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Angaben zur Veröffentlichung / Publication details:

Audretsch, David B., and Erik E. Lehmann. 2023. "Narrative entrepreneurship: bringing (his)story back to entrepreneurship." *Small Business Economics* 60 (4): 1593–1612. https://doi.org/10.1007/s11187-022-00661-2.

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Small Bus Econ (2023) 60:1593–1612
https://doi.org/10.1007/s11187-022-00661-2

Narrative entrepreneurship: bringing (his)story back to entrepreneurship

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Accepted: 19 July 2022 / Published online: 11 August 2022
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Abstract Narrative entrepreneurship is the study of the spread and dynamics of popular narratives and stories focusing on the role and impact of entrepreneurs (stories of human interest and emotions), and how these change through time, to understand variation and heterogeneity in entrepreneurial activities across time and space. The term 'narrative' refers to a simple story or expressed explanation of events that many people want to bring up in conversation or on the news or social media because it can be used to stimulate the concerns or emotions of others and/or because it appears to advance self-interest. The field of entrepreneurship should be expanded to include serious quantitative study of changing popular narratives (theory development, experiments and econometric regressions). Narrative entrepreneurship is not only a product of reverse causality, from the outcomes to the narrative, but also from the narrative to the outcome (as we know from other fields such as marketing, philanthropy or education). The goal of this paper is to distil what we know, and should know, about narratives and stories to consider reasons to expect that stories and narratives might be thought of as important in the field of entrepreneurship and to stimulate future research to apply the concept of narrative into the field of entrepreneurship for both theory building and empirical analysis.

Plain English Summary The main focus of this paper is to distil what we know, and should know, about narratives and stories to consider reasons to expect that stories and narratives might be thought of as important in the field of entrepreneurship and to stimulate future research to apply the concept of narrative into the field of entrepreneurship for both theory building and empirical analysis. In contrast to previous research, in this study we argue also for a 'reverse causality' view in that narrative and stories may help us to explain differences and variations in all kinds of entrepreneurial activities. The principal implication of this study is that narrative and stories should be included into the field of entrepreneurship, and provides directions on future research in this promising and upcoming field.

Keywords Entrepreneurship · Narrative entrepreneurship

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JEL Classifications L26 · M13

1 A story is worth a thousand regressions

'The French have no word for entrepreneurship' is a *bonmot* dedicated to former President George W. Bush and regularly used as a joke by entrepreneurship scholars. After all, everyone knows that entrepreneurship is a French word. The term originates from the French language, meaning a combination of 'entre' and 'prendre', an intermediary or broker, at least in the thirteenth century when we find the first written notion of entrepreneur. However, George W. Bush may be right—and widely misunderstood. What former President Bush may have had in mind is that, while France may have entrepreneurs, it lacks compelling and gripping stories conjuring compelling images of entrepreneurs and entrepreneurship. 'Entrepreneur' is more than just a loanword from the French language.

The French may have coined the word, but the myth or fable, the *narrative*, of entrepreneurship and the entrepreneur is an invention of the United States. Therefore, entrepreneurship today is a narrative beyond self-employment and new venture creation. Why is Silicon Valley the universal gold standard for entrepreneurs? Why not New York, Boston, Seattle or Austin, with their own celebrated and vibrant entrepreneurship scenes? The answer is simple—the Valley tells the better story.

