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A Tale of Two Kirznerns: Time, Uncertainty, and the “Nature” of Opportunities

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This paper discusses the influence of Israel Kirzner on the field of entrepreneurship research. We review Kirzner’s work and argue that it contains two distinct approaches to entrepreneurship, termed Kirzner Mark I and Kirzner Mark II. Mark I with its focus on alertness and opportunity discovery has exerted a strong influence on entrepreneurship research in the last decade, and helped catapult the field forward. We propose that Mark II, with its emphasis on time, uncertainty, and creative action in pursuit of imagined opportunities, complements the discovery view and can provide an alternative conceptual grounding for the decade to come.

Introduction

The evolution of entrepreneurship as a field of study demonstrates the value of borrowing boldly from other theories and disciplines (Gartner, Bird, & Starr, 1992). Indeed, entrepreneurship is quintessentially multidisciplinary; and borrowing ideas and concepts from economics, sociology, and psychology has been fundamental in moving the field beyond descriptive accounts to more theoretically grounded positions. While such borrowing has served the field well in many respects, entrepreneurship scholars must also be cautious since concepts, constructs, and theories may not be readily transferable across scholarly domains and levels of analysis (Klein & Bylund, 2014; Landström, 1999). In this paper, we discuss a specific and highly influential case of borrowing: the use of Austrian economist Israel Kirzner’s work on the economic function of the entrepreneur as a basis for developing theories and research programs in the field of entrepreneurship.

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The scholarship of Kirzner continues to be a central influence and source of theoretical foundations in entrepreneurship research (Klein & Bylund, 2014; McCaffrey, 2014). His work is not only widely cited, but his theories of the entrepreneurial function in the market, with its emphasis on alertness and opportunity discovery, have elevated him to an almost canonical status in the field, equaled only by Joseph Schumpeter. Kirzner's influence on the field was also formally acknowledged when he received *The International Award for Entrepreneurship and Small Business Research* in 2006 (Douhan, Eliasson, & Henrekson, 2007). In particular, Kirzner's work on alertness, discovery, and profit opportunities has provided essential theoretical foundations for several important research streams within entrepreneurship, including opportunity recognition (e.g., Gaglio & Katz, 2001; Shane, 2003; Shane & Venkataraman, 2000), entrepreneurial cognition (Mitchell et al., 2004), the debate over entrepreneurial search versus alertness (Busenitz, 1996; Fiet, Norton, & Clouse, 2013; Fiet & Patel, 2008; Gaglio & Katz; Kaish & Gilad, 1991; Murphy, 2011), and the contested nature and role of opportunities (Alvarez & Barney, 2007; McMullen, Plummer, & Acs, 2007; Short, Ketchen, Shook, & Ireland, 2010). In all of these streams, Kirzner's work is invoked to underpin a general view of alert entrepreneurs who discover, without active search, opportunities that exist because markets are in disequilibrium.

In this paper, we argue that this depiction of Kirzner's work is incomplete and that a broader reading of his work reveals not one but two quite different views of entrepreneurship, henceforth referred to as Kirzner Mark I and Kirzner Mark II. Briefly stated, Kirzner Mark I presents a simple model of the entrepreneurial function in an effort to make the theory compatible with neoclassical economics and the theoretical notion of markets as equilibrium frameworks. Kirzner Mark II, on the other hand, describes the entrepreneurial function in a way that adheres to the foundational Austrian idea of markets as dynamic processes. Since entrepreneurship researchers have thus far borrowed primarily from Mark I, they have by and large adopted a theoretical description of entrepreneurship that emphasizes alertness and the discovery of opportunities, while downplaying issues related to time and uncertainty (i.e., Kirzner, 1973, 1997a). Borrowing ideas from Kirzner Mark I has been central in moving the field beyond what Shane and Venkataraman (2000, p. 217) described as a "hodgepodge" of largely descriptive work without a shared conceptual grounding. Indeed, the introduction of a conceptual framework centered around opportunity, discovery, and alertness helped advance a broadly accepted view of entrepreneurship as an integrated "nexus" of individual agency, and structural components embedded in a disequilibrium understanding of markets (Shane & Venkataraman).

In contrast to this, Kirzner Mark II spends considerable effort on describing the nature of entrepreneurship within a multi-time-period framework, i.e., with time and consequently uncertainty present (e.g., Kirzner, 1982, 1985b, 1999, 2009). While this aspect of Kirzner's work is seldom cited by entrepreneurship scholars, the core tenets of Mark II resonate with several contemporary trends and developments in the field. These include theoretical accounts such as effectuation (Sarasvathy, 2008) and entrepreneurial bricolage (e.g., Baker & Nelson, 2005; Garud & Karnøe, 2003) as well as more specific suggestions to focus not on objectively existing opportunities but subjectively perceived "New Venture Ideas" (Davidsson, 2012), to consider entrepreneurship as being essentially about judgment under uncertainty (Foss & Klein, 2012), and to think through the implications of entrepreneurship as a process that unfolds in real time (McMullen & Dimov, 2013). It is our belief that a better understanding of Kirzner Mark II can provide a common conceptual grounding for these and related trends and developments, and thereby help move the entrepreneurship field forward much as Kirzner Mark I did a decade ago. We hope that this paper can contribute to this development.

The paper is organized as follows: In the first sections, we describe the central ideas of the two Kirznerns with special focus on how *time and opportunities*, as well as *alertness and entrepreneurial agency*, are conceptualized in the two views before discussing the *influence and interpretation* of the views within the entrepreneurship research field. Based on this description, the subsequent sections discuss the implications of the two Kirznerns for entrepreneurship research. In particular, we suggest that Kirzner's own depiction of Mark I, as deliberately simplified, points toward the value of revisiting key concepts such as time, uncertainty, and opportunities in light of the two Kirznerns. As part of this analysis, we show how the central ideas of Kirzner Mark II dovetail with several contemporary trends and developments in the entrepreneurship field that are typically not labeled as Kirznerian, but, in many cases, seen as representing the polar opposite. Finally, we show how Kirzner Mark II may serve as a fruitful theoretical foundation for research that sees entrepreneurship as proactive, creative, and uncertainty facing.

Background and Central Ideas of Kirzner Mark I

The central references to Kirzner Mark I are the 1973 book "Competition and Entrepreneurship" and the 1997 *Journal of Economic Literature* article "Entrepreneurial discovery and the competitive market process: An Austrian approach." Here, Kirzner formulates a strong critique of what he labels "the orthodoxy of equilibrium theory" as found in neoclassical economics. According to Kirzner, the neoclassical tradition assumes rational actors in equilibrium markets who maximize their utility relative to a given set of ends. The result is a market in a state of equilibrium where resources are allocated optimally. Any divergence from the equilibrium state will immediately be remedied, as all information about prices and qualities is assumed to be openly available and accessible to all actors in the market.

By assuming this state of equilibrium, the neoclassical view renders invisible a number of key elements, including the competitive (in the rivalrous sense) nature of the market process and the role of the entrepreneur (Kirzner, 1973). It is, therefore, necessary for economic theory to shift focus from markets in equilibrium to market processes and thereby to the forces that compel changes in prices, outputs, methods of production, and the allocation of resources (Kirzner). These forces are manifestations of systematic relationships between market actors. Yet, the systematic relationship is very different from the one assumed by the neoclassical view. Contrary to the assumptions of neoclassical economics, Kirzner assumes that actors have imperfect knowledge and therefore constantly make errors in their assessment of prices and qualities. In equilibrium theory, where actors make "perfect" decisions, there is no room for the role of the entrepreneur. But when actors make erroneous decisions, the entrepreneur has a vital role to play.

Time and Opportunities

To align his theory of entrepreneurship with the neoclassical equilibrium view that he is criticizing, Kirzner in his Mark I works abstracts from time and uncertainty. Opportunities are therefore conceptualized as pure arbitrage opportunities, which arise because the actors in the market do not have full information and therefore will err in price-setting decisions, i.e., they operate in suboptimal means–end frameworks. Opportunities thus exist objectively as a consequence of suboptimal market coordination (Kirzner, 1973). This lack of coordination is expressed in price differences. What is essentially the same

resource or product may be bought in one market and sold in another market at a different price (Kirzner). It is basically this price difference, which other market actors have so far overlooked, that the entrepreneur discovers. Finally, since Kirzner Mark I describes entrepreneurship in a single time period, the passage of time and uncertainty are not considered. Buying and selling—or opportunity discovery and opportunity exploitation—are carried out simultaneously, and the Mark I entrepreneur takes no risk.

