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The Missing Pieces in the Entrepreneurial Ecosystem Puzzle: A Complex Perspective on Economic Growth

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Abstract

The entrepreneurial ecosystem (EE) concept is widely popular, but it has recently attracted criticism. This paper aims to critically construct this tension and build on the contributions of complexity economics, which are currently limited in entrepreneurial studies, as well as the absence of entrepreneurship in economic complexity. This paper contributes to understanding how economic transformation—entrepreneurship, growth, development—starts, evolves, diffuses, and declines with a novel perspective and moves closer to unravelling the mystery of economic growth. Proceeding from the divergent views of economic complexity and entrepreneurship, this article finds the missing components to understand the role of entrepreneurialism in economic growth. Agency, culture, and collective action are the missing pieces to fill in the puzzle; however, the key element overarching all of them is the transmission of entrepreneurialism, the moving force enabling interactions that shape actors' actions. The article finds narrative to be both the research object and approach and concludes by setting the research agenda and pointing to novel methods of inquiry on the what, how, and why of entrepreneurialism in entrepreneurial ecosystems. The implications of this research are useful to policymakers who prioritise setting, planning, and achieving economic growth.

Keywords: agency; cultural transmission; economic growth; entrepreneurial ecosystem

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1. Introduction

The entrepreneurial ecosystem (EE) and economic growth are strictly intertwined, at least apparently. The two concepts go hand in hand also because they share obscure meanings. What they are is not fully clear yet; despite their importance, their mystery remains unsolved. This article tries to dissociate the views on economic growth on one side and on entrepreneurship on the other to the appreciation of the EE body of knowledge. The concept is indeed an umbrella term to indicate entrepreneurial growth in a delimited location populated by actors and institutions. The risk is to shield its true functioning behind concepts and insulate key elements from observation. I propose instead to disentangle the opposite views of economic complexity and entrepreneurship to discover their touching points and find areas of overlapping. The bridge between the two fields of research elucidates ideas known to both separately that gain a new light under common perspective.

Critics have been severe as the concepts are not without weaknesses. However, critical contribution is essential to the development of science. The motivation is therefore to construct a new theoretical perspective rather than deconstruct fallacies. For such reason, this paper inquires on what is missing in the debate around the EE. The answers derive from

theoretical speculation and set future avenues of research. Interaction within the ecosystem and a more comprehensive view of entrepreneurialism emerge as dominant issues.

Economic growth is elusive, yet it is "central to shaping people's overall living conditions" [1]. Sustained and inclusive growth is one of the 17 Sustainable Development Goals of the United Nations (SDGs goal 8), linked with decent work. While we can dispute the attributes of economic growth, we still know little about how it happens, how it starts, and how to sustain it. Otherwise, everyone would have a blueprint for starting the process of economic growth, and while most of the world is rising from poverty, rates, time, and modes of growth differ, and most notably, the process is neither unstoppable nor irreversible. Economic growth is still a mystery [2].

This research explores what turns people into entrepreneurial agents and transforms poor areas into thriving regions. This study takes a step further in the search for an answer to the biggest question in economics and economic history: the nature of growth. A decisive action to tackle the question about the why of economic growth is to assume a perspective that includes both the individual and the system, not as different levels, but as mutually interacting dimensions that jointly form the reality. I am suggesting a relational view centred on collective agency to exceed the limits of individualism and embrace culturally transmitted narratives of entrepreneurialism. Relational agency emerges from the emotional relatedness to others and defines the ability to engage with the world [3,4]. I take in this perspective entrepreneurialism as a form of relational agency producing the transformation of the economic reality.

Starting from this motivation, the central question this paper aims to address is how to conciliate the entrepreneurial ecosystem view with complexity theory, given the different level of analysis, approaches, and conceptual equipment these two perspectives bring to the exploration of the sources of economic growth. This paper proposes to explore the collective agency of EEs together with systemic approach of complexity theory, which conversely lacks in consideration for the individual agent. This paper reviews the literature on EE, focusing on the recent debate that supports the concept, as opposed to the critical views on the theme; then, it builds on this tension to include the perspective of economic complexity, which allows for defining theoretical gaps and open questions.

