related to consumer creativity perceptions, which in turn mediated the effect on consumer responses (e.g., attention, motivation and depth of processing) but not on purchase intentions (Smith, MacKenzie, Yang, Buchholz, & Darley, 2007). These findings highlight the similar role that novelty, originality, and divergence play for detecting, processing, and remembering a stimulus, and raise the importance of conceptually demarcating creativity from related dimensions of stimulus salience.

When the target is an idea. Contrary to the general portrayal of creativity as a desirable attribute of an idea, empirical studies repeatedly observed a preference for practicality and impact, at the expenses of originality. Blair and Mumford (2007) found that preference was given to ideas that were easy to understand, conforming to prevalent social norms, and beneficial for many people. By contrast, risky, time-consuming, and original ideas tended to be disregarded. The bias against creative ideas appears to be covert, and driven by a motivation to reduce uncertainty. Mueller, Melwani, and Goncalo (2012) reported that inducing feelings of uncertainty affected implicit preference for practicality over creativity (measured via response times), but not explicit preference (i.e., self-reported ratings). These results were only partially corroborated by management research on the evaluation of new ideas, which attests to a curvilinear relation between idea novelty and audiences' evaluation. Securities analysts who introduced in their reports a moderate number of new framings were more likely to be recognized as best analysts of the year by investors (Giorgi & Weber, 2015). Researchers including a moderate amount of new keyword combinations in their grant proposals were more likely to have the proposals positively evaluated by reviewers (Boudreau, Guinan, Lakhani, & Riedl, 2016). Papers balancing both conventional and novel knowledge tended to be cited more; interestingly, the probability to become a hit (95th percentile of citation distribution) was almost twice as high for papers with highly conventional and

highly novel combinations of prior literature (Uzzi, Mukherjee, Stringer, & Jones, 2013). Although consistent with the aforementioned curvilinear effects, this finding gives a more nuanced view on novelty evaluation. Highly novel insights can achieve appreciation if they are grounded in strongly familiar knowledge. Future research may thus benefit from decoupling novelty and similarity, and reconsidering these two concepts in their duality, rather than as antagonistic factors.

When the target is a finished product. The evaluation or adoption of new products is an important topic in marketing and management information systems. Marketing studies showed that newness is a product characteristic that strongly affects consumers' evaluation. Hoeffler (2003) differentiated between two categories of new products: the "really new products" (RNPs) and the "incrementally new products" (INPs). The author observed that people displayed a higher degree of uncertainty when estimating the usefulness of RNPs compared to INPs, and evaluated RNPs less favorably than INPs. Alexander, Lynch, and Wang (2008) reported that consumers perceived a higher level of newness for RNPs than INPs, but expressed lower purchase intentions for RNPs than INPs. Because consumers experience challenges in understanding RNPs, they often rely on situational cues to form expectations and preferences. Moreau, Markman, and Lehmann (2001) found that when multiple product categories were available, consumers used the first plausible category label to evaluate a new product, suggesting the importance of framing for evaluating new products. In addition to being affected by situational cues, individuals also ponder over the usefulness of a new target and the actual effort that the adoption would require. Research into the adoption of new management information systems found that effort expectancy, performance expectancy, and social influence were positively related to intention to use a new IT system, and intention to use was positively related to actual usage behavior (Venkatesh, Morris, Davis, & Davis, 2003).

When the target is a person. To promote creativity and innovation, organizations need to identify creative talents. Thus, individuals may also be the target of creativity evaluation. Rossman and Gollob (1975) examined what type of information perceivers need to discriminate accurately between a target's creativity and intelligence. With information on a person's abilities, perceivers were not able to discriminate between creativity and intelligence – the two types of evaluation shared 84% variance. When perceivers were given information on a fuller set of characteristics (e.g., personality, biographic data), the shared variance dropped to 51%, suggesting that the perceivers could adequately separate creativity from intelligence. Also a target person's behaviors may influence perceivers' creativity evaluation. Katz and Thompson (1993) found that the more a fictional person displayed prototypically creative acts, the more that person was evaluated as creative. Departing from the aforementioned approach of asking participants to evaluate the creativity of fictional persons, Kandler and co-authors (2016) used a multiple-rater approach with different sources of data (self-reports, peer evaluations, judges' ratings, and creative test scores). They found that raters could differentiate between creative and noncreative people, and that peers' and self-evaluations of creativity tended to converge. Prior work also started to explore the potential cost of being seen as creative. Experimental and field studies showed that individuals presenting novel and useful solutions were perceived as having less leadership potential than those presenting useful solutions. Only when a charismatic leadership prototype was activated, individuals presenting new and useful ideas were perceived as having higher leadership potential (Mueller, Goncalo, & Kamdar, 2011).

Summary. Research on target's characteristics has found some consistent results. Evidence from marketing, management information systems, and management converges in showing that perceivers are often reluctant to render favorable evaluation to highly novel ideas or products (Boudreau et al., 2016; Hoeffler, 2003). Management and psychology studies yielded convergent results, showing that it is possible to differentiate creative from noncreative targets, and creativity from

related characteristics (Katz & Thompson, 1993; Rossman & Gollob, 1975). This multidisciplinary review also uncovered significant knowledge gaps. Across all types of targets reviewed, the evaluation of creativity has been rarely examined in parallel to its underlying dimensions, novelty and usefulness. Few studies examined what happens to persons perceived as creative: will they be bestowed leadership positions or resources for their creative ideas?

Creator's Characteristics

When evaluating a new idea, product, or venture, perceivers may consider personal characteristics of the creator. We review relevant studies in the following paragraphs.

Biographic data. Research from entrepreneurship, management, and psychology showed that while evaluating the creativity of an idea or product, perceivers considered its creator's biographic information. Proudfoot, Kay, and Koval (2015) reasoned that a "masculinized" orientation of maintaining distinctiveness and autonomy corresponds to people's understanding of creative thinking; perceivers should thus ascribe greater creativity to men than to women. Results supported their reasoning. Luksyte, Unsworth, and Avery (2018) found that people stereotypically associated innovative behaviors more with men than with women and men who engaged in innovative behaviors received more favorable performance evaluation than women. The speaking accent of a creator is another biographic cue that perceivers may attend to when evaluating new or creative ideas. Research on entrepreneurial pitch competitions held in the U. S. showed that after controlling for race, age, and gender, entrepreneurs with a non-native English accent were less likely to receive investments for their new ventures (Huang, Frideger, & Pearce, 2013). The bias against non-native speakers was explained by perceptions of lower political skill (i.e., the ability to exert interpersonal influence; Huang et al., 2013).

The effect of the creator's biographic data can be contingent on situational factors. Lebuda and Karwowski (2013) reported that the effect of authors' gender on creativ-

ity evaluation depended on the focal domain. Whereas scientific works authored by men tended to be evaluated as more creative than those by women, in poem writing and painting, no significant difference was observed between male and female authors. The relevance of the creator's biographic data may also depend on the background of the perceivers. While evaluating new venture proposals, experienced investors were less swayed than less experienced investors by the academic degrees of start-up team members (Franke, Gruber, Harhoff, & Henkel, 2008). An additional finding is the existence of a general preference for creators who share similar characteristics. Venture capitalists showed a preference for new opportunities proposed by entrepreneurs who displayed decision-making processes similar to their own (Murnieks, Haynie, Wiltbank, & Harting, 2011). Franke, Gruber, Harhoff, and Henkel (2006) found that venture capitalists preferred start-up teams with similar training and professional experiences. The same effect was not replicated for similarity in age, education, and leadership experience, suggesting that only certain features are relevant for triggering the proposed homophilous bias (Franke et al., 2006). Thus, research on creativity evaluation may move beyond examining creators' characteristics in isolation, and look at how the creator-perceiver dyad and its interpersonal features shape creativity evaluation.

Personality traits. Researchers investigated the possibility that the creator's personality may affect perceived creativity, but not actual creativity of a target. They found that the more people scored high in a standardized test of narcissism, the more they were likely to rate their own ideas as creative, even though these ideas were no more creative than average when blind-coded (Goncalo, Flynn, & Kim, 2010). Despite the lack of a significant relation between narcissism and creativity in idea generation, independent observers still rated the ideas of narcissistic creators as more creative, perhaps because narcissists exhibited greater enthusiasm when presenting their own ideas (Goncalo et al., 2010).

Reputation. Because new ideas, products, and ventures usually carry uncertainty, perceivers may take into consideration the creators' reputation in their evaluative or adoptive responses. Shane and Cable (2002) showed that when investors had direct or indirect relationships with at least one member of a new venture's team, they were more likely to invest in the venture. The entrepreneurs' reputation was the mediating mechanism behind this pattern of results. Similarly, Gürhan-Canli and Batra (2004) found that when consumers perceived that a product purchase involved high-risk, information concerning corporate reputation was influential for new product evaluation: better reputation led to more favorable product evaluation.

