



Università  
Ca' Foscari  
Venezia

**Department  
of Management**

## Working Paper Series

**Giovanni Favero, Vladi Finotto  
and Anna Moretti**

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Imprinting: Sensitive Periods,  
Cognitive Frames and  
Resistance**

**Working Paper n. 10/2016  
August 2016**

**ISSN: 2239-2734**



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# Historicizing Entrepreneurial Imprinting: Sensitive Periods, Cognitive Frames and Resistance

GIOVANNI FAVERO  
VLADI FINOTTO  
ANNA MORETTI  
<gfavero@unive.it>  
Department of Management  
Università Ca' Foscari Venezia

(August 2016)

**Abstract.** Literature in strategy and entrepreneurship resorted to the concept of imprinting to explain the resilience of firms' traits. Nonetheless, it assumed such a process is at work rather than aiming at its explanation. This article advances a conceptual framework based on three main building blocks - cognitive frame, resource mobilization, and resisting entrepreneurs - combined in a historical perspective, overcoming the existing generalized confusion about "what to study" and "how to study" in the investigation of entrepreneurial imprinting. We offer an original definition of the imprints and a dynamic view based on resistance investigating the replication, substitution, and re-negotiation of imprints in time. The contribution of the present work is twofold: on the one side, it contributes to the ongoing debate on entrepreneurial imprinting by closing some of the gaps that characterized previous literature on the subject, and offering an innovative bridging between imprinting and resistance; on the other side, it answers to the recent call for a deeper integration between historical approaches and entrepreneurship literature.

Keywords: Entrepreneurial imprinting, Cognitive frames, Resistance, Historical approach, Interpretive process

JEL classification numbers: L26, N01, M14

# **Historicizing Imprinting: Sensitive Periods, Cognitive Frames and Resistance**

## **Introduction**

Scholars in strategy, organization and entrepreneurship recently have turned their attention to Stinchcombe's so-called "imprinting hypothesis": distinctive characteristics emerged at the time of founding in some cases endure dimensional growth, changes in management, entry in novel markets and industries and appear to guide firms' movements into future states (Levinthal, 2003). Alluded to in a host of organizational theory in the last twenty years, imprinting gained currency as a conceptual attractor in a variety of debates tackling the persistence of early conditions or of founders' influence (cf. Marquis, Tilksic, 2013).

In the parlance of journalism and policy-making and in practitioners' discussions, the persistence of traits and properties deemed as unique or somehow related to success attracted a vast deal of attention, even though the vernacular might be different and "imprinting" is seldom used. For instance, the fascination with successful innovators has brought many to a quest for understanding how the innovative "Dna" can be engrained in organizations and how it can endure the test of time (for instance cf. Guynn 2011). Other debates have centered on the very ideas of persistence, resilience and on the continuing influence of specific traits that allow firms or even regions to resist the gales of the financial crisis or of global economic restructuring (Kammerlander et al., 2015; Duran et al., 2015) Finally, entrepreneurship and management experts put a prize on the ability of startup founders to hard-wire their original ways of thinking about markets, products and industries into organizational culture and routines to enable scaling up processes, growth and, ultimately, job creation (Rao, Sutton 2014; Sutton, Rao, 2014).

Despite being unquestionably fascinating and frequently evoked in theory and practice, the concept of imprinting rests on shaky grounds. Recent theoretical articles based on extensive reviews

of the literature pointed to three main problems with the evolution of the debate. First, research resorting to, mentioning or somehow dealing with imprinting, is quite fragmented (Marquis, Tilksic, 2013) and scattered across several different levels of analysis. Second, despite imprinting being referred to as a process, few, if any, attempts at uncovering its processual nature, the mechanisms and forces entailed in its unfolding, have been made (Johnson, 2007). In the literature dealing with imprinting, empirical studies are often of «variance-, rather than process-based, type [leaving] the imprinting process black boxed» (Simsek et al., 2014) p. 307. Finally, the concept is often loosely used as a reference to the fact that the environment “stamps” characteristics, organizing technologies or other traits available in a given moment on an organization. More precisely, Stinchcombe’s claim has come to be equated with the fact that organizational entities come to reflect the «conditions and constraints of history» (Simsek et al., 2014 p. 289). However, as Kipping and Üsdiken (2014, p. 571) highlight, «these studies take only a view back from the present to a kind of stylized past as a driver for the former and have little interest in understanding the historic context of the founding conditions per se or, for that matter, in the developments occurring between that founding moment/period and the present». This attitude makes possible to frame imprinting stating that the environment "stamps" itself onto the organization and then becomes persistent (cf. Stinchcombe, 1965). Despite its immediacy, such a trope risks to reduce imprinting to an automatic mechanism, depriving an inherently historical process of its complexity and concealing the role of human and organizational agency.

For the concept of imprinting to become a valuable theoretical tool and for it to be tackled with empirical rigor, we maintain that definitional uncertainties need to be overcome and that a dynamic-oriented framework for the historical analysis of the phenomenon needs to be proffered. Our paper aims at contributing to the refinement and operationalization of the concept through the integration of different streams of literature and the elaboration of an analytical toolkit. We advance a conceptual and analytical framework that emphasizes the importance of contingent political aspects and mobilizing practices to thoroughly understand the organizational dynamics enabling the

preservation and persistence of founders' *frames*. In line with Witt (2007), Barreto (2012) and Zander (2007), we deem these cognitive devices enabling actions as “cognitive frames” (Goffman, 1974), schemata of interpretation used by actors to make sense of ambiguous and varied signals that «shape how individual actors see the world and perceive their own interests» (Kaplan, 2008, p. 731). Moreover, the theoretical framework we propose adds agency at the intersection between the environment and the entrepreneur: in particular we claim that that the entrepreneur enacts the environment –and thus repertoires of strategies, structures or behaviors– through her cognitive frames. Agency is put center stage also in the ongoing process of imprinting, whereby the founder tends to diffuse and legitimize her frames resisting to organizational change, while other individuals in the firm could aim at diffusing alternative ones. In this way, we shift the focus from the results of the imprinting process to the process in itself, interpreted as an interaction between different frames that can exchange their roles (from diffusing power to resistance) following the outcomes of their confrontation. In such a perspective, the origins and the past of the firm are not a static variable that determines the firm's development, but become the object of subsequent reinterpretation by different frames. This way, we are able to assign history a dynamic role, focusing on the retrospective nature of the (conflicting) rhetoric reconstructions of the past. These are certainly a possible source of competitive advantage for the firm (Suddaby, Foster and Quinn-Trank, 2010; Foster, Suddaby, Minkus & Wiebe, 2011), but emerge as «social memory assets» also in the fight for mobilization and legitimization between different frames.