The contribution of this research is a framework of cultural transmission of entrepreneurialism defined as a model of behaviour and beliefs—how it creates social capital and growth. This study examines how culture drives the transmission of entrepreneurial knowledge. The mechanisms for acquiring and transforming knowledge have a great impact on new venture formation. The transmission of this entrepreneurial activity is the ongoing "creation of viable, profitable and scalable firms that engender the formation of self-replicating and mutually enhancing innovation networks and knowledge clusters" [5], p. 236. Institutions co-located with entrepreneurs in a region significantly influence the transmission of knowledge. Recent research [6–8] considers the relationship between new ventures, entrepreneurs' social capital, and firms' performance. However, relatively less research has been devoted to examining the influence of these on the transmission and resulting sustainability of regional entrepreneurial activities.

The remainder of the paper sets the foundations of the critical perspective on EEs in the following section. The Section 3 finds the research gaps and sets the motivations of the study. The Section 4 develops the emerging themes that complete the theoretical framework of EEs. The Section 5 proposes new methods and avenues of research to solve the impasse. The Section 6 discusses the novelty and contribution of the argument in this paper.

2. Background: Entrepreneurial Ecosystem

2.1. The Fortune of the Concept

The entrepreneurial ecosystem (EE) concept has become a fashionable buzzword in abundant and influential research [9–17] that sought to "to establish environments that are conducive to increasing the success for newly established ventures" [18], p. 313.

A recent definition of EE states that "the entrepreneurial ecosystem comprises a set of interdependent actors and factors that are governed in such a way that they enable productive entrepreneurship" [19], p. 809. The concept is rooted in the local dimension [20], with EE "as a popular concept to explain the persistence of high-growth entrepreneurship within regions" [21], p. 49 and "why some places enjoy persistently higher rates of high-growth entrepreneurship than others" [22], p. 155. The main factors of EE at the local and regional level are actors and institutions [23]. Variances in the endowment of these factors explain different rates of entrepreneurship in the region [24,25].

A recent edited book offered a state-of-the-art analysis of the entrepreneurial ecosystem (EE) metaphor, "one of the most popular concepts [. . .] over the past decade" [26], p. 6. Despite providing a comprehensive overview of the multiple themes associated with the concepts, spanning from the emergence, the evolution, and the future of EE (see also [27]), the editors cannot avoid admitting in their introduction to the book that "we need a better understanding of what entrepreneurial ecosystem are—the types of actors and factors associated with entrepreneurial activities—and of *how* and *why* ecosystem can increase the performance and survival of entrepreneurial firms" [26], (p. 6, italics in the original). The editors indicate as a research direction the investigation of the impacts of "history, culture, and the local institutions" [26], p. 8, on the nature, emergence, and evolution of a local entrepreneurial ecosystem, in line with previous research that recognised social and cultural factors to affects attitudes towards entrepreneurship [28–30].

Moving the focus to the emergence of the EE, the book helps to identify and define the key components of the ecosystem that need greater understanding. The second chapter argues that human interactions influence the social infrastructure of entrepreneurial attitude and proposes that denser places foster higher rates of entrepreneurship [31]. The next chapter points to the historical roots of entrepreneurial culture and sees knowledge as the key source [32]. Another chapter deals with the collective dimension of entrepreneurial actions [33].

2.2. The Critical Perspective

Critics of the entrepreneurial ecosystem (EE) are numerous. The weakness and ambiguity of the concept are equal only to its fortune, as it is widely present in academic research [34]. The first controversial issue is the term ecosystem itself, not far from the equally contended faulty analogy to natural ecosystems used in the catchphrase innovation ecosystem [35]. The economic interpretation of regional effects is all but new when we think of the work of Marshall [36], List [37], Von Thünen [38], and more recently Nelson and Winter [39].

The EE framework remains primarily conceptual and descriptive for what concern the sources of regional growth [40,41]. Conversely, a recent study showed that the persistence of growth is negligible at the regional level [16], conflicting with the premise that drivers of EE success are region-specific and slow-changing.

Fallacies go beyond the regional level. Most EE models fail to consider the individual perspective of the actor/entrepreneur [42,43]. The individual level is not antithetical to institutional factors; research must develop a comprehensive view that considers the complex interactions between the different elements of the ecosystem. However, interactions are dynamic, context-dependent, and fast-changing, and complexity theory can provide the

right perspective for interpreting the EE as a system. A few studies already adopted this approach. For example, one recognises the interdependencies and feedback mechanisms of interactions among various EE elements [44]; another one pointed to the context-dependent configuration of the EE affecting performance outcomes [45]. Both studies reveal high variance in entrepreneurial ecosystems over time and throughout locations. In this respect, research that relies on (too much) formalised theories and test invariants to make predictions is poorly informative, like a "broken-clock", fundamentally flawed but correct "twice-a-day" [16].

