

A R T I C L E S

INNOVATION THROUGH TRADITION: LESSONS FROM INNOVATIVE FAMILY BUSINESSES AND DIRECTIONS FOR FUTURE RESEARCH

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In steering toward the future, innovation managers are commonly advised to dismiss the old and make way for the new. However, such “recency bias” may significantly limit a firm’s innovation potential and prevent it from realizing the benefits of past knowledge. We argue that the temporal dimension of innovation deserves more research attention. Combining prior research on innovation, dynamic capabilities, and family business, we conceptualize a new product innovation strategy called innovation through tradition (ITT) and identify its underlying capabilities of interiorizing and reinterpreting past knowledge. We analyze and discuss the illustrative cases of six long-lasting family businesses (Aboca, Apremare, Beretta, Lavazza, Sangalli, and Vibram), exemplifying how firms that build long-lasting and intimate links with their traditions can be extremely innovative while remaining firmly anchored to the past. These examples help readers visualize theoretical concepts and recognize the potential advantages of past knowledge in terms of value creation and capture. We develop an agenda for future research aimed at improving our understanding of the temporal search processes involved in the ITT strategy, within and outside the family business field, and thus contribute to innovation and organizational learning studies. Managers of nonfamily firms can learn from the family businesses that successfully use ITT to create and nurture a competitive advantage and emulate them by leveraging rather than discarding tradition.

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Product innovation is a vital source of competitive advantage (e.g., Banbury & Mitchell, 1995; Calantone, Chan, & Cui, 2006). According to conventional thinking in innovation, relying on knowledge from the past can cause path dependence, inflexibility, and conservatism, thus reducing a firm's capability to successfully innovate (Leonard-Barton, 1992) and meet current environmental needs and expectations (Sorensen & Stuart, 2000). Managers are therefore commonly advised to create a corporate sense of urgency and obtain a mandate to dismiss the past and open the doors to the future (Adner & Snow, 2010).

Yet scholars have recently started to recognize the potential benefits of searching in the past to develop innovative products (e.g., Katila, 2002; Messeni Petruzzelli & Savino, 2014; Nerkar, 2003). Customers increasingly look for responses to their needs to repossess the past and look back for guidance from less chaotic and unstable times (Brown, 2001), and integrating knowledge from the past into new products can elicit positive feelings and legitimize innovative functionalities (Ryder, 2014; Wang & Wallendorf, 2006). Thus, downplaying the past in innovation is more a cultural choice than an imperative or strategic need.

In other words, it is the result of a "recency bias" that may inadvertently hinder a firm's innovation performance (e.g., Capaldo, Lavie, & Messeni Petruzzelli, in press; Katila, 2002). Indeed, knowledge pertaining to the past is increasingly recognized as a powerful and unique source of innovation advantage (Messeni Petruzzelli & Albino, 2012). As such, the conventional view of the past in innovation research may prove inadequate or even counterproductive, and the scant attention to the temporal dimension of innovation search processes—that is, how firms gain access to and use knowledge that has been developed in the past to innovate (Nerkar, 2003)—emerges as a significant gap in innovation research (Savino, Messeni Petruzzelli, & Albino, in press).

Despite increasing awareness among scholars and practitioners that past knowledge has the potential to sustain and enhance a firm's innovation performance (e.g., Messeni Petruzzelli & Albino, 2012), existing research offers little understanding of why the past can be valuable and how managers can leverage it to innovate. How can we develop a thorough understanding of the value of the past in innovation? How can future research be shaped to further our understanding of this possible phenomenon? We provide a first attempt to address these questions by developing the concept of innovation through

tradition (ITT), a product innovation strategy that firms can apply to leverage temporally distant knowledge for product development. By integrating insights from different research streams—namely, product innovation and knowledge search, family business, and dynamic capabilities—we advance a model of ITT that maps the process through which firms can gain access to and use past knowledge, and highlights the capabilities firms need to interiorize and reinterpret past knowledge to innovate. Illustrative vignettes from six long-lasting and innovative family businesses (Aboca, Apreamare, Beretta, Lavazza, Sangalli, and Vibram) exemplify how the past can sustain product innovation and how ITT is applied in practice (Siggelkow, 2007).

Family businesses are a particularly apt context to appreciate how the past can be leveraged in innovation. Indeed, the extraordinary longevity and long-term orientation of some family businesses (Miller & Le Breton-Miller, 2005) can result in a special capability to create links between their past, present, and future (e.g., Zellweger, Nason, & Nordqvist, 2012), enabling them to search and recombine temporally distant knowledge to develop new products. This capability allows many family businesses to innovate by exploiting knowledge pertaining to the firms' tradition and to that of their territory. However, non-family businesses can learn to leverage knowledge from the past for successful product innovation as well, pointing to a broader applicability of ITT outside the family business context. In this vein, we advance ideas for extending the concept of ITT beyond the context of family business and outline an agenda of promising directions for future research.

THEORETICAL BACKGROUND

Product innovation has long been a source of competitive advantage, allowing firms to enlarge existing markets and create new ones (e.g., Banbury & Mitchell, 1995; Calantone et al., 2006). Product innovation involves a knowledge search and recombination process, whereby firms search for knowledge components across multiple domains in an attempt to identify novel combinations (Henderson & Clark, 1990). Our focus is on product innovation rather than on service, process, or business model innovation because the benefits of searching knowledge across multiple domains are perhaps most tangible in new products (Wang & Wallendorf, 2006). This conceptualization of innovation as a knowledge search and recombination process (e.g., Ahuja, Lampert, & Tandon, 2008) is

found in both high- and low-technology sectors (e.g., Khaire & Wadhvani, 2010).

Is Tradition a Resource or a Liability?

Research examining search processes in innovation focuses on two main dimensions of search. The first, referred to as search depth, captures the extent to which firms search for knowledge within their existing knowledge bases (e.g., Miner, Bassof, & Moorman, 2001; Stuart & Podolny, 1996). Scholars have examined the costs and benefits of searching for knowledge in domains falling within the organization's existing competence bases (Katila & Ahuja, 2002). These studies emphasize the importance of achieving a balance between exploration of novelty and exploitation of existing knowledge, which can be achieved through mechanisms such as ambidexterity or punctuated equilibrium (for a review, see Gupta, Smith, and Shalley, 2006).

The second dimension of innovation search is breadth—in other words, how widely a firm searches for new knowledge across multiple knowledge domains (Katila & Ahuja, 2002). Searching across geographic and technological contexts enables new product development (e.g., Rosenkopf & Almeida, 2003). However, too much searching across multiple domains incurs higher costs than searching extensively within a narrower set of knowledge domains (e.g., Laursen & Salter, 2006), hindering innovation performance.

By focusing on these two dimensions, innovation scholars have overlooked the question of how firms search for innovation across time, devoting only scant attention to the dynamics characterizing the temporal search process—the process through which firms search for knowledge that was developed in the past (Nerkar, 2003). The paucity of such research mirrors the conventional assumption that successful innovation requires searching and recombining the most recent knowledge (e.g., Argote, 1999). Accordingly, the past is traditionally perceived as a source of resistance that leads to inertia, excessive path dependency, the liability of senescence (Barron, West, & Hannan, 1994), and core rigidity (Leonard-Barton, 1992). This is because old knowledge tends to become obsolete and does not meet current environmental needs and expectations (Sorensen & Stuart, 2000), thus reducing the value and usefulness of new products that embed such knowledge.

This unfavorable view of the role of the past in innovation may generate a “recency bias” that leads firms to give excessive weight to the most recent knowledge and overlook the potential benefits of old

knowledge (e.g., Capaldo et al., in press; Katila, 2002). Accordingly, we call for a reconsideration of the conventional view of the past in innovation research and the recommendation for innovation managers to dismiss the old to make way for the new, which is based on the assumption that the value of knowledge decreases over time. Therefore, in an attempt to provide a deeper understanding of the temporal dimension of the search process, in the following sections we discuss the benefits of searching over time for innovation, illustrate the competitive implications of this search process, and discuss why some firms are particularly well equipped to leverage the past to innovate.