Alertness and Entrepreneurial Agency

Kirzner Mark I also distinguishes the entrepreneurial quality of alertness from neoclassical processes of rational search (e.g., Stigler, 1961). A key difference is that alert opportunity discovery is always accompanied by surprise (Kirzner, 1997a), which stems from the fact that for it to be a discovery, the entrepreneur cannot by definition have known what was to be discovered *ex ante*. It is therefore impossible to search for opportunities, since searching involves some knowledge of what one is searching for. On the contrary, the crucial feature of the neoclassical approach suggests that the form that the future can take is known in advance in a world of Knightian risk (Littlechild, 1986). Ricketts (1987, p. 58) illustrates the difference with the following analogy:

Stigler's searcher decides how much time it is worth spending rummaging through dusty attics and untidy drawers looking for a sketch which (the family recalls) Aunt Enid thought might be by Lautrec. Kirzner's entrepreneur enters a house and glances lazily at the pictures which have been hanging in the same place for years. "Isn't that a Lautrec on the wall?"

The agency involved in Mark I is thus of a responding kind; a reaction to the lure of preexisting opportunities (Kirzner, 1973, p. 74). Such opportunities are effectively pulling forth alert entrepreneurs who can " 'smell' or sense where pure entrepreneurial profits can be won" (Kirzner, 1997b, p. 40). Beside such instantaneous acts of alert opportunity discovery, all remaining agency is traditional, rational economic maximizing during the opportunity exploitation phase. Hence, in this setting, the entrepreneur only performs the discovery function, leaving her with no uncertainty.

Influence and Interpretation

The concept of the entrepreneur as the actor who alertly discovers preexisting opportunities for buying cheap and selling dear, thereby equilibrating the market, has made a significant impact on entrepreneurship research (Shane, 2000, 2003; Shane & Venkataraman, 2000; Venkataraman, 1997; Yu, 2001; and others). In particular, the influential individual-opportunity nexus perspective (Eckhardt & Shane, 2003; Shane; Shane & Venkataraman; Venkataraman) is explicitly constructed on the edifice provided by Kirzner Mark I, in particular the assumption that opportunities have objective existence. Following Kirzner Mark I, opportunities are essentially seen as arbitrage opportunities, which exist independently of the entrepreneurs who discover and exploit them:

Although recognition of opportunities is a subjective process, the opportunities themselves are objective phenomena that are not known to all parties at all times. . . . [Entrepreneurs] can purchase resources at below their equilibrium value and earn an entrepreneurial profit by recombining the resources and then selling them. (Shane & Venkataraman, p. 221)

The opportunity concept has been essential for understanding how structural components influence entrepreneurial activities. And as pointed out by Short et al. (2010), the

concept has generated some of the most fascinating research questions within the field, in spite of the problems involved in clearly defining the opportunity construct (Davidsson, 2012).

Later work on opportunity discovery from a cognitive and information economics perspective has also suggested a more general capacity among entrepreneurs when it comes to signal detection and the ability to “connect the dots” and see the links between seemingly unrelated changes in the external circumstances (Baron, 2004, 2006; Fiet, Norton, & Clouse, 2007; Fiet et al., 2013; Fiet & Patel, 2008; Ward, 2004).

Background and Central Ideas of Kirzner Mark II

Whereas Mark I targeted neoclassical economists, the ideas that we refer to as Kirzner Mark II can instead be found in texts where Kirzner addresses his fellow Austrian economists.

The central references of Kirzner Mark II are book chapters from 1982 and 1985, as well as journal articles published several years later in 1999 and 2009. Certainly, these texts are less known than the 1973 book and less cited in the entrepreneurship field than the 1997 article, yet in terms of the topics raised and the audiences addressed, they are very relevant considering the status of Kirzner in the entrepreneurship research field.

Time and Profit Opportunities

In Kirzner Mark II, the passage of time and uncertainty are essential components of the entrepreneurial function. This has severe implications for the way opportunities are characterized. The Mark II entrepreneur is directed toward future opportunities that have yet to come into existence and therefore seeks to actively “coordinate” between present and future markets, which cannot be defined *ex ante*. Since the passage of time inevitably implies uncertainty, this means that such opportunities for inter-temporal coordination are not predetermined. Indeed, since the future markets do not yet exist, entrepreneurial opportunities must be either speculative, as when the entrepreneur makes a passive bet on the future, or creative, as when the entrepreneur actively tries to shape or create the future in favorable ways (Kirzner, 1982, p. 141). In fact, Kirzner (1985b, p. 155) explicitly argues that: “the futurity that entrepreneurship must confront introduces the possibility that the entrepreneur may, by his own creative actions, in fact *construct* the future as *he* wishes it to be” (emphasis added). In this case, opportunities are subjectively imagined rather than objectively existing, and the entrepreneurial function is not only concerned with the discovery of opportunities that exist due to price disequilibria.

Alertness and Entrepreneurial Agency

Alertness, as conceived in the Mark II view, involves speculation on the future or creation of imagined opportunities, making entrepreneurial agency proactive and constructive. Kirzner Mark II therefore needs to stretch the meaning of alertness beyond the reactive sense used in Mark I:

Alertness is a concept sufficiently elastic to cover not only the perception of existing arbitrage opportunities, but also the perception of intertemporal speculative opportunities that can be definitely realized only after the lapse of time, and even also the

perception of intertemporal opportunities that call for creative and imaginative innovation. (Kirzner, 1985a, pp. 84–85)

Entrepreneurial action in Mark II thus goes beyond the Mark I view, in which the entrepreneur is “not a source of innovative ideas” but simply “responding to opportunities rather than creating them” (Kirzner, 1973, p. 74). When embedded in time and facing uncertainty, entrepreneurs are described as speculators or active creators of the future (cf. Kirzner, 1999).

Influence and Interpretation

The ideas of Kirzner Mark II are not well cited in the entrepreneurship literature (see however, Barreto, 2012; Berglund, 2009; Fiet & Patel, 2008; Foss & Klein, 2010a, 2010b; Foss, Klein, Kor, & Mahoney, 2008; Klein, 2008; McMullen & Shepherd, 2006; Yu, 2001). In their discussion of entrepreneurial action, McMullen and Shepherd acknowledge that Kirzner elaborated on the simple arbitrage view of alertness in part as a response to internal Austrian criticism that his theory was too deterministic. Entrepreneurship in Mark I was described as an automatic response to preexisting opportunities; “alertness is what happens when the market presents a profitable situation that is successfully exploited by an individual who ‘fits’ the necessary profile” (McMullen & Shepherd, p. 144). In Mark II, on the contrary, alertness is also represented by qualities such as boldness, creativity, innovativeness, and judgment.

While McMullen and Shepherd consider the shift in focus mainly as a problem—because it is said to divorce entrepreneurial alertness from the market context—others see this as an intellectual gain. For Foss and Klein (Foss et al., 2008; Klein, 2008), the greater resemblance to Knightian judgment makes Kirzner Mark II more relevant for applied management research. Embedding Kirzner in the broader Austrian tradition, Foss and Klein emphasize the inevitable creativity of entrepreneurial action as the pursuit of imagined opportunities under conditions of uncertainty.

A Tale of Two Kirznerns

As is the case with most economic literature dealing with entrepreneurship, Kirzner is first and foremost concerned with the function of the entrepreneur in the economic system (Hebert & Link, 1988), and hence deals with entrepreneurship as a distinct function in the market process. This applies for both Kirzner Mark I and II, despite the significant differences between them, summarized in Table 1.

The difference between the two views is not simply the result of a change over time in Kirzner’s conceptualization of markets and the entrepreneurial function. Instead, the difference appears to be the result of Kirzner addressing two distinct audiences and engaging in two different discussions (Kirzner, 1982, 1985a). What we refer to as Kirzner Mark I is an attempt to introduce the entrepreneurial function into equilibrium-oriented neoclassical economic theory. The emphasis on reactive alertness to preexisting opportunities within a single time period was therefore chosen to communicate with mainstream neoclassical economists, not with Austrian economists or entrepreneurship scholars. In order to do so, Kirzner felt it necessary to provide a specific version of the entrepreneurial function: “For the purpose of that work I believed it important deliberately to abstract, for the most part, from the complications introduced by consideration of production, and the passage of time” (Kirzner, 1985b, p. 6).