Critics point to the failures of the ecosystem metaphor. Ecosystems are evolutionary; on the contrary, innovation ecosystems are so by design, not by evolution [35], p. 5. Entrepreneurial ecosystems are neither by design nor by evolution, as they include the agent that is emerging from the ecosystem and impacting the ecosystem at the same time. What is missing is not the dynamic view of the system or the actors and resources that are part of it, but the understanding of the complex relationships between actors [46].

These premises serve as a framework to limit the field of research and target the main issues explaining the appearance and longevity of the EE. This paper argues that elements such as the diffusion of an entrepreneurial intention [47], entrepreneurial culture [48,49], entrepreneurial orientation [50], entrepreneurial intensity [51,52], entrepreneurial cognition [53], and entrepreneurial capabilities [54] are all intertwined and find their place in the web of interactions that constitutes the essence of the ecosystem; the interconnections are the most crucial and at the same time elusive components of the EE. Interactions are the mutual action of influence between at least two actors. Interactions are sporadic or continuous, limited or multiple, all however happening in a defined space, or field. The complex interactions between actors in place define the emergence of culture. A culture of entrepreneurialism or growth is the force behind the agency that starts and spurs the EE. The table below frames the theoretical perspectives concerning the EE (Table 1). The position of this paper is that complexity is largely underestimated in the premises (e.g., formation) and consequences (e.g., economic growth) of the EE.

Table 1. Framework of the theoretical perspectives.

Perspectives	Streams
Supporter of entrepreneurial ecosystem [9–18]	Local dimension of the entrepreneurial ecosystem [19–26] Social and cultural factors [28–30]
Critics of entrepreneurial ecosystem [16,35]	Descriptive analysis [40,41], Miss the individual level [42,43]
Entrepreneurial dimension [47–54]	Entrepreneurial intention [47] Entrepreneurial culture [48,49] Entrepreneurial orientation [50] Entrepreneurial intensity [51,52] Entrepreneurial cognition [53] Entrepreneurial capabilities [54]

Source: Authors' elaboration.

3. The Missing Pieces in the Framework

In this section, the article presents and discusses the two sources of difficulty in combining entrepreneurial ecosystems and complexity to untangle the issue of economic growth. First, it presents the limitations of complexity theory in defining the agent (i.e., the entrepreneur) who activates the process of creating new combinations. Next, it discusses the gaps in the theory and identifies collective agency and narratives as mechanisms to be explored in order to combine complexity with entrepreneurial ecosystems.

3.1. Economic Growth: A Mystery Between Agency and Complexity

Economic growth is a mystery for economists; a problem is its complex relationship with entrepreneurship. A limitation is considering entrepreneurship as a rational decision-making act and not as a dynamic process that includes uncertainties, unknowns, and the entrepreneur's imagination [55,56]. These studies "typically minimized the arduous nature of entrepreneurship" and turned "into a broad set of entrepreneurial ideologies that informs how we organize work, educate ourselves, and perceive social interactions" [57], pp. 1–3.

On the other hand, economic complexity is at the forefront of the research on growth, and it is increasingly popular in innovation studies; yet, it does not consider the entrepreneur. In economic complexity, innovation results from new connections of different domains; for example, technologies in a certain location combine into a technological innovation. Who makes the connection is nevertheless neglected. Entrepreneurs are the agent responsible for making new connections and therefore igniting the process of economic growth; a serious investigation about the sources of economic growth cannot leave entrepreneurship out of the picture, nor economic complexity. It is striking that a recent special issue on "the new paradigm of economic complexity" in *Research Policy* [58] does not mention the entrepreneur, entrepreneurship, or anything entrepreneurial at all. Economic complexity theory and applications prescribe the reduction of the analysis to the economic activities that explain outcome variations [59,60]. This interpretation of reality illuminates relations but avoids the agency that configures and reconfigures the relations of space–time–matter. The agent, the connections, the social and natural reality, and its interpretation must hold together to comprehend the purpose—the why—of economic growth.

Economic complexity sees societies as brains. "At one level, the brain (society) is composed of very similar neurons (humans) but its capabilities emerge from specialisation and interconnections, making the idea of a social brain more than just a metaphor. Ecological systems involve specialised species that interact through trophic, mutualistic, and other connections. Locations differ in their diversity and species differ in their ubiquity. Moreover, more diverse ecosystems tend to host less ubiquitous species, just as in economic systems. No wonder many of the methods developed in ecology have been close to the ones that have proven useful in economic complexity" [58], p. 3.