Temporal Search and Tradition

Temporal search represents a third dimension along which the search process in innovation can take place, orthogonal to the search depth and breadth dimensions discussed above (Katila, 2002). In particular, it identifies the process through which firms “search for and access knowledge created at different points in the past in order to create new products” (Katila, 2002, p. 995). There are several potential benefits of using temporally distant knowledge, including increased reliability, decreased risk of retaliation, and uniqueness (Katila, 2002). This view is supported by evidence highlighting the innovation benefits of searching across time (Messeni Petruzzelli, Rotolo, & Albino, 2012), including reducing the risk from incorrect applications of new knowledge and increasing the reliability (Heeley & Jacobson, 2008) and legitimacy (Hargadon & Douglas, 2001) of innovations. These benefits become especially important when consumers look to the past for guidance in increasingly chaotic and culturally unstable times (Brown, 2001). Hence, relying on past knowledge to innovate can be especially effective in specific industries, such as health, food, beverage, and luxury, where customers exhibit an enduring need that may be satisfied by managing the tension between preservation and adaptation. Managing this tension helps enhance the legitimacy of the innovative solutions and the likelihood of gaining acceptance within the market (Hargadon & Douglas, 2001).

The temporal search process is closely intertwined with the concept of tradition, which refers to the stock of knowledge, competencies, materials, manufacturing processes, signs, values, and beliefs pertaining to the past (Messeni Petruzzelli & Albino, 2012). Tradition involves accumulation of know-how,

symbolic and cultural content, and micro-institutions of practice handed down across generations and contributing to shaping the identity of individuals, organizations, and territories (Hibbert & Huxham, 2010). Following the resource-based view of the firm (Barney, 1991; Wernerfelt, 1984), tradition can be thought of as a distinctive and unique resource. Indeed, the sticky and embedded nature of tradition makes its imitation more difficult, thus contributing to its distinctiveness and rarity. Accordingly, firms capable of developing an appropriate set of dynamic capabilities that allow them to leverage a specific tradition may be able to create and capture value from innovation and thus create and nurture competitive advantage.

Dynamic Capabilities, and Creating and Capturing Value With Innovation

Capabilities represent a key source of firm competitive advantage (e.g., Barney, 1991; Winter, 2003). Differences in these capabilities may contribute to explaining heterogeneity in performance and competitiveness. A particular subset of a firm's capabilities, known as dynamic capabilities (Helfat & Peteraf, 2003), are important in enabling a firm to combine and reconfigure its bundle of resources over time to effectively respond to changes in the competitive environment. Accordingly, dynamic capabilities play a crucial role in allowing a firm to delve into a specific tradition to create value through new products (Giddens, 1990) and then turn these new products into a superior competitive advantage by capturing value from them (Teece, 1986).

In terms of *value creation*, the importance of the past in influencing consumer behavior is noted not only in business and economics, but also in sociology and psychology. Consumers often indulge in nostalgia (Brown, Kozinets, & Sherry, 2003) when they are unhappy with the present or frightened of the future. Indeed, individual identity is strongly based on the past, and nostalgia reaffirms social identities that have been impaired by the turmoil brought about by uncertainty and instability (de Janasz, Sullivan, & Whiting, 2003; Inglehart & Baker, 2000). Thus, tradition enables firms to elicit strong and positive feelings, increasing the value of new products by embedding past knowledge and facilitating the legitimacy of innovative functionalities and meanings and the likelihood of obtaining market acceptance (Ryder, 2014). Furthermore, the past often helps individuals make sense of the present (Shils, 1981). Using resources drawn from a specific

tradition in the innovation process allows firms to position new products in a well-defined temporal and geographic space, evoking memories and experiences to respond to the need for product distinctiveness and to remind the customer of less chaotic and culturally unstable times (Messeni Petruzzelli & Savino, 2014).

In terms of *value capture*, relying on the past means developing product innovations anchored in a specific tradition that may pertain to the firm and/or its territory (Hibbert & Huxham, 2010). Tradition is a highly idiosyncratic resource that cannot be easily replicated by others (Kanter, 1995). This allows firms to develop innovations characterized by uniqueness, which is a tremendous source of bargaining power and key to appropriating innovation rents (Di Minin & Faems, 2013; Teece, 2006)—thus requiring relatively less access to complementary assets to capture value from innovation. This explains why tradition may be a key resource for small or medium-size firms, which are likely to be at a disadvantage compared with larger competitors in terms of bargaining for the development and acquisition of complementary assets such as manufacturing capacity, brand awareness, and access to distribution channels (Arora et al., 2009). Furthermore, tradition may enable firms to innovate by building on more reliable knowledge and resources, extensively validated over time, and hence reduce development and utilization costs and increase profits from new products (Heeley & Jacobson, 2008).

Tradition and Family Businesses

Family businesses represent an organizational form particularly well suited to leverage tradition in product innovation. Prior family business research can provide a deeper understanding of how firms can innovate through tradition. Definitions of family businesses vary greatly (Chua, Chrisman, & Sharma, 1999; De Massis et al., 2012), and researchers recognize that family businesses are highly heterogeneous (Chua et al., 2012; De Massis, Kotlar et al., 2014; Wright et al., 2014). Our focus is on family businesses that are, as defined by Chua and colleagues (1999, p. 25), “governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations.” This definition emphasizes that in some family businesses, the values and beliefs of the founding family are handed down across

generations for decades, sometimes centuries, such that organizational culture and identity closely reflect the way the firm has operated in the past (Gagné et al., 2014; Le Breton-Miller & Miller, 2008; Tapies & Ward, 2008). In these firms, family history pervades business practices, producing and reinforcing shared values, norms, and beliefs over time and creating a close link between the present and the past (Zellweger et al., 2012).

Due to their strong links with the past, family businesses are conventionally seen as conservative, path dependent, and ultimately less innovative than nonfamily counterparts (Gómez-Mejía et al., 2007). However, family businesses may display extremely diverse innovation behaviors and outcomes (Chrisman & Patel, 2012; De Massis et al., in press; Kotlar et al., 2014). Under certain circumstances, family businesses are even more innovative than their nonfamily counterparts (De Massis, Di Minin, & Frattini, 2015; Patel & Chrisman, 2014) and are better able to convert innovation input into output (Duran et al., in press).

We argue that long-lasting family businesses benefit from their privileged access to past knowledge and that the innovation success of these firms can be explained by their ability to leverage tradition to develop successful new products. Indeed, the long-lasting involvement in ownership and management characterizing some founding families, their socio-emotional wealth, and the resulting strong links with the past can represent valuable resources for innovation. The unique opportunities these family businesses have to create and maintain a link with the past can streamline temporal search processes and facilitate the identification of past knowledge, enabling the effective use of this knowledge for successful innovations.

Some family businesses are endowed with unique capabilities that allow them to make the past available and understandable to employees involved in the innovation process by putting in place organizational routines that ensure continuity across time and generations (Shils, 1981), preserving the original meaning and content of past knowledge (Hibbert & Huxham, 2010). This in turn increases the value of temporal search by overcoming the risk of misinterpretations, misunderstandings, and misapplications (Argote, 1999), which may reduce the “inventor’s ability to correctly recall, retrieve, and apply overly mature knowledge in an innovation” (Capaldo et al., in press, p. 6). Therefore, long-lasting innovative family businesses can particularly illuminate how the past can be valuable; the distinctive

capabilities needed to link the past, present, and future in meaningful ways; and ways to purposefully search and recombine past knowledge to develop innovative products.

INNOVATION THROUGH TRADITION: CONCEPTUALIZING A NEW PRODUCT-INNOVATION STRATEGY

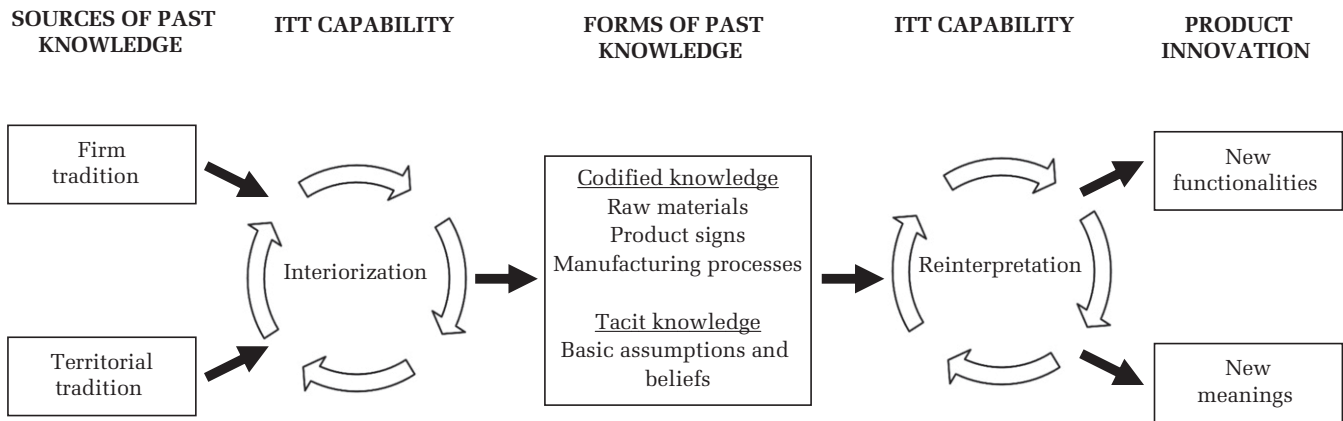
Toward a Model of Innovation Through Tradition

Competitive advantage requires a combination of good strategy, strong dynamic capabilities, and difficult-to-imitate resources (Teece, 2014). Following this approach, understanding why and how ITT can lead to a competitive advantage requires identifying the idiosyncratic resources on which this strategy is built and the capabilities through which these resources are adapted, orchestrated, and innovated over time (Teece, 2007). As discussed above, understanding how firms search and use past knowledge to innovate requires integrating a multitude of theoretical perspectives and diverse literature streams. The various theoretical concepts and relationships underlying ITT are systematized in Figure 1, which provides an integrative framework that highlights the main building blocks and outcomes of ITT and explains how firms can develop new products by leveraging knowledge from the past.