Reputation may affect creativity evaluation by signaling ability. Paintings exhibiting inconsistent artistic styles were perceived as more creative and aesthetically valuable, but only when they were attributed to a highly prominent artist (Picasso), rather than to less prominent ones (Braque, de la Fresnaye; Sgourev & Althuizen, 2014). This positive reputational effect seems to depend on the consistency between the target's novelty and the creator's identity. A bibliometric study found that more novel publications were more likely to be cited only when the author or the author's former mentor received recognition for doing highly novel work (Trapido, 2015). By contrast, the higher the reputation accrued for lower novelty work, the fewer citations were obtained by novel publications.

Affective displays. A creator may also influence creativity evaluation and adoption via displays of affective states. Entrepreneurship research has documented mixed on this subject. An initial study revealed that perceived entrepreneurial passion had little effect on evaluator's intention to invest in new ventures (Chen, Yao, & Kotha, 2009). Yet later studies reported a generally positive relation between perceptions of entrepreneurial passion and evaluations of funding potential (Li, Chen, Kotha, & Fisher, 2017; Mitteness, Sudek, & Cardon, 2012; Murnieks, Cardon, Sudek, White, & Brooks, 2016). An explanation for this inconsistency is that the impact of affective displays on the evaluation of new ventures depends on char-

acteristics of the prospective investors, such as their experience (Murnieks et al., 2016), age, cognitive style, personality, regulatory focus and motivation (Mitteness et al., 2012). In addition, the impact of affective displays is contingent on the degree of novelty or creativity of the target. In two crowdfunding studies, entrepreneurial passion affected funding decisions via a contagion process (i.e., increasing enthusiasm of prospective investors), and the effect was stronger for more innovative projects (Li et al., 2017; also Davis, Hmieleski, Webb, & Coombs, 2017). Perceived entrepreneurial passion also interacted with perceived product creativity in predicting prospective funders' positive affect, which in turn partially mediated the relation between perceived creativity and investment decisions (Davis et al., 2017).

Impression management. A person may behaviorally exert influence on perceivers by actively creating the right impression (Parhankangas & Ehrlich, 2014). An inverted U-shaped relation was found between the extent entrepreneurs promoted the innovativeness of their ventures (i.e., emphasizing novelty and creativity in the business plan) and evaluation outcomes (i.e., receiving invitations to present to angel investors and receiving funding). Interestingly, business angels also seemed to prefer business plans with a high degree of opinion conformity (i.e., including terms emphasizing agreement, similarity, and continuity). It thus seems that entrepreneurs need to strike a difficult balance between expressing originality and conventionality when presenting their ventures (Parhankangas & Ehrlich, 2014).

Summary. Management research has started to examine the impact of creators' personal characteristics on the evaluation of new ideas and products. This early research showed that the creators' biographic information and personality attributes affected creativity receiving. Studies in entrepreneurship, marketing and sociology revealed that creators could leverage their reputation, affective displays and impression to affect how their new or creative ideas are evaluated. They provide insights for management research to draw from.

Perceivers' Characteristics

The meaning, utility, and ultimate success of a new idea, product, or venture are inherently uncertain. This renders subjectivity a significant part of the creativity evaluation process (Zhou & Woodman, 2003). Perceivers with different characteristics can perceive and evaluate the same target differently (Zhou et al., 2017). In the following paragraphs, we review research on perceivers' characteristics that are especially relevant for creativity receiving.

Personality traits. To explain why different perceivers often differ in their evaluation of the same new idea or product, researchers examined individual differences in predispositions towards novelty. Marketing researchers considered the impact of consumer innovativeness (i.e., the extent to which consumers seek novelty and make innovation decisions independently) on their evaluation of new products (Hirschman, 1980; Manning, Bearden, & Madden, 1995). They found that novelty seeking positively related to new product awareness, whereas independent judgment making positively related to the decision of trying the new product (Manning et al., 1995). Klink and Athaide (2010) found a positive relation between consumer innovativeness and new product evaluation; it was stronger when the new product was associated with new brands rather than with extended brand names. The results from marketing suggest that differences in individual attitudes towards novelty are grounded in differences in personality traits. This is consistent with results on Big Five measures and evaluation of creative ideas. Openness to experience was correlated with supervisors' inclination to adopt or reject subordinates' creative ideas (Sijbom, Janssen, & Van Yperen, 2015a). Persons with greater openness to experience showed higher accuracy in identifying their creative ideas (Silvia, 2008). These studies not only corroborate the notion that subjective responses to creativity are influenced by personality traits, but also imply that creativity recognition and creative performance share similar antecedents. In the following paragraph, we review studies specifically examining this possibility.

Creative ability. Studies examined whether creative ability predicted the perception, recognition, and implementation of creative ideas. In comparing monozygotic and dizygotic pairs of twins, it was discovered that creative personality correlated with self-reported tendencies to recognize and pursue entrepreneurial opportunities (Shane & Nicolaou, 2015). Further analysis revealed that the correlations were partly explained by shared genetic and environmental factors, suggesting the existence of common antecedents of individual abilities to generate, recognize and implement new ideas. Research showed that perceivers with high levels of originality (i.e., ability to generate unique ideas) accurately rated original advertisements as highly creative (Caroff & Besançon, 2008). Perceivers with high levels of fluency (i.e., ability to generate more ideas) were more accurate in selecting their most creative ideas (Silvia, 2008).

Organizational role. The involvement of the perceiver in the generation of a creative target ranges from playing a focal role (i.e., being the creator) to occupying peripheral positions (e.g., being a colleague, an independent judge, or a decision-maker). Perceivers with a creator role appear to be more accurate than people in a managerial role and laypeople in forecasting the success of novel ideas created by others, but not in forecasting the success of their own ideas (Berg, 2016). Likewise, Mueller and co-authors (2018) argued that perceivers in decision-making roles were likely to develop an economic mindset, and thus to discount creative ideas with low social approval, as low social support signals lower success potential. They found that perceivers with decision-making roles indeed discounted creative ideas with low social approval cues in their creativity assessments, but not in their idea usefulness ratings.

Prior knowledge and experience. Extant research found mixed results about the effects of perceivers' knowledge and prior experience on creativity evaluation. One view suggests that prior knowledge should help understanding creativity by facilitating the acquisition of new knowledge. Supporting this view, studies on

investor decision-making found that having knowledge on customer problems increased the number and innovativeness of opportunities identified (Shepherd & DeTienne, 2005) and that possessing knowledge about the technology and market of an opportunity increased the likelihood of assessing highly novel opportunities as attractive investments (Wood & Williams, 2014). Other studies did not replicate these results. In fact, the rarity of an opportunity and perceivers' prior knowledge even had a compensatory relation: the more an opportunity was related to a perceiver's prior knowledge, the less its rarity influenced the perceiver's judgment (Haynie, Shepherd, & McMullen, 2009). One explanation is that prior knowledge facilitates the comprehension and appreciation of novelty only to the extent that it is transferable to the target being evaluated (Moreau, Lehmann, & Markman, 2001). The more an innovation represents a discontinuity from the existing knowledge, the more experts risk to be entrenched in existing cognitive structures and to experience difficulties in evaluating the nature and benefits of the innovation. This idea was tested in studies on consumer adoption of new products. High prior domain knowledge was indeed positively related to comprehension, perception of net benefits and preference for continuous innovations, yet it negatively affected the understanding and evaluation of discontinuous innovations (Moreau, Lehmann et al. 2001).

Research on perceivers' experience similarly lacks consensus on whether this factor diminishes or stimulates appetite for novelty. A study comparing first-time and serial entrepreneurs found that these two groups differed in their cognitive prototype of a good idea (Baron & Ensley, 2006). Experienced individuals agreed more on the attributes that a business opportunity should have, and their cognitive representations geared towards solving a concrete problem, rapidly generating revenues, and being positively assessed by others (e.g., friends or experts). By contrary, novices emphasized the novelty of an idea, and the extent to which it exploited new technologies or had the potential to change an industry (Baron & Ensley, 2006). Conversely, Casakin and Kreitler (2008) found that in evaluating the creativity of

architectures, expert architects placed more emphasis on innovation, whereas architectural students focused more on the operational aspects. Haller, Courvoisier, and Cropley (2011) found that experts (i.e., professionals and teachers) showed lower inter-judge consistency than novices (visual art students) in a new product evaluation.

Schema incongruity . As one of a very small number of theories specifically formulated for creativity evaluation, schema incongruity theory (Mandler, 1982) holds the promise to explicate the cognitive process underlying creativity evaluation. It posits that radically new products are extremely incongruent with existing products. Existing products have already established certain expectations or schema in the minds of consumers. The schema make it difficult for consumers to understand the benefits of radically new products. The difficulty of resolving the incongruity and its resultant discomfort leads the consumers to evaluate radically new products negatively. By contrast, if products are not novel, they are congruent with the established schema for existing products. Congruity does not evoke arousal. Hence, the evaluation of products that are not new should be mildly positive. Moderate incongruity evokes arousal, as the consumers need to process the information about the products' newness. Because moderately new products usually share similarities with existing products, they can be connected with the schema of the latter. The knowledge associated with the existing schema helps the consumers to resolve the incongruity. Consequently, they may evaluate the moderately new products positively. Research in marketing yielded results consistent with this theory (Meyers-Levy & Tybout, 1989; Meyers-Levy, Louie, & Curren, 1994). Later work also found moderating conditions: the negative effects of extreme levels of schema incongruity on individuals' evaluation were especially pronounced for individuals with lower levels of prior knowledge about a given product category (Peracchio & Tybout, 1996).