Table 1

Summary of the Differences Between Kirzner Mark I and Mark II

	Kirzner Mark I	Kirzner Mark II
Central idea	Disequilibria exist in markets—and are reduced by arbitrage	Uncertainty exists in markets—and is reduced by creative construction
View of time	The passage of time is not emphasized	Time is essential
View of opportunities	Objectively existing arbitrage opportunities	Imagined and subjectively constructed
View of alertness and agency	Alertness is reactive and leads to discovery	Alertness is proactive and comprises both speculation and creativity
Primary audience	Economists	Austrian economists or entrepreneurship scholars
Key works by Kirzner	Kirzner (1973, 1997a)	Kirzner (1982/1985b [book chapter], 1999, 2009)
Examples of corresponding works in the entrepreneurship field	Venkataraman (1997); Shane (2000, 2003); Shane & Venkataraman (2000); Gaglio & Katz (2001); Kaish & Gilad (1991); Baron (2004, 2006); Mitchell et al. (2004); Busenitz (1996)	Klein (2008); Dimov (2007); Ardichvili, Cardozo, & Ray (2003); McMullen & Shepherd (2006); Sarasvathy et al. (2002)

Kirzner Mark II, on the other hand, addresses a different audience; primarily fellow Austrian economists (see, e.g., Kirzner, 1982, 1985b) but later also the research field of entrepreneurship (see Kirzner, 2009). While many Austrian economists appreciated Kirzner's initial effort to bridge Austrian economics and neoclassical equilibrium theories, others suggested that it was both misleading and wasteful to remove core Austrian ideas in order to present a simplified "Austrian-economics-as-supplement-to-neoclassical-economics" (Vaughn, 1994, p. 166). Consequently, Kirzner Mark I (in particular the 1973 book *Competition and Entrepreneurship*) was subjected to criticism from fellow Austrians, who felt that he unduly downplayed central Austrian ideas related to uncertainty, speculation, and the passage of time (Hazlitt, 1974; White, 1990).

In a series of books, book chapters, and journal articles, Kirzner therefore sought to rehabilitate his theory of entrepreneurship by more explicitly discussing the effects of the passage of time and the presence of genuine uncertainty (Kirzner, 1982, 1985a, 1999; 2009; see, however, also Kirzner, 1973, pp. 84–85). Kirzner Mark II can therefore be viewed as an attempt to accommodate internal Austrian criticism as well as to communicate with scholars interested in entrepreneurship per se. The effect was that in Kirzner Mark II the central message is one of imaginative entrepreneurs who make their profits by proactively shaping the nonexistent future in ways that brings it in line with the future as they envision it—as opposed to the arbitrage discovery of Mark I.

According to Kirzner himself, the two views of the entrepreneurial function are quite different and must be understood in context. Specifically, the single time period view of Kirzner Mark I was developed for a specific purpose, namely to engage with the mainstream economics literature.

My emphasis on alertness to hitherto unperceived opportunities as the decisive element in the entrepreneurial function stemmed from my pursuit of a didactic purpose. This purpose was to distinguish the analysis of the market process (a process in which the entrepreneur plays the crucial role) as sharply as possible from the analysis of equilibrium states (in which all scope for entrepreneurial activity has been assumed away). (Kirzner, 1982, pp. 140–141)

In a later paper, Kirzner elaborates further:

It was certainly not the intention, in deploying this analytical device, to deny that in the real world of production and (consequently) of multi-period decision making and radical uncertainty, entrepreneurship is exercised only by calling upon the entrepreneur's qualities of boldness, innovativeness and creativity. (Kirzner, 1999, p. 11)

While this heterogeneity did spawn some discussion and even controversy internally among Austrian economists (see, e.g., Buchanan & Vanberg, 1991; Vaughn, 1994), these differences have been largely overlooked by entrepreneurship researchers. This is somewhat surprising given the impact of Kirzner's work on this field. The result is that, by drawing on Kirzner Mark I, entrepreneurship scholars have been citing and using a version of Kirzner's theory of entrepreneurship that is directed at mainstream economists, and for this purpose have deliberately excluded concepts and dimensions that, according to Kirzner himself, are essential for understanding real-world entrepreneurial processes. Consequently, there are potential insights to be gained by revisiting Kirzner's theories.

In what follows, we will elaborate in greater detail on the implications for the entrepreneurship field of the two Kirznerns. This will be done in three sections. The first two focus on the entrepreneurship field's theoretical borrowing from Mark I and on how Mark II resonates with central debates in the entrepreneurship field. The final section is more forward looking and offers a number of propositions and suggestions for future research.

Theoretical Borrowing: A Reflection on Kirzner Mark I

When borrowing theories from other fields, some reinterpretation and selection of what to include and what not to include is inevitable, especially when theories are operationalized for empirical research purposes. Moreover, such reinterpretation and selection will have consequences for how the theories work in the new context. In the case of Kirzner's influence on entrepreneurship research, it is clear that focusing, as Kirzner Mark I does, on alert discovery of objective arbitrage opportunities has helped entrepreneurship scholars appreciate both structural factors and entrepreneurial agency, as well as underpinned the development of overarching research programs that integrate the two (cf. Shane, 2003).

Entrepreneurship research inspired by Kirzner Mark I has been tremendously beneficial to the field, not least by moving the field beyond its historical focus on individuals (Shane & Venkataraman, 2000; Venkataraman, 1997) and by distinguishing between entrepreneurship as search and alert discovery (Fiet et al., 2007, 2013; Fiet & Patel, 2008). The research questions implied by this tradition clearly reflect the underlying assumption of objectively existing opportunities that are discovered by alert individuals (cf. Gaglio & Katz, 2001; Kaish & Gilad, 1991; Patel & Fiet, 2010). These were clearly pronounced by Shane and Venkataraman (p. 218) who suggested three sets of research questions:

(1) why, when, and how opportunities for the creation of goods and services come into existence; (2) why, when, and how some people and not others discover and exploit these opportunities; and (3) why, when, and how different modes of action are used to exploit entrepreneurial opportunities.

As evidenced by the extensive research done on the basis of these research questions, the Kirzner Mark I framework is well suited for processes where time and uncertainty are

of little consequence; similar to what has been referred to as risky decision-making contexts (Alvarez & Barney, 2007). This leads us to proposition 1.

Proposition 1: Kirzner Mark I provides an adequate description of entrepreneurial processes that take place in stable environments where entrepreneurs possess knowledge that allows them to foresee the central effects of their actions.

Yet, it may be argued that it is likely very difficult to establish *ex ante* whether an entrepreneurial process will be uncertain. The human ability to predict is limited, and entrepreneurial plans are often displaced by unforeseen events, even in what has historically been stable markets (McMullen & Shepherd, 2006; Sarasvathy, 2008).

The borrowing of Kirzner Mark I ideas has not been entirely uncontroversial. Barreto (2012) suggests that the Kirznerian concepts of opportunity discovery and alertness are fuzzy and have caused misunderstandings. Consequently, these concepts may have been advancing and holding back theoretical development at the same time. Fiet and colleagues (Fiet et al., 2007, 2013; Fiet & Patel, 2008) have questioned the pragmatic value of Kirzner Mark I's concept of alertness, which is understood as random search relying largely on luck. Finally, Foss and Klein (2010a, 2010b, 2012) suggest that entrepreneurship research has misunderstood the metaphorical nature of Kirznerian concepts. Specifically, alertness and opportunities should be seen as metaphors used to describe the tendency for markets to equilibrate; they should not be treated as psychological properties and environmental artifacts (Foss & Klein, 2012). Still, they suggest that the adoption of Kirzner Mark I has been a "fruitful misunderstanding" in the sense that it has inspired significant research streams (Foss & Klein, 2012).

This highlights the more general risk entrepreneurship researchers run of conflating two levels of analysis in their theoretical borrowing. Kirzner Mark I explicitly addresses the market as level of analysis, whereas entrepreneurship researchers who borrow his ideas often focus on entrepreneurial processes, firms, or individuals at the micro level (Foss & Klein, 2010b). In treating alertness and opportunities as empirical categories rather than metaphorically intended theoretical concepts, these researchers run the risk of committing the fallacy of misplaced concreteness (Berglund, 2009; Foss & Klein, 2012). Indeed, the concept of alertness comes across as quite empty when used to describe and especially prescribe entrepreneurial action at the micro level (Fiet & Patel, 2008; Fiet et al., 2007, 2013; Foss & Klein, 2012; Klein, 2008; Patel & Fiet, 2010).

One reason for these issues may be that the concepts of opportunity and alertness, borrowed from Kirzner Mark I, arguably underemphasize features related to time, uncertainty, and creativity (Berglund, 2009; Whitehead, 1967). So while Kirzner Mark I may adequately describe a great number of real-life situations where time and uncertainty for various reasons are not essential, too much focus on Mark I may lead researchers to ignore real-life situations where time, uncertainty, and creativity are central. Important research efforts have indeed focused on such conditions (e.g., Baker & Nelson, 2005; Sarasvathy, 2008), and it has also been argued that such situations are theoretically more interesting (cf. Sarasvathy & Berglund, 2010), and should therefore be given priority in theory building efforts (cf. Davidsson, 2004, p. 68).