We integrate different streams of research into this framework. First, the dynamic capabilities view (Helfat & Peteraf, 2003) suggests that ITT is based on two key capabilities: interiorization and reinterpretation. Interiorization allows assimilation and sharing of knowledge pertaining to the firm’s traditions or the traditions of its territory across the entire organization, as reflected by the different forms of codified and tacit knowledge used to develop new products. Reinterpretation allows the combination of selected forms of past knowledge with up-to-date technologies to develop new products. Second, research on temporal search in innovation is used to identify the sources from which past knowledge, the idiosyncratic resource at the heart of ITT, can be searched and retrieved (Messeni Petruzzelli & Albino, 2012). Furthermore, knowledge management and organization studies suggest that, when firms interiorize past knowledge, this can take different forms, both codified and tacit, that feed the product innovation process (Cowan, David, & Foray, 2000).

Finally, innovation research suggests that, by combining codified or tacit forms of past knowledge with new technologies, it is possible to elicit two

FIGURE 1
A Model of Innovation Through Tradition



different types of product innovation strategies: an innovation of functionality or an innovation of meaning (Veryzer, 1998). Figure 1 also points to several emerging themes that have been under-researched or addressed only in a fragmented way across different research streams. Most important, this model is used to identify gaps in our understanding of ITT and outline promising questions for future research. We therefore elaborate a future research agenda that provides scholars with promising directions to move the study of ITT forward and advance our understanding of how firms can leverage past knowledge to innovate.

Illustrative Examples of Long-Lasting and Innovative Family Firms

We complement the theoretical development with examples of six long-lasting and innovative family firms that, contrary to the conventional view, are extremely innovative by remaining anchored to tradition. We chose these firms precisely because their capacity to innovate by maintaining a strong link with the past provides insights unavailable to most firms. Therefore, in accordance with previous studies (Siggelkow, 2007), these “extraordinary” cases seem to be a suitable choice to discuss and analyze the phenomenon under investigation. Our purpose here is not to report on an inductive study, but to use these examples as illustrations to clarify theoretical concepts and relationships and show how the various conceptual issues included in the ITT framework are actually applied (Siggelkow, 2007). This approach allows for a close correspondence between theory and data (Glaser & Strauss, 1967). Moreover,

the combination of our theoretical arguments and these examples points to interesting avenues for future research that addresses the applicability of ITT beyond family firms.

We drew on multiple and varied sources of information in developing the cases. Specifically, data were collected from company websites and other secondary sources of data, such as financial and business reports, presentations, press releases, magazine articles, and books between 2009 and 2014. For some firms the secondary source data were corroborated with face-to-face interviews conducted with the CEOs and other family and nonfamily members responsible for product innovation, as well as through direct observation of the new product development process. Data were analyzed using an iterative process, moving from data to theory and vice versa (Strauss & Corbin, 1998), which enabled us to refine the ITT framework, better clarify its theoretical foundations, and illustrate how theoretical concepts work in practice. Finally, to ensure the integrity of our data, we triangulated the multiple sources, independently read the data and information, and discussed our interpretations in face-to-face meetings to resolve potential misunderstandings and divergent views. Table 1 provides a brief description of the six long-lasting and innovative family firms used in this article, which are briefly described below.

Aboca: Historical Phytotherapy Meets Biotech. Aboca is an Italian family business that is a market leader in the production and commercialization of natural health care and beauty products, with an annual turnover of €125 million and average profit growth of around 20% over the last five years. The company dates to 1978, when Valentino Mercati

TABLE 1
Illustrative Cases of Family Firms That Innovate Through Tradition

	Aboca	Apreamare	Beretta	Lavazza	Sangalli	Vibram
Founded	1978	1849	1526	1895	1972	1937
Founder	Valentino Mercati	Giovanni Aprea	Bartolomeo Beretta	Luigi Lavazza	Maria Sangalli	Vitale Bramani
Annual turnover	€125 million	€20 million	€480 million	€1.34 billion	€2 million	€200 million
Employees	810	185	850	3,000	10	240
Generation of family control	Second	Fifth	Fifteenth	Fourth	Second	Second
Sector	Natural health care and beauty products	Boats	Firearms	Coffee products	Haute couture	High-performance rubber soles for footwear
Sources of past knowledge	Territory tradition: Ancient official herbs from the territory	Territory tradition: Manufacturing skills and product signs characterizing old craftsmanship in Sorrento	Firm tradition: Craftsmanship skills handed down from generation to generation in the firm	Firm tradition: Traditional coffee blending techniques in the firm	Territory tradition: Traditional high-fashion heritage characteristic of Milan	Firm tradition: Historical values and passion for hiking and nature in the firm
Product innovation	New functions: Properties of ancient and mostly forgotten herbs combined with up-to-date technologies enable effective drugs without the side effects.	New meanings: Luxury yachts based on the traditional <i>gozzo sorrentino</i> design of fishing boats in the area of Sorrento	New functions: Traditional materials combined with innovative polymers and revolutionary technologies provide firearms with radically superior performance.	New functions: Traditional coffee blending processes combined with innovative technologies enable a capsule-based espresso system to work in extreme conditions.	New meanings: Traditional Milanese sewing techniques combined with innovative materials change the meaning of high-fashion clothing.	New meanings: The meaning of sport shoes is changed by a line of minimalist shoes that mimics the look and mechanics of being barefoot.
Examples of new products	GrinTuss, Melilax, Sollievo Bio 90, Adiprox, NeoBianacid	Apreamare 40 Don Giovanni	A400 Xcel	A Modo Mio, ISSpresso	Light My Night	FiveFingers, Speed Ascent, Rollingait System
Awards and recognitions	Tuscany Award for excellence and innovativeness	Included in the final list of the Motor Boat of the Year award	Shotgun of the Year award from <i>American Hunter</i> magazine	Coffee Innovation Award	Creativity Award from the Italian Chamber of Fashion	OutDoor Industry Award

bought a farm in Tuscany to research the properties of ancient medicinal herbs found in the local territory and, in so doing, unveiled the potential of such knowledge to be combined with biotech technologies to create health and beauty products. The firm is still fully controlled and managed by members of the Mercati family. By combining ancient and mostly forgotten herbs with up-to-date technologies, Aboca develops new products (such as GrinTuss, Melilax, Sollievo Bio 90, Adiprox, and NeoBianacid) that are enthusiastically received by the market because they are effective without the side effects found in their competitors' products.

Apreamare: Old Fishing Boats Turned Into Luxury Yachts. Located in southern Italy, Apreamare produces boats and yachts and has a turnover of around €20 million, 20 dealers throughout the world, and more than 185 employees worldwide. It was founded in 1849 when shipbuilder Giovanni Aprea started hand-building rowing and sailing boats for fishing in Sorrento, basing his craft on the shape and form of the traditional *gozzo sorrentino*. The company was acquired by the Ferretti group in 2001, but in 2010 it was returned to the founding family. The traditional local craftsmanship, entrepreneurial spirit, and manufacturing skills have been handed down for more than a century and a half, creating a tight link between the firm and its territory, which results in a distinctive combination of tradition and modernity.