Implicit theories of creativity. Implicit theories are individuals' mental constructions of what constitute creativity (Sternberg, 1985). They arise in and are affected by social contexts. Psychologists emphasized the existence of implicit theories in individuals' minds (Sternberg, 1985). Cross-cultural and educational researchers emphasized the influence of cultural contexts on implicit theories (Chan & Chan, 1999). Sociologists emphasized the influence of different domains or fields on implicit theories of originality (Guetzkow, Lamont, & Mallard, 2004). They converge in suggesting that individuals in different professions or cultures attach idiosyncratic meanings to creativity. Sternberg (1985) showed that individuals held implicit theories about creative persons, which influenced their evaluation of whether other people, or themselves, were creative. Loewenstein and Mueller (2016) found that the implicit theories in the U.S. emphasized novelty, whereas the implicit theories in China included both novelty and usefulness. Finding a somewhat different pattern of results, Paletz and Peng (2008) indicated that for individuals in China, Japan, and the U.S., novelty was important, but it was more important for the Chinese in creativity evaluation, whereas appropriateness was more important for the Japanese and Americans. These results raise questions about the stability and magnitude of differences in implicit theories of creativity across cultures.

Other studies argued that besides relying on target-specific cues, evaluators also search for interpersonal cues to form creativity judgments. A study of Hollywood pitches provided evidence for a dual-process model (Elsbach & Kramer, 2003). Individuals pitching new movies were judged as creative when they fit not only with specific industry prototypes (e.g., the storyteller), but also with relational categories (e.g., creative collaborators). Employers used themselves as creative models in their assessment of job candidates and favored candidates who were 'different like them' (i.e., exhibiting similarly idiosyncratic and omnivorous cultural tastes; Koppman, 2016). These studies offer a complementary perspective to prior target-centered approaches, suggesting that implicit theories are imbued with interpersonal connotations, and that evaluators contribute to constructing what is or is not creative.

Construal level. Construal level theory posits that individuals directly experience the 'here and now', but rely on abstract mental construals to reflect on psychologically distant objects, such as events in the future or in the past, and places far away (Trope & Liberman, 2010). The abstract mental construals allow individuals to make predictions and express preferences about objects or events that they are not experiencing here and now. As psychological distance increases, such construals become more abstract, retaining only the essential features of the objects they represent. Mueller and colleagues (2014) tested whether one's construal level affected creativity evaluation. Results showed that participants in the high construal level condition rated the idea as being more creative than those in the low construal level condition. In another study, the authors again found that construal level affects creativity evaluation, but only for ideas high in creativity. They argued that uncertainty was the mediator but found inconsistent evidence. Future research needs to examine whether these effects are generalizable to the workplace, and directly test whether uncertainty serves as the proposed mediator.

Regulatory focus. Yeo and Park (2006) found that when forming new product evaluations, prevention-focused consumers emphasized perceived risks, uncertainties, and future regret, whereas promotion-focused consumers emphasized hedonic attainments (e.g., joy and pleasure). Prevention-focused consumers favored similar brand extensions compared to novel brand extensions. Chang, Lin, and Chang (2011) found similar results. Regulatory focus also appear to affect evaluation accuracy: Herman and Reiter-Palmon (2011) found that perceivers' promotion focus was positively related to accuracy when evaluating idea quality, but negatively related to accuracy when assessing idea originality. Conversely, prevention focus was negatively related to the accuracy of idea quality evaluation, but positively related to the accuracy of originality evaluation. Tumasjan and Braun (2012) found that promotion focus and creative self-efficacy were positively related to the innovativeness of opportunities recognized by entrepreneurs; they had a compensatory rather than reinforcing effect on opportunity recognition. Zhou and co-authors (2017)

developed associative evaluation theory to study personal (e.g., regulatory focus) and contextual influences. The authors theorized that the subjective element of creativity recognition and evaluation is formed through an associative evaluation process. In this process, a perceiver's impression of and evaluative responses to a target depend on the nature of the associations automatically activated in the perceiver's memory (Gawronski & Bodenhausen, 2011). The more positive associations are activated, the greater creativity the perceiver will recognize in a target. Conversely, if largely negative associations with creativity are activated, the perceiver will tend not to favor nor recognize creativity. They also theorized that characteristics of the perceiver, the context, and the interaction between the two affect the nature of the associations being activated. In lab and field studies, they systematically examined the effects of regulatory foci on novelty and creativity perception and found that promotion-focused perceivers recognized more novelty and creativity in highly novel or creative ideas than prevention-focused perceivers. Situational goal framing interacted with perceivers' regulatory focus such that prevention-focused perceivers perceived less novelty under the loss framing condition than under the gain framing condition. The results supported the associative evaluation theory of creativity evaluation.

Goal orientation. In three articles, Sijbom, Janssen, and Van Yperen investigated the effects of managers' achievement goal on their reactions to creativity. They found that managers with performance-approach goals were more likely to oppose employees' radically creative ideas, whereas managers with mastery-approach goals were more likely to adopt such ideas (Sijbom et al., 2015a). They also showed that performance-goal leaders were less receptive to subordinates' creative ideas than mastery-goal leaders (Sijbom et al., 2015b). They further observed that managers with performance-approach goals displayed a higher intention to adopt a creative idea proposed by a supervisor than by a subordinate (Sijbom et al., 2016).

Group characteristics and processes. A few studies identified group-level factors that affect the collective assessment of creativity. Criscuolo, Dahlander, Grohsjean, and Salter (2017) found that panels' workload and expertise moderated the relation between R&D projects' novelty level and funding decisions. High workload reduced, whereas expertise diversity increased, panels' preference for novelty. Less novel projects were more likely to be funded if at least one of the panel members worked in the same location as the person submitting the project. Putman and Paulus (2009) found that groups in which members interacted at the idea selection stage, but not during the idea generation stage, selected more original ideas than groups performing both tasks collectively. Similarly, hybrid groups, in which idea generation and evaluation were conducted both individually and collectively, outperformed interactive groups in discerning the value of the ideas conceived (Girotra, Terwiesch, & Ulrich, 2010). This line of work shows it is possible to harness the "best of both worlds" — engaging individuals in both independent thinking and group discussion. Yet the results were obtained in controlled settings in which idea generation and selection were treated as sequential and separated processes. They offer limited evidence on the actual interactions occurring among group members and driving the collective evaluation. An exception is the study by Harvey and Kou (2013), which showed that groups shifted between different patterns of generative and evaluative processes. Groups engaging in evaluation-centered sequences, in which their members start developing and discussing a few ideas, and then continue elaborating them and integrating feedback, remained as productive as other groups, and were potentially retaining more novel ideas in the process. The fact that idea generation and selection processes can be conceived as intertwined and multimodal in their nature opens up new opportunities for understanding group creativity evaluation. Future work may examine hybrid forms of creative interaction and the joint role of group processes and structures in determining the effectiveness of groups in the selection of original and useful ideas.

Summary. Research in entrepreneurship, management, marketing, sociology, and psychology revealed the profound impact of perceivers' characteristics on the evaluation of new or creative targets. The associative evaluation theory and the scheme incongruity theory, which were developed by management and marketing scholars, respectively, identify the potential cognitive underpinnings of creativity and novelty evaluation, and hold promise for guiding future studies on the impact of perceivers' characteristics. In addition to explaining the independent role of perceivers, the associative evaluation theory emphasizes the interplay between perceivers' characteristics and the contexts in which they are embedded (Zhou et al., 2017).

Contextual Characteristics

The evaluation of creativity does not occur in a vacuum. Perceivers are situated in multiple contexts, which play a powerful role in shaping how they perceive and evaluate creative targets. In the following section we review studies on the effect of different contextual factors, ranging from the local influence of leaders and teams, to the large-scale impact of cultures and fields.

Training. Storme, Myszkowski, Celik, and Lubart (2014) found that a training module that gave a definition of creativity increased perceivers' evaluation accuracy (i.e., higher agreement with expert ratings). Birney, Beckman, and Seah (2016) tested three different evaluation processes: structured evaluation (perceivers used a standardized scale to evaluate the product), unstructured evaluation (perceivers simply gave a summary rating), and semi-structured evaluation (perceiver first listed their evaluation criteria, and then gave ratings based on those criteria). Evaluation accuracy was affected by the interaction between the evaluation process and the perceivers' traits. Under the structured evaluation condition, perceivers with higher divergent thinking gave more accurate evaluation; under the unstructured evaluation condition, perceivers with higher conscientiousness gave more accurate

evaluation, indicating the importance of the fit between personal and situational factors for evaluation accuracy.