The explication of the proposed framework is completed by a discussion of the methodological implications aimed at guiding future empirical investigations on imprinting processes. The remainder of the paper is structured as follows: next section introduces our main focus on entrepreneurial imprinting; section 2 describes the theoretical background; section 3 discusses our proposal, and section 4 draws the conclusions.

## **1. Imprinting theory: the state of the art**

Imprinting has been treated elusively at best and plastically applied to an array of phenomena and research questions. An exhaustive recognition of the different empirical settings wherein imprinting was investigated is outside the scope of this paper and systematic efforts to map the empirical investigations of the imprinting hypothesis have already been made (Marquis, Tilksic, 2013). A cursory overview of the research questions and empirical settings in the field, nonetheless, might clarify its fragmentation and heterogeneity.

A host of studies focused on the founders' legacy, analyzing how specific characteristics of founders exercised an influence in later developments of a firm. Some insisted on the competences detained by founders at the time of founding and the subsequent performance of organizations and their growth in terms of employees (Colombo, Grilli, 2005). As they stated in a subsequent study, the authors implicitly assumed that founders have a durable imprint on the firms they created, without delving into the actual imprinting process (Colombo, Grilli, 2010). Other analysts focused on the effects of founders' role after an IPO or of their experiences on later performances and growth of firms. For instance, Nelson's analysis of the influence of the founder after IPOs (Nelson, 2003) found that the influence of the founder is higher if the founder's retains the role of chief executive officer *vis-à-vis* situations in which the CEO is a non-founder. In a study on the founders' effect on the composition of top management teams after IPOs, Beckman and Burton (Beckman, Burton, 2008) found that experienced founders tend to attract experienced management teams and that firms that begin with a complex functional structure tend to develop more complete functional structures in time. In other words, the experience of founders and their early decisions in terms of structure tend to attract top management teams that show a high resemblance to founders.

Students of strategic change have focused their studies on imprinting on the imprint, that is on the characteristic or the trait that is made persistent. Boeker (1989) proposed that the dominant strategies explicitly adopted at the outset of a venture tend to persist in time, making it difficult for a company that adopted a single and circumscribed strategy to change in the course of its life. Such

persistence is mediated by a number of factors that can be traced back to organizing choices at the beginning of a firm's life. In particular the persistence of a dominant strategy is determined by the recognition of a major organizational influence to specific organizational units –for instance R&D if the initial dominant strategy is that of a first mover, operations if the initial dominant strategy is that of a low-cost producer– and by the share of ownership retained by the founding management group. Harris and Ogbonna (1999), similarly, posit that founders' “strategic visions” shape future strategies of the firms they found by influencing organizational culture. Prominent among the factors that make a strategic vision persistent and conducive to positive performance are the entrepreneurial vision's flexibility and its environmental appropriateness.

Pondering over the proliferation of empirical studies measuring the existence and the long-term effects of specific conditions at the outset of entity, recent articles registered the variegated and often unrelated research questions underlying the scholarly debate and called for parsimonious and unifying definitions of imprinting (Marquis, Tilksic, 2013).

An attempt to develop a definition of entrepreneurial imprinting as a process can be identified with the work of Victoria Johnson. Based on her in-depth investigation on the founding of the Paris Opera, Johnson (2007) advances two qualifying general statements related to the process of imprinting. Speaking directly to theoretical elaborations on imprinting made by organizational ecologists, she contends that major attention needs to be devoted to the role of agents –entrepreneurs– in creatively selecting and combining environmental elements at founding. Organizational ecologists accounts of imprinting, in fact, insisted on the links between «macrolevel conditions at founding and the subsequent rates of organizational survival, mortality or change» (Johnson, 2007, p.117) with little attention to the micro-mechanisms and processes entailed in such relation. The entrepreneur –or the entrepreneurial group– thus is conceived as a creative agent rather than passive conduits of environmental elements. On a similar vein, recent contributions posited that emerging organizations, or better organization founders, engage in organizational bricolage wherein they draw from, and creatively select, mold and combine, existing organizational



forms in the surrounding environment (Perkmann, Spicer, 2014)

Secondly, Johnson shows that what is selected by the agent and the subsequent combination of environmental elements is heavily influenced by the intervention of relevant stakeholders who participate –either supporting or thwarting– in the entrepreneur’s creative selection and combination of environmental elements. Thus imprinting is, at least at founding, a socially embedded process.

Kipping and Üsdiken (2014, p. 571) have criticized Johnson's analysis of entrepreneurial agency and its social embeddedness for applying modern notions as “cultural entrepreneurship” and “stakeholder power” to the 17th century historical context, where their meaning is at least doubtful. Such an anachronism, however, depends in large part from the static notion of imprinting that Johnson draws directly from Stinchcombe (1965). In fact, if the past, as the historical conditions at founding is conceived as a static variable exerting its influence on the present, it is relevant only for what remains of it in the latter, as it happens in many studies on organizational culture (Clark and Rowlinson, 2004, pp. 344-345). And historical residues in the present fit by definition into present-day categories. If instead the past is conceived “as process and context, and not merely as a variable” (p. 346), as the object of changing retrospective reinterpretations as history evolves, its complexity escapes the reductionist effect of anachronistic interpretations, generating new theoretical insights into the variability of imprinting processes. Partially building on Johnson’s contribution, and addressing some of its shortcomings, two recent review articles tried to systematize the ravel of different approaches and perspectives on imprinting that emerged since Stinchcombe’s seminal insight, in particular Marquis and Tilksic (2013) and Simsek et al. (2015). Both have a number of merits. First, they converged towards a shared working definition of imprinting. Marquis and Tilksic, in particular, defined imprinting as «a process whereby, during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods» (p. 199, emphasis in original). This definition has four essential markers. First, it claims that the process is triggered during brief transition periods. Second, it