Beretta: Craftsmanship Heritage Reinterpreted Into Innovative Competition Shotguns. Beretta is a 500-year-old, world-leading family business that reinterprets the founding family's traditional values of hunting and their long tradition of craftsmanship, recombining these with up-to-date technologies to enable radically new functionalities in their products. After 15 generations of continued family control, Beretta is the oldest gunsmith company in the world, with products ranging from handguns, rifles, and shotguns to knives, accessories, and sporting apparel. The net total sales of Beretta Holding reached €480 million in 2011. Beretta sells to law enforcement agencies through exclusive distributors and sells directly to consumers in its six high-end Beretta Gallery stores worldwide. As part of its business, Beretta USA also offers hand-finished firearms and custom-made hunting apparel. Currently, Beretta dominates the competition shotgun market worldwide thanks to the astute integration of traditional walnut material with innovative polymers and revolutionary technologies that enable radically superior performance. The A400 Xcel

shotgun, for example, which was named the 2012 Shotgun of the Year by *American Hunter* magazine, is the culmination of Beretta's lengthy experience in the market and the family's long-lasting passion for shotguns.

Lavazza: Traditional Blended Coffee Transformed to Be Served Under Extreme Conditions. An Italian manufacturer of coffee products, Lavazza was founded in Turin in 1895 by Luigi Lavazza as a small grocery store; it is now managed by the fourth generation of the Lavazza family. Lavazza is recognized as the market leader in Italy and among the leaders in the world in espresso products. Lavazza has a turnover of €1.34 billion, more than 3,000 employees worldwide, a presence in more than 90 countries, four production plants in Italy, and nine foreign subsidiaries. The firm owes its success to continuously innovating its products while remaining anchored to its traditional specialization in blending coffee. This capability results from the application of a traditional coffee mixing process to obtain flavorful products, which was first invented by Luigi Lavazza in 1910. A recent example of innovation is ISSpresso, the first capsule-based espresso system able to work in extreme conditions, even in space.

Sangalli: Milanese Traditional Sewing Applied to High-Tech Textiles. Atelier Sangalli, one of the haute couture high-fashion spaces in Milan and recently recognized by the Italian Chamber of Fashion for its creativity, was opened by Maria Sangalli in 1972. In 2005, after a change in ownership and management, Maria's nephew, Federico Sangalli, stepped in as owner and chief designer. As director of the atelier, Federico is determined to preserve the traditional unique handmade dress while also bringing a contemporary feel to the brand. For example, in 2014, during the Milan Design Week, Federico presented a collection of dresses, bags, and accessories made with LED fiber optics that emit light, a combination of innovation and tradition that one fashion writer called "genius."¹

Vibram: Shoeless Hiking Tradition Turned Into Barefoot Footwear. Vibram, a 70-year-old Italian family firm based in Northern Italy, is the world leader in the production of high-performance rubber soles for sport, leisure, work, orthopedic, and repair footwear, with more than 35 million soles produced annually and a turnover of around €200 million. The company was founded in 1937 by Vitale Bramani, who invented and commercialized the first rubber sole with the famous design called "tank tread." The

¹ See <http://milanostyle.com/vogue-night-out/>

firm is still fully controlled by the Bramani family, and family members take major roles in the management of the firm. The Bramani family has always had a strong passion for hiking and nature, and they pioneered the barefoot phenomenon by introducing a line of shoes—FiveFingers—that mimic the look and mechanics of being barefoot. Indeed, the recombination of the Bramani family's values and passion with innovative technologies resulted in a collection of minimalist footwear that completely changed the meaning of mountaineering shoes, making life, according to their promotional materials, "a little more memorable with every step you take."

PRODUCT INNOVATION VIA ITT

There are four building blocks of ITT that allow product innovation to occur: (1) sources of past knowledge, (2) forms of past knowledge, (3) types of product innovation, and (4) interiorization and re-interpretation capabilities. We look at each in turn below.

Sources of Past Knowledge

The first building block of ITT is the sources of knowledge. Two specific sources of past knowledge are especially important in ITT: (1) knowledge pertaining to the traditions of the firm itself and (2) knowledge pertaining to the traditions of the territory in which the firm is located (Messeni Petruzzelli & Albino, 2012). Indeed, both firms and geographical areas evolve along distinct trajectories of specialization, following a path-dependent process that strongly relies on past knowledge gained from research and/or practical experience (Nelson & Winter, 1982). This past knowledge refers to the long-standing traditions and practices of certain communities, which have often been passed orally from generation to generation (Shils, 1981).

Indeed, tradition is strongly characterized by a high degree of cultural and communitarian nature, being anchored in a number of related historic events and how these are interpreted and understood by the various communities (Hibbert & Huxham, 2011). Therefore, tradition tends to be characterized by a high degree of stickiness, the result of the unique combination of a number of institutional, economic, cultural, and organizational factors (Zahra & Wright, 2011) that influence individuals' and firms' routines and knowledge bases (Messeni Petruzzelli & Albino, 2012). Tradition is hence the product of the "accumulated cultural productivity of society" (Ashworth,

1994, p. 20), which may serve as a key strategic resource upon which to build novel economic opportunities (Graham, 2002). By leveraging tradition it is thus possible to rediscover distinctive knowledge whose adaption to current market needs and expectations may open the door to the creation of unique opportunities for product innovation and, as a consequence, competitive advantage.

Our illustrative vignettes indicate that some firms actively seek and leverage past knowledge that lies within the firm's tradition. For example, Beretta leveraged the firm's long history of fine craftsmanship and enduring experience with old materials and the shared family love of hunting to create the A400 Xcel shotgun. Similarly, development of the Lavazza ISSpresso was possible thanks to the firm's outstanding traditional competencies in blending coffee over its 100-year history. Similarly, Vibram's FiveFingers footwear was inspired by the Bramani family's belief in close contact with nature and their historical values and passion for barefoot hiking. These examples illustrate the case of an ITT strategy based on delving back into the firm's tradition.

Other examples illustrate ITT strategies that reach beyond the firm's traditions and into the traditions of the territory in which the firm operates. For instance, Aboca's products originate from the heritage of ancient herbs and production techniques in Valtiberina (Tuscany). Similarly, the product language of Apremare's 64-foot Fly speedboat is inspired by the traditional *gozzo sorrentino*, a heritage of the Sorrento territory (Campania), and was developed using the manufacturing skills and product signs characterizing over a century of craftsmanship in the Sorrento area. Finally, the ancient sewing techniques used in Atelier Sangalli are found in the heritage of the Milanese high-fashion tradition.

Forms of Past Knowledge

The second building block is storage and retrieval of past knowledge within organizations. Well-established taxonomies distinguish codified and tacit forms of knowledge (Cowan et al., 2000). Codified knowledge reduces the costs of transmitting, storing, and reproducing such knowledge (Saviotti, 1998; Zack, 1999); tacit knowledge cannot be easily transferred because it is not expressed in an explicit form (Von Krogh, Ichijo, & Nonaka, 2000). Codified knowledge in ITT most commonly takes the form of raw materials and manufacturing processes (Benezech et al., 2001; Brusoni, Marsili, & Salter, 2005), but past knowledge can also be codified in

product signs—combinations of colors, textures, symbols, etc.—that communicate messages to product users (Dell’Era & Verganti, 2007). Tacit knowledge mainly refers to the assumptions and values at the base of an organization’s culture in the past. According to Schein (2004), underlying assumptions are unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings representing the ultimate source of values and actions in an organization.

Our illustrative examples show that family businesses involved in ITT consciously identify and use traditional raw materials to manufacture new products, even if these raw materials are no longer in use. Aboca’s products incorporate the properties of ancient herbs. Beretta’s A400 Xcel shotgun integrates traditional raw materials with innovative polymers using an extremely advanced technology. The double-pointed hull of Apremare’s gozzo, dating back to Roman boats, is an example of past knowledge codified in the form of shapes and forms. Past knowledge can also be codified in manufacturing processes, such as those involving Apremare’s shipwrights, blacksmiths, and carpenters; Aboca’s production techniques, traditionally used in the local tobacco industry; Lavazza’s traditional coffee blending technique; and the old sewing methods of Atelier Sangalli.

Examples of tacit forms of past knowledge include the conviction that human beings and nature are strongly intertwined and co-evolve, and that a sustainable future is possible only if we respect nature—a solid belief, shared by all Aboca employees, that inspires all product innovation projects initiated by the firm. Similarly, the Bramani family at the helm of Vibram shares values rooted in the belief that the human being is fully realized only in close contact with nature, and that complete fulfillment for humans is possible only if barriers that society and economic development have created between man and nature are broken down. These thoughts inspired Vibram when it created the FiveFingers shoe and made it a pioneer in the barefoot walking and running movement worldwide.