A crucial debate in current research concerns the distinction between the brain and the mind [61]. The brain is the biological host of the mind, and philosophers understand the mind as the process that resides in the brain. I argue that the brain metaphor of economic complexity is missing the 'mind', as the intentional process that activates entrepreneurship and innovation. All the material elements of the network are there, but there is no sight of the process of making connections: agency is neglected. The entrepreneurial agency, defined as the ability to act entrepreneurially, is the process of innovation as the mind is the process of the brain [62].

A similar metaphor sees innovation as a forest: "Think of a product as a tree and firms as monkeys. There are rich and poor parts of the forest. What you want is to have the monkeys jump from the poor part to the rich part. But in some places, the trees are close together, so it is easy for the monkeys [firms] to move around. In other places, the trees are far apart—this is where the capabilities that go into making one thing don't help much in making the next thing" [63]. With all due respect to monkeys, the agent that makes the connections is irrelevant in this example. All that matters is the distance of the products/domains (trees) that is given by the shape of the network (the forest). Again, the agency is irrelevant, only locations matter. Firms and entrepreneurs are monkeys jumping on the nearest tree. In the above examples, firms (monkeys) administrate resources (trees) and search for them in the environment (the forest). The forest and trees are immutable. But if that is so, nothing is said about how and why firms search for innovation (why monkeys

jump), how and why they innovate, and how the context (the forest) changes. In biology, transformation refers to the transfer of genetic material between cells [64]. As it became clear, cells do not correspond to the organism as the composition of cells [65]. Organisms are complex and much more than the sum of their parts. However, the solution is not to exchange reductionism and methodological individualism for a macro level of analysis but to look at the interconnections between actors and networks [66].

Economic complexity made an essential contribution to re-thinking agents in economics. First of all, it turned agent into a plural term. It assumes that agents differ; are not perfectly rational; explore, react, and change actions and strategy; and form individual behaviour that differs from the aggregate outcome of individual behaviours; in sum, the action of agents is "making sense" [67], p. 138.

3.2. Theoretical Gaps: Entrepreneurial Agency and Narratives

The entrepreneur is rarely a genius or a hero. More often, entrepreneurship is a complex array of human and non-human elements that creates heterogeneous and agential configurations [68,69]. However, entrepreneurship study usually features "a single, rouge innovator, a leader who by timing or luck finds himself orchestrating a maelstrom of technology disruption" [70]. Hence, the field prefers methodological individualism and Bayesian rationality, and under-investigates plural agency [71], despite scholars' opposition to the myth of the heroic entrepreneur [72,73] and calls for a collective-action perspective and research on entrepreneurial teams [74,75].

A recent contribution revealed the limits of Bayesian rationality in interpreting entrepreneurship as a static distribution of discrete outcomes and not as a dynamic and complex process [55]. The analysis computed entrepreneurship as a probabilistic assumption of a set of discrete outcomes. Instead, the reality of entrepreneurship is risky, uncertain, and full of unknowns. Entrepreneurship could not exist without this non-given and dynamic reality. Thus, we need a new approach to the study of the entrepreneur that overcomes the limitations of the Bayesian approach, not because this is incorrect, but because the rationality behind the model does not allow for the unknown possible combinations an entrepreneur can produce.

The way out of this gap is considering entrepreneurship as a form of collective agency where purpose drives intentionality; purposes emerge from narratives; and narratives are the comprehension, mediation, and transmission of the complexities of the reality that shape practices of actions. This will clarify who is responsible for the action of creating new connections, how and why, to overcome the current limitations [76].

Narratives, i.e., how people make sense of their experience [77], offer the collective images of the future that guide humans' activities [78] and are of great relevance in facing uncertainty [79]. In the face of uncertainty, agents rely on making sense of events (or outcomes) by selection and organising "sequence and consequence [. . .that are] connected and evaluated as meaningful for a particular audience" [80], p. 394, therefore "having the capacity to create meaning through a series of events and characters in a story" [81], p. 673.

Narratives require a certain level of cultural knowledge (i.e., facts, information, skills, and familiarity with social processes) [82] about the functioning of institutions to interpret and understand the chain of events in a meaningful sequence. Communities share and develop cultural knowledge through group communication [83]. The use and practice of narratives allow communities to exchange information about complex relations in simple terms and in an appealing way and are a mechanism for the transfer of uncodified and tacit knowledge [84]. "Narratives are a particular kind of data, profoundly distinct from the abstracted variables that dominate most quantitative approaches to social science" [85].