In addition to these general risks related to theoretical borrowing, the discovery view has received empirically grounded criticism from entrepreneurship researchers; a critique that can be also traced back to the concepts borrowed from Mark I. Some researchers suggest that the discovery view is too simple and too linear to adequately describe and explain many entrepreneurial processes at the micro level (e.g., Baker & Nelson, 2005;

Garud & Karnøe, 2003). Also, critics point out that creativity, social interaction, and subjectivity are largely missing in the discovery view (see Korsgaard, 2013).

The abovementioned issues suggest that there are limits to the applicability of the discovery view based on Mark I. But does Kirzner Mark II hold promise for new ways of conceptualizing entrepreneurship that deals differently with time, uncertainty, and opportunities? And under what conditions are Kirzner Mark I and II valid (cf. Fiet et al., 2013; Zahra, 2007)? In the following, we will explore these issues and also argue that just as Mark I helped move entrepreneurship research forward a decade ago, Mark II can do the same by providing a coherent theoretical foundation that resonates with several contemporary trends and developments in the field.

Three Central Debates in Entrepreneurship Research: A Reflection on Kirzner Mark II

In the following, we delve deeper into the relation between Kirzner's work and the entrepreneurship research field. We do this by focusing on three themes that all highlight key differences between Kirzner Mark I and II and constitute central points of debate in the entrepreneurship field: (1) time, (2) uncertainty, and (3) the nature of opportunities. For each theme, we identify streams of research that resonate with, yet are not typically associated with, the Kirzner Mark II view. We also point to future research avenues where existing research streams can be integrated with a Kirzner Mark II view, and introduce research themes and questions that are pressing in a Kirzner Mark II perspective.

Time

The passage of time is a key difference between Kirzner Mark I and II. In Kirzner Mark I, the entrepreneurial process is conceptualized as arbitrage and consequently downplays the passage of time. In Mark II, a multi-time-period perspective is introduced, and the entrepreneur engages in what Kirzner (1982) refers to as intertemporal coordination—making the world of tomorrow better—which involves effort, investments, and the bearing of uncertainty.

Integrating the passage of time has the potential to highlight elements of the entrepreneurial process that are invisible if entrepreneurship is treated as analogue to arbitrage. As pointed out by Dimov (2007, p. 717), the discovery view of entrepreneurship and opportunities is based on a “conceptual collapse of the time between a first insight and the idea that ends up being implemented.” Such a position fits poorly with cases of entrepreneurship where iteration and creative reinterpretation of the perceived opportunity are prevalent. Stated differently, by making discovery an atemporal concept—something that happens in a single instance (Dimov)—the discovery view runs the risk of overlooking the work of creative iteration and development of ideas. Here, it is important to remember that a Kirzner Mark I perspective is a reasonable approximation of reality in many situations where almost no time passes—buying and selling is nearly instantaneous—or nothing of real consequence to the plans and expectations of the entrepreneur happens in the time passing. Examples of this can be found in simple arbitrage businesses as well as in generally stable industries, such as traditional manufacturing or parts of the pharmaceutical industry, where customer demand, business models, and regulatory conditions are quite established and stable (cf. Fiet et al., 2013). While the threat of disruption, by innovative entrepreneurs, is a possibility in even the historically most stable industries

(Christensen, 1997), the discovery and exploitation of opportunities in stable industries will likely approximate the Kirzner Mark I view. In other situations, customer demand, business models, regulations, technology, etc., are less stable, which means that the passage of time is likely to entail changes that force entrepreneurs to revise their ventures and perceived opportunities substantially (Alvarez & Barney, 2005; Blank, 2005). Current examples include industries such as wearable computers, online education, or self-driving cars. Under such conditions, Kirzner Mark II will likely provide a better description of the entrepreneurial process.

Indeed, several in-depth case studies have found instances where the discovery view of opportunities inadequately explains what takes place at the micro level of firm and individual activities (Baker & Nelson, 2005; Berglund, Dahlin, & Johansson, 2007; Gaddefors, 2005; Garud & Karnøe, 2003; Görling & Rehn, 2008). One reason for this is that what the discovery view assumes to be analytically distinct phases of discovery, evaluation, and exploitation may in some entrepreneurial processes actually be intertwined. Instead of a staged linear development from discovery to exploitation, these case studies find highly interactive, iterative, and creative processes (Korsgaard, 2013). Taking a multi-period view, the entrepreneur may in fact appear to be creating the very future states between which she, *post hoc*, appears to have been coordinating. This takes us to proposition number 2:

Proposition 2: Kirzner Mark II provides an adequate description of entrepreneurial processes that take place over a duration of time in which the relevant conditions alter significantly.

Pressing research questions in relation to the role of time in entrepreneurial processes may include: How does the passage of time influence entrepreneurial processes; how does the duration of the entrepreneurial process influence the organization and outcome of the process; and how are time and uncertainty interrelated in entrepreneurial processes?

Uncertainty

In Kirzner Mark II, uncertainty is seen as present in all entrepreneurial ventures that require production or more generally unfolds over time. Consequently, the entrepreneur will need to bear uncertainty as well as make decisions and take actions in the face of uncertainty. In this respect, Kirzner Mark II is very similar to judgment-based views of entrepreneurship (Foss & Klein, 2012; Knight, 1921). Following Kirzner Mark II, it becomes essential to explore how entrepreneurs manage uncertainty. Some headway has been made in this respect. McMullen and Shepherd (2006) explore how uncertainty might prevent entrepreneurial action. They suggest that perceived uncertainty and the motivation to bear uncertainty are decisive components in separating those who choose to take entrepreneurial action and those who do not. For McMullen and Shepherd, uncertainty thus becomes a mental construct related to a sense of doubt which may lead to hesitation. This is in congruence with the Kirzner Mark II suggestion that Schumpeterian characteristics of boldness and perseverance are in fact important in real-world entrepreneurial processes (Kirzner, 2009).

However, uncertainty for Kirzner Mark II is more than a mental construct; it is a factual characteristic of the activity and process. Regardless of whether the entrepreneur perceives herself to be in an uncertain situation or not, and whether uncertainty actually manifests itself in unexpected or unpredicted events during the entrepreneurial process, prospective entrepreneurs do face actual uncertainty caused by the futurity of the markets

in which they will be selling. This suggests that there are certain ways of organizing and acting under uncertainty that may be better than others (Alvarez & Barney, 2005; Sarasvathy, 2001; Sarasvathy, Venkataraman, Dew, & Velamuri, 2002). While Kirzner in his market-level treatment of the entrepreneurial function does not explicitly address what he refers to as the “secrets of successful entrepreneurship” (Kirzner, 2009, p. 145), he does provide a theoretical foundation for an exploration of these “secrets.” The theory of effectuation has made significant forward strides in demonstrating the value of participatory and iterative strategies in conditions of uncertainty (Sarasvathy, 2008). Future research into various resourceful strategies and tactics such as bricolage (Baker, 2007; Baker, Miner, & Eesley, 2003; Baker & Nelson, 2005; Garud & Karnøe, 2003), exaptation (Dew, 2007; Dew, Sarasvathy, & Venkataraman, 2004) and improvisation (Baker et al.) will most likely add to our understanding of how entrepreneurs can manage uncertainty once the decision to act has been taken. Similarly, the resurging exploration of Austrian economics has resulted in interesting findings concerning the organization of ventures under uncertainty (Foss & Klein, 2012). This leads us to proposition 3:

Proposition 3: Kirzner Mark II provides an adequate description of entrepreneurial processes that take place in uncertain contexts.

An essential research avenue is thus the exploration of how entrepreneurs experience, encounter, and manage uncertainty. Much interesting work is already ongoing in this respect (see, e.g., Alvarez & Barney, 2005; McKelvie, Haynie, & Gustavsson, 2011; McMullen & Shepherd, 2006; Read, Dew, Sarasvathy, Song, & Wiltbank, 2009). In particular, the various behaviors and heuristics employed by entrepreneurs (e.g., bricolage, effectuation, improvisation, exaptation, cocreation, relationship building) warrant further inspection under a Kirzner Mark II view (cf. Venkataraman, Sarasvathy, Dew, & Forster, 2012); i.e., how and when are such actions and heuristics deployed and to what effects?

Pressing research questions relating to uncertainty thus include: How do entrepreneurs experience uncertainty; how does the experience of uncertainty influence the entrepreneurial process; and how and in what situations do entrepreneurs organize for uncertainty (as opposed to risk)?