advances that in these periods focal entities are highly susceptible to the environment and thus come to incorporate and reflect elements of it. Third, it stipulates that these elements persist beyond the sensitive period. Finally, the authors emphasize that identifying the sensitive period(s) as transition phases allows imprinting to occur repeatedly during the life of a firm, namely when exogenous or endogenous changes either force the organization, or rather make it willing to import novel elements from the environment. Through their review, Marquis and Tilksic notice the importance of analyzing the dynamics and recurrence of imprinting that subtract the process from attributions of «permanence and irreversibility» (Marquis and Tilksic, 2010, p. 220), and encourage analysts to explain why and how frames might fade over time, juxtapose or combine with new ones.

Second, these reviews contributed to identify the building blocks of the process, as Simsek et al. (2015) did by singling out imprinters, imprinted, and imprinting processes. *Imprinters* are the «pre-existing forces and characteristics that constitute the environment and set in motion an imprinting process» (p. 293). More specifically, they define the imprinters as the entities that «provide the imprint's template, both form and content» (p. 294) and as repositories of organizational forms, strategies, routines, and various other elements that constitute the palette of choice for the emerging organization. Among the literally hundreds of different imprinters found in the literature, they identify three major categories: the environment, individuals and groups, existing organizations. They go on to define the *imprinted* as the «entities that bear the mark of [the] influences» (p. 297) exercised by the imprinters. As they do for the categories of imprinters, the authors recognize four major types of imprinted, especially when considering organization-level imprints: cognitions, structures, culture, and resources. *Imprinting*, at last, is the actual process wherein imprints are formed during sensitive periods.

Third, both Marquis and Tilksic (2013) and Simsek et al. (2015) considered imprinting as a dynamic and recurrent process: while one important sensitive period is an organizations' inception, organizations go through a number of such sensitive periods in their life. They can thus be re-imprinted, a theme that few analyses considered. As an organization goes through different

sensitive periods in its life, original imprints (i) might *persist*, perhaps changing their function (exaptation, cf. Marquis and Huang, 2010); (ii) they might *amplify* (Simsek et al., 2015) that is they become increasingly ingrained and “inscribed” within an organization through, for example, escalation of commitment (Koch, 2011) or organizational learning (Simsek, 2015); (iii) they can *decay* as a result of a variety of factors (e.g. distant search, changes in management, poor performance, and the like); (iv) they can *transform* and be redefined as a result of the juxtaposition of original and new imprints (Marquis, Tilksic, 2013; Simsek, 2015).

## **2. Imprinting and the emergence of organizations**

Loyal to the working definitions emerged in literature we sketch our process view of imprinting starting from what might be seen as the “first” and generative sensitive period, that is the emergence of an organization (Simsek et al., 2015). As previously highlighted, one of the fundamental issues at stake when looking at the genesis of an organization with the lenses of imprinting theorizing is the *role of agents* in the process, somehow overlooked by past literature (Johnson, 2007). An interesting perspective on the subject is offered by the inductive analysis of nine qualitative papers on a special issue of the Journal of Business Venturing developed by Suddaby et al. (2015). They sustain that, depending on analysts’ ontological and epistemological points of departure, firm foundation can be framed in two ways. On the one hand it can be seen as a process of imprinting –one in which the environment profoundly influences the actions of entrepreneurs, determining the opportunity landscape. On the other they claim it can be framed as the result of reflexivity –one wherein the entrepreneur is aware of both the constraints of extant social and economic arrangements, but at the same time is able to recombine creatively elements of the environment or to devise novel and original social and economic arrangements.

The difference between the two perspectives resides on the locus of agency. A discovery view of entrepreneurial opportunities postulates that agency resides eminently in the context: this exerts a strong influence on firm founders who are able to recognize given social and economic

arrangements and to act upon them. A creative view of opportunities maintains that actors –namely entrepreneurs– are able to envision «alternative social and economic arrangements in their environment» (Suddaby et al., 2015: 6) and create opportunities by molding the environment through their actions and interactions. Suddaby et al. (2015), nonetheless, overcome a simple oppositional view of the two perspectives. They first recognize that the opposition might be due to the level of analysis and the assumptions of the researcher. Secondly, they actually maintain that imprinting and reflexivity might be coexisting in the process of venture creation. Both the views, in particular, insist on the importance of «shared schemas or socially shared cognitions» (p. 9) in the entrepreneurial phenomenon. Consequently, these «constructs might [not] be seen as oppositional but rather representative of an orthogonal relationship between shared cognitions that become culturally embedded (imprinted) over time, but which are periodically overcome by actors who are less susceptible to the totalizing effect of imprinted cognitions (reflexivity)» (p. 9).

The debate about opportunities discovery or creation has been center stage in entrepreneurship literature for long time, in the attempt to unfold the issue of why –and how– firms come into existence given severe and genuine uncertainty and thus the impossibility to make any calculations (Langlois, 2007; Foss, Klein, 2005; Foss, Klein, 2011). Two main theoretical postures provide different accounts of how the environment and the nascent entrepreneur interact.

On the one hand, linear and rationalistic accounts of entrepreneurship (cf. Shane, Venkataraman, 2000) posit that entrepreneurship is a process entailing the discovery, evaluation and exploitation of opportunities carried out by individuals that «notice [opportunities] in a wave of alertness» (Steyaert, 2007, p. 460). Once the opportunity is discovered and evaluated, agents design consistent means-ends chains to exploit it, securing access to valuable resources that allow the attainment of clear and pre-determined goals. This view of the venturing process has been increasingly contended (Fisher, 2012) by alternative views that disputed its main tenets: the overemphasis on "cognitive" processes underlying entrepreneurship and the nature of action entailed in venturing. The environment, in other words, is conceived as a repository of resources,

information and objective opportunities that are seized by individuals who happen to be better equipped than others in terms of “alertness”. Deemed as the «discovery view of entrepreneurship», this perspective maintains that the discovery of opportunities *happens* in an insight, in the heads of individuals immersed in a continuous flow of information in which they recognize the value of new or hitherto overlooked or undervalued information. The consequent assumption is that the generative moment –the actual *time zero*– of entrepreneurship lies with individual information processing in a given moment.