Types of Product Innovation

The third building block is product innovation. Product innovation research suggests that codified and tacit knowledge can be reinterpreted to develop two types of product innovations: (1) innovations that offer new functionalities by innovating the technologies on which the product is built and (2) innovations that determine a change in the reason

why customers buy a product by building on its original meaning (Verganti, 2008; Veryzer, 1998). The first type uses science and technology to create innovative functionalities. This approach assumes a progression of knowledge from basic science to applied research to the development of products for commercial ends (e.g., Tushman & Anderson, 1986). The second type “starts from the comprehension of subtle and unspoken dynamics in sociocultural models and results in proposing radically new [product] meanings and languages that often imply a change in sociocultural regimes” (Verganti, 2011, p. 387). These types of innovations are exemplified by products such as the Nintendo Wii, which completely changed the meaning of console gaming, from passive immersion in a virtual world to a social experience that encourages active physical entertainment (Norman & Verganti, 2013).

Both of these types of product innovations can originate from past knowledge. Indeed, old materials or production processes can give birth to new products characterized by highly innovative and rare functionalities (Ahuja & Katila, 2004), qualities that enhance the firm’s appropriation advantage because of reduced risks of imitation and misappropriation (Di Minin & Faems, 2013). At the same time, past knowledge carries a rich set of values and beliefs that can revamp positive feelings and infuse existing products with new meanings, thus opening novel market opportunities and making products able to satisfy new or latent customers’ needs (Brown et al., 2003).

Table 2 summarizes the different types of ITT strategies classified as a combination of (1) sources from which past knowledge is retrieved, (2) forms of codified and tacit knowledge retrieved from the past, and (3) types of product innovation enabled by the combination of past knowledge with up-to-date technologies. Table 2 also references our illustrative example firms, which are discussed in detail below.

Beretta’s A400 Xcel shotgun, for instance, offers superior performance—such as reduced recoil, extreme durability, and comfortable handling—attained through skillful integration of traditional raw materials such as walnut. Aboca products combine the properties of ancient and almost forgotten herbs to create extremely effective drugs without the usual side effects. Lavazza’s ISSpresso enables consumers to savor traditional coffee in extreme conditions, such as in space, by combining traditional coffee blending methods with highly innovative technologies.

In other instances, past knowledge has led to important modifications in the meaning of existing products. Apremare changed the meaning of *gozzo*

TABLE 2
Typology of ITT Strategies by Source of Past Knowledge and Type of Product Innovation

Source of past knowledge	Type of product innovation	
	Innovating product functionalities	Innovating product meanings
Firm tradition	Interiorizing knowledge from the firm's past (raw materials and manufacturing processes) and reinterpreting these to enable new product functionalities <i>Case examples: Beretta, Lavazza</i>	Interiorizing knowledge from the firm's past (basic assumptions and beliefs) and reinterpreting these to enable new product meanings <i>Case example: Vibram</i>
Territorial tradition	Interiorizing knowledge from the territory's past (raw materials and manufacturing processes) and reinterpreting these to enable new product functionalities. <i>Case example: Aboca</i>	Interiorizing knowledge from the territory's past (product signs and manufacturing processes) and reinterpreting these to enable new product meanings <i>Case examples: Apremare, Sangalli</i>

from a boat used mainly for commercial fishing into a pleasure craft. Vibram's FiveFingers originated from the desire to reinterpret the conventional mountain shoe concept, producing hiking shoes that are bought not only for their technical characteristics but also to rediscover the experience of coming into contact with nature. Finally, Federico Sangalli changed the meaning of high-fashion apparel by incorporating fiber optics into textiles.

Interiorization and Reinterpretation Capabilities

The final, and perhaps most important, building block of ITT is formed by a specific subset of dynamic capabilities (Teece, 2014)—namely, the capabilities to interiorize and reinterpret past knowledge. Specifically, *interiorization* refers to the firm's capability to internalize—within its organizational boundaries—potentially useful knowledge from the past, by searching and sourcing it from the tradition of the firm or of its territory. *Reinterpretation* is the capability of making this knowledge marketable and useful to satisfy contemporary customer needs by combining selected forms of past knowledge with up-to-date technological solutions.

In terms of interiorization, bringing past knowledge culturally close to employees, especially those involved in the innovation process, is key for ITT (Messeni Petruzzelli & Savino, 2014). Interiorization capabilities allow past knowledge to be fully understood and reduce the risk of incorrect applications due to forgotten practices, lost records, and staff turnover (Argote, 1999). This is achieved by ensuring cultural closeness between past knowledge and the inventors, giving them a deep understanding of these traditional resources in the form of common interpretations and routines that “allow

organizations [and individuals] to interpret and give meaning to actions without making all these difficult interpretations explicit” (Knoben & Oerlemans, 2006, p. 76). This, in turn, calls for shared cognitive and interpretative schemes among employees (e.g., Jensen & Szulanski, 2004), which contribute to sustaining and enhancing their aptitude to effectively use past resources (e.g., Kostova & Zaheer, 1999). Creating a tight link between past knowledge and the experiences of employees (Maggitti, Smith, & Katila, 2013), therefore, emerges as a critical aspect of ITT in that such capabilities allow inventors to absorb and apply past knowledge to develop new products. By creating a sense of cultural proximity between employees and past knowledge embedded in the tradition of the firm or the territory, a firm can internalize such knowledge, identify the appropriate forms in which it can be stored and retrieved, and leverage it by reducing the risk of misinterpretation and wrong applications in the product innovation process.

In terms of reinterpretation, integration of past knowledge and its recombination to develop product innovations can unfold through two distinct processes. First, past knowledge may be recombined with technologies from distant industrial fields (Messeni Petruzzelli & Savino, 2014), hence augmenting the variety and scope of the recombination process (Katila & Ahuja, 2002; Laursen, 2012). Introducing technologies from different contexts enables the firm to refresh its competence base, thereby avoiding the risk of rendering past knowledge obsolete and enhancing its newness (Ahuja & Lampert, 2001). Second, past knowledge may be recombined with solutions and technologies that are familiar and largely adopted in the specific industrial field but

used to develop new connections among the various tangible and intangible elements of the product, resulting in unexpected functionalities or meanings (Maggitti, Smith, & Katila, 2013; Messeni Petruzzelli & Savino, in press). This approach allows the creation of successful new products by bringing elements generally considered isolated and distinct into close proximity (Schilling & Green, 2011) without damaging product functionality and meaning (Fleming, 2001). In terms of Teece's (2014) framework, firms' abilities to do this should be conceived as a particular subset of dynamic capabilities tailored to a specific approach to gain competitive advantage—that is, leveraging past knowledge to develop product innovations.

Among our examples, the Aboca Museum and the Bibliotheca Antiqua illustrate how historians and researchers interiorize the tradition of the territory where the officinal herbs are cultivated, including its history and culture. In addition, ad hoc training courses and a variety of symbols in the headquarters and production sites are used to spread and share knowledge about the properties of traditional officinal herbs. At Apremare, to guarantee the interiorization of Sorrento's nautical experience the founding family employs local shipwrights, blacksmiths, and carpenters with knowledge of the ancient boat manufacturing process to develop new products. To ensure that new employees are culturally close to the firm's traditional coffee blending process, Lavazza established a Training Centre Network, the world's largest coffee school with eight sites in Italy and 50 abroad, with the goal of disseminating understanding and the Lavazza espresso culture by training and educating employees and other stakeholders.

Reinterpretation capabilities are also well exemplified by our illustrative vignettes. Lavazza reinterpreted past knowledge by combining it with distant advanced technologies, such as those from the space industry, to develop the first espresso machine able to work in space. Sangalli maintains the old high-fashion division of labor, where the tailors sew each item from beginning to end, all sitting at the same table under the leadership of the *premiere*,² the oldest tailor of the team, who trains newly hired tailors in their first two years in the firm. In this way, Sangalli combines the old Milanese high-fashion heritage with very distant technologies, such as fiber optics used in the telecommunication industries, to give unexpected meanings to high-fashion

apparel and items. Similarly, Beretta's commitment to nurturing generations of craftsmen enables it to leverage past knowledge and recombine it with the most advanced material and production technologies in the firearms industry.

