

## DIALOGUE

### MUTABLE REALITY AND UNKNOWABLE FUTURE: REVEALING THE BROADER POTENTIAL OF PRAGMATISM

In this dialogue paper, we consider Zellweger and Zenger's (Forthcoming) conceptualization, rooted in pragmatism, of entrepreneurs as scientists. While we agree that pragmatism provides a useful but neglected foundation for studying the entrepreneurial journey, we maintain that entrepreneurs are more than scientists—in addition, they are engineers, artists, and designers. Our view is predicated on enfolding considerations of time, emergence, and the associated unsurmountable epistemological barrier of unknowability, which enable entrepreneurs to not only describe (predict) the world as scientists do but also actively shape the future to fit their “mind.”

In their recent paper, Zellweger and Zenger (Forthcoming) provided a pragmatist perspective on entrepreneurial action to suggest that entrepreneurs act as scientists, pursuing “inquiries” hinged on beliefs about opportunities. Based on their theories of the world, entrepreneurs generate beliefs about opportunities, transform uncertainty into risk, test these beliefs in action to learn about their value, and update the probabilities associated with them. Zellweger and Zenger's thoughtful analysis yields theoretically insightful recommendations that can guide entrepreneurial action.

We applaud the use of pragmatist thinking in the study of entrepreneurship, and sincerely hope that other scholars will follow suit in their inquiries pertaining to entrepreneurial reasoning and action. To that end, we see in this response an “opportunity” to shed light on some aspects of pragmatist thought that are relevant to entrepreneurship research but remain obscure in Zellweger and Zenger (Forthcoming) due to their focus on learning anchored on a determinate future. Illuminating these additional connections to reveal the broader potential of pragmatism holds the promise to enrich the study of entrepreneurship and provide a foundation for developing a robust research program within the field.

Our response is structured along three interconnected themes: limitations of the “scientists” analogy, the ontological difference between the present and

future, and the implications of this difference for epistemic barriers and the creative agency of entrepreneurs.

### ENTREPRENEURS AS SCIENTISTS: BOTH YES AND NO

Pragmatism originated, in part, as a reaction to a dogmatic religious worldview and empiricist epistemology that seeks objective truth (Misak, 2013). Two cornerstones of the pragmatist revolution were, first, admitting that all beliefs are inevitably fallible, and second, evaluating the provisional veracity of beliefs based on their practical consequences (Putnam, 1994: 152). James (1907/2017: 19) famously noted that “the whole function of philosophy ought to be to find out what *definite difference* [emphasis added] it will make to you and me, at definite instants of our time, if this world-formula or that world-formula be the true one.” Stated differently, for pragmatists, belief is held provisionally true when acting upon it brings about the desired difference to the world. In this focus on practical consequences lies not only the similarity between scientists and entrepreneurs highlighted by Zellweger and Zenger (Forthcoming), but also a significant difference between the two.

Like scientists, entrepreneurs generate beliefs to reduce their doubt, but their reasons for doing so differ. Scientists seek to reduce doubt in order to bring about the desired difference of describing (predicting) the world more accurately. Entrepreneurs also seek to reduce doubt and obtain a more accurate description of the world, but for them this information is not the end in itself. Rather, entrepreneurs seek to *shape* the world by fitting their ventures into it—that is, to steer the world from what it is to what it could be (Wood, Bakker, & Fisher, 2021; see also Joas, 1996). Thus, the analogy between entrepreneurs and scientists is only partially true—while it is useful for shedding light on how entrepreneurs learn from feedback to update their beliefs, it obscures other equally, if not more important, activities they engage in to shape the future in line with their intentions (e.g., Alvarez, Young, & Woolley, 2015; Hargadon & Douglas, 2001; Zott & Huy, 2007). Fortunately, pragmatism contains within it the conceptual tools that can aid in accounting for these other entrepreneurial activities. The key here is that pragmatism, though it acknowledges that an independent, objective reality exists, treats it as

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Correspondence concerning this article should be directed to Anastasia Sergeeva.

mutable (James, 1907/2017: 83), and the future as ultimately *unknowable* (Haack, 1976: 243).<sup>1</sup>

### OBJECTIVE REALITY EXISTS, BUT THE FUTURE DOES NOT

As Zellweger and Zenger (Forthcoming) rightly noted, pragmatists do believe that there exists an independent, objective reality. However, unlike pragmatists, Zellweger and Zenger (Forthcoming) assumed that if an independent, objective reality exists, then so do future opportunities. From such a perspective, future success is marked by a pathway that is gradually revealed, thereby constituting objective conditions for the possibility of that success. Crucially, Zellweger and Zenger (Forthcoming) see these conditions as determinate and existing at the start (*now*); they are simply unknown to the entrepreneur. An entrepreneur's journey, then, is about finding that invisible path to success *via* a gradual calibration of their roadmap.