Group identity. Drawing insights from social identity and self-categorization theories, Haslam, Adarves-Yorno, Postmes, and Jans (2013) argued that perceivers' evaluation of creativity depends on whether personal identity or group identity is salient. When personal identity is salient, creativity evaluation is influenced by the perceivers' idiosyncratic styles and preferences. When group identity is salient, creativity evaluation is consistent with the norms and goals of the perceivers' group. The authors also argued that creativity perceptions are influenced by the group to which both creator and perceiver belong. Adarves-Yorno, Haslam, and Postmes (2008) found that creativity ratings of new products were higher when the perceivers believed that the creator belonged to the same country or university. In analyzing the nationality of the winners of US-based Oscars and British-based BAFTAs, Steffens, Haslam, Ryan, and Millard (2017) found that U.S. artists won a greater proportion of Oscars than BAFTAs, whereas British artists won a greater proportion of BAFTAs than Oscars. The findings suggest that perceivers display in-group favoritism in their creativity evaluation, and the usefulness of the social identity approach in understanding creativity recognition and evaluation, especially for lateral evaluation such as evaluating the creativity of team members. More theoretical work is needed to precisely explain how individuals balance their personal idiosyncratic styles and their social identity. Rigorous studies conducted in organizations are also needed.

Leadership, supervisory and team support. Research highlighted the role played by leaders, supervisors, and teams in implementing creative ideas. Michaelis, Stegmaier, and Sonntag (2010) found that transformational leadership positively related to followers' innovation implementation. Škerlavaj, Černe, and Dysvik (2014) found that the relation between creative idea generation and implementation was an inverted U-shape. They reasoned that individuals who engaged in moderate

levels of creativity devoted sufficient time and resources to navigating interpersonal relationships and selling ideas. They also found that supervisor support moderated the relation between idea generation and implementation such that with the presence of strong supervisory support, ideas were more likely to be implemented. Axtell et al. (2000) found that employees' creative suggestions had a greater chance to be implemented with the presence of management support, team leader support, and team support for innovation and participation.

Organizational level characteristics. Keum and See (2017) examined the influence of organizational hierarchy on different stages of innovation. They found that although hierarchy had a negative effect on idea generation, it increased the selection quality of original ideas and enhanced fashion brand sales. Consistent with the associative evaluation theory discussed earlier, Zhou and coauthors (2017) found that organizational innovation culture—a culture favoring creativity and innovation—influenced employees' recognition of new ideas. Human resource managers from organizations with an innovative culture perceived more novelty in new HR practices than did managers from organizations without an innovative culture.

Social influence. Research in anthropology has highlighted the role of social influences in affecting individuals' decisions to adopt new things. Henrich (2001) challenged the notion that individuals engage in cost-benefit analysis when deciding whether to adopt an innovation, suggesting that they followed the footsteps of prestigious people or imitated the behaviors of the majority. Research in sociology echoes the emphasis on social influences. Salganik, Dodds, and Watts (2006) showed that in an online experiment in which participants chose new songs in a cultural market, their choices were influenced by which songs other people had picked. Such social influences had the greatest impact when the new songs' quality was medium; their influences were modest when the quality was high or low—the really good songs were almost always chosen, and the really bad ones were rarely picked.

Cross-cultural differences. Prior studies obtained mixed results about creativity evaluation across cultures. Paletz and Peng (2008) contended that East Asians place more emphasis on usefulness in evaluating creativity and their desire for a product whereas Americans focus more on novelty. They found that contrary to their predictions, in terms of creativity evaluation, usefulness had a stronger effect for American and Japanese students than for Chinese students, and novelty was virtually equally important for the participants from the three countries. In terms of desire for a product, usefulness had a stronger effect for Americans and Japanese than for Chinese, and Chinese were more influenced by novelty than Americans and Japanese. Adair and Xiong (2018) found that Chinese students had greater preference for usefulness and Caucasian Canadian students had greater preference for novelty. They showed that uncertainty avoidance ("the extent to which the members of a culture feel threatened by uncertain or unknown situations", Hofstede, 1991: 113) explained these cultural differences. Rubera and co-authors (2011) measured individuals' cultural values in the U.S. and in Italy, and examined the effects of novelty and meaningfulness (i.e., the extent to which the products were appropriate and relevant for customers' needs) of new products on customers' intention to buy. They found that novelty had a stronger effect on intention to buy in the U.S. than in Italy, yet meaningfulness had a stronger effect on purchase intention in Italy than in the U.S.

Field level influences. Csikszentmihalyi (1998) emphasized even higher levels of contextual influences: the domain, which represents a symbolic system of practices, norms, values, and knowledge, and the field, which refers to the social community arising around a domain. Creativity is said to emerge when individuals produce variations in a domain, which are then recognized and retained by the respective field. These ideas are reminiscent of sociological and anthropological research (cf. Lamont, 2012; Wilf, 2014). A key result is that the composition of the field affects the likelihood of introducing variation within a cultural domain. Fields in which peer-based institutions control the recognition and attribution of value may sti-

fle the emergence of innovation that deviates from existing canons (Wijnberg & Gemser, 2000). Only the transformation of the selection system, from the dominance of fellow artists to the rise of museum curators, dealers, and critics, enabled the recognition of Impressionists' innovations (Wijnberg & Gemser, 2000). Most of the findings drew on qualitative studies. Our knowledge on the receiving side of creativity may benefit from further work corroborating these insights.

Summary. Management research showed that organizational culture affected the recognition of novel and creative ideas, organizational hierarchy affected selection quality, and leadership affected the implementation of new ideas. Research in anthropology, psychology, and sociology showed that contextual factors or interventions such as training, social identity, and field-level dynamics influenced evaluation accuracy, creativity ratings, differential focuses on novelty versus usefulness during creativity evaluation, adoption of new artworks, and recognition of truly outstanding creativity. As such, these disciplines provide insights for management researchers to investigate a host of additional contextual factors and a number of outcome variables relevant to creativity receiving in future research.

Discussion

Research into the receiving side of creativity is gaining momentum. The attention of management scholars is shifting from creators and the generation of creativity to perceivers and their responses to creative outputs. Researchers have started to address questions concerning *how* people evaluate creative ideas and talents (Elsbach & Kramer, 2003), *who* tends to perceive greater novelty and creativity (Zhou et al., 2017), *when* people may desire and yet reject creativity (Mueller et al., 2012), and *what* organizations can do to overcome biases in the evaluation of creative or novel targets (Criscuolo et al., 2017; Zhou et al., 2017). To foster the development of this promising field of research, in the following sub-sections we highlight the main limitations of extant work and envisage promising avenues of future research. We

conclude by discussing the managerial implications of our journey through the receiving side of creativity.

Fostering Conceptual Clarity

The receiving side of creativity is still a new and fragmented field of research. It is thus unsurprising to find a multitude of constructs related to creativity receiving, which are often used inconsistently and without explicitly demarcating conceptual boundaries and relations. This is problematic, because despite sharing similar meanings, constructs may carry different underlying assumptions. Creativity perception, recognition, and judgment are often used interchangeably. Yet, in psychological studies, creativity recognition may imply that a target inherently possesses a normative level of creativity, which perceivers may or may not discern correctly (Zhou et al., 2017; Mueller et al., 2014). A target's creativity is thus assumed to be independent from the perceivers' response. Creativity judgment instead implies that perceivers possess a subjective definition of what constitutes creativity, to which the target may or may not correspond (Elsbach & Kramer, 2003; Katz & Thompson, 1993). Thus a target's creativity depends on the receivers' responses (i.e., an idea or person is creative to the extent individuals judge it as such).

We started addressing the lack of conceptual clarity by summarizing the main constructs covered in the review (see 'An Organizing Framework' section). We also consolidated findings by sub-themes, to reveal potential similarities and differences between responses to creativity. However, we believe that more empirical and theoretical work is needed. Available evidence is too sparse. In future studies, we encourage researchers to model and test their hypotheses on different sides of creativity receiving. This could help conceptual demarcation, for example revealing overlaps and differences in antecedents. We also call for a more systematic conceptualization of individual responses to creativity, aimed at clarifying their differences and theoretical relevance. A formal distinction should be made between constructs referring to implicit, instinctive evaluations of creativity (e.g., creativity perception),

and more explicit, conscious evaluations, instrumental for a decision-making or measurement task (e.g., creativity judgments, creativity assessments), as they may subject to different cognitive influences.

The lack of conceptual clarity also concerns creativity-related constructs. Researchers examined targets' originality, uniqueness, rarity, novelty, dissimilarity, unfamiliarity, usefulness, relevance, and meaningfulness. These are all salient characteristics of a target, and their relations to creativity and interdependencies have been proposed, but rarely conceptualized or tested in a systematic fashion. This is once again an important limitation, because it undermines the interpretation and integration of extant knowledge on creativity receiving. We thus call for more work unpacking the links between creativity and its underlying dimensions, novelty and usefulness, as only a few papers explicitly examined whether creativity, novelty, and usefulness evaluation share similar antecedents (Mueller et al., 2018; Zhou et al., 2017). Future studies may explain how novelty and usefulness are related in the eyes of the perceivers. It has been argued that ideas that are highly novel and highly useful are particularly rare, since extreme novelty can entail a deficiency of enabling factors (cf. Kaplan & Vakili, 2015). In turn, lack of novelty in certain contexts may be associated with lack of usefulness. If so, extreme levels of novelty would negatively relate to usefulness perceptions, and thus explain why evaluators tend to prefer moderate levels of novelty. The possibility is not trivial, since the two constructs have been conceptualized as orthogonal in the past (e.g., Litchfield, Gilson, & Gilson, 2015).