Aboca, Apremare, and Vibram all illustrate reinterpretation capabilities that enable them to recombine past knowledge with technologies that are familiar and largely adopted in their specific industries. Aboca recombines ancient officinal herbs with biotech and leading-edge manufacturing techniques widely applied in the pharmaceutical industry. Apremare's yachts recombine the shape and form of the traditional *gozzo sorrentino* with modern engine and boat manufacturing technologies. Finally, Vibram reinterprets the basic assumptions and beliefs of the mountaineering shoe by using recent rubber-based innovative products to manufacture footwear, delving into the traditional values and beliefs of the founding family and their love for barefoot walking.

DIRECTIONS FOR FUTURE RESEARCH

The ITT framework presented and discussed above challenges existing assumptions about past knowledge in innovation management research and practice, and galvanizes future research attention on ITT as a viable and effective innovation strategy that can contribute to firms' competitive advantage. Our examination of diverse literatures and conceptual analysis suggest that we still need theoretical development and specific studies on each building block. These research gaps raise opportunities for future research on family business and innovation management on the antecedents and performance implications of ITT. These research gaps and related questions for future research are summarized in Table 3 and discussed below.

Research Gaps and Related Research Questions

Sources of past knowledge. Opportunities exist for addressing the varying sources of past knowledge as well as for improving our understanding of how tradition originates and evolves over time; how firms and industries contribute to create and change firm and territory traditions; and the role of national, regional; and organizational culture.

Relatedly, the two specific sources of past knowledge that emerge from existing innovation management research are not always independent of each other. For example, Beretta's multigenerational presence and prominent role in the socioeconomic

² This is the Italian word for "premier."

TABLE 3
Directions for Future Research on Innovation Through Tradition

Building blocks of the ITT model	Research gaps	Research questions
Sources of past knowledge	<p>RG #1: Addressing varying sources of past knowledge and origins and evolution of tradition, including the role of family and nonfamily firms</p> <p>RG #2: Clarifying relationships between firm tradition and territory tradition, including the role of family owners and managers</p> <p>RG #3: Identifying optimal levels of past knowledge search and its determinants, including differences between family and nonfamily firms</p>	<p>RQ #1A: Do other sources of past knowledge exist in addition to firm tradition and territory tradition?</p> <p>RQ #1B: How does tradition emerge? How do the experiences, heuristics, and routines embedded in an industry contribute to creating and changing firm and territory traditions? How do national, regional, and organizational cultures influence the existence and types of traditions? Do family and nonfamily firms contribute differently to these processes?</p> <p>RQ #1C: Do firms actively take part in the creation and change of tradition? How do they do so?</p> <p>RQ #2A: Are there mutual relationships between firm tradition and territory tradition? Does the presence of a controlling family facilitate these links?</p> <p>RQ #2B: How do firms navigate different sources of past knowledge? Are firm tradition and territory tradition substitutes or complementary? When and under what circumstances do firms rely more on firm tradition or territory tradition?</p> <p>RQ #3: To what extent should firms search knowledge in the past? Is there a too-much-of-a-good-thing effect that reduces the marginal benefits from using sources of past knowledge and/or triggers negative consequences for innovation? To what extent does this potential optimal level differ between family and nonfamily firms?</p>
Forms of past knowledge	<p>RG #4: Addressing the variety of forms of past knowledge and the flow of such knowledge, especially in multigenerational family firms</p> <p>RG #5: Exploring the intellectual property issues associated with past knowledge and how these issues are addressed differently by family and nonfamily firms</p>	<p>RQ #4A: How do firms store and retrieve past knowledge? How does the inflow of past knowledge relate to existing knowledge stock in the firm? At what levels (e.g., individual, group, intergroup, organization) do different forms of past knowledge exist? How are different forms of past knowledge translated and used across individual, group, intergroup, and organization levels? How is past knowledge handed down in multigenerational family firms?</p> <p>RQ #4B: What is the relationship between different configurations of codified and tacit knowledge and product innovation? Are there differences between family and nonfamily firms in how knowledge is stored and retrieved?</p> <p>RQ #5A: How do firms protect their intellectual property? Are there differences between family and nonfamily firms?</p> <p>RQ #5B: What are the intellectual property protection advantages and disadvantages associated with different forms of past knowledge? What advantages and disadvantages do family firms have in addressing these issues, compared to nonfamily firms?</p>

TABLE 3
(Continued)

Building blocks of the ITT model	Research gaps	Research questions
Types of product innovation	<p>RG #6: Investigating the (nonlinear) effects of past knowledge on innovation performance and how such effects differ in family and nonfamily firms</p> <p>RG #7: Extending the boundaries of the ITT model to family and nonfamily firms in the context of other types of innovation</p>	<p>RQ #6A: How does the use of past knowledge affect the introduction of new products and the returns from innovations? Do family firms have advantages in using past knowledge to innovate?</p> <p>RQ #6B: Do innovations of functionality and meaning based on past knowledge have different implications for innovation performance? In what circumstances are innovations of functionality and meaning more likely to result in higher/lower innovation performance? How do family firms differ from their nonfamily counterparts in developing innovations exploiting past functionalities and meanings?</p> <p>RQ #7A: Does ITT benefit service, process, organizational, and business model innovation? How do the challenges of ITT differ across these different forms of innovation? Do family and nonfamily firms differ in the way they address these challenges?</p> <p>RQ #7B: How do past knowledge and ITT relate to different types of innovation (e.g., continuous/discontinuous, incremental/radical, supportive/disruptive, flexible/inflexible)? Do the advantages of family firms in using past knowledge apply differently to different types of innovations?</p>
ITT capabilities	<p>RG #8: Investigating the microfoundations of ITT capabilities in family and nonfamily firms</p> <p>RG #9: Clarifying relationships between sources of past knowledge, forms of past knowledge, and product innovation in family and nonfamily firms</p>	<p>RQ #8A: How are interiorization and reinterpretation capabilities related to individual cognition and to the interaction of individuals within organizations? Are these capabilities different in family and nonfamily firms?</p> <p>RQ #8B: How do communities of practice and technological gatekeepers enable interiorizing and reinterpreting past knowledge in the organization? How do family and nonfamily firms contribute to building such communities of practice?</p> <p>RQ #8C: How do organizational routines, histories, stories, documentation, and procedures create shared understandings of the knowledge at the organization level and interiorizing and reinterpretation of past knowledge? Under which conditions do family firms have advantages in building ITT capabilities?</p> <p>RQ #9A: How does the interiorization capability relate sources of past knowledge (firm and territory tradition) to forms of past knowledge (codified and tacit knowledge)? Do family firms always have advantages in developing such links?</p> <p>RQ #9B: How does the reinterpretation capability relate forms of past knowledge (codified and tacit knowledge) to types of product innovation (new functionalities and new meanings)? Do family firms always have advantages in developing such links?</p>

TABLE 3
(Continued)

Building blocks of the ITT model	Research gaps	Research questions
	RG #10: Exploring the drivers of heterogeneity and variation of ITT capabilities between family and nonfamily firms and among different types of family firms	RQ #10A: What are the managerial, organizational, and interorganizational drivers of heterogeneity in the interiorization and reinterpretation capabilities? RQ #10B: Do family firms have better ITT capabilities than nonfamily firms? How do family willingness (e.g., values, goals, objectives) and ability (e.g., power concentration, participative decision making) relate to differences in ITT between family and nonfamily firms and heterogeneity among family firms? RQ #10C: How do ITT capabilities evolve over time? How do situational and temporal factors such as succession and generation influence ITT capabilities over time?
Contextual factors	RG #11: Incorporating the effects of exo-context and chrono-context and empirically validating and generalizing the ITT model	RQ #11A: Is ITT more viable in certain industries, and why? RQ #11B: How do the economic, social, political, legal, cultural, spatial, and technological environments influence the viability of ITT? RQ #11C: How does the chrono-context (e.g., global and national crises) influence the viability of ITT?
	RG #12: Investigating how ITT is applied outside the family business context	RQ #12A: Which managerial practices and approaches are applied by nonfamily businesses to employ the ITT strategy? RQ #12B: How does the application of ITT differ in forms and significance among different types of nonfamily firms (e.g., widely held corporations, cooperative ventures, joint ventures, venture capital-backed firms, state-owned firms)?

development of its hometown created a clear overlap between the tradition of the firm and that of the territory, as shown by the Firearms and Weapon-Making Tradition Museum located in Gardone Val Trompia. Therefore, future research should explore the links among traditions that originate from different sources, including not only firms and territories but also controlling families and individuals working in organizations and living in certain territories, and their mutual influences, and the role of family and nonfamily firms in navigating the different sources of past knowledge. Finally, like searching other sources of knowledge (e.g., geographically and technologically distant contexts), searching past knowledge is subject to decreasing marginal returns (Katila, 2002; Katila & Ahuja, 2002), so future research is needed to assess to what extent searching past knowledge is beneficial, along with its costs and potential drawbacks. In this regard, scholars may

also investigate to what extent such marginal returns differ between family and nonfamily firms, hence increasing our understanding of the ability of family businesses to innovate through tradition.