The question of whether the future exists can be turned into the question of whether something exists before it happens. For example, if success ultimately depends on the failure of a major competitor, the passing of certain legislation following a radical change in political power, or the change in climate conditions in a region, can these future events be taken to exist *now* (in some preactualized form) so as to be deemed part of the reality about which an entrepreneur calibrates their beliefs (*à la* scientist)? The pragmatist answer to this question is no. It can be illustrated with the arguments of a prominent pragmatist philosopher, Willard van Orman Quine, who, in his seminal paper, "On what there is" (1948: 22) discussed the nature of existence of Pegasus (the mythical flying horse):

If Pegasus were not, McX argues, we should not be talking about anything when we use the word; therefore it would be nonsense to say even that Pegasus is not. Thinking to show thus that the denial of Pegasus cannot be coherently maintained, he concludes that Pegasus is.

McX cannot, indeed, quite persuade himself that any region of space-time, near or remote, contains a flying horse of flesh and blood. Pressed for further details on Pegasus, then, he says that Pegasus is an idea in men's minds. Here, however, a confusion begins to be apparent. We may for the sake of argument concede that there is an entity, and even a unique entity (though this is rather implausible), which is the mental

Pegasus-idea; but this mental entity is not what people are talking about when they deny Pegasus.

This illustration demonstrates the difference between an idea in the mind and a thing in the world, which Quine (1948) attributed to a difference between naming and meaning. While naming is directed at objects, meaning is related to a conceptual schema (or category, set) to which something is assigned and under which it is described. When we speak of the future, we are not naming particular events or circumstances—the future is simply a category that we fill with mental content such as our expectations, aspirations, etc. In this sense, talking about the future is similar to talking about Pegasus in that they both depict a fictional world (Beckert, 2016). In other words, for pragmatists, the future (as well as opportunities belonging to it) does not exist in the mode portrayed by Zellweger and Zenger (Forthcoming)—that is, as a determinate object against which to calibrate fit. At the same time, pragmatists acknowledge that it is fully meaningful to talk and form expectations about the future. Indeed, such expectations are what inspire (entrepreneurial) action, in the hope that (unlike Pegasus) they could become a reality one day.

A simple example would serve to clarify the sense in which pragmatists deem the future not to exist. Imagine the start of a tennis match, a championship final. We know that one of the two players will win the match and become champion, except that we do not know who, and cannot know until the match is complete. But does that champion exist *now*, before the match is completed? Although the set of *possible* champions has finite members that exist *now*, "champion" is currently an empty set to which one of the players will be assigned, but not until the match is over. Therefore, we cannot say that the champion exists *now*, for there is no champion yet. In addition, if the match were stopped and never completed, there might never be a champion. Nevertheless, like Pegasus, the champion-idea (the meaning) exists *now* and is real. Before the match, it agitates our beliefs, expectations, and predictions as spectators. For the players, it is a focal point of aspirations: they each seek to shape the world by gaining entry into the champion set. But there is nothing objective in the world *now* that can serve as a determinate point for calibration. In this sense, the conditions of possibility of winning the championship (e.g., shots missed and made) is also an empty set *now*—it will be filled in the course of the game. To claim otherwise is to attempt to step outside of time and treat the finished match as a *fact*. However, there are no future facts (Brumbaugh,

<sup>1</sup> After all, pragmatism has significant affinities with constructivism (Hickman, Neubert, & Reich, 2009).

1966)—like the horizon, the future can never be reached.