Research along this line of inquiry may also examine whether the effects of different dimensions of creativity on perceivers' responses are contingent upon the context (e.g., culture, Adair & Xiong, 2018) or the perceiver. The notion of paradoxical frames (i.e., mental templates used to embrace seemingly contradictory statements or dimensions of a task or situation; Miron-Spektor, Gino, & Argote, 2011) may allow future research to develop a more in-depth understanding of how novelty and usefulness jointly affect perception and evaluation of creative ideas

or products. Individuals without a paradoxical mindset may think that seeking extreme levels of novelty will inevitably sacrifice usefulness or feasibility, and thus prefer targets high on one dimension but not both. Individuals with paradoxical frames may believe that novelty and usefulness coexist, and be more receptive towards targets that are both highly novel and useful.

To foster conceptual clarity, we also recommend re-examining the relation between dimensions of creativity that some see as antithetic. Novelty is often treated as the converse of similarity (Giorgi & Weber, 2015) and originality as the opposite of familiarity. Yet they may represent the proverbial two sides of the same coin and coexist in the same target. Papers incorporating both highly novel and highly conventional knowledge achieve higher impact (Uzzi et al., 2013). Ads that are both original and familiar attract the most attention (Pieters et al., 2002). Recognizing the duality of novelty and similarity could inspire new ways of looking at how people react to novelty. Consumer aversion for radically new products may be due to the lack of conventional features, rather than the presence of radically new ones. If so, creators could circumvent this issue by introducing familiar features in radically new products, similarly to what happened in the case of e-books, which maintained graphics reminiscent of page flipping movements (Uzzi et al., 2013: 471). Striving for conceptual clarity is not only a necessity, but also a trigger for new and relevant research questions in this emerging field of study.

Advancing Methodological Precision

Fostering conceptual clarity demands advancing methodological precision. In experimental studies, researchers usually use targets that present a certain degree of creativity. There are three approaches to operationalize the creativity level. The first is to use an invariant level of creativity (Adarves-Yorno et al., 2008; Mueller et al., 2018; Mueller et al., 2014, Studies 1 and 3). The second is to dichotomize creativity levels, discriminating between uncreative and creative targets (Zhao, Hoeffler, & Dahl, 2009). The third is to operationalize creativity as a continuous variable, cre-

ating targets with levels of creativity from high to low (Zhou et al., 2017). The first approach makes it relatively convenient for researchers to prepare creative targets and for participants to evaluate them. However, it significantly restricts the interpretation of findings, because it precludes the possibility to attribute the observed effects to the creativity of the target. Given this limitation, it is suitable only for studies assuming, rather than testing, that the target's creativity is influencing the results. Dichotomizing creativity levels allows observing effects of manipulations on creative and uncreative targets, thus it is a more powerful design. It is also relatively parsimonious, because it requires developing and using only two classes of targets. The third approach, because it accounts for the variation of targets' creativity across multiple levels, enables researchers to capture non-linear relations and to test more nuanced and complex relations between targets' creativity and evaluation outcomes. For these reasons, we recommend privileging the second and the third approach. Alternatively, researchers could consider combining different approaches, especially when conducting multi-study investigations.

It is important to remind that these methodological practices, which infer normative levels of creativity from subjective evaluations, rest on the assumption that appropriate judges should recognize creativity and converge in their evaluations (Amabile, 1982). There is substantial evidence corroborating the validity of using subjective evaluations, as discussed in the target's characteristics section. However, this approach assigns to the researcher the duty to assess the appropriateness of the judges. This could be a vexing issue, especially due to the systematic influence on creativity evaluation of perceivers' characteristics, including possessing prior knowledge and occupying managerial or decision making positions (Moreau, Lehmann et al., 2001; Berg, 2016; Mueller et al., 2018). We thus recommend caution and transparency in defining the criteria and procedures used to recruit judges and to collect their evaluations. We also hope that this review will stimulate methodological advancements, in light of recent findings on the effects of training or creative ability on evaluation accuracy.

Integrating Theoretical Perspectives

In reviewing the literature, we witnessed a limited development of overarching theories. In cognitive studies, theoretical frameworks are mostly perceiver-centric and focused on the intra-individual processes involved in creativity evaluation (e.g., construal level theory). In social psychology, existing approaches (e.g., social identity, dual-process model) consider the role of inter-personal and situational factors, yet they are usually bound to social influences. In information systems, adoption models (e.g., frameworks on the acceptance of new technologies) incorporate environmental conditions, such as technology's compatibility with existing systems, but they do not directly explain how perceivers respond to different levels of targets' novelty.

In order to advance research on creativity receiving, management scholars should develop new theoretical models, or integrate complementary perspectives, to grasp how individual, contextual, and target-related factors jointly influence perceivers' responses to creativity. The associative evaluation theory is an example in this direction. Formulated by management researchers to inform research on creativity evaluation, it provides a systematic account of the factors affecting creativity receiving, encompassing perceiver-, target-, and context-related factors. This and analogous integrative perspectives are important to move beyond the relatively simplistic and compartmental view of target, creator, perceiver, and context as independent sources of influence on creativity receiving, and to start capturing interactive effects, especially between perceiver's characteristics and situational factors. One study using the associative evaluation theory indicates that the negative influence of individual's prevention focus on creativity recognition can be mitigated or exacerbated by situational goal framing (Zhou et al., 2017). Similarly, the relation between perceivers' personality and their accuracy in evaluating creativity seems to be contingent on the evaluative context (Birney, Beckman, & Seah, 2016). This evidence points at the power of situational factors in shaping one's (in)ability to recognize creativity, and the relevance of looking at the fit between perceiver and

context. Building on this work, a fruitful route for future research is to identify new ways in which the workplace can turn employees with characteristics disfavoring creativity recognition into people who can spot creativity. Conversely, it is also important to discover which organizational characteristics, such as culture, evaluation processes, and formal structures, may overshadow one's ability to evaluate creative ideas (see Zhou & Hoever, 2014, for a typology of actor–context interaction effects).

Spanning Adjacent Disciplines

In this review, we covered more than four decades of research on the receiving side of creativity, bringing together theoretical perspectives and empirical findings scattered across several scientific fields. These efforts brought to light a diverse body of knowledge, particularly in terms of types of targets, perceivers, and responses studied. The reasons for looking beyond the boundaries of management research are multiple. Research on creativity receiving has been mostly conducted in psychology and marketing, and these two disciplines remain the most prolific in generating insights on this topic. Furthermore, significant overlap exists across disciplines in terms of research scope and findings. Marketing, management, and psychology scholars have similarly questioned whether individuals display a preference for creativity and novelty. Their work attested to the existence of a bias against highly novel or creative targets, which has been repeatedly observed among laypeople in controlled experiments, experts and managers in organizational settings, and consumers facing purchasing decisions (Criscuolo et al., 2017; Hoeffler, 2003; Mueller et al., 2012). Disciplinary overlaps are also visible from the similarity in psychological constructs used. Parallel lines of work in psychology, marketing, and management examined whether regulatory focus affected attitudinal and behavioral responses towards new or creative targets (Tumasjan & Braun, 2012; Yeo & Park, 2006; Zhou et al., 2017).

These overlaps can help advancing research on creativity receiving by offering complementary approaches to similar phenomena. Entrepreneurship and marketing scholars adopted different perspectives and reached different conclusions on the role of prior knowledge in evaluation of novelty, with the former highlighting the benefits for recognizing new opportunities (e.g., Shepherd & DeTienne, 2005) and the latter warning against the risks of entrenched knowledge structures in appraising discontinuous innovations (Moreau, Lehmann et al., 2001). These complementary standpoints can serve as inspiration to explain the complex links between prior knowledge and creativity evaluation.

Spanning disciplinary boundaries can also uncover new research avenues that are not typically addressed in a specific field. Disciplines usually focus on a specific audience, such as consumers, investors, managers, or laypeople. Building on the notion that roles can shape perceivers' cognitive processes, and alter the type of cues they attend to when assessing creative targets (Mueller et al., 2018; Berg, 2016), future studies could explore which mindsets or thinking styles are activated across audiences, and how they in turn affect creativity evaluation. For example, which audiences are the most accurate in predicting the success of creative targets? What are the underlying reasons? Initial evidence suggests that laypeople outperform experts at inferring the commercial potential of an idea (Berg, 2016). Yet we know little of the mechanisms that could explain this effect, and current work is limited to a restricted number of audiences and targets.