The Nature of Opportunities

In the atemporal world of Kirzner Mark I, it is perfectly reasonable to view opportunities as having objective existence. The notion of objective opportunities has been adopted in the hugely successful discovery view, which has dominated the entrepreneurship research field for more than a decade. In Kirzner Mark II, the nature of opportunities is less straightforward. Here, we can speak of opportunities as existing only in the metaphorical sense of signifying the tendency of the market to equilibrate (Klein, 2008). At the level of firms and individuals, it becomes meaningless to speak of opportunities as something that exists and can be subject to entrepreneurial action and research. In Mark II, we may more appropriately refer to opportunities as imagined (Foss & Klein, 2012; Klein). What is central here is that entrepreneurs “imagine opportunities” in future states (Berglund, 2007a; Chiles, Elias, Zarankin, & Vultee, 2013; Foss & Klein). These imagined opportunities are subjective images similar to what Davidsson (2012) refers to as “new venture ideas.” The entrepreneur thus acts to realize the imagined opportunity, and in doing so seeks to bring about the desired future state of affairs (Kirzner, 1982, 1985b). Of particular importance here thus becomes the judgments (Foss & Klein,

investments (Foss & Klein; Sarasvathy, 2008), and actions (Sarasvathy & Venkataraman, 2011) of the entrepreneurs as they explore the viability of the imagined opportunities and seek to create a favorable future state of affairs. This leads us to proposition 4:

Proposition 4: Kirzner Mark II provides an adequate description of entrepreneurial processes that take place over a duration of time and in an uncertain context in which entrepreneurs iteratively develop and alter their imagined opportunities.

An important avenue for research is thus a continued effort to understand how entrepreneurs make conjectures about future states of affairs, as well as how entrepreneurs creatively engage in the iterative development of new means–ends combinations (cf. Kirzner, 1985b). In other words, any stream of research that explores how entrepreneurs make and alter conjectures, generates and transforms creative ideas both individually and in collaboration with others is key in a Mark II view (Fletcher, 2006; Garud & Karnøe, 2003; Korsgaard, 2011, 2013; Krueger & Day, 2010). Pressing research questions may include: How are new opportunities imagined; and how are imagined opportunities developed in the entrepreneurial process?

Implications for Research

There is great potential in integrating individual and firm-level research with market- and system-level economic explanations of the entrepreneurial function. This is true both in general and in the specific case of Austrian economics (cf. Chiles, Bluedorn, & Gupta, 2007; McMullen & Shepherd, 2006; Venkataraman, 1997). For instance, system level explanations can be a source of good micro-level research ideas (Chiles et al.), and can generally provide coherence among seemingly fragmented empirical research findings by providing overarching frameworks that relate findings and establish common ground. As such, it can serve to enhance the legitimacy of the field as a whole (Venkataraman).

We argue that there is further potential for integrating the market-level economic theories of Austrian economics with individual and firm-level research in the entrepreneurship field. In this, we are similar to Chiles and colleagues (Chiles, et al., 2007; Chiles, Tuggle, McMullen, Bierman, & Greening, 2010; Chiles, Vultee, Gupta, Greening, & Tuggle, 2010) as well as Foss and Klein (2012) who suggest that the entrepreneurship field may benefit from a broader reading of Austrian works. But, unlike these scholars, we suggest that we need not replace Kirzner with Lachmann, Mises, or Knight. Instead, we show that there is also great potential in reading more Kirzner, and in particular those parts of Kirzner's oeuvre that embrace uncertainty, creativity, and the passage of time; what we have termed Kirzner Mark II.

By acknowledging the value of both Kirzner Mark I and II, we believe that a better foundation for entrepreneurship research can be established. Taking as point of departure the theoretical propositions regarding time, uncertainty, and creative action in pursuit of imagined opportunities, Kirzner Mark II provides a coherent theoretical grounding that ties together many contemporary trends and developments in the field, and also indicates broad areas for further inquiry, similar to the way Kirzner Mark I drew focus to opportunities, discovery, and processes of exploitation (cf. Shane & Venkataraman, 2000). The emphasis on these issues also suggests certain methods and research designs suitable for empirical investigations. While outlining detailed designs is beyond the scope of this paper, we hope to clarify the implications of our propositions by suggesting a number of testable hypotheses coupled with appropriate research methods and variables for investigating these. We

focus on three methods that stand out as particularly useful: longitudinal case studies (McMullen & Dimov, 2013; Nell, 2010; Van de Ven & Engleman, 2004; Yang & Chandra, 2013), agent-based simulations (Nell; Yang & Chandra), and phenomenological interviews (Berglund, 2007a, 2007b; Cope, 2005; Fiet et al., 2013).

The Kirzner Mark II view aligns well with the long-standing call for longitudinal process studies in entrepreneurship research (McMullen & Dimov, 2013; Van de Ven, 2007; Van de Ven & Engleman, 2004). According to Kirzner Mark II, the introduction of multiple time periods fundamentally changes the entrepreneurial function and process. Designs that will help us understand the difference between Mark I and II processes, where time has limited and substantial influence, respectively, are important. Furthermore, it is important to explore exactly how the introduction of time alters the entrepreneurial function and process. It is an implicit proposition in Kirzner Mark II that more time means more uncertainty, yet this may play out in different ways and with different effects in empirical reality. And the introduction of uncertainty is likely not the sole effect of time on entrepreneurial processes.

Theory building longitudinal case studies provide a solid method for exploring processes over time (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Yin, 2009). Such studies will, in simplified terms, incorporate time as the independent variable, and explore how time influences dependent variables such as the level and nature of uncertainty, as well as the nature of entrepreneurial opportunities and processes.

Some case studies have already proven useful in this respect, giving initial insights into how entrepreneurs manage uncertainty, alter venture ideas, and develop opportunities through experimentation and creative iteration (see, e.g., Baker & Nelson, 2005; Garud & Karnøe, 2003). An example of such an approach was adopted by Garud and Karnøe in their study of the emerging windmill industries of Denmark and the United States.

Agent-based simulation models can also be a useful method to explore patterns of entrepreneurial activity and environmental uncertainty over multiple time periods (McKelvey, 2004; McMullen & Dimov, 2013; Yang & Chandra, 2013). Following Austrian economics in general, agent-based models seek to explain macro-level outcomes from micro-level interactions. The actors in the simulation are modeled individually to adopt different strategies and have different preferences. The macro-level outcomes emerge from the interactions between heterogeneous actors over multiple time periods, in a way that is analogous to how the market process is depicted in the Austrian tradition (Nell, 2010). Agent-based simulations can thus be designed to explore the relation between time and uncertainty. In particular, it is possible to manipulate the duration of entrepreneurial processes to explore effects both on the level of uncertainty as well as successfulness of strategies adopted. It is also possible to manipulate the level of uncertainty or environmental dynamism (Davis, Eisenhardt, & Bingham, 2007), and explore at which point certain entrepreneurial strategies are suitable. An approach somewhat similar to this was adopted by Gavetti, Levinthal, and Rivkin (2005) in their agent-based simulation of strategic decisions based on analogy or local search as different approaches adopted by heterogeneous actors. Such a study demonstrates the potential of simulating different strategies adopted under different circumstances leading to unpredictable and nontrivial results (Davis et al.).

Phenomenology as a methodological perspective also dovetails nicely with the Austrian principle of subjectivism and its strong rejection of scientism (Hayek, 1942). It is therefore no surprise to find that the two have a long and shared history (cf. Madison, 1994). As a method, phenomenology focuses on individuals' experiences of phenomena or situations, rather than on their objective properties. Stated differently, focus is on the subjects rather than the objects of human action (Berglund, 2007b). Based on systematic

analyses of rich qualitative data, e.g., from interviews, action research, ethnographies, or diaries, researchers seek to describe how individuals experience a phenomenon or situation. Things like entrepreneurial opportunities are thus not considered to exist in and of themselves, but rather in the ways individuals experience and interpret them. This is important, not least because it influences how these individuals act (Berglund, 2007a; Foss et al., 2008). The connection between subjective perceptions and behavior is also made by Davidsson and Tonelli (2013) in their recent call to replace the “objectivist notion of opportunities” with new venture idea; a term that the authors believe better captures “the subjective perceptions that guide entrepreneurial action” (p. 7). The value of interviews based on the phenomenological tradition—phenomenological interviews—has been demonstrated in the entrepreneurship field already in Fiet et al. (2013) and Berglund’s (2007a) studies on opportunities as well as Cope’s (2011) work on learning and failure.

Based on these three methods—longitudinal case studies, agent-based simulations, and phenomenological interviews—Table 2 summarizes a number of suggestions for how to empirically investigate the theoretical propositions developed in the paper. This table is by no means complete, and the variables included are only crudely operationalized. Still, the table demonstrates how key concepts and insights from Kirzner Mark I and II can inspire empirical research and help further develop our understanding of entrepreneurship.