A second perspective, developed on more constructivist premises, claims that the environment, and the inherent opportunities, are far from being given and objective and are rather constructed created– by the actions of individuals (Alvarez, Barney, 2007). At the core of this second perspective lies the claim that founders that aim at coalescing resources and devising means-ends chains usually face uncertain situations and exercise judgment, that is «they create their own structures for interpretation and decision, or find some ready-made structures they are prepared to adapt» (Loasby, 2004, quoted in Langlois, 2007: 1113).

The reflection of environmental elements into the design of the firm at founding, thus, is not a smooth and unidirectional process originating from changes in the environment and ending into the design of a firm. On the contrary, entrepreneurs interpret the environment and extant organizational and strategic blueprints.

Nascent entrepreneurs are described as imposing interpretive templates (Barreto, 2012) or theories (Felin, Zenger, 2009)<sup>1</sup> on the world and basing their behavior on them. Based on fragmented and non systematic observations and on scarce previous experiences, entrepreneurs engage in the imagination of alternative future states of the world and of the potential implications of alternative sets of actions that can be put in place (Sarasvathy, 2001). Entrepreneurs engage in an

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<sup>1</sup> In line with Witt (2007), Barreto (2012) and Zander (2007), we deem these cognitive devices enabling actions as “cognitive frames” (Goffman, 1974), schemata of interpretation used by actors to make sense of ambiguous and varied signals that «shape how individual actors see the world and perceive their own interests» (Kaplan, 2008, p. 731).

ideational work through which they imagine future possibilities and states of the world and future courses of action, at the same time reinterpreting the present –and the past– in the light of their vision.

Witt (2007) argues that the past, and thus previous experiences as well as extant “ways of doing”, represent one of the elements of the palette available to the entrepreneur to create her own venture and devise her own “business conception” (cf. Witt, 2007). In turn, Felin and Zenger (2009) suggest that these imaginative processes are related to, but not strictly determined by, past experience and perception. Rather than interpreting this argument as a claim for a definition of the entrepreneur as radically breaking with the past, we suggest that the past acts through the (re)interpretation that actors construct of it, this way constraining and feeding change processes at the same time.

While devising –imagining– a way out of uncertainty through highly idiosyncratic and subjective interpretive frameworks, entrepreneurs leverage upon the means they have at hand (Baker, Pollock, 2007; Sarasvathy, 2001) to create artifacts that are continuously tested against the environment and presented to move towards the collection of resources –finance, labour, technologies– to materialize their ideas. The entrepreneur engages in a process of mobilization of resources (Jenkins, 1983) towards the best configuration suggested by her cognitive frame. She manages and organizes tangible and intangible resources in a way that reflects her personal understanding of the problem and the corresponding solution. The process of mobilization corresponds to the efforts and actions undertaken by a subject (collective or individual) to secure control over the resources needed for reaching her or their goals (Jenkins, 1983, p. 532). At this stage, entrepreneurs need to make their views of the environment and their interpretive templates shared among a collectivity of other individuals who will self-select into the nascent firm (Sarasvathy, 2001; Witt, 1998; 2007): in order to do so, the entrepreneur will build her narrative that, once legitimized by the collectivity, will become the truth about the context and the organization. Such a narrative is essentially an interpretation of the past in line with the present and

the envisioned future. An organization emerges if the entrepreneur's interpretive framework is legitimated and shared by others who self-select into the venture, thus if the entrepreneur exercises a cognitive leadership on the firm, allowing for coordination, control, and delegation (Witt 1998).

Imprinting on the nascent firm thus occurs when the interpretive template of the entrepreneur is understood, learned, and perceived as legitimate by other members of the organization. Such narrative is also the signal of a frame, whose transferring and resilience is at the core of imprinting. Through imprinting, the entrepreneur shapes one or several dimensions of the organization based on her schemata of interpretation of a specific problem or issue, thus modeling firm's features on the basis of her cognitive frame. As Witt effectively states, in the nascent phase of a venture, an entrepreneur succeeds to the degree he or she establishes and consolidates a cognitive leadership, that is legitimized and makes intelligible to others his or her frame of reference guiding actions and decisions (Witt, 2007). Such a process is crystallized in the narrative account of how it happened. Such a narrative is not only the tangible result of this process of frame construction and legitimization. It performs also the function of defining role models in which members of the organization can identify, and of enforcing expectations about the consequences of action, or means-to-ends connections. The "history" that imprints an organization is not "the past" (what happened, defined once and forever), but its narrative interpretation.

### **3. Re-imprinting during sensitive periods: conflict and resistance**

The process of imprinting goes beyond firms' foundation occurring repeatedly during the life of a firm in particular sensitive periods (Marquis and Tilcsik 2013; Simsek, 2014). As stated by Simsek (2014), «insufficient attention has been paid to the actual processes by which imprints form. [...] Over half of the articles reviewed refer to imprinting processes either implicitly or not at all, either taking them as "givens" or neglecting them entirely. And for those scholars that do specify the mechanisms of imprinting, we observed little consistency in the terminology, definition, and boundaries of such processes.» (Simsek 2014, p.298). In order to contribute to fill this gap we move

from the concept of sensitive periods. Besides listing the possible instances of such periods (as, for example, new market entries, poor performance, crisis, M&A, and so on: see Simsek (2014) for an extensive review), we start theorizing from their *conflictual nature*. Sensitive periods, in fact, happen whenever contextual elements make the imprint contested. Whenever a narrative—that is “how things are gone”, i.e. the history of the organization— becomes contested, it is the signal that the imprinted frame is in conflict with others. Such “windows of susceptibility” are opened and closed as a result of the contingent presence of different historical factors. In order to make imprints persist over time, during sensitive periods entrepreneurs *resist* to environmental and organizational thrusts towards change, mobilizing resources in favor of their own cognitive frame.