Who is an entrepreneur? A storyteller. What makes a successful entrepreneur? Telling the best stories. What are the ingredients for a successful start-up? A mountain of textbooks would provide plenty of answers, but let's distil these answers to a good idea, money, the right place and the right time. Where does the idea come from? A vision and a big story; a narrative. Narrative comprehension, according to psychologist Bruner (1991, p. 9), is among the earliest powers of mind to appear in the young child. And, as Nobel laureate Robert Shiller (2017) summarizes the essence from psychologists and anthropologists, 'the human brain has always been highly tuned toward narratives' (p. 967). The starting point of an entrepreneur is spinning a story around their idea. And where does the idea, the opportunity, come from? By discovery or creation or both (Alvarez & Barney, 2007)? From a discovery perspective, opportunities are exogenously given by the context (Shane, 2012). From a creation perspective, opportunities are endogenously generated through a process like creative imagination and aspiration—the subtext (Lachmann, 1986). Entrepreneurial narrative combines both, the context with the subtext (Garud & Giuliani, 2013). Where does the money come from to realize the idea? Friends, family and outside investors, be they business angels, venture capitalists, banks or the crowd (Manning & Bejarano, 2017). But how can an entrepreneur convince herself and others to give their money away just to realize someone else's dream? The answer is storytelling (Aldrich & Fiol, 1994; Brattström & Wenneberg, 2021). A pitch is nothing more than a compelling story, peppered with some phrases and metaphors the audience would like to believe. Saving the planet, feeding the poor, becoming world market leaders, solving climate change or, more recently, overcoming the pains caused by the pandemic are only a few examples. And a business plan is nothing, but a good story peppered with some facts and figures investors would like to hear and believe. Where is the right place? Where the best stories are told. Mega-Events like 'Bits & Brezels' in Munich or others elsewhere document the importance of places but also ask new questions about places in the digital economy. The right time? Listen to the stories told by others and decide yourself whether or not your story fits in in the canon of stories. Afraid of telling the same story? Tell it differently, more convincing to the audience, more promising to investors.

Entrepreneurship is very much about storytelling (Garud et al. 2014a; 2014b). The importance of stories and narrative in the evolution of humankind is unspoken, even though it was popularized more recently by Harari in his worldwide bestselling book *Sapiens* (2014). The cognitive revolution, the evolution of storytelling, started some 70,000 years ago. But for a very long time, scholars in economics and management have ignored the power of narratives and stories. While scholars in business and management have always complimented their studies with stories to illustrate their thoughts, most of the work done could be categorized as anecdotal evidence or 'man who' statistics: 'I know a man who…' While no self-respecting scholar in management and business would have denied the role of stories, the whole subject is too slippery to handle seriously. This holds in particular for economics, where even the subject of entrepreneurship is still a tricky domain.

Only a handful of eminent economists, such as William J. Baumol (1968, 1990), directly addressed his work to analysing the entrepreneur. For the rest of the economics community, entrepreneurship was almost focused entirely on questions of self-employment, without even addressing the topic of entrepreneurship promised prominently in the title of the paper, simply because self-employment is easy to define, to measure and to include in mathematical formulas, as reflected in the well-known economics model of occupational choice: self-employment is preferred to an alternative outside employment opportunity. As framed in the model of occupational choice, the only person who needs convincing by a nascent self-employer is themselves. Self-employment is entrepreneurship without the story. And, unfortunately, many scholars today in the social sciences are confusing self-employment with the entrepreneur, simply because we have no reliable statistics defining and measuring what actually constitutes a *bona fide* entrepreneur, leaving scholars and researchers having to resort to analysing official statistics and surveys measuring self-employment.

Still, what is particularly striking is that scholars from a broad spectrum of academic disciplines and fields, ranging from management to business, psychology, sociology, regional studies, finance and economics, all quote and rely on the one big story—the narrative of the entrepreneur as the creative destructor, first told by Alois Schumpeter (1911). What is the field of entrepreneurship without the narrative of 'the creative destructor'? A naked story, a skeleton without blood and flesh about self-employment and firm creation by combining tangible and intangible assets. However, entrepreneurship scholars continue to neglect an important intangible asset—the big story behind the numbers.

There are actually two ways that the narrative should be relevant and important to scholars of entrepreneurship. The first is as an inductive methodology employed to analyse entrepreneurship. It is a style or methodology used to contribute to the understanding by scholars of the phenomenon of entrepreneurship and everything surrounding and influencing that phenomenon. The second analyses how narratives in the real-world influence entrepreneurship. That is, how narrative can impede or promote entrepreneurship, serving as a catalyst or deterrent (Brattström & Wenneberg, 2021). While in the first way entrepreneurship is treated as exogenously given, i.e. not shaped by the narrative, in the second way it does, and entrepreneurship is also endogenously shaped by the narrative in several ways. This study focuses on this second way and takes the 'reverse causality' focus, arguing that the narrative also shapes entrepreneurship. Furthermore, we propose that narratives are important and necessary ingredients shaping entrepreneurial activities across the life cycle, from opportunity seeking to new venture creation and growth. Instead of telling a story about storytelling, we introduce the ratio and logic of the 'how' and the 'why' narratives shape entrepreneurship. Our arguments are thus mainly based on the nature character of narrative as tacit information and knowledge and 'how' and 'why' narrative helps to coordinate and motivate agents in the entrepreneurial process.