Implications for Practice

With respect to the practice of entrepreneurship it is well established that a focus on uncertainty rather than risk, and opportunity creation rather than discovery, generates very different normative models for entrepreneurial action (see, e.g., Alvarez & Barney, 2007; Read, Sarasvathy, Dew, Wiltbank, & Ohlsson, 2011). The presence and importance of uncertainty is also central to many influential practitioner-oriented theories. One example is the Lean Startup literature, where Steve Blank (2005), Eric Ries (2011), and others formulate a set of principles that, based on an imagined opportunity, focus on formulating venture hypotheses and then quickly and efficiently testing these, often by engaging with customers and other stakeholders. The central premise is that the venture is developed in the face of great uncertainty, which implies that the entrepreneur’s main priority is to learn as efficiently as possible. This approach rejects the traditional discovery–planning–execution model of entrepreneurship, as presented in numerous textbooks building on an opportunity discovery view (see, e.g., Barringer & Ireland, 2008; Mariotti, 2007; Wickham, 2006). The same line of thinking is embodied in discovery-driven planning (cf. McGrath, 2010) as well as in Mullins and Komisar’s (2009) idea of iterating to a plan B as fast as possible. They argue that since the predictions of entrepreneurs are likely to be wrong, it is best to have them rejected as quickly and cost efficiently as possible. This approach skips the traditional business-planning phase for a hands-on test of specific assumptions made by the entrepreneurs about what customers want. While different in some respects, we note a strong coherence between the experimental and iterative approaches of these practitioner-oriented works and the transformative change pursued in the theory of effectuation. Both embrace uncertainty and regard “opportunities” as tentative, and both provide a set of principles to guide entrepreneurial action in the face of this uncertainty (Read et al.). While the merits of specific principles and guidelines may be debated, it is nevertheless clear that a Kirzner Mark II view, with its emphasis on uncertainty and creativity, calls for this type of uncertainty embracing prescriptive theories (cf. Harper, 2002). This stands in sharp contrast to the Kirzner Mark I view, which is closer in spirit to the traditional discovery–planning–execution view of entrepreneurship.

Table 2

Overview of research designs

Theoretical propositions	Testable hypotheses	Level of analysis	Method	Independent variables	Dependent variables	Sources of methods inspiration
<p><i>Proposition 1: Kirzner Mark I provides an adequate description of entrepreneurial processes that take place in stable environments where entrepreneurs possess knowledge that allows them to foresee the central effects of their actions.</i></p> <p><i>Proposition 3: Kirzner Mark II provides an adequate description of entrepreneurial processes that take place in uncertain contexts.</i></p>	<p>Entrepreneurs perceive their opportunities as having objective existence or as being tentative conjectures, depending on the expected level of uncertainty facing the venture</p>	The individual	Phenomenological interviews	Uncertainty facing the venture, as perceived by the entrepreneur	Nature of the opportunity, as perceived by the entrepreneur	Berglund (2007a, 2007b); Cope (2011); Fiet et al. (2013)
	<p>The entrepreneurial process will be more or less linear—i.e. comprising discovery, evaluation and exploitation—depending on the level of uncertainty facing the venture.</p>	The entrepreneurial process	Longitudinal case studies Simulation studies	Uncertainty facing the venture (cf. Davis, Eisenhardt, & Bingham, 2009)	Nature of the entrepreneurial process (linear or iterative)	Garud & Karnøe (2003) Davis et al. (2009)
<p><i>Proposition 2: Kirzner Mark II provides an adequate description of entrepreneurial processes that take place over a duration of time in which the relevant conditions alter significantly</i></p>	<p>Entrepreneurs perceive their opportunities as having objective existence or being tentative conjectures, depending on the expected duration of the entrepreneurial process.</p>	The individual	Phenomenological interviews	Duration of the process, as anticipated by the entrepreneur	Nature of the opportunity, as perceived by the entrepreneur	Berglund (2007a, 2007b); Cope (2011); Fiet et al. (2013)
	<p>The entrepreneurial process will be more or less linear—i.e. comprising discovery, evaluation, and exploitation—depending on the duration of the entrepreneurial process.</p>	The entrepreneurial process	Longitudinal case studies Simulation studies	Duration of the entrepreneurial process	Nature of the entrepreneurial process (linear or iterative)	Van de Ven et al. (1999) Gavetti & Rivkin (2005)
<p><i>Proposition 4: Kirzner Mark II provides an adequate description of entrepreneurial processes that take place over a duration of time and in an uncertain context in which entrepreneurs iteratively develop and alter their imagined opportunities.</i></p>	<p>During the entrepreneurial process, entrepreneurs' imagined opportunity will change more or less depending on the uncertainty facing the venture.</p>	The individual	Phenomenological interviews	Uncertainty facing the venture (cf. Davis et al., 2009) Intervening Variable: Nature of the entrepreneurial process (linear or iterative)	Change in the nature of the opportunity, as perceived by the entrepreneur	Berglund (2007a, 2007b); Cope (2011); Fiet et al. (2013)
	<p>During the entrepreneurial process, entrepreneurs' opportunity perceptions will change more or less depending on the duration of the entrepreneurial process.</p>	The individual	Phenomenological interviews	Duration of the entrepreneurial process Intervening Variable: Nature of the entrepreneurial process (linear or iterative)	Change in the nature of the opportunity, as perceived by the entrepreneur	Berglund (2007a, 2007b); Cope (2011); Fiet et al. (2013)

Limitations

While we see great promise in Kirzner Mark II, a further integration of this view and entrepreneurship research is not without limitations and challenges. Mainly, there are some inconsistencies in what we here refer to as Kirzner Mark II, primarily resulting from Kirzner's continued insistence on coherence between Mark I and II. From the perspective of entrepreneurship research, it is a source of some confusion that Kirzner insists on retaining the concepts of discovery and alertness in a multiple time-period scenario (Buchanan & Vanberg, 1991; Klein, 2008). We acknowledge that from a *post hoc* detached system-level perspective, it makes sense to metaphorically speak of inter-temporal coordination, and hence of discovery and alertness in a multi-time-period view. We furthermore acknowledge Kirzner's ambition of building a bridge or taking the middle ground between Austrian subjectivism and mainstream neoclassical economics, which is probably the main reason for maintaining this vocabulary across Mark I and Mark II texts. We do, however, propose that this terminology has created confusion in the translation of market-level explanations of the entrepreneurial function into concepts and constructs for firm and individual-level research. The greatest of care must be shown in this translation. This, however, does not detract from Kirzner Mark I nor Mark II's insightful descriptions of the entrepreneurial function and how they can serve as a solid foundation for current and future entrepreneurship research. We thus propose a continued bold borrowing from Kirzner.

Conclusion

In sum, this paper has proposed that Kirzner's work should be divided into Mark I and Mark II versions. We have argued that Mark I, despite offering a deliberately simplified view of the entrepreneurial process, has been instrumental in moving the field forward for more than a decade. However, the Mark I inspired discovery view is facing increasing challenges, and we have argued that many of these can be fruitfully addressed from a Mark II perspective. Specifically, Mark II has the potential of providing an integrating theoretical framework that comprises time, uncertainty, and entrepreneurial creativity. In its emphasis on these issues, we also noted that Kirzner Mark II is well aligned with several promising entrepreneurship research streams that are typically not labeled Kirznerian—but in many cases quite the opposite. Interestingly, they share an emphasis on time, uncertainty, and creative action in pursuit of imagined opportunities. By grounding them in the central concepts of Kirzner Mark II, we hope that entrepreneurship researchers will not only discover the richness of Kirzner's work, but also once again rally around Kirznerian ideas, and in doing so move the field forward with focus and energy.

REFERENCES

- Alvarez, S.A. & Barney, J.B. (2005). How do entrepreneurs organize firms under conditions of uncertainty? *Journal of Management*, 31(5), 776–793.
- Alvarez, S.A. & Barney, J.B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1–2), 11–26.
- Ardicvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105–123.