Yet, despite accepting the human agent for which history matters [86], how narratives form, diffuse, translate, transmit, and shape agency and culture is unsaid in agency theory. Equally, economic complexity acknowledged the importance of human purpose in the creation of new technology [87], and again it remains silent about what is human purpose and how evolves. I contend that purpose, the profound reason for which an agent acts is the product of the individual sense of reality, which forms from the culturally transmitted understanding of the world, i.e., narratives. The questions concerning how narratives and purpose form each other are open and vital to the future of societies.

4. A Theory of Cultural Transmission of Entrepreneurialism

4.1. Narratives of Entrepreneurship

The two symmetrical contradictions—the limited role of complexity in entrepreneurial studies and entrepreneurship in economic complexity—are an obstacle to understanding how economic transformation (entrepreneurship, growth, development) happens, evolves, diffuses, and declines. One puts focus on the agent, the other on the system, but the two are not to be disjointed. Agency and the connections that form the system are intertwined.

The entrepreneur is the human agent responsible for creating connections between domains with a purpose, i.e., making sense (finding meaning). Connections are possible in a historical context—the dynamic environment that defines meaning—that influences purpose. The purpose is the "why" of entrepreneurship. Eventually, the act of entrepreneurship finds purpose in a narrative of shared and transmissible meaning that bridges the understanding of reality with a practice of actions, i.e., intention. Therefore, one must consider entrepreneurialism as a culturally informed and transmitted behaviour, or to put it differently, a form of collective agency. A necessary caveat here is to not diverge the focus from the individual to the collective as alternative levels of analysis but integrate individuals and collectives—as well as intentions and actions—into a relational view of the transformative act of entrepreneurship that causes economic growth.

In economic complexity, inventions result from the discovery of new combinations of existing ideas [88,89], combined with scientific progress [90]. The more distant the ideas, the more innovative the outcome. This explains what, how, who, where, presumably also when, but not why. Why entrepreneurship? Innovation is more than joining the dots; it is a thread of intertwining links, i.e., a narrative. Narratives put the links in a broader framework of meaning and make sense of them. Entrepreneurialism is a narration with the author(s), a hero(es), audience(s), and a story that brings emotions and meanings and creates common ground, i.e., a universe of meaning.

The capacity to create or innovate corresponds to a capacity to relate, to make connections between domains (technologies, cultures, practices, opportunities). The entrepreneur drives the process with meaning (purpose) and makes sense of the new connections. Making sense is a translation practice—the circulation of innovation depends on the symbolic, interpretive, or material transformation of the innovation [91,92].

Entrepreneurs live in a social universe that constantly embeds the past in the present in shared ideas brought forward in language. Language orders actions and events according to causal principles that are subject to contingencies and liable to change from multiple directions and temporalities. Contingencies cause the emergence of institutions and human actors, and they constantly re-create meanings that transfer to an audience who interprets the narrations, translates meanings into understanding (for example, translates values into ways of actions and behaviours) [93], and shares the new meaning. Narratives are relational but cannot escape the existence of narrator(s) and listener(s) or, said otherwise, the actions of narrative production and comprehension [94]. The foundation of intentions is the interaction of individual and collective sense-making. Innovation scholars have

started to look at language as a source and predictor of innovation; as ideas need words, "when humans innovate, they often have the problem of lacking a word to describe their invention" [95], p. 2. Language is then used to explain innovations, and the language-based narration makes sense of the transformation and allows its transmission.

The consequence of narration is a web of meanings that gives life to a discourse with a clearly structured trajectory and an orientation. The narration of entrepreneurial and innovative events gives rise to the entrepreneurial discourse or entrepreneurialism.

4.2. Entrepreneurialism

If the entrepreneur is the human agent responsible for creating connections between domains with a purpose (i.e., meaning), we must look at entrepreneurship as a cultural process. However, the limits of methodological individualism undermine research on entrepreneurial identities and cultures [96].

Entrepreneurial Identity (EId) refers to the definition of self [97–99]. Self-definition may be individual, organisational, and societal [100,101]. While identity is based on this sense of self, the feeling of uniqueness is in balance with the need to belong to a community [102]. The entrepreneurial identity is a social construct formed through interaction with others in the community or the context. Identity development precedes behaviour [103,104], i.e., individuals make decisions, take action, and perceive feelings after the adoption of the new identity [105,106].