### THE FUTURE IS NOT JUST UNKNOWN BUT UNKNOWABLE

Admitting the fact that the future does not exist in the pragmatist sense described above has tremendous implications for recognizing entrepreneurship as a complex, competitive, open-ended process (Fisher, 2020). It is because the future does not yet exist that entrepreneurs can shape it according to their intentions. Such shaping is possible because the future is not just unknown but emerges as a result of actions of, and interactions between, a multitude of economic agents. In our tennis match example, winning the match is an emergent outcome following from the actions of both players, judgments of the referee, cheering or booing by the audience, vagaries of the weather, etc.

Admitting emergence means recognizing that patterns or structures arise from interactive processes and cannot be reduced to their constituent parts (WalDROP, 1994). Essentially, “the whole [that emerges] is substantively different from the totality of the parts from which it is composed, [...] we simply do not know how much, or how [each] part contributes to the whole” (Anderson, Dodd, & Jack, 2012: 963). From an ontological perspective, emergence also implies a possibility of unanticipated newness, *unknown unknowns*—no amount of information-gathering at the level of the constituent elements in the present can foretell the “emergent” level as it remains beyond the horizon. For example, it is impossible to predict the new market category that will emerge from the complex web of interactions of entrepreneurs, consumers, media, etc. (e.g., Khaire & Wadhvani, 2010; Navis & Glynn, 2010). To recognize that there will be such unknowable markets is not the same as being able to say anything determinate about them. Simply put, the market is more than an information discovery process:

Future parts of a market simply do not exist; they are by definition not present. There are, at any point in time, many potential futures imaginable, based on more or less informed reflections. Yet, which future will come into existence will depend on choices yet to be made. (Buchanan & Vanberg, 1991: 176)

The implication here is that entrepreneurs are *more* than scientists—they do not merely seek to describe (predict), but are, in addition, engineers, designers, and artists (see Oxman, 2016), who seek to shape the future to “fit” their mind *via* their actions (Sergeeva,

Bhardwaj, & Dimov, 2021).<sup>2</sup> Therefore, to claim that feedback from the world can be divided into Type I and Type II error may, in itself, be a Type III error (Mitr-off & Featheringham, 1974) of sorts—for the pragmatist entrepreneur, the question is not merely whether “beliefs fit the market” (Zellweger & Zenger, Forthcoming) but what action can be taken to make the yet nonexistent future market to fit their beliefs. It is within this framework that recognizes the manipulative function of entrepreneurs in interacting with other market participants (Soros, 2013) that “fixing beliefs” provides an impetus for action (Peirce, 1923). Here, learning from errors is *one* way of fixing beliefs, and the scientist function is subservient to the larger impetus for action toward fulfilling an entrepreneurial journey.

### WHAT DIFFERENCE DOES IT MAKE?

In the spirit of pragmatism, we ask: What difference do our descriptions of entrepreneurs make? These descriptions can not only deject or inspire future entrepreneurs but also signal the skills we find valuable. To say that entrepreneurs are scientists is to say they get things right. To say they are engineers is to say they make things work. To say they are artists is to say they make things new. And to say they are designers is to say they make things practical. It is intuitive that, faced with an open future, they are all of these.

With their study, Zellweger and Zenger (Forthcoming) were among the first to place a pragmatist perspective front and center in our inquiries about entrepreneurship (see also Sergeeva et al., 2021). Their work matters in opening up a new conversation and we invite other entrepreneurship scholars to join it—after all, good science is good conversation (Mahoney, 1993).

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<sup>2</sup> Whether this fit is achieved can only be known in hindsight, and even then, there are significant barriers in knowing whether any errors were made—the underdetermination of theories by evidence undermines confidence in inferences (Quine, 1951).

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Anastasia Sergeeva  
Erasmus University

Akhil Bhardwaj  
Tilburg University

Dimo Dimov  
University of Bath  
Reykjavik University  
[https://doi.org/AMR\\_2021.0488](https://doi.org/AMR_2021.0488)



**Anastasia Sergeeva** ([sergeeva@rsm.nl](mailto:sergeeva@rsm.nl)) is an Assistant Professor in Rotterdam School of Management (Erasmus University). Her research focuses on an interpretative understanding of entrepreneurial reasoning and value-laden aspects of innovating and organizing.

**Akhil Bhardwaj** ([A.Bhardwaj@tilburguniversity.edu](mailto:A.Bhardwaj@tilburguniversity.edu)) is an Assistant Professor in Tilburg School of Economics and Management (Tilburg University). He studies how to discover, formulate, and mitigate organizational failures. His research also explores how thinking can be improved.