Disciplines also privilege different levels of analysis. Psychology and marketing studies, which represent the largest share of studies reviewed in this paper, tend to focus on individual-level factors and to investigate the characteristics of individual perceivers or creators in isolation. Looking beyond these two fields can reveal cross-level influences that would otherwise be disregarded and promote new research opportunities. Psychologists may draw inspiration from recent management studies on creativity receiving conducted at the group-level. These lines of research have begun to investigate different types of interactions (Girotra et al., 2010; Har-

vey & Kou, 2013) and factors that might affect group evaluation (Criscuolo et al., 2017). This is a new and growing research area, which has not yet addressed how individuals evaluate group creative outputs. Existing theories explaining the evaluation of individual creativity (e.g., implicit theories, Elsbach & Kramer, 2003; Sternberg, 1985) might not necessarily apply to the evaluation of group creativity. Traits that positively influence the creativity evaluation of an individual's idea may have the opposite effect when shared by all the members of a group (e.g., narcissism, Goncalo et al., 2010). More in general, we still need to investigate how attributions of group creativity are formed (Kay, Proudfoot, & Larrick, 2018). Do perceivers base their creative perceptions on the average team creativity, or rather on the ability of specific members? Do group dynamics inform perceivers' assessment of team creativity? Modeling different levels of analysis will allow researchers to address new and important research questions.

Disciplinary differences also exist in terms of conceptualization of creativity evaluation. Predominant psychological perspectives usually represent perceivers as trapped in cognitive models of creativity and constrained in their creativity evaluation by their personality, cognition, and context. These perspectives are relatively static and deterministic, and do not consider the possibility that perceivers may actively shape what is considered creative. Sociological and systemic accounts are conversely interested in more dynamic and agentic models, explaining the evolution of fields and how different audiences attempt to establish competing standards (Wijnberg & Gemser, 2000). We encourage attempts to bridge these two perspectives, building on the idea that creativity entails "a change in a symbolic system that has a counterpart in a mental structure" (Csikszentmihalyi, 1998: 41). Future studies could explore how decision-makers can use their social sphere of influence to shift creativity assessments via a change in the perceivers' mindset. We believe that adopting an integrative view can reveal more of the paths through which an idea is celebrated as revolutionary or fade into oblivion.

Bridging Creativity and its Receiving Side

Although the receiving side of creativity is becoming a research topic in its own right, we recommend that its study remains integrated with the main stream of creativity research. Future research may benefit from examining both generative and evaluative processes in combination (e.g., Zhou, 2007), rather than independently. Studying the creating and the receiving side of creativity together would allow disentangling potentially inconsistent effects that some factors may have on these complementary processes. For example, there is evidence of contrasting effects of deep-level diversity on divergent and convergent processes during group creative tasks (Harvey, 2013). Analogously, it has been argued that traditionalism (i.e., valuing continuity with the past) may facilitate the implementation of feasible ideas, and yet obstruct the generation of new and creative solutions (Huang, Gibson, Kirkman, & Shapiro, 2017). These insights should urge us to revisit prior findings from creativity research: individual or organizational factors believed to be uninfluential or harmful for the generation of creative ideas might on the contrary have strong and possibly opposing effects on the evaluation and implementation of ideas. Strong social ties, for example, can constrain the generation of creative ideas, but prove beneficial for idea elaboration and implementation (e.g., Perry-Smith & Mannucci, 2017), and thus reduce the risk of discarding or negatively evaluating creative ideas (Kijkuit & van den Ende, 2007).

Bridging the creating and receiving side of creativity is also necessary to capture their interdependent and dynamic nature. The evaluation process can help people to develop a shared problem framework, integrating potentially different perspectives, criteria, and understandings of the creative task (Harvey & Kou, 2013). In turn, the existence of a shared problem framework can direct the generation and elaboration of creative ideas, and facilitate the retention of the most original ones (Harvey & Kou, 2013). Future work should continue exploring the relational, co-evolutionary mechanisms (e.g., Tasselli, Kilduff, & Menges, 2015) through which creating and receiving side may influence each other. Longitudinal designs and

ethnographic accounts are especially indicated for this purpose, and significantly lacking in the studies reviewed, despite providing researchers with an ideal position to observe the journey of an idea from the generation to its implementation or rejection (Kijkuit & van den Ende, 2007).

Practical Implications

A comprehensive framework surfaces out of our multidisciplinary review, suggesting four groups of factors affecting the receiving side of creativity: characteristics of target, creator, perceiver, and context. This framework offers a guide for practitioners to better assess creative ideas; it also informs managers on how to build an environment in which creative ideas are spotted and utilized. Idea generators can benefit from this body of knowledge in their efforts to make their work recognized by others.

First, new product managers, designers, and marketers, who wish to increase their discernment for fresh ideas, need to know that their personal characteristics will affect their ability to "see" creativity and novelty. They might embrace a promotion focus and learning goal and stay open to new adventures and opportunities (Sijbom et al., 2015a; Zhou et al., 2017). Adopting a high construal level (Mueller et al., 2014) and sharpening one's own creative abilities can also help creativity recognition (Caroff & Besançon, 2008; Silvia, 2008). Though one's prior knowledge and experiences affect creativity recognition, one's constructions of what creativity is (implicit theories of creativity) also color how creativity is perceived (Loewenstein & Mueller, 2016). Decision-makers without any creating experience should be aware that they might downplay creativity or inaccurately forecast its success (Berg, 2016; Mueller et al., 2018).

Second, managers may foster an environment where new ideas are valued, recognized, and implemented. At the organizational level, having a culture in which innovation and creativity are valued facilitates creativity perception (Zhou et al.,

2017). To enable idea implementation, managers need to provide resources and team leaders need to convey the message to the implementers that their endeavors are endorsed and supported by the organization and management (Axtell et al., 2000; Škerlavaj et al., 2014).

Scientists and artists whose work needs to be recognized by the receivers should use this knowledge. They need to know that women's ideas are underrated (Luksyte et al., 2018; Proudfoot et al., 2015), and creators who want to sell breakthrough innovation may encounter resistance as people tend to prefer moderately new ideas or products that are only moderately incongruent (Criscuolo et al., 2017; Meyers-Levy & Tybout, 1989). Fortunately, how an idea is received also depends on the perceivers' and contextual factors. To level the playing field, women and those who have radically new ideas may benefit from approaching perceivers whose characteristics favor creativity or organizations that truly value creativity and innovation (Sijbom et al., 2015a; Zhou et al., 2017).

Chapter 2 - References

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Embargo version of thesis.
Pages 66 - 110 are temporarily omitted, as chapter 3 is in preparation for submission.
For a full version, please contact the author.

Chapter 4

With New Eyes

A treatise on novelty and its recognition could not be complete without the customary statement on the importance of innovation for individuals, organizations, and societies alike. This dissertation makes no exception. In each chapter, the scrupulous reader will have noticed (and maybe sighed) at the implicit allusions or explicit references to the rewards awaiting those who are able to spot and seize new ideas, and the perils looming over those who unwarily dismiss them. Still, independently of whether you count yourself among the scant but worthy handful of sceptics pointing to pro-novelty biases (e.g. Abrahamson, 1991; Anderson et al., 2014), or you belong to the 'bias against novelty' camp (Chai & Menon, 2019; Wang, Veugelers, & Stephan, 2017), it is my hope that this dissertation made you appreciate the significance of human differences in the perception and response to novelty. In this concluding chapter, I will briefly recall the intended contributions of the previous chapters, discuss general limitations of the present thesis and potential critiques to my work, and conclude with some final reflections on the merit of further developing a science of novelty and its recognition.

Summary of contributions

In **chapter one**, I reflected on the substantive and experiential nature of novelty and how it implicates issues of novelty overlooked and novelty misconstrued. I argued that these issues have remained largely unanswered due to a common understanding of innovation as an act of genesis rather than the product of human recognition. I also proposed a dual understanding of novelty recognition to embrace both its perceptual and performative character, with the intention to expose differences and inter-dependencies in existing research traditions.

In **chapter two**, we gave an integrative overview of the science on the 'receiving side' of novelty and creativity. Like 'cartographers', we mapped existing findings, developing four intuitive dimensions (characteristics of target, creator, perceiver and context) and a set of working definitions of evaluative and adoptive responses to systematically place and confront findings from a broad range of disciplines and streams of literature. In our reconnaissance of this emerging field of research, we stumbled upon numerous challenges and gained valuable lessons. Like 'fellow travellers' interested in the receiving side of creativity, we warned about the importance of advancing conceptual clarity, for example by simultaneously examining adjacent dimensions (e.g. creativity, novelty, and usefulness) and responses (e.g. perceptions and judgments). We also encouraged scholars to span disciplinary boundaries, to accelerate scientific advancement, but also to uncover new and important research questions.