The formation of a new identity and the diffusion of entrepreneurial cultures is a transitional phase, a transition where individuals are "betwixt and between the positions as assigned by and arrayed by law, custom, convention, and [are] ceremonial" [107], p. 129. The formation of culture develops in three stages: separation, transition, and incorporation; transition represents a phase of ambiguity, in search of stability and the adoption of new structures and norms, and the formation of a new role [108]. Contexts are important in the process because transitions are a form of adjustment to changes in the environment [109].

The diffusion of an entrepreneurial culture forms entrepreneurial orientation (EO), intention (EI), intensity (EIn), and capabilities (EC). Entrepreneurial orientation determines the inclination to favour change and innovation, take risks, and take actions to achieve goals and objectives [110,111]. Entrepreneurial intensity (EIn) is the "degree and frequency of entrepreneurship" [112] and captures the "innovativeness, risk-taking, and proactiveness" [113]. Entrepreneurial capabilities (EC) are the capacity to sense, identify, and exploit opportunities [114] and include human, social, and technological capabilities. Human capabilities consist of institutional knowledge, experience, skills, and attitudes [115]; social capabilities include the sharing of knowledge [116]; technology capabilities enable individuals to identify, acquire, and apply new external knowledge to develop operational competencies, mainly through learning.

While most research puts under scrutiny one single element of entrepreneurial culture (intention, orientation. . .), we still need a comprehensive picture of the mechanisms that allow for the diffusion of entrepreneurialism.

4.3. The Cultural Transmission of Entrepreneurialism

The cultural transmission of knowledge is the process of passing information, beliefs, behavioural models, and history that inform people about societal practices and habits. The transmission implies mechanisms that include teaching, emulation, i.e., copying the outcome; and imitation, i.e., copying the actions [117–119]. The cultural transmission of knowledge—tacit included—involves mental representation, combinatory complexity, and interpretation [120].

First, knowledge is a mental representation. The representation must be public [121]; for example, via verbal instruction, and a great deal of culture is passed verbally [119–122]. This mechanism excludes tacit knowledge [123,124] and implies that tacit knowledge may change in the process of transferring from actor to actor [125,126].

Second, knowledge is combinatorial. It provides a set of contingently interconnected skills [127,128]. This makes explicit instruction too difficult to produce because the intended outcomes and their contingencies are too various and mutable for straightforward imitation or emulation. The mutability of reality causes the inadequacy of probabilistic models (i.e., Bayesianism).

Third, what is relevant to learn from others, i.e., culturally transmitted, is purely observational; for example, whether an action is instrumental or not [129]. Knowledge of what is relevant is tacit and is based on interpretation [130]. Therefore, over-imitation is common [131,132]. It is not just about how to transmit knowledge, but knowing what part is worth transmitting. Mental representation, combinatory complexity, and interpretation are relevant in the transmission of entrepreneurial cultures. Tacit knowledge is embedded in a socio-economic context, which can modulate how it is expressed [133], and factors like emotions can mediate the transmission of tacit knowledge [134]. Individuals embody publicly shared thought and value systems that affect the transmission of knowledge, so learning cannot be an individual action based on linear causal effects, but a social construction based on interactions [135].

In the cultural transmission of knowledge, sudden changes interrupt long periods of imitation [136]. In the first stage, the transmission of knowledge forms standards. In the second stage, alternative practices emerge to counteract contingencies or constraints and are as good as the standard if not better. The latter is innovation. The effects of cultural transmission become manifest over time as individuals develop new knowledge that could not be predicted; although all the parts were following the rules, transfers lead to unforeseeable outcomes [137].

Figure 1 (below) depicts in linear terms the mechanisms connecting the cultural transmission of entrepreneurial agency to new business formation, innovation, and ultimately economic growth.

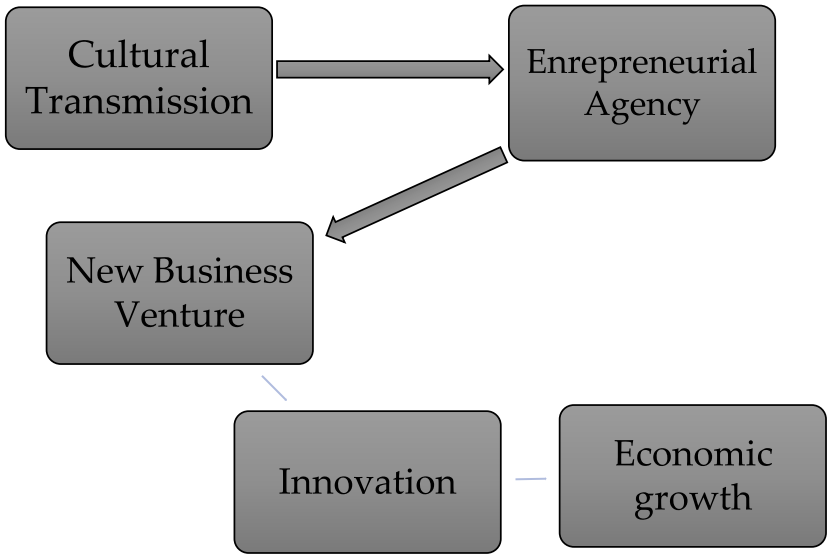

Figure 1. Conceptual diagram of cultural transmission of entrepreneurialism.