**Dimo Dimov** ([dpd24@bath.ac.uk](mailto:dpd24@bath.ac.uk)) is Professor of Entrepreneurship and Innovation at University of Bath, UK and visiting professor at Reykjavik University, Iceland. His



research focuses on entrepreneurial thinking, processes, and practice.



## ENTREPRENEURS AS SCIENTISTS: A PRAGMATIST ALTERNATIVE TO THE CREATION-DISCOVERY DEBATE

In a thoughtful comment on our paper (Zellweger & Zenger, Forthcoming), Sergeeva, Bhardwaj, and Dimov (2022) joined us in advocating for a pragmatist perspective on entrepreneurship. The authors, however, offered two closely related critiques of our pragmatist perspective. They suggested that entrepreneurs are more than scientists seeking to understand their world, but rather are engineers, designers, and artists who act to produce value within it. They also situate our pragmatist perspective within the epistemological creation versus discovery debate, and cast us into the discovery camp where entrepreneurs merely seek to discover a future that already objectively exists in the present. In our comments below, we develop two responses. First, while we wholeheartedly agree that entrepreneurs act to create value as they solve problems, in doing so, all humans, including entrepreneurs, engineers, and artists, act as scientists. Second, while we reject the placement of our perspective in the discovery camp, we argue that our entrepreneur-as-scientist perspective, and pragmatism more generally, find little use for the made versus found distinction.

### ENTREPRENEURS AS (PRAGMATIST) SCIENTISTS

First, we wholeheartedly agree with Sergeeva et al. (2022) that entrepreneurs are more than scientists who only seek to understand their world, but rather are individuals who act within it to create value through new products or services (Casson, 1982; Shane & Venkataraman, 2000). In Zellweger and Zenger (Forthcoming) we highlighted a broad scope of actions through which entrepreneurs seek to produce value under uncertainty. Entrepreneurs find and frame problems that surround them. They compose theories to solve them. They test assumptions related to these theories. They compose preliminary

solutions and evaluate feedback. Overall, they explore fit and the usefulness of their beliefs in guiding these actions (Bremner & Eisenhardt, 2022). Given our heavy focus on action throughout our paper, we must assume that the real objection here is to our analogy and characterization of entrepreneurs as scientists—individuals who seek to understand problems and create solutions in a science-like manner.

In Sergeeva et al.'s (2022) framing, scientists only learn, while engineers and designers do and act. Therefore, by associative logic, because entrepreneurs act, they cannot be scientists, or at least not solely scientists. Yet, for us and for pragmatism, the label “scientist” is not a role but an approach—a set of both cognitive and physical actions focused on solving the problems at hand. Our paper's original working title was actually “Entrepreneurs as pragmatist scientists,” adding the modifier “pragmatism” to ensure readers did not view our entrepreneur-as-scientist analogy as suggesting that entrepreneurs are only ivory-tower scientists seeking to understand the world. A reviewer, however, correctly noted that the word “pragmatism” here was redundant, as scientists are pragmatists who use the scientific method to act and problem-solve. In fact, for pragmatists all humans behave as scientists as they seek to address the problems that surround them. All humans frame problems, compose theories, test hypotheses, recalibrate those hypotheses, and ultimately generate refined beliefs that are useful in guiding action (Dewey, 1938). Even infants and young children act as scientists as they seek to solve problems in their world (Gopnik & Meltzoff, 1997; Gopnik, Meltzoff, & Kuhl, 1999). Thus, not only are entrepreneurs scientists, but engineers and designers are scientists as well. They are pragmatist scientists, who adopt a quasi-scientific process to produce value under uncertainty. In fact, it is precisely in settings of uncertainty—in settings of “unknown unknowns”—that a scientific approach is of particular value. Here, both entrepreneurs and scientists select problems with unknown solutions, advance conjectures or theories about how to compose them, and then seek evidence that tests what they form. Consistent with pragmatist thinking, we simply reject any real distinction between the average individual, the entrepreneur, or the scientist in their mode of scientific inquiry and problem-solving. In fact, for pragmatists, even real scientists “are better thought of as solving puzzles than as gradually disclosing the true nature of things” (Rorty, 2007b: 77). Consequently, any difference between