Research Gap 1: Research on ITT should address the varying sources of past knowledge and how tradition originates and evolves over time, including the role of family and nonfamily firms.

Research Gap 2: Research on ITT should clarify the relationships between firm tradition and territory tradition, including the role of family owners and managers.

Research Gap 3: Research on ITT should not assume that searching for past knowledge is always beneficial or detrimental for innovation. Rather, it should identify optimal levels of past knowledge search, taking into account the marginal benefits and costs of searching past knowledge as well as the contingency

factors that cause such benefits and costs to prevail. Specifically, the differences between family and nonfamily firms need to be explored.

Forms of past knowledge. Little attention has been devoted to understanding the distinctive forms that past knowledge can take in an organization. Among the few exceptions, Schein (2004) pointed to some unique attributes of past knowledge that can take the form of unconscious assumptions, beliefs, perceptions, thoughts, and feelings. At the same time, our illustrative examples suggest that past knowledge can take a variety of tangible and intangible forms, opening up promising opportunities for future research. For example, future research is needed to explore different ways in which firms store and retrieve past knowledge, how firms manage stocks and flows of past knowledge, and whether different forms of past knowledge exist at different levels, such as individuals, groups, and organizations. How such storage and retrieval differs across family firms at different generations of family control and how stored knowledge is handed down across generations of family control also warrant exploration.

Future research should also attempt to gain deeper understanding of the intellectual property issues associated with past knowledge. The questions of whether (or under what conditions) formal intellectual protection of knowledge encourages innovation or imposes legal risks and burdens that limit innovation has been subject to a lively debate (e.g., Bessen and Meurer, 2008). Research can fruitfully broaden this understanding by exploring and comparing the different challenges that present and past knowledge involve in terms of intellectual property protection, in family and nonfamily firms.

Research Gap 4: Research on ITT should address the varying forms that past knowledge takes in organizations and the flow of such knowledge, also referring to how such flow occurs across generations in family firms.

Research Gap 5: Research on ITT should explore how family and nonfamily firms protect and manage the intellectual property of past knowledge.

Types of product innovation. Prior research and our illustrative examples suggest that past knowledge can contribute to innovation of both product functionalities and meanings. However, more research is needed to explain to what extent past knowledge is conducive to superior innovation performance, alone or in combinations with other forms of knowledge. Further, there is a need to examine to what extent searching past knowledge is

beneficial and whether temporal search is exposed to the “too much of a good thing” effect (e.g., De Dreu, 2006). Indeed, relying on the past may present a double-edged-sword effect, especially when firms are unable to reinterpret tradition and thus offer only a conservative application of past knowledge, without any effort to adapt it to changing market conditions. This problem is illustrated by the Italian company Natuzzi, a manufacturer of sofas, armchairs, and living room accessories, which has experienced a significant downturn due to its excessive reliance on its traditional resources (e.g., product signs and materials), which were no longer appropriate in the changing competitive scenario.

Also, future work is needed to understand whether there are different performance implications between innovations of functionality and meaning based on past knowledge, in what circumstances one or the other type of innovation results in higher or lower innovation performance, and whether and how family firms differ from their nonfamily counterparts in developing innovations that exploit past functionalities and meanings. Accordingly, an interesting direction for future research would be to study when and under what circumstances tradition, both of the firm and of its territory, should be forgotten rather than leveraged. Moreover, the boundaries of the ITT framework should be examined thoroughly in future research to understand whether and to what extent past knowledge benefits different types of innovations (e.g., service, process, organizational, business model innovation) and in which way (e.g., continuous/discontinuous, incremental/radical, sustaining/disruptive, flexible/inflexible innovations). These different types and modes of innovation may present different types of challenges in the use of ITT.

Research Gap 6: Research on ITT should investigate the (nonlinear) effects of past knowledge on innovation performance in family and nonfamily firms.

Research Gap 7: Research on ITT should extend the boundaries of the ITT model in family and nonfamily firms in the context of other types of innovation.

ITT capabilities. Drawing from prior research on dynamic capabilities, we have developed initial insights pointing to the importance and nature of interiorization and reinterpretation to leverage past knowledge in developing product innovations. However, there are several opportunities for further research, particularly exploring the microfoundations of ITT capabilities. According to Coleman (1990), studying the microfoundations of social systems is key

to understanding them. Thus, the microfoundations of ITT represent important research areas for gaining a deep understanding of its antecedents. For example, such research may focus on the role of individual cognitions and their interactions within organizations. Research should also look at specific patterns of communication in firms and territories, and the role of structures for knowledge management, such as communities of practice and knowledge gatekeepers, in discovering the trail of past knowledge through the firm and territory.

Appreciating how organizational routines, histories, stories, documentation, and procedures (Pentland & Feldman, 2005) interact in creating shared understandings of knowledge at the organization level and in interiorizing and reinterpreting past knowledge is another area worthy of future investigation. Research also appears warranted that examines more in depth the relationships among the building blocks of the ITT framework to gain a better understanding of how interiorization capabilities relate different sources of past knowledge to forms of past knowledge, and how reinterpretation capabilities transform different forms of past knowledge into product innovations. Future research on the relationships among the different building blocks of ITT might suggest, for example, that only some forms of past knowledge are conducive to innovation of product functionalities, whereas other forms of past knowledge are more likely to lead to innovation of product meaning.

Finally, as for other dynamic capabilities (Teece, 2014), we assume that firms have heterogeneous ITT capabilities. Moreover, we noted earlier that family firms are recognized as a particularly diverse form of organization (e.g., Chua et al., 2012; Wright et al., 2014). Therefore, the factors that differentiate family and nonfamily firms in terms of ITT capabilities as well as the drivers of heterogeneity in ITT capabilities among family firms represent promising areas for future research. Future research can systematically examine managerial, organizational, and interorganizational factors and compare family and nonfamily firms or different types of family firms based, for example, on their diverse goals (Kotlar & De Massis, 2013), governance structures (Wilson, Wright, & Scholes, 2013), and firm age (De Massis, Chirico et al., 2014). Scholars are therefore encouraged to adopt a more contextualized approach that is able to recognize the sources and contextual elements of the heterogeneity of family firms (Wright et al., 2014), thus enabling a more fine-grained understanding of how differences in family firm characteristics affect their willingness and ability to engage in ITT (De Massis, Di Minin, & Frattini, 2015).

Finally, future research needs to examine how ITT capabilities evolve over time, including path and place dependencies and cumulative knowledge creation (Heimeriks & Boschma, 2014), and the role of situational factors that may disrupt such trends, such as succession and generational transfer of businesses. Which managerial decisions (Dosi, Faillo, & Marengo, 2008) and microfoundations (Felin et al., 2012) help create and nurture these capabilities in family (and also nonfamily) businesses remains an open question and points to a promising area for future research.

Research Gap 8: Research on ITT should investigate the microfoundations of ITT capabilities in family and nonfamily firms.

Research Gap 9: Research on ITT should clarify the relationships between sources of past knowledge, forms of past knowledge, and product innovation, in both family and nonfamily firms.

Research Gap 10: Research on ITT should explore the drivers of heterogeneity and variation of ITT capabilities between family and nonfamily firms and among different types of family firms.

Contextual factors. Future research is needed to explore the role of external factors in influencing the availability of past knowledge and firms' capability to interiorize and reinterpret such knowledge in product innovation. As noted earlier, it appears that past knowledge can be particularly valuable in specific industries where customers' needs are enduring (Hargadon & Douglas, 2001). However, more research is needed to identify whether ITT is more viable in those industries, and why. More broadly, theoretical and practical understanding of ITT will be improved if future research examines the role of the economic, social, political, legal, cultural, spatial, and technological environments (i.e., the *exocontext*) in enabling or constraining the use of past knowledge to innovate. By doing so, future research will ideally enable the identification of the mechanisms and junctures through which the past becomes an important source of innovation in relatively younger family firms, as well as what types of policies may better support firms in leveraging the past and using it to develop new products.

Future research on the role of the *chrono-context* is also warranted because temporal factors such as global and national crises can significantly shape customers' needs, creating nostalgia (Brown et al., 2003) and thereby increasing the perceived value of new products that embed past knowledge. Thus, it is

likely that temporal factors such as crises can have an effect on the viability of ITT, which emerges as a further avenue for future research. Such research could include examination of the differences in response nature and speed between family and nonfamily firms in their use of ITT in relation to changes in the chrono-context.