5. Open Questions: What, How, and Why

Developing theories is a prerequisite to deductive research that can use novel concepts to build a model about how new theories work. In the case of the present paper, empirical research can explore how collective agency and entrepreneurial action may impact constrained contexts. While this article did not set a comprehensive toolkit of theoretical concepts for further investigation, it sets a research agenda based on the following open questions.

5.1. What: Interaction and Transmission

Future research must focus on what is to study to understand collective entrepreneurial agency. The essence of this conceptual paper is that entrepreneurship is a collective phenomenon much more than it is usually conceived. Being entrepreneurial agency a social construct, the object of study is therefore the interactions within collectives and more precisely the transmission mechanisms that allow members to pass on entrepreneurial agency to others.

Research must examine the mechanisms of cultural transmission of entrepreneurial agency and how the institutional context influences the transmission of entrepreneurial knowledge. Institutions significantly affect the transmission of knowledge. The mechanisms for acquiring and transforming knowledge have the greatest impact on new venture formation. The social context influences how individuals acquire new knowledge through learning, as learning happens thanks to interactions in social networks [138,139]. However, how individual knowledge transfers to the collective level is problematic [140,141], and there is relatively little research that examines the influence of institutions on the transmission of entrepreneurial agency.

This paper proposes a new approach to understanding the multifaceted, collective, and culturally transmitted form of agency that transforms economic reality. Entrepreneurial scholars need to understand what activates entrepreneurial action; when it emerges; who is responsible; what are the enabling factors; how it diffuses; and, probably the more relevant question, why it happens.

An open research question asks what the social mechanisms of transmission of entrepreneurial agency within collectives are.

5.2. How: A Narrative Approach

Future research needs to find a methodological approach that fits with the object of study. The transmission of entrepreneurial cultures—which spur entrepreneurial agencies—is deeply entangled and continually assembled in histories. An essential question is why these mechanisms exist, as well as what keeps them going on or might cause them to fall apart. What we need is a "strategy for radically avoiding reification and abstraction" [142], p. 615, whether at the individual or collective level. We need to explore multiple and overlapping entities, factors, and mechanisms at work. Interactions may take various forms, mutually reconfiguring one another, but we need "to follow the lines and connections among these various things, rather than highlighting one as transcendent" [142], p. 616.

The interpretative analysis of entrepreneurialism requires the empirical and conceptual awareness of the relationships between intentions, practices, temporalities, and forms of action [143]. Part of that is to understand what exactly is tacit in the transfer of entrepreneurialism, that is, what is not possible to code but is equally passed on in a transitional phase that shapes identities individually and collectively.

Empirical research investigates the transformation impact of entrepreneurial actions on structure. Thus, studies must take into account the interpretation and the sense-making of entrepreneurship in its specific context and time. The aim is to identify the transmis-

sion mechanisms of the entrepreneurial agency, from the inception of the entrepreneurial event to the sharing of the culture that leads to structural change, transformation, and growth [144].

This paper suggests a narrative interpretation to grasp the dynamic, relational, and collective form of agencies that defines the purpose at the base of economic transformation and transmits knowledge about entrepreneurial intentions. The premise is the refusal to make any distinction between individuals and collectives, to overcome the limits and perils of dualism, in favour of a view of reality as the dynamic reconfiguration of relational agencies. The relational dimension of agency is mediated by emotion-regulating and meaning-creating processes. These processes are narrative and form the understanding of reality (and the self), the transmission of knowledge, the formation of memories, and the sharing of values and purposes. The narration is the logically coherent description of a series of actions and events that unfold over time. We live in a social universe that constantly embeds the past into the present in shared concepts and ideas, brought forward in language. Therefore, the narrative approach relies on interpretive analysis and phenomenology to understand the process of creation of meaning, sharing of values, and translation of practices in an interconnected community [145]. Phenomenology is a non-dualist interpretive methodology that explores the factors influencing entrepreneurial identities [146] and the understanding of the reality that guides human actions [147]. Hence, future studies will focus on the variation of understanding and experiences. The critical analysis of the individuals' experiences shared through narratives aims to capture and define the factors influencing entrepreneurial agency.