Theories on resistance, especially in more recent contributions where the concept has been declined on a more egalitarian and positive paradigm (Ford, Ford, D'Amelio, 2008; Piderit, 2000; Thomas, Davies, 2005), offer a powerful conceptual toolkit to understand how entrepreneurs *resist* to organizational change, and conversely how imprinting can result in a highly political, and thus contested, process.

*Resistance* can be the bridging concept allowing to overcome the opposition between *imprinting* and *reflexivity* (Suddaby, Bruton, Si, 2015), as different ways to put into relationship (entrepreneurial) actors and the context in which they are embedded (Suddaby, Bruton, Si, 2015). The concept of *resistance* of –and to– imprinting highlights how the *conflict* between different cognitive frames makes actors reflect and intervene on them, making change possible. We posit that organizations are spaces of contestation among different and often diverging cognitive frames, which ensue in different narratives about the history of the organization, the environment, and their relationship. Sensitive periods catalyze and unfold these contestations, triggering political struggles that aim at making a specific frame *resist* on the organization *vis-à-vis* contending ones, finally ratifying one narrative (about the organization and/or its context) over the others.

The use of the term *narrative* here makes reference to the specific historical accounts built by the actors, these being the main evidence of the frames they adhere to, and the result of their effort



to make sense of organizational changes. The kind of narrative here involved is different from pure fiction, as it needs to include in a plausible interpretation some pieces of evidence. Yet at the same time it is a social and rhetorical construct that «motivate, persuade and frame action» (Suddaby, Foster, Quinn-Trank, 2010). The presence of different interpretive frames then opens the way to many different narrative reconstructions of organizational history, which in turn provide conflicting meanings to what went on, and are inherently political, as they establish a basis for consequent action or reaction (White, 2009, p. 30). The figure of the entrepreneur can thus be reinterpreted as a *resisting entrepreneur*, adding to a view of resistance that gives “equal attention to top-down, planned change and to bottom-up or egalitarian change processes” (Piderit, 2000, p. 792). We draw from micro-political views of resistance as a process wherein organizational members engage in the construction, renegotiation and redefinition of meanings, identities and historical narratives (Thomas, Davies, 2005; Thomas et al., 2011; Mumby, 2005). Following this perspective, resistance will emerge because “engagement with new meanings proposed by [...] change agents involves challenge and modification by other employees” (Thomas et al., 2011, p. 23). The only way to deconstruct the dominant narrative is to contrast it with other narratives: as a consequence, abruptly, different, irreconcilable accounts emerge, focusing on elements that had been neglected in the previous dominating narrative. Even if the focus of this theoretical perspective has been traditionally on entrepreneurs and top management as change agents, and employees as resisters, we think that flipping this view and elaborating on the idea of resisting entrepreneurs can give important insights for the literature on both imprinting and resistance.

The idea of resisting entrepreneurs, in fact, far from conceptualizing resistance as a reaction to repressive power (Piderit, 2000; Thomas & Davies, 2005), is closer to the approach looking at the *other side of the story* of resistance to change (Ford, Ford, 2009; Ford et al., 2008), in which the labeling of resistance is questioned and the idea of *resisting resistance* is proposed (Ford et al., 2008; Kärreman, Alvesson, 2009). During sensitive periods, resisting entrepreneurs, in order to perpetuate imprints, i.e. their ‘ways of doing things and solve problems’, while facing change and

uncertainty, resist to “ideas, proposals, and counteroffers” (Ford et al., 2008, p. 367) submitted by other agents advancing their own cognitive frames. In this view, we espouse the more recent interpretation of resistance as “a multidimensional, fluid and generative understanding of power and agency” (Thomas & Davies, 2005, p. 700), recognized as “a constant process of adaptation, subversion and reinscription of dominant discourses” (Thomas & Davies, 2005, p. 687).

This process brings into consideration strategic and political concerns (Campbell, 2005) since a (successful) imprinting results in the prevalence of a given frame –the one of the founder– over other competing ones, especially long after the firm has been founded and has grown (Kaplan, 2008; Nelson and Winter, 1982: 99-107; Scott and Meyer, 1994). In this perspective, a work of maintenance emerges then as crucial to successful imprinting, as whenever contests about interpretations and meanings arise during organizational life, entrepreneurs engage in imprinting processes characterized by a resistance dimension in order to make imprints persist onto their firms. The presence of conflicting narratives is characteristic of sensitive periods, and make possible to identify them. Importantly for the researcher, such narratives, when recorded, are also the main trace that reveals the presence of historical alternative frames in the evolution of the organization, as they usually disappear or result disguised when a new dominant narrative is imposed. In the analytic approach we suggest here, the different narratives proposed by the actors are then the main historical source (together with other available evidences) to identify conflicting frames and follow their interplay. Focusing on inconsistencies and “dissonances” between different accounts, we can shed light on the deeper working of the cognitive frames we assume are at work but we cannot directly observe.

#### **4. Imprinting mechanisms and practices: the micro-politics of resistance**

Adding the idea of resisting entrepreneurs we are now able to uncover the *imprinting mechanisms* underlying and unfolding the process over time. From a historical perspective going beyond the exclusive focus on the nascent firm and the limits of corporate history (Rowlinson,

Hassard & Decker, 2014, 260-263), we may also argue that locating in time the very origin of a venture or an organization in many cases implies questionable assumptions.

Our interpretation of the imprinting processes is that of a process framed within a social context (involving several actors) characterized by strategic and political dimensions. Resource mobilization and resistance always exist “within a network of power relations” (Kärreman & Alvesson, 2009, p. 1120), and develop through daily interactions, communicative practices, and negotiations (Thomas et al., 2011) aimed at making one frame prevail over the others. As Sarah Kaplan put it, «where frames about a decision are not congruent, actors engage in framing practices in an attempt to make their frame resonate and mobilize action in their favor» (Kaplan, 2008, p. 729).

Following Campbell (2005)’s review, we refer to three *mechanisms* entailed in imprinting processes (framing, diffusion, and translation) and the corresponding *practices* through which they are enacted.