- Baker, T. (2007). Resources in play: Bricolage in the toy store(y). *Journal of Business Venturing*, 22(5), 694–711.
- Baker, T., Miner, A.S., & Eesley, D.T. (2003). Improvising firms: Bricolage, account giving and improvisational competencies in the founding process. *Research Policy*, 32(2), 255–276.
- Baker, T. & Nelson, R.E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50(3), 329–366.
- Baron, R.A. (2004). The cognitive perspective: A valuable tool for answering entrepreneurship’s basic “why” questions. *Journal of Business Venturing*, 19, 221–239.
- Baron, R.A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs “connect the dots” to identify new business opportunities. *Academy of Management Perspectives*, 20(1), 104–120.
- Barreto, I. (2012). Solving the entrepreneurial puzzle: The role of entrepreneurial interpretation in opportunity formation and related processes. *Journal of Management Studies*, 49(2), 356–380.
- Barringer, B.R. & Ireland, D.R. (2008). *Entrepreneurship: Successfully launching new ventures* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Berglund, H. (2007a). Opportunities as existing and created: A study of entrepreneurs in the Swedish mobile Internet industry. *Journal of Enterprising Culture*, 15(3), 243–274.
- Berglund, H. (2007b). Researching entrepreneurship as lived experience. In H. Neergaard & J. Ulhøi (Eds.), *Handbook of qualitative research methods in entrepreneurship* (pp. 75–93). Camberley, UK: Edward Elgar.
- Berglund, H. (2009). *Austrian economics and the study of entrepreneurship: Concepts and contributions*. Paper presented at the Academy of Management Conference, Chicago, IL.
- Berglund, K., Dahlin, M., & Johansson, A.W. (2007). Walking a tightrope between artistry and entrepreneurship: The stories of the Hotel Woodpecker, Otter Inn and Luna Resort. *Journal of Enterprising Communities*, 1(3), 268–284.
- Blank, S. (2005). *The four steps to the epiphany*. Pescadero, CA: K&S Ranch Press.
- Buchanan, J.M. & Vanberg, V.J. (1991). The market as a creative process. *Economics and Philosophy*, 7, 167–186.
- Busenitz, L.W. (1996). Research on entrepreneurial alertness. *Journal of Small Business Management*, 34(4), 35–44.
- Chiles, T.H., Bluedorn, A.C., & Gupta, V.K. (2007). Beyond creative destruction and entrepreneurial discovery: A radical Austrian approach to entrepreneurship. *Organization Studies*, 28(4), 467–493.
- Chiles, T.H., Elias, S.R.S.T.A., Zarankin, T.G., & Vultee, D.M. (2013). The Kaleidic world of entrepreneurs: Developing and grounding a metaphor for creative imagination. *Qualitative Research in Organizations and Management: An International Journal*, 8(3), 276–307.
- Chiles, T.H., Tuggle, C.S., McMullen, J.S., Bierman, L., & Greening, D.W. (2010). Dynamic creation: Extending the radical Austrian approach to entrepreneurship. *Organization Studies*, 31(1), 7–46.
- Chiles, T.H., Vultee, D.M., Gupta, V.K., Greening, D.W., & Tuggle, C.S. (2010). The philosophical foundations of a radical Austrian approach to entrepreneurship. *Journal of Management Inquiry*, 19(2), 138–164.
- Christensen, C. (1997). *The innovator’s dilemma*. Boston, MA: Harvard Business School Press.
- Cope, J. (2005). Researching entrepreneurship through phenomenological inquiry. *International Small Business Journal*, 23(2), 163–189.

- Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, 26(6), 604–623.
- Davidsson, P. (2004). *Researching entrepreneurship*. New York: Springer.
- Davidsson, P. (2012). *Entrepreneurial opportunity and the entrepreneurship nexus: A reconceptualization*. Paper presented at the Academy of Management Annual Meeting, Boston, MA.
- Davidsson, P. & Tonelli, M. (2013). *Killing our darling: Why we need to let go of the entrepreneurial opportunity construct*. Paper presented at the Conference Proceedings: Australia Centre for Entrepreneurship (ACE) Research Exchange Conference 2013.
- Davis, J.P., Eisenhardt, K.M., & Bingham, C.B. (2007). Developing theory through simulation methods. *Academy of Management Review*, 32(2), 480–499.
- Davis, J.P., Eisenhardt, K.M., & Bingham, C.B. (2009). Optimal structure, market dynamism, and the strategy of simple rules. *Administrative Science Quarterly*, 54(3), 413–452.
- Dew, N. (2007). Pre-adaptation, exaptation and technology speciation: A comment on Cattani (2006). *Industrial and Corporate Change*, 16(1), 155–160.
- Dew, N., Sarasvathy, S.D., & Venkataraman, S. (2004). The economic implications of exaptation. *Journal of Evolutionary Economics*, 14(1), 69–84.
- Dimov, D. (2007). Beyond the single-person, single-insight attribution in understanding entrepreneurial opportunities. *Entrepreneurship Theory and Practice*, 31(5), 713–731.
- Douhan, R., Eliasson, G., & Henrekson, M. (2007). Israel M. Kirzner: An outstanding Austrian contributor to the economics of entrepreneurship. *Small Business Economics*, 29(1), 213–223.
- Eckhardt, J.T. & Shane, S.A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333–349.
- Eisenhardt, K.M. (1989). Building theories from case study research. *The Academy of Management Review*, 14(4), 532–551.
- Eisenhardt, K.M. & Graebner, M.E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32.
- Fiet, J. & Patel, P. (2008). Entrepreneurial discovery as constrained, systematic search. *Small Business Economics*, 30(3), 215–229.
- Fiet, J.O., Norton, W.I., & Clouse, V.G.H. (2013). Search and discovery by repeatedly successful entrepreneurs. *International Small Business Journal*, 31(8), 890–913.
- Fiet, J.O., Norton Jr., W.I., & Clouse, V.G.H. (2007). Systematic search as a source of technical innovation: An empirical test. *Journal of Engineering and Technology Management*, 24(4), 329–346.
- Fletcher, D.E. (2006). Entrepreneurial processes and the social construction of opportunity. *Entrepreneurship & Regional Development*, 18(5), 421–440.
- Foss, N.J. & Klein, P. (2012). *Organizing entrepreneurial judgment: A new approach to the firm*. Cambridge, UK: Cambridge University Press.
- Foss, N.J. & Klein, P.G. (2010a). Alertness, action, and the antecedents of entrepreneurship. *Journal of Private Enterprise*, 25(2), 145–164.

- Foss, N.J. & Klein, P.G. (2010b). Entrepreneurial alertness and opportunity discovery: Origins, attributes and critique. In H. Landström & F. Lohrke (Eds.), *The historical foundations of entrepreneurship research* (pp. 98–120). Aldershot, UK: Edward Elgar.
- Foss, N.J., Klein, P.G., Kor, Y.Y., & Mahoney, J.T. (2008). Entrepreneurship, subjectivism, and the resource-based view: Toward a new synthesis. *Strategic Entrepreneurship Journal*, 2(1), 73–94.
- Gaddefors, J. (2005). Creating context—Entrepreneurial opportunities in a consumer market setting. *Journal of Enterprising Culture*, 13(3), 199–224.
- Gaglio, C.M. & Katz, J.A. (2001). The psychological basis of opportunity identification: Entrepreneurial alertness. *Small Business Economics*, 16(2), 95–111.
- Gartner, W.B., Bird, B.J., & Starr, J.A. (1992). Acting as if: Differentiating entrepreneurial from organizational behavior. *Entrepreneurship Theory and Practice*, 16(3), 13–31.
- Garud, R. & Karnøe, P. (2003). Bricolage versus breakthrough: Distributed and embedded agency in technology entrepreneurship. *Research Policy*, 32(2), 277–300.
- Gavetti, G., Levinthal, D.A., & Rivkin, J.W. (2005). Strategy making in novel and complex worlds: The power of analogy. *Strategic Management Journal*, 26(8), 691–712.
- Gavetti, G. & Rivkin, J.W. (2005). How strategists really think. *Harvard Business Review*, 83(4), 54–63.
- Görling, S. & Rehn, A. (2008). Accidental ventures: A materialist reading of opportunity and entrepreneurial potential. *Scandinavian Journal of Management*, 24(2), 94–102.
- Harper, D.A. (2002). *Entrepreneurship and the market process: An enquiry into the growth of knowledge*. London: Routledge.
- Hayek, F.A. (1942). Scientism and the study of society. *Economica*, 9(35), 267–291.
- Hazlitt, H. (1974). Competition and entrepreneurship. [Book Review]. *The Freeman*, 24(December), 756–760.
- Hebert, R.F. & Link, A.N. (1988). *The entrepreneur: Mainstream views and radical critiques*. New York: Praeger.
- Kaish, S. & Gilad, B. (1991). Characteristics of opportunities search of entrepreneurs vs. executives: Sources, interests, general alertness. *Journal of Business Venturing*, 6(1), 45–62.
- Kirzner, I.M. (1973). *Competition and entrepreneurship*. Chicago, IL: The University of Chicago Press.
- Kirzner, I.M. (1982). Uncertainty, discovery, and human action: A study of the entrepreneurial profile in the Misesian system. In I.M. Kirzner (Ed.), *Method, process, and Austrian economics* (pp. 139–159). Lexington, MA: Lexington Books.
- Kirzner, I.M. (1985a). *Discovery and the capitalist process*. Chicago, IL: The University of Chicago Press.
- Kirzner, I.M. (1985b). Uncertainty, discovery, and human action. In I. Kirzner (Ed.), *Discovery and the capitalist process* (pp. 40–67). Chicago, IL: Chicago University Press.
- Kirzner, I.M. (1997a). Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of Economic Literature*, 35(1), 60–85.
- Kirzner, I.M. (1997b). *How markets work: Disequilibrium, entrepreneurship and discovery*. London: Institute of Economic Affairs.