In addition to these research opportunities, our analysis stimulates future research to empirically validate and generalize our theoretical assertions. In particular, it would be interesting to address, for instance, through large-scale representative surveys, how many family firms engage in ITT compared to nonfamily firms. Further, as our examples are drawn from the Italian context, it would also be appropriate to conduct such surveys in different institutional contexts because family and nonfamily firms differ between contexts (Wright et al., 2014).

Finally, as mentioned above, an ITT strategy might also be applied by nonfamily firms. Indeed, managers of nonfamily companies can learn to emulate these extremely successful family businesses and focus on specific forms of past knowledge to build a sustainable competitive advantage. This view is supported by examples of nonfamily businesses that appear to have the capability to use past knowledge to innovate, pointing to the viability of the ITT strategy outside the family business domain. For example, the U.S. multinational conglomerate General Electric deploys this potential through the application of purposefully designed organizational routines that leverage the firm's traditions to enable technological innovation. GE's DDHF multi-stage centrifugal pump, for example, was based on the company's traditional hydraulic design but was reengineered for CO₂ pumping and enhanced oil recovery. Another well-known example is Cartier, which has based its competitive advantage largely on its capability to develop luxury products by blending cutting-edge technologies and the traditional craftsmanship of local artisans. The success of Cartier's watch production is due to the Swiss watchmaking tradition and expertise that the company preserves and nurtures through its watchmaking school, the Institut Horlogerie Cartier.

These exemplar cases suggest the extension of the ITT concept and the related benefits outside the realm of family business, calling for future investigation in this direction. Indeed, our analysis provides insights for considering ITT as a viable strategy for nonfamily businesses and adds to the emerging stream of studies identifying the management practices that nonfamily firms can learn from family businesses (Kachaner, Stalk, & Bloch, 2012). More specifically, the application of ITT can take on

dissimilar forms and significance among different types of nonfamily firms. For example, the way and the extent to which an ITT strategy can be applied may differ across widely held corporations, cooperative ventures, joint ventures, venture capital-backed firms, or state-owned firms. Clearly, a key assumption for the successful application of ITT is the existence of specific traditions that can be leveraged. The ideas we have presented are therefore more difficult to apply for firms that are too young to borrow from their past tradition or are not particularly linked to the tradition of any specific territory (e.g., newly established multinational subsidiaries).

Research Gap 11: Research on ITT should incorporate the effects of *exo-context* and *chrono-context* and empirically validate and generalize the ITT model comparing family and nonfamily firms.

Research Gap 12: Research on ITT should investigate the managerial practices that nonfamily firms adopt to implement the ITT strategy and study differences occurring among different types of nonfamily firms.

CONCLUDING DISCUSSION

Drawing on a diverse body of research, our study develops and conceptualizes a new product innovation strategy, called innovation through tradition, through which firms can leverage knowledge from the past to develop new product functionalities and meanings. The ITT can be broken down into its key building blocks: (1) the sources of past knowledge, including knowledge pertaining to the tradition of the firm itself or of its territory, (2) the forms of past knowledge, either codified (raw materials, product signs, manufacturing processes) or tacit (assumptions, values, beliefs), (3) the types of product innovation strategy enacted by leveraging knowledge from the past, either innovation of product functionalities or innovation of product meaning, and (4) the key capabilities underlying ITT, interiorization and reinterpretation, which allow the assimilation and sharing of past knowledge stocks across the organization and the combination of these with up-to-date technologies to generate product innovation. We illustrated these building blocks with six long-lasting and innovative family firms that have mastered ITT and used tradition to innovate their products. Indeed, family businesses appear to be in a privileged position for leveraging tradition to innovate because their nature offers opportunities to establish, maintain, and nurture links with the past. This makes family firms an excellent context for elucidating the capabilities underlying the ITT strategy and identifying

managerial practices and solutions that may be learned by nonfamily companies to enable them to successfully innovate through the past.

Implications for Research

We identified a number of specific research gaps relating to ITT, but our analysis also holds a number of more general implications for management research. First, this paper suggests a way of reconciling the innovation paradox that characterizes innovation in family businesses (Chrisman et al., 2015), whereby these firms are often unwilling to engage in innovation because the family wishes to maintain control, preserve its identity, and behave parsimoniously, despite having the resources and capabilities to innovate. By delving into the firm's tradition and that of its territory, family businesses can overcome this innovation paradox and engage in successful product innovation.

Second, our research contributes to studies conceptualizing innovation as a search process (Savino et al., *in press*), unveiling the merits of searching over time to identify valuable sources of innovation, thus providing further arguments against the conventional management prescription to dismiss the old to make way for the new. We add, therefore, to the recombinant view of the innovation process (Ahuja et al., 2008). Existing research has studied two dimensions of the search process in innovation: search depth and search breadth. We point to the importance of considering a further dimension of search processes in innovation: time.

Third, we contribute to innovation research by integrating knowledge search and recombination perspectives and by suggesting that, besides technologies and the market, past knowledge is another important source for innovating product functionalities and meanings (Messeni Petruzzelli & Savino, 2014).

Fourth, our study adds to the literature on entrepreneurship and enterprise development (Acs & Audretsch, 1990; Lumpkin, Steier, & Wright, 2011; Simsek & Heavey, 2011). Indeed, ITT is a product innovation strategy based on a noncostly, highly idiosyncratic resource: the tradition of the firm or of its territory. This resource can determine strong competitive advantages in both the value creation and capture phases of the innovation process without requiring high financial resource commitments. ITT could therefore foster the development of small and medium-size firms, which are strongly embedded in their territories, and help them compete against larger, multinational enterprises.

Fifth, this study contributes to research on dynamic capabilities (Eisenhardt & Martin, 2000) by showing that this model can be used to explain the dynamics underlying an important source of sustained enterprise performance—that is, product innovation. Our study highlights two capabilities underlying ITT: interiorization and reinterpretation. These should be conceived as a particular subset of dynamic capabilities tailored to a specific approach to gain competitive advantage—that is, leveraging past knowledge to develop product innovations (Teece, 2014).

Finally, also with respect to strategy, our paper informs research on absorptive capacity (Zahra & George, 2002), showing the relevance of a temporal view and offering new insights for the investigation of processes that sustain the effective absorption of traditional resources.

Implications for Practice

Our study also has a number of interesting managerial implications. First, managers with responsibilities for product innovation are often advised to establish a corporate sense of urgency and obtain a mandate to dismiss the past and open the door to the future. We highlight the critical role played by a firm's traditions and those of its territory in providing a source of raw materials, product signs, manufacturing processes, assumptions, and beliefs that can be transformed into new products. ITT enables firms to rediscover and reinvigorate past knowledge and create products with new functionalities and meanings.

Second, we offer managers some preliminary insights into the capabilities underlying ITT, which we call interiorization and reinterpretation. Future research will have to systematically identify the managerial decisions underlying these capabilities, but it is possible to argue here that some practices and routines can be used to foster the capabilities to interiorize and reinterpret temporally distant knowledge. This can be done by permeating the culture of the entire organization and allowing those involved in the innovation process to understand the strategic importance of the past, and of searching within it and transforming it into new product functionalities and meanings. Some practices may include historical narratives to maintain links to the firm's or its territory's past based on different types of internal and external communications, ancestor symbolization that calls to mind the firm's or its territory's past, emotion elicitation to create events that build socio-

emotional attachment to the firm's or its territory's traditions, and legacy councils to establish working governing bodies responsible for designing policies and initiatives aimed at preserving the firm's or its territory's past. These practices are more naturally applied in long-lasting and innovative family firms, but they can be emulated by managers of nonfamily firms to revitalize their organizations' capabilities to leverage past knowledge to innovate.

CONCLUSION

Long-lasting innovative family firms such as Aboca, Apremare, Beretta, Lavazza, Sangalli, and Vibram show that the past should be considered not a core rigidity but an opportunity to discover knowledge to be turned into new products. ITT is a product innovation strategy that addresses the recency bias in innovation management and allows a firm to deploy new product functionalities and meanings based on the interiorization and re-interpretation of knowledge rooted in the past of the firm or of its territory. This paper has laid the foundations for a deeper understanding of innovation through tradition and the building blocks of this new concept in the innovation literature. We hope it will inspire other scholars to continue this important and promising area of investigation, of which we have only started to scratch the surface.

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