*Framing* is the mechanism by which an individual frames issues in ways that resonate with the ideologies, identities, and cultural understandings of all subjects involved by a specific cause (Snow et al., 1986). It is aimed at affecting how actors perceive their interests, identities, and possibilities for change. This mechanism provides the means through which subjects interpret opportunities and decide how to best pursue their objectives (McAdam et al., 1996). An example of organizational processes and practices through which the mechanism can be developed is offered by the work of Zander (2007), who talks about the *recombination and reorganization of existing resources* as a process of framing a new business conception, aimed at mobilizing both internal and external actors towards entrepreneurs' interpretation of the environment. On the same note, Johnson (2007) adds the consideration of politics, proposing the development of framing through the *repeated interaction* with influential stakeholders. We also argue that a crucial action in the framing process is the narrative (re)interpretation of past experiences in the light of present aims and the envisioned future.

*Diffusion* refers to the spread of a cognitive frame through a group of people, and it is considered a cognitive mechanism «insofar as it facilitates the dissemination of ideas and models that cause actors to perceive new possibilities or imperatives for action» (Campbell, 2005). A practice that can be adopted to pursue the diffusion of a frame is that of *legitimation*, through explicitly sharing the frame with internal and external stakeholders, as suggested for example by Witt (1998). Moreover, Harris and Ogbonna (1999) talk about *influencing organizational culture* through the frame's flexibility, focusing on a frame's feature as an element of success of the mechanism. In such a perspective, the rhetoric plausibility of the proposed narrative exerts a relevant role in favoring the diffusion of a shared frame.

*Translation* is the process of transferring a cognitive frame through its modification and implementation by adopters, from theory to practice, in such a way that it will fit the specific organizational context. Examples of the use of this mechanism are offered by two works, both focused on the explicit frame adoption: in the work by Becker (2012), the entrepreneur's frame is translated in *formal and clear guides* for organizational design; Boeker (1989), focusing on the analysis of dominant strategies, identifies how those *explicitly adopted* will be those with higher chances to persist. As the process goes on, new events and episodes are also selected to be included into an extended ongoing narrative by social memory, while others may be excluded as contradicting its coherence.

## **5. Discussion and conclusions: towards a conceptual framework of entrepreneurial imprinting**

We advance here a conceptual and analytical framework of entrepreneurial imprinting, synthesizing all our previous considerations derived from the theoretical repertoire on imprinting and resistance.

Our first aim is to propose a parsimonious and integrative definition of imprinting, based on a

process framework (McAdam and Scott 2005) and constituted by three distinct building blocks: *cognitive frames, resource mobilization, and resisting entrepreneurs.*

In defining entrepreneurial imprinting, we add some qualifications referring to agency and frames to the definition offered by Marquis and Tilcsik (2013). We define imprinting as a *process whereby, during a brief period of susceptibility, the entrepreneur transmits his/her cognitive frames to the organization by means of imprinting mechanisms. Founders' frames eventually persist despite significant environmental changes in subsequent periods.*

From the whole set of frames the entrepreneur will have in creating a novel venture or managing her firm (concerning its strategy, offer, structure, etc.), the frame (or frames) of interest for the imprinting processes are those showing distinctive traits. We propose three possible methodological alternatives to identify distinctive frames: entrepreneurs' narratives (self-assessment); a comparison with other firms in the competitive environment; an ex-post historical analysis of organizational traits that persisted from firm's foundation on.

Hence, drawing on the concept of cognitive frame we have the possibility to uncover the mechanisms through which entrepreneurs stamp their imprints on their organizations, an issue only marginally addressed, if at all, by extant literature.

We define *imprinting mechanisms those practices enacted by entrepreneurs both at firm foundation and during firm evolution aimed at transferring his/her cognitive frames to the organization, and at assuring their persistence over time.*

Transferring cognitive frames to organizations requires the development of specific mechanisms, which result into proper organizational actions and practices. The three imprinting mechanisms we propose, following the resource mobilization theory and defined in the previous section, are: *framing, diffusion, and translation.*

*Framing* refers to practices of (re)combination and (re)configuration of existing resources, both tangible and intangible. It is then directly connected to Schumpeterian innovation.

The second mechanism, *diffusion*, entails legitimation, mobilization, coalition building.

*Translation*, the third and last mechanism, is part of imprinting in its aiming at modifying the frame in order to actually implement it. Formalization is the main example of this translating process, through which entrepreneurs build a codified system of rules that embody their frame. The process of translation is usually the main occasion for hidden resistance and alternative interpretation of the frame to emerge, as it offers the occasion to test the possibility of the frame to perform a stricter alignment of different actors, who may have loosely interpreted its meaning.

Our definition of imprinting, based on its dynamic interpretation, assigns a key role to agency: viewing imprinting as a mechanistic process, in fact, can be misleading and can induce to wrongly address the reasons of imprinting success or failure. Scholars often looked for causes of –successful– imprinting on entrepreneur's frame, as if the possibility to transmit some distinctive traits to an organization could depend only on the intrinsic power (or fit) of the frame itself. If this is for sure a part of the story, we argue that it cannot explain all of it. In fact, moving the point of view on the process it is possible to define also *successful and unsuccessful imprinting* – a theme only recently addressed by the literature (Simsek, 2014).

The sole empirical observation of cases in which imprinting happened has led to think of imprinting as a process automatically linked to a successful outcome, observable only ex-post. The view here proposed suggests to abandon this approach in favor of an extended understanding of imprinting outcomes as dependent on the effectiveness of imprinting practices. Adopting this new perspective would allow also considering the possibility of multiple layers of imprints, as proposed by Marquis and Tilcsik (2013).

Thus we posit that *imprinting processes can result into four possible outcomes: success (transmission or persistence of entrepreneur's frame); failure (prevalence of another frame); transformation (combination of entrepreneur's and others' frame); unsolved contest.*

Outcomes of imprinting processes can be distinguished in three conclusive results, and one reiterative. All alternative outcomes can be associated to the two dimensions of the imprinting process: the initial transmission of entrepreneur's frame, and the subsequent persistence of its

distinctive traits.

The *successful outcome*, the first of the three conclusive results, verifies when the entrepreneur's frame is successfully transferred to the organization, and it persists over time.