The first way applying narrative as a methodology is replete in the literature throughout the social sciences as well as entrepreneurship. Gartner (2007) calls this the reflexive approach, because narrative and narrative methodology serve as a mirror of our own stories and why our research is conducted (p. 614). He introduced the narrative method as an inductive approach instead, but not as a substitute to the empirical approach relying on large data sets to increase our knowledge and understanding of entrepreneurship as a phenomenon. Narrative and stories, he argues, provide a variety of insights that can be gained as to what is really being said about entrepreneurship and entrepreneurs and why, as well as what wasn't said and what might be. Together with a handful of colleagues, he started a project, a special issue, in the *Journal of Business Venturing* with one entrepreneurial story (a narrative) as the starting point, a 'Toy Story' told by Terry Allen about how he started a toy store in Rutland, Vermont, in 1965. This Toy Store(y) then served as a basis for six articles applying the narrative approach, as a reflexive mirror for each of the researchers then telling their own story and interpretation. Steyaert (2007) and also Fletcher (2007) argue that the narrative approach recognizes that any story is embedded in a context and thus every story is not the whole story; something is omitted, overestimated or overseen. A narrative also provides information about the author's intention in telling this story, why the story is being told and cited by a researcher. Here, the narrative of entrepreneurship is the generation of hypotheses about how the world might be and how the future might look. Narrative

entrepreneurship as qualitative data is used to gain insights about how entrepreneurs feel, behave, think and act, and can be pulled from personal interviews.

Thus, research in the field of entrepreneurship is shaped by the view of researchers and this view is shaped by narrative and stories about entrepreneurship. This literature treats the narrative and entrepreneurship as exogenously given, as data either to gain insights for academic research or to stimulate, motivate and shape academic research about the phenomenon of entrepreneurship—'as both subject and process; as the object of the study, and in the study of the study of the object' (Gartner, 2007, p. 624). The causality thus runs from entrepreneurship towards the narrative. However, only a handful of studies in the entrepreneurship literature have analysed the narrative as a force shaping entrepreneurship (see Brattström and Wenneberg, 2021. This study takes the 'reverse causality' focus and argues that the narrative also shapes entrepreneurship. Furthermore, we propose that narratives are important and necessary ingredients shaping entrepreneurial activities across the live cycle, ranging from opportunity seeking to new venture creation and growth. Instead of telling a story about storytelling, we introduce the ratio and logic of the 'how' and the 'why' narratives shape entrepreneurship. Our arguments are thus mainly based on the nature character of narrative as tacit information and knowledge and 'how' and 'why' narrative helps to coordinate and motivate agents in the entrepreneurial process.

The fledgling strand of literature on this second use of the narrative in entrepreneurship stems from early contributions from organizational psychologists, like Schein (1985), Geertz (1973) and Hofstede (1980), who argue that stories are part of an organizational culture shaping organizational behaviour and performance. Meanwhile, the 'narrative turn' has penetrated almost every human science like anthropology, sociology, psychology or history (Riessman, 2008), and has recently also impacted business, finance and economics (Shiller, 2017). A handful of scholars subsequently applied this narrative concept to entrepreneurial education. For example, Gartner (2007, p. 617) argued that his background is strongly influenced by what he labels the 'Harvard approach', i.e. analysing qualitative data from case studies, like those published in the Harvard Business Review for teaching scholars and practitioners in the field of entrepreneurship (see O'Connor, 2007 for an overview and critical discussion applying the case study approach and relying on stories as facts instead of interpretation). Recently, Fisher et al. (2021) theorize that a particular type of narrative—a resourcefulness narrative—will significantly impact an entrepreneur's ability to mobilize support from resource providers, thus overcoming the problem of resource constraints. They introduce the resourcefulness narrative as a discursive, temporal account of past or ongoing entrepreneurial actions to overcome resource constraints and argue that such a resourcefulness narrative generates positive emotional and cognitive reactions from external resource providers such that they are inclined to support a venture. The most striking conclusion from this strand of literature is that narratives and stories matter for entrepreneurship, and that the right narrative can heavily spur entrepreneurship, just as the wrong one can impede it (O'Connor, 2004).