A contribution in this regard comes from economic complexity. It turned agent into a plural term. It assumes that agents are not perfectly rational; they explore, react, and change actions and strategies each in their own way; and they differ from the aggregate outcome of individual behaviours. For economic complexity, the action of agents is "making sense" [67], p. 138. Narratives, i.e., making sense, are of great relevance in facing uncertainty [79] because they share collective images of the future that spawn activities [78]. How narratives form, diffuse, translate, transmit, and shape agency and culture is still unknown. Equally, economic complexity acknowledges the importance of purpose in the creation [87] but does not provide a clear view of how purpose guides actions. This paper contends that purpose—the profound reason causing an agent to act—is the product of the individual sense of reality, which originates from the culturally transmitted understanding of the world, i.e., narratives. The question concerning how narratives and purpose form each other is open to future research.

5.3. Why: Purpose in Entrepreneurship

The last contribution of this paper tries to go beyond the what and how and find its way to understand the why of entrepreneurial agency. Recent explorative contributions to the theories bring evidence that entrepreneurial agency starts transformative actions because of constrained contexts and not despite them. This line of inquiry is worth further investigation. It highlights the reason for entrepreneurial actions instead of mechanisms or factors. This approach is commendable as it starts with the hardest question: why entrepreneurship? What are the reasons behind producing an entrepreneurial action?

This paper assumed the purpose as the why of entrepreneurship. The entrepreneurial action finds purpose in a narrative of shared and transmissible meaning that bridges the understanding of reality with agency. The agent, the connections, the social and natural reality, and their interpretation must hold together to comprehend the purpose—the why—of entrepreneurial agency. Individuals capable of acting know what they are doing and why [148], but how exactly does the same refer to collectives?

If the why derives from a narrative that forms the collective sense-making, any research must consider that entrepreneurial agency is purpose-driven, is the object of cultural transmission, and is inseparable from the collective and social structures.

The table below proposes a conceptual frame of the three questions that conclude the above argument, presenting for each of them the aim of the questions and the object of inquiry to find an answer (see Table 2).

Table 2. Key questions.

Question	Aim	Object of Inquiry
What	The transmission mechanisms	Collective interaction and cultural transmission of entrepreneurial agency
How	The narrative approach	Interpretative analysis
Why	Purpose	A narrative of shared and transmissible meaning that bridges the understanding of reality with agency

Source: Author's elaboration.

6. Concluding Remarks

This paper expanded the debate on EE, going beyond the dichotomy of critics/supporters. Instead, starting from the critical perspective on the concepts, this paper argues about how to fill the voids. The combination of economic complexity and a critical view of entrepreneurship provided insights useful to the search for the source of economic growth. It proposes three answers to as many questions: What deserves attention, how to explore it, and why.

This article develops its argument, setting new avenues of research and offering methods of inquiry. Other methods exist and combine with similar aims. For example, others [9,22,149,150] suggest a network theory approach to improving our understanding of causal relationships and dynamics within EEs.

The contribution of this article is in offering a complex view on a complex object of debate. Others have indeed questioned the limit of the natural ecosystem's metaphor. For example, Audretsch and colleagues (2017) contended the use of the metaphor as a community of living organisms in conjunction with the non-living components of their environment, where the 'eco' part of the word is assumed to be related to the environment and 'system' implies the economic use of the concept metaphorically to consider the environment and agents in a system that generate and share value [151–155]. However, the metaphor is inconsistent and vague, and some scholars repute the term as old wine sold in new skins [14,156].

Critical questions remain unanswered; for example, what are the boundaries [41], governance [157], or nature—artificial or built from scratch [158]—of 'ecosystems'. The EE should bring insights into individual and collective action in entrepreneurship, "when the outcome of the action is rather unforeseen and unpredictable and the activity itself matters, at least for the interconnected actors" [41], p. 316.

The contributions to the theory in this paper essentially aim to stimulate the debate about when and how the drives of growth in the EE appear and how they evolve. The limitations reside mainly in the conceptual nature of the contribution, which aims more to speculate about theories than to test hypotheses, in the hope of seeing in future research that takes the courage to avoid oversimplification and catch-phrase metaphors but faces the complexity of entrepreneurial growth.

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