The second conclusive outcome is labeled "*transformation*", meaning that the original entrepreneur's frame has been transmitted to the organization only to some extent, having been influenced by, and combined with, other frames during sensitive periods. Entrepreneur resisted to organizational change, but her resistance was only partially successful. Facing change and uncertainty, entrepreneurs resist trying to make their own frame prevail even when contested by frames of other individuals. Opposing parties enact mobilizing practices to build coalitions of stakeholders sharing their frames.

Imprinting *failure*, the third and last conclusive result, verifies when entrepreneur's frame fails to be transmitted to the organization through effective imprinting practices, or when it fails to persist over firm's evolution. The outcome is observable in the presence of an alternative frame, different from that of entrepreneur, which influences and defines organizational traits, despite the engagement in imprinting practices. It is important to highlight that failures cannot be detected as the simple "absence of imprints": our dynamic view wants to address the continuity between the building blocks, pointing to the fact that imprinting exists—namely, can fail—if and only if a cognitive frame object of imprinting mechanisms and practices was present.

The last outcome, the reiterative one, is named "*unsolved contestation*": with this concept we define those situations in which the imprinting process is contested because alternative narratives are present at the same time, and neither frame is effectively transmitted to the organization by means of imprinting practices. This outcome is iterative because resisting entrepreneurs will pursue imprinting process until one frame will prevail, leading to one of the three conclusive outcomes.

The last concept we want to suggest with our conceptual framework (figure 1) is the *continuous* character of imprinting process. In fact, this conceptual framework is proposed as an analytic tool to

study both the transmission and persistence of entrepreneur's frame, from which comes its recursive nature. When a frame has been successfully imprinted, it will need to be the object of recurrent imprinting practices to make it persist over time. It is a phenomenon widely highlighted in the literature on institutional work (Lawrence, Suddaby & Leca, 2009). In the present perspective, this last point emphasizes the problem of linking imprinting processes only to firms' founders. A deeper analysis through a historical approach suggests that imprinting can develop well beyond founders' presence: if it was successful at a time, frames' persistence will be probably left in other hands. Historical analyses of imprinting and of the persistence of specific frames need then to pay a great deal of attention to the social trails of the process, by identifying the individuals and groups vested with the responsibility of perpetuating –imprinting over and over again– new members of the organization as it grows in space and as it ages. Similarly, all of the imprinting practices we saw as relevant in the initial imprinting by the founder will be recurring during periods following an organization's founding and will characterize the action of subsequent individuals and groups as well as the contestation between different groups both diachronically and synchronically.

As Marquis and Tilcsik argue, «this view implies a superposition of imprints—a process whereby layers of history are deposited in organizations at a few specific points in time. In this sense, we might study organizations much like archeologists who examine the temporal succession of strata at an excavation site, identifying the critical contexts in which different layers were formed. [...] As the traces of old layers are not swept away when new layers form, complex sets of 'layered features, practices, and ideas' build up in organizations over time, and those layers that are deposited during sensitive periods are especially resistant to erosion.»

Yet this “archeological” approach runs the main risk to be static, considering the history of an organization relevant only as it remains “deposited” in today practices. What we tried instead to demonstrate in this paper is that the way the remaining imprints are historically reinterpreted and transformed by processes of framing, diffusion and translation is essential to understand imprinting in a dynamic perspective. In order to do that, a critical analysis and triangulation of remaining



narrative accounts is the privileged instrument to assess the presence of competing frames and their interaction and evolution in time.

### *5.1 Theoretical and methodological implications*

The present work contributes to the literature on two different perspectives: on the one side, it contributes to the ongoing debate on entrepreneurial imprinting by closing some of the gaps that characterized previous literature on the subject, and offering an innovative bridging between imprinting and resistance; on the other side, it answers to the recent call for a deeper integration between historical approaches and entrepreneurship literature (Wadhvani and Jones, 2014).

With respect to *imprinting literature*, our work offers several insights. A first one is definitional. In previous sections we noticed how there is still little agreement on the definition of imprinting. In line with Marquis and Tilksic (2013) we argue that imprinting is a process that takes place at the outset of a firm and during its life, when either environmental changes or internal contestations require for new frames to be stamped on the organization. We agree with Marquis and Tilksic on the diverse results of the process: original frames can be replicated, they can be substituted by new ones, or can integrate with new ones during sensitive periods occurring during the life of a company.

While it espouses the main tenets of Marquis and Tilksic definition of imprinting, our definition adds agency at the intersection between the environment and the firm, contributing to overcome the oppositional view between imprinting and reflexivity, which Suddaby, Bruton and Si (2015) already questioned. In particular we claim that the entrepreneur enacts the environment –and thus repertoires of strategies, structures or behaviors– through her cognitive frames. Moreover, we put agency center stage also in the ongoing process of imprinting, whereby the founder tends to diffuse and legitimize her frames resisting to organizational change, while other individuals in the firm could aim at diffusing alternative ones. In this way, we shift the focus from the results of the imprinting process to the process in itself, interpreted in historical perspective as an interaction

between different frames that can exchange their roles (from diffusing power to resistance) following the outcomes of their confrontation.

Borrowing definitions from ethology and biology is useful but can be misleading – as, in our view, for the imprinting case. If from a genetic point of view we are talking about an *inheritance process* (see Hodgson, 2013), and from the psychological one imprinting is a kind of *unconscious learning*, the object of management studies are not genes or offspring, but organizations –namely complex systems made by individuals. We argue that the study of the imprinting process needs to bring the issues of social interaction and strategic action into consideration: entrepreneurs, at least to some extent, act and take steps in order to influence the evolution of their organizations, and specifically to make some elements persist, specifically by constructing a coherent narrative that connects the past to the present and the future. Opponents, on the other hand, could take advantage of changed environmental conditions to try to re-imprint the firm according to their frames and to corresponding alternative narratives. Both the parties, in sensitive periods and during the subsequent imprinting process, strategically aim at constructing coalitions to have their frames legitimized, shared, and deployed in organizational decision making processes. Hence the imprinting process, from this point of view, results as deeply historical, being highly characterized by a strategic and political dimension. This in turn recalls issues concerning mobilization of resources (Jenkins, 1983), political negotiations (Campbell, 2005), framing contests (Kaplan, 2008), and triggers inherently historical (i.e. complex, contextual, contingent and idiosyncratic) dynamics in the long run (Lippman & Aldrich, 2014).