- Kirzner, I.M. (1999). Creativity and/or alertness: A reconsideration of the Schumpeterian entrepreneur. *The Review of Austrian Economics*, 11(1–2), 5–17.
- Kirzner, I.M. (2009). The alert and creative entrepreneur: A clarification. *Small Business Economics*, 32(2), 145–152.
- Klein, P. & Bylund, P. (2014). The place of Austrian economics in contemporary entrepreneurship research. *The Review of Austrian Economics*, 27(3), 1–21.
- Klein, P.G. (2008). Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, 2(3), 175–190.
- Knight, F.H. (1921). *Risk, uncertainty, and profit*. Boston, MA: Hart, Schaffner & Marx; Houghton Mifflin Co.
- Korsgaard, S. (2011). Entrepreneurship as translation: Understanding entrepreneurial opportunities through actor-network theory. *Entrepreneurship & Regional Development*, 23(7–8), 661–680.
- Korsgaard, S. (2013). It's really out there: A review of the critique of the discovery view of opportunities. *International Journal of Entrepreneurial Behaviour & Research*, 19(2), 130–148.
- Krueger, N.F. & Day, M. (2010). Looking forward, looking backward: From entrepreneurial cognition to neuroentrepreneurship. In J.A. Zoltan & B.A. David (Eds.), *Handbook of entrepreneurship research* (pp. 321–358). New York: Springer.
- Landström, H. (1999). The roots of entrepreneurship research. *New England Journal of Entrepreneurship*, 2(2), 9–20.
- Littlechild, S. (1986). Three types of market process. In N.L. Richard (Ed.), *Economics as a process: Essays in the new institutional economics* (pp. 27–39). Cambridge: Cambridge University Press.
- Madison, G.B. (1994). Phenomenology and economics. In P.J. Boettke (Ed.), *The Elgar companion to Austrian economics* (pp. 38–47). Cheltenham, UK: Edward Elgar.
- Mariotti, S. (2007). *Entrepreneurship: Starting and operating a small business*. Upper Saddle River, NJ: Pearson Prentice Hall.
- McCaffrey, M. (2014). On the theory of entrepreneurial incentives and alertness. *Entrepreneurship Theory and Practice*, 38(4), 891–911.
- McGrath, R.G. (2010). Business models: A discovery driven approach. *Long Range Planning*, 43(2–3), 247–261.
- McKelvey, B. (2004). Toward a complexity science of entrepreneurship. *Journal of Business Venturing*, 19(3), 313–341.
- McKelvie, A., Haynie, J.M., & Gustavsson, V. (2011). Unpacking the uncertainty construct: Implications for entrepreneurial action. *Journal of Business Venturing*, 26(3), 273–292.
- McMullen, J.S. & Dimov, D. (2013). Time and the entrepreneurial journey: The problems and promise of studying entrepreneurship as a process. *Journal of Management Studies*, 50(8), 1481–1512.
- McMullen, J.S., Plummer, L.A., & Acs, Z.J. (2007). What is an entrepreneurial opportunity? *Small Business Economics*, 28(4), 273–283.
- McMullen, J.S. & Shepherd, D.A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31, 132–152.

- Mitchell, R.K., Busenitz, L., Lant, T., McDougall, P.P., Morse, E.A., & Smith, J.B. (2004). The distinctive and inclusive domain of entrepreneurial cognition research. *Entrepreneurship Theory and Practice*, 28(6), 505–518.
- Mullins, J. & Komisar, R. (2009). *Getting to Plan B: Breaking through to a better business model*. Boston: Harvard University Press.
- Murphy, P.J. (2011). A 2×2 conceptual foundation for entrepreneurial discovery theory. *Entrepreneurship Theory and Practice*, 35(2), 359–374.
- Nell, G. (2010). Competition as market progress: An Austrian rationale for agent-based modeling. *The Review of Austrian Economics*, 23(2), 127–145.
- Patel, P.C. & Fiet, J.O. (2010). Enhancing the internal validity of entrepreneurship experiments by assessing treatment effects at multiple levels across multiple trials. *Journal of Economic Behavior & Organization*, 76(1), 127–140.
- Read, S., Dew, N., Sarasvathy, S., Song, M., & Wiltbank, R. (2009). Marketing under uncertainty: The logic of an effectual approach. *Journal of Marketing*, 73(3), 1–18.
- Read, S., Sarasvathy, S., Dew, N., Wiltbank, R., & Ohlsson, A.-V. (2011). *Effectual entrepreneurship*. New York: Routledge.
- Ricketts, M. (1987). *The new industrial economics: An introduction to modern theories of the firm*. New York: St. Martins Press.
- Ries, E. (2011). *The lean startup: How constant innovation creates radically successful businesses*. London: Portfolio Penguin.
- Sarasvathy, S., Venkataraman, S., Dew, N., & Velamuri, R. (2002). Three views of entrepreneurial opportunity. In Z. Acs & D. Audretsch (Eds.), *Handbook of entrepreneurship* (pp. 141–160). New York: Kluwer Academic Publishers.
- Sarasvathy, S.D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243–264.
- Sarasvathy, S.D. (2008). *Effectuation: Elements of entrepreneurial expertise*. Cheltenham, UK: Edward Elgar.
- Sarasvathy, S.D. & Berglund, H. (2010). On the relevance of decision-making in entrepreneurial decision making. In H. Landström & F. Lohrke (Eds.), *Historical foundations of entrepreneurial research* (pp. 163–184). Cheltenham, UK: Edward Elgar.
- Sarasvathy, S.D. & Venkataraman, S. (2011). Entrepreneurship as method: Open questions for an entrepreneurial future. *Entrepreneurship Theory and Practice*, 35(1), 113–135.
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, 11(4), 448–469.
- Shane, S. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Cheltenham, UK: Edward Elgar.
- Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226.
- Short, J.C., Ketchen, D.J.J., Shook, C.L., & Ireland, R.D. (2010). The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management*, 36(1), 40–65.
- Stigler, G.J. (1961). The economics of information. *Journal of Political Economy*, 69(3), 213–225.

- Van de Ven, A.H. (2007). *Engaged scholarship*. Oxford: Oxford University Press.
- Van de Ven, A.H. & Engleman, R.M. (2004). Event- and outcome-driven explanations of entrepreneurship. *Journal of Business Venturing*, 19(3), 343–358.
- Van de Ven, A.H., Polley, D.E., Garud, R., & Venkataraman, S. (1999). *The innovation journey*. New York: Oxford University Press.
- Vaughn, K.I. (1994). *Austrian economics in America: The migration of a tradition*. Cambridge: Cambridge University Press.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. In J. Katz & R. Brockhaus (Eds.), *Advances in entrepreneurship* (Vol. 3, pp. 119–138). Greenwich, CT: JAI Press.
- Venkataraman, S., Sarasvathy, S.D., Dew, N., & Forster, W.R. (2012). Reflections on the 2010 AMR Decade Award: Whither the promise? Moving forward with entrepreneurship as a science of the artificial. *Academy of Management Review*, 37(1), 21–33.
- Ward, T.B. (2004). Cognition, creativity, and entrepreneurship. *Journal of Business Venturing*, 19(2), 173–188.
- White, L.H. (1990). Entrepreneurship, imagination and the question of equilibration. In S. Littlechild (Ed.), *Austrian economics* (Vol. 3, pp. 87–104). Aldershot, UK: Edward Elgar.
- Whitehead, A. (1967). *Science and the modern world*. New York: The Free Press.
- Wickham, P.A. (2006). *Strategic entrepreneurship* (4th ed.). Harlow, UK: Pearson.
- Yang, S.-J.S. & Chandra, Y. (2013). Growing artificial entrepreneurs: Advancing entrepreneurship research using agent-based simulation approach. *International Journal of Entrepreneurial Behaviour & Research*, 19(2), 210–237.
- Yin, R.K. (2009). *Case study research* (4th ed.). Thousand Oaks, CA: Sage.
- Yu, T.F.-L. (2001). Entrepreneurial alertness and discovery. *The Review of Austrian Economics*, 14(1), 47–63.
- Zahra, S.A. (2007). Contextualizing theory building in entrepreneurship research. *Journal of Business Venturing*, 22(3), 443–452.
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