In **chapter three**, we proposed that ideas vary in the level of disagreement they accrue. We theorized and empirically tested that differences in the degree of disagreement that surrounds ideas can help predict whether they will earn recognition or fade into oblivion. We also provided first evidence on the ambivalent role of disagreement: whereas more controversial ideas appear to have fewer chances of being awarded by an organization, disagreement between people holding dissimilar interests is associated with more debate, popularity, and a higher probability of

earning recognition. We finally articulated the implications of this finding for both prior and future research, drawing attention to the possibility that extant research methods implicitly emphasize factors that favour the generation of consensual ideas, at the expenses of minority and more unorthodox solutions.

Limitations, reservations, and some words of justification

The above-mentioned contributions should be read in light of both tangible limitations and conceivable critiques. I discuss here a certainly non-exhaustive list of shortcomings, accompanied by an earnest attempt to clarify the underlying rationale of this work, and when possible, to propose potential remedies.

What's new, and who cares? As observed elsewhere in this dissertation, I am not the first to argue that novelty is in the eye of the beholder, nor to suggest the interdependency between social and cognitive systems for the recognition of novelty and creativity. In fact, the work of Everett Rogers, Teresa Amabile, Mihaly Csikszentmihalyi and other prominent scholars profoundly inspired and certainly guided me in writing this dissertation. But to take a page from Ronald Burt's book, "though the hypothesis might lack novelty, it is intrinsically interesting to people who work with ideas" (2004: 351). Even when lagging in originality, I hope this work can still contribute to fuel interest in the study of novelty recognition, by exposing old assumptions and offering a different approach to the topic.

A similar critique of unoriginality could be moved more specifically for the second chapter, since other scholars concurrently or previously reviewed studies related to the broader subject of creativity receiving. It is however my view that existing reviews were mostly preoccupied with methodological aspects (e..g. creativity tests and measurement, Plucker & Makel, 2010), or narrower, field-specific interests (e.g. idea generation and selection, Kornish & Hutchison-Krupat, 2017; sociological perspectives, Godart, Seong, & Philips, 2020). If not new in the strictest sense, I still stand by the statement that this paper, by trespassing disciplinary boundaries

and adopting an inclusive conceptual umbrella, represents a first attempt to systematically survey the literature and a practical guide for both novices and more seasoned researchers interested in creativity and innovation.

With regards to the third chapter, to my knowledge no other published paper empirically investigated controversial ideas and the implications of disagreement for an idea's ability to earn recognition and acquire resources. A gap in the literature however 'does not necessarily make the study interesting or worthwhile' (Grant & Pollock, 2011) and even a new finding can be found wanting of practical interest. To be more specific, what actionable recommendations can we formulate based on our findings?

Alone, our study does not permit us to confidently say whether and when organizations *should* reward and invest in more controversial ideas. To do so, it is necessary to theoretically and empirically determine the causal role of idea disagreement in the discrimination against (or in favour) of ideas that can benefit organizations, directly, in terms of commercial potential and technical feasibility, or indirectly, for example via organizational learning, search and attention processes.

Admittedly, the study also falls short with regards to explicit recommendations for inventors, creatives, and ideators. Besides a general discussion on the importance of achieving consensus (in itself not a new proposition) or on the potential benefits of sparking disagreement and attracting a heterogeneous audience, we say little of *what* makes an idea more or less controversial, *how* ideators can exploit similarity or differences in opinions in their audiences to secure resources, and importantly whether the controversy that surrounds an idea has a *causal effect* on the decision of the organization.

It would be wise however not to dismiss too hastily the absence of bold pronouncements as lack of practical relevance. Idea disagreement holds diagnostic utility – and this is important for organizers of idea tournaments, but also for

awarding bodies relying on collective forms of evaluation to screen and determine which ideas are worthy of recognition. The fact that controversial ideas are less likely to be awarded when relying on bounded measurement scales and averaging should stimulate these organizations to *(a)* inspect instances of controversy to exclude causes of unfairness, for instance due to strategic behaviour (Balietti, Goldstone, & Helbing, 2016) or idiosyncratic rater effects; and *(b)* to consider alternative response scales or aggregation heuristics depending on the expected (ir)relevance of minority opinions and minority ideas.

The latter point is once again not a new proposition, but it holds very current and practical implications. Already a century ago, Francis Galton posed the question of "how can the right conclusion be reached, considering that there may be as many different estimates as there are members" (1907:414). Interestingly, Galton discussed the merits of taking the average or the median evaluation from a *democratic* point of view, and argued that the average opinion violates the democratic principle of "one vote, one value", because, in his own words, it "would give a voting power to "cranks" in proportion to their crankiness" (1907:414).

Today, with a management community increasingly more vocal about the importance and urgency of fostering inclusion and diversity, it is of the essence to understand how current practices may implicitly sabotage this explicit and shared mission. I have little doubts that the way we interpret collective forms of evaluation and allocate financial and symbolic capital to new ideas is central to both understanding and addressing the lack of inclusivity in our society. Our paper advances the modest, and yet in my view much needed argument that disagreement in evaluations of ideas represents not only noise, but also a potential expression of plurality. It warns organizations and ideators alike that existing information processing and decision-making heuristics can implicitly lead to discount minority ideas as mediocre ideas.

Too broad, too narrow, too inconsistent. Granted, the scope of this dissertation was and still is a moving target. The introductory chapter broadly speaks of novelty, both in terms of artefacts and ideas, and of recognition, covering issues of perception, evaluation and valuation. The review chapter broadens even more the topic of discussion, bringing into the picture the generic and all-embracing concept of creativity receiving, which touches upon a broad spectrum of responses and targets, and unproblematically shifts between related and yet certainly distinct issues of novelty, usefulness, creativity, originality, atypicality and familiarity (to name a few). The empirical study narrows back the attention to new ideas and a specific form of recognition, but novelty in this case is largely assumed rather than explicitly measured and theoretically modelled.

It is thus personally interesting to note that a common feedback I received over the years regarded the too narrow scope of my work. For instance, in reviewing literature on the recognition of novelty and novel ideas, I too briefly discussed or even failed to acknowledge important streams of research, including: long-standing traditions in sociology and economics on the adoption and diffusion of new technologies (Coleman, Katz, & Menzel, 1966; Rogers, 1983; Banerjee & Duflo, 2011); research on social evaluation and valuation in cultural and scientific fields (cf. Bourdieu, 1984; Lamont, 2012); new product development literature on the selection of new projects and management of innovation portfolios (e.g. Chao & Kavadias, 2008; Cooper, 1990;); and psychological and medical bodies of knowledge on novelty detection and novelty-seeking propensities (e.g. Knight, 1996).

The critique has teeth. The thesis privileges some sub-fields over others, and it is thus subject to unavoidable disciplinary biases with regards to theoretical perspectives and interests, terminology, and methodological approaches. For instance, many of the studies reviewed fail to acknowledge that in practice, evaluations and decisions on new ideas are not independent of each other. In contrast, new product development literature has often emphasized the importance of balancing the

characteristics of the overall portfolio of new projects in individual selection and funding decisions (Cooper, Edgett, & Kleinschmidt, 2001; Chao & Kavadis, 2008).

At the same time, these critiques hint at both the promises and challenges of spanning disciplinary boundaries. The way people respond to novelty has implications for personal life outcomes, the progress of single communities and broader societies, the success and demise of organizational endeavours and even entire industries. The broad appeal of the topic attracted, and it will continue to attract attention across academic fields. As discussed before, I believe there is value in learning what scholars from other disciplines are doing, to discover alternative perspectives and methods, and similarities or inconsistencies in the findings, and the review chapter, even if not perfectly comprehensive, is an earnest attempt to accomplish this goal. At the same time however, we are guided in our review and assessment of peers' work by field-specific interests, and we seek for clarity, precision and consistency in our theoretical and empirical work.

This dissertation shows a way (or better, my way) to navigate through these difficult trade-offs. I started off with a problem of broad and personal relevance – new ideas and artefacts being overlooked and misconstrued (chapter 1), temporarily relaxed the original definition of the problem to more broadly understand why people differ in their responses to novelty and creativity (chapter 2), and zoomed back in to show the implications of differences in idea evaluations for the probability of a new idea to access both symbolic and financial resources (chapter 3). To be clear, this journey is less the outcome of a premeditated and well-executed plan, and more a post hoc rationalization of my doctoral trajectory, which often drifted due to unexpected opportunities, emerging contingencies, and personal learning. But I hope it can help the reader, as it helped me, to gain a sense of direction and to make sense of the shifting scope of my thesis.

The missing chapter. No research journey is probably ever complete. I feel it is especially so in the case of my dissertation, as I am now confronted with more

questions than I actually set to answer. Some of these open questions I already mentioned in this and prior chapters, and I could certainly enumerate others. It is however of interest to reflect not only on what remains to be discovered, but also on what knowledge gap is the most pressing and complementary to the scope of this dissertation.