Moreover, our framework advances a dynamic conceptualization of imprinting, while extant literature has often relied on static definitions of it (Marquis and Tilksic, 2013). Extant analyses of imprinting assume that after sensitive periods organizational traits –or frames in our analysis– are replicated during the life of a firm or until environmental conditions demand for radical changes (Nelson, 2003). We maintain that such persistence is far from being attained once and for all at the time of founding. On the contrary, it results from the continuous deployment of mobilizing

practices during the life of the firm.

The present work also contributes in bridging the literature on imprinting and resistance, proposing the concept of resisting entrepreneurs. Our proposal answers to Piderit's (2000) call to adopt a view of resistance "that captures more of the complexity of individual's responses to proposed organizational changes" (p.783) focusing on bottom-up, egalitarian change processes. In our view, in fact, the agent of change is the organization, intended as the system of relationships among all the individuals working for the entrepreneur, who evolves and develop over time, sometimes slipping from managerial control. In imprinting processes, resisting entrepreneurs engage in imprinting mechanisms and practices in order to oppose to organizational change, and to make their own frames persist. Thus we follow the recent turn in the literature on resistance, the interpretation of which moved from a reaction to repressive power (Courpasson, Dany, Clegg, 2011; Ford et al., 2008; Piderit, 2000; Thomas, Davies, 2005; Thomas, Hardy, 2011; Thomas et al., 2011), to a multidimensional understanding of power and agency (Kärreman, Alvesson, 2009; Thomas, Davies, 2005). Moreover, with our work we answered to the recent call to renew the research agenda of entrepreneurship and business history (Wadhvani, Jones, 2014). The growing literature on, and interest in, imprinting represents but one response on recent calls for a reconsideration of the relationship between agency and context in strategy, entrepreneurship and organization studies. Recent calls for an historical turn in entrepreneurship focus on contingency as a crucial element for the emergence of entrepreneurship, and on its relationship with the creative response of the entrepreneur. Schumpeter (1947) already highlighted the point that the same causal factor could have different outcomes depending on the context, i.e. from the presence of other factors in the same historical moment. In determining the way such factors combine together, the entrepreneurial agency has a crucial role, allowing not only an adaptive (deterministic) response, but also a creative (unexpected) one. Wadhvani and Jones (2014) have argued that since then research on entrepreneurship, as it emerged and consolidated as a field, has paid lower and lower attention to the historical context and its constraints. The focus has shifted to the behavioral and

cognitive features of entrepreneurs, neglecting the influence of different historical and institutional settings on the outcome and the meaning of entrepreneurship for the whole economy and society (Baumol, Strom, 2007). Isolating agency such approaches fail to understand the larger dynamic character of entrepreneurship. In the analytical approach we propose here, the same possibility of change is the result of the conflict between different frames and the corresponding narrative (re)interpretations of the past in the light of the present aims and the envisioned future. In such a perspective, agency, far from being isolated, works in a dynamic relationship with the resistance to its action –and in the effort to include it into a coherent narrative. The different narratives proposed by the actors are then the main source to identify conflicting frames and follow their interplay (as in Hardy, Maguire, 2010). Focusing on inconsistencies and “dissonances” between different accounts, we can shed light on the deeper working of the cognitive frames we assume are at work but we cannot directly observe.

Our paper speaks also to issues of method in studying imprinting processes (Marquis and Tilksic, 2013). In available literature on imprinting, differences can be found in the levels of analysis, in the variables selected, in their operationalization, and in their interpretation with respect to the imprinting process. Our framework aims at unifying balkanized approaches and vantages by providing: (i) a fundamental unit of analysis, that is entrepreneurs’ frames as the generative elements of the observed heterogeneity in resilient traits; (ii) a conceptual and analytical framework that singles out the processes and practices to be looked at in order to develop a thorough understanding of the elements intervening in the process and the causal mechanisms explaining alternative outcomes in a historical perspective that allows to take into account context and contingency.

For what concerns variables selection, operationalization and interpretation, our framework provides specific suggestions, mainly related to the adoption of "cognitive frame" as the core concept of the imprinting process. Variables that must be selected in the analysis of imprinting

should belong to the three main building blocks of the conceptual framework here proposed - cognitive frame, resource mobilization, and resisting entrepreneurs. Regarding the former, thanks to Sarah Kaplan (2008), among the others, we have a very clear example of its operationalization: in her work, she analyzed two competing cognitive frames, distinguishing their diagnostic and prognostic dimensions, and declining them for the organizational problem they were aimed at solving. From our point of view, the very same approach could be adopted in the entrepreneurial imprinting domain, solving the traditional difficulty of operationalizing its cognitive dimension. Secondly, a longer tradition, mainly coming from social movements research, characterizes the study of practices such as mobilization, coalition building, legitimation, etc. Lastly, literature on resistance provides an extensive theoretical framework in order to elaborate on the social and political issues regarding resisting entrepreneurs, and in particular about its micro-political dynamics (Griffiths et al., 2012).

Thus our framework, combining these three building blocks within a historical perspective, proposes a way to overcome the existing generalized confusion about "what to study" and "how to study" in the investigation of entrepreneurial imprinting. Nevertheless, we have to acknowledge the scope conditions which constraint the applicability of our framework, far from considering it as universally explanatory of the dynamics under analysis. The main bounding condition is that imprints taken into consideration by our framework are innovative in their nature, no matter whether for the sole firm or for the whole market, but they must mark somehow a discontinuity from the firm's (internal or external) context. From this discontinuity, in fact, it emerges the necessity to mobilize actors and to make them understand the entrepreneur's frame – especially in the preliminary phases of firms' foundation. This means that the framework is more suitable for studying the imprinting process in industries characterized, at least to some degree, by innovative dynamics concerning product conceptions, process organization, business model reconfigurations.

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