In my opinion, the most important lacuna regards the lack of an appropriate exploration of the concept of novelty, which is ironical, given its centrality not only to this dissertation, but also in most definitions of innovation and creativity (Anderson, de Dreu, & Nijstad, 2004; Anderson, Potočnic, & Zhou, 2014; Amabile, 1982; Garcia & Calantone, 2002; George, 2007; Zhou & Shalley, 2003). Novelty has been discussed in several terms, including the *recency* of introduction or use within a predetermined context (e.g. newness to the world, market, industry, scientific community, firm, customer; e.g. Garcia & Calantone, 2002; Rogers, 1983); the non-obviousness of the insight (Teitelbaum & Cohen, 2007); the *incongruence* or *deviance* from the audience's cognitive schema, expectations based on prior probabilities, or social norms (Adarves-Yorno, Postmes, & Haslam, 2007; van Kesteren, Ruiter, Fernández, & Henson, 2012); the *continuity* and *discontinuity* from existing knowledge bases, practices, products and artefacts (Moreau, Lehmann, & Markman, 2001; Murray & O'Mahony, 2007), which in turn relates to discussions of *singularity* and *distinctiveness* (Poppenk, Köhler, & Moscovitch, 2010; Wilf, 2014), *normality*, *similarity*, *typicality* and *prototypicality* (Kahneman & Miller, 1986; Murphy, 2004; Tversky, 1977). To further confuse the situation, the plethora of concepts above listed, which is far from being complete, is likely accompanied by just as many distinct measures and operationalizations.

A prequel to my first and second chapters should have raised the issue, and explicitly defined novelty and its relationship with adjacent constructs. A systematic effort to map the conceptual overlaps and distinctions between these constructs and their respective measures would have provided the foundations for a more parsimonious and precise model of what novelty is, and importantly, a less ambiguous

understanding of how novelty is received. It could be argued, for instance, that the observed *bias against novelty* originates from specific novelty-related features (e.g. incongruence, discontinuity) whereas *pro-innovation biases* may stem from other features similarly associated to novelty (e.g. uniqueness, recency, potential, e.g. Abrahamson, 1991). More in general, an empirical effort to explicitly link substantive characteristics of a target with the audience's experience of novelty and originality (e.g. Sgourev & Althuizen, 2014) would have offered important insights on why novelty can be misconstrued or overlooked.

Concluding remarks

The first time I presented the subject of my dissertation outside of the familiar glass walls of the department was also my very first introduction to the *Academy of Management*. As a first-year PhD, I found myself sitting with the authorities of the field and naively discussing my idea of studying disagreement in experts' judgments of creativity. I still remember the comments of two respected scholars, who literally called the topic a 'minefield' and 'old stuff from the 80s', and who warned me that I was wasting my time. Looking back at these exchanges, I feel encouraged. Management research on the recognition of novelty and creativity has been experiencing a lot of traction in the past few years. The shift is certainly merit of the efforts of several scholars, who believed in the importance of bringing a different perspective to the study of creativity, who provided us with a common place where to share and discuss our ideas, and whose work and findings kept advancing the conversation. I am excited to be now part of this growing research community and I look forward to the discoveries still awaiting us. *Ad maiora!*

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Summary

Whereas novel ideas introduce an opportunity for innovation, it is the human experience of novelty that permits innovation to thrive or that warrants its demise. This dissertation explores the factors and forces regulating how people respond to novel and creative manifestations, and in particular what guides their recognition of novelty and novel ideas. It is argued that recognition of novelty should be understood for both its perceptual and performative nature – people's ability to evaluate the substantive novelty of an idea, but also the role these evaluations have in establishing when novelty is valued as such. It is offered a multidisciplinary review of empirical findings and theoretical intuitions on why people differ in their responses to creativity and novelty. From the review, an intuitive framework surfaces, highlighting the interplay between the characteristics of the idea, its creator, audience, and context in determining how novelty is received. It is finally proposed that differences in evaluations predict the fate of new ideas in the competition for recognition – stronger levels of disagreement should mask the value of new ideas and put them at a higher risk of being overlooked unless said disagreement arises from a genuine plurality of interests: in this situation, controversy is a marker of an idea's ability to attract attention, stimulate debate, and earn recognition. The validity of these propositions is tested on 26'480 ideas competing over 156 design and innovation tournaments. This work holds implications for individuals and organizations in the pursuit of novelty, showing how innovation needs people generating new ideas, and people looking with new eyes.

Nederlandse Samenvatting

Terwijl nieuwe ideeën een kans voor innovatie bieden, is het de menselijke ervaring van nieuwheid die innovatie in staat stelt te gedijen of zijn ondergang garandeert. Dit proefschrift onderzoekt de factoren en drijfveren die bepalen hoe mensen reageren op nieuwe en creatieve manifestaties. In het bijzonder onderzoekt dit proefschrift wat hen stuurt in het herkennen van nieuwheid en nieuwe ideeën. Er wordt gesteld dat de herkenning van nieuwheid moet worden begrepen vanwege zowel het perceptuele als performatieve karakter van nieuwheid – het vermogen van mensen om de substantiële nieuwheid van een idee te evalueren , maar ook de rol die deze evaluaties spelen bij het vaststellen wanneer nieuwheid als nieuwheid moet worden gewaardeerd. Dit proefschrift presenteert een multidisciplinair overzicht van empirische bevindingen en theoretische intuïties over waarom mensen verschillend reageren op creativiteit en nieuwheid. Vanuit de literatuurstudie wordt een intuïtief raamwerk zichtbaar welke benadrukt dat het samenspel tussen de kenmerken van het idee, de maker, het publiek en de context bepalen hoe nieuwheid wordt ontvangen. Ten slotte wordt voorgesteld dat verschillen in evaluaties - op hun beurt - het lot van nieuwe ideeën in de competitie voor herkenning bepalen – sterkere meningsverschillen maskeren de waarde van nieuwe ideeën en vergroten het risico om deze over het hoofd te zien – tenzij het meningsverschil voortkomt uit een oprechte veelvoud aan belangen. In dit geval laat de controversie zien dat het idee in staat is om de aandacht te trekken, debat te stimuleren en erkenning te verdienen. De proposities worden getest met 26’480 nieuwe ideeën die meededen in

meer dan 156 ontwerp- en innovatiewedstrijden. Dit proefschrift heeft implicaties voor individuen en organisaties bij het nastreven van nieuwheid en laat zien hoe innovatie mensen vereist om nieuwe ideeën generaliseren en door een nieuwe bril te kijken.

About the Author

I was born in 1989 and I come from Piombino Dese, a small village in the North-East of Italy. I hold a bachelor's degree in international trade from Universitá Ca' Foscari Venezia and a double master degree in international business from Stockholm School of Economics (SSE) and CEMS - a global network of management

and business schools. Prior to starting my doctoral studies at Rotterdam School of Management (RSM), I worked as a marketing manager, tried (and failed) to launch my own business, and I was involved in business development projects with several European startups. In my research, I study how people evaluate and respond to new ideas and opportunities. These investigations brought me to examine a diversity of empirical contexts - including crowdfunding campaigns, crowdsourcing contests, pitch competitions, and startup accelerators - and to employ both inductive and deductive approaches. My work was published in the *Journal of Management* and presented in several international conferences, including the Academy of Management Annual Meeting (AOM), the European Group for Organizational Studies Colloquium (EGOS) and specialized conferences on the topic of creativity and entrepreneurship.

In class, I teach the science and practice of innovation. I held undergraduate and graduate courses and lectures on creativity, entrepreneurship and business innovation at Cambridge University, EPFL, RSM, SSE and Università degli Studi di Verona. Over the years, I coached more than 30 master students, and taught both methodological and practical courses to help them along their thesis trajectory.

In life, I continue to cultivate my passion for science as a lecturer and researcher at the *Ecole Polytechnique Fédérale de Lausanne*, and to discover the joys of life with Amanda and our little daughter, Luna.

Author's Portfolio

Research

Peer-reviewed publications

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Teaching

Lecturer

EPFL, M.Sc. Management, Technologie et Entrepreneuriat
Entrepreneurship & New Venture Strategy, Spring 2020

Cambridge University, Pembroke-King's Summer Programme
Creativity, business innovation and networks, Summer 2018
Creativity and business innovation , Summer 2017

Guest lecturer and workshop instructor

Rotterdam School of Management, B.Sc. Business Administration
Idea evaluation and forecasting, Spring 2018
Adoption of innovation, Spring 2017

Rotterdam School of Management, M.Sc. Innovation Management
Fostering an organizational culture of creativity, Fall 2019
Social networks and creativity, Spring 2018
Self-censorship of creativity, Fall 2017
Fostering an organizational culture of creativity, Fall 2017

Rotterdam School of Management, M.Sc. Innovation Management
Research fundamentals, AY 2018/2019
Survey and archival research, AY 2017/2018
Survey and archival research, AY 2016/2017

Supervision

Rotterdam School of Management, M.Sc. Innovation Management
Master thesis supervision, 2016 - present

Service and recognitions

Ad hoc reviewer

Academy of Management Annual Meeting (2016 – present)
Journal of Organizational Behavior
Outstanding reviewer award, Organizational Behavior division (2017).

Academic service

PhD representative, Technology and Operations Management Dept., RSM (2017-2018)
Research seminar coordinator, Erasmus Centre for Innovation Management (2017- 2019)

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