However, both strands of literature linking narratives to entrepreneurship are entangled in the problem of reverse causality: narratives are told where entrepreneurial activities are vibrant and stories are told about successful entrepreneurs, like the mountain of biographies and monographies occupying the bestseller rankings in the last decades. What is missing is the link, the ratio, the logic, the causality. This paper attempts to explain how and why the causality may also work the other way, from the story and narrative to entrepreneurship, treating the story as endogenous as well as exogenous.

Introducing stories into the field of entrepreneurship contributes in several ways. We highlight only the most salient and compelling contributions in this paper. First, by analysing how and why stories increase our understanding of individual decision-making in the context of entrepreneurship, we follow a young and promising field in economics and organization science (Gibbons & Prusak, 2020). Building on these ideas, we turn to the role of stories in explaining why the occupational choice approach does not hold for Schumpeterian entrepreneurs such as Elon Musk, Steve Jobs and Mark Zuckerberg.[1] Can it truly be suggested that they start their own business in order to avoid working as employees? Following

[1] Occupational choice theories define entrepreneurship as self-employment and explain the choice between self-employment and employment. The underlying logic is that the expected returns of becoming self-employed and starting the own business exceeds the expected return, or wages, from employment. In occupational choice theories, being an entrepreneur means holding a particular job title (see Foss and Klein, 2012, p. 28/29).

the insights of their biographies and the interviews they gave; they are not becoming an entrepreneur to hold a particular job title. They become an entrepreneur because they are thrilled to pursue an idea, to be curious whether it works, out of the conviction of the promise of the idea and convinced that it works, against all odds—that their story is told!

Then we turn, aligned to the insight about information by Arrow (1962), to the question of whether stories are goods and have an economic value, and if there exists a market for such stories. With mechanisms like strategic story transmission and story design, is there a growing market for story coaching, story provision and story management at work?

The third contribution is on places as locations and spatial agglomerations of stories, most prominently Silicon Valley—if you can do it there, can you really do it anywhere. This raises important questions about the impact of marketing and branding of places. Along with the spatial agglomeration effects of 'story telling', this also sheds new light on the key role played by local entrepreneurship culture, emphasizing stories as a cornerstone of local cultural knowledge. Finally, we turn to the national or country level. The 'American Dream' is the story of people who rise from dishwasher to millionaire—or today billionaire—which is one of the most impressive examples, even though upward mobility today is less than it was over the past century. Still, becoming an entrepreneur is almost the only possible way to make the dream from dishwasher to billionaire come true.

Revisiting the entrepreneurship literature of the last half century, one uncovers a cornucopia of stories and the collection of these stories forms a narrative—the really big story, that of entrepreneurship. Even in the childhood of modern entrepreneurship, where a group of eight employees left Shockley Semiconductor Laboratory in 1957 to found Fairchild Semiconductor, resides a big story; a narrative. What is usual and common today, namely spin-offs from companies and that employees leave the company to found their own firm, was so uncommon and exceptional at that time, that they were branded as 'the traitorous eight'. Silicon Valley started with a rude big bang in 1957. The rest is (hi)story. Can the French tell a similar story?

The structure of our paper is as follows. First, we refer to the title, 'The (hi)story of entrepreneurship' by introducing John Law, an English economist and refugee in the eighteenth century, who made a few people rich, such as Richard Cantillon, and ruined France's economy for a century, just because thousands of thousands of investors believed the story he told. Section 3 then theorizes the role of stories and narrative in shaping entrepreneurship. The underlying ratio and logic is that stories and narrative, in the absence of perfect and symmetric information, may motivate individuals to become an entrepreneur and then could be a promising vehicle to motivate and coordinate the stakeholders of an entrepreneurial start-up, like investors, key employees or clients. Then, in Sect. 4, we describe how our framework of narrative and stories could be applied in the different stages of entrepreneurial firms, form venture creation to growth and maturity. Section 5 summarizes, concludes and provides steps for future research.

2 John Law: L'économie c'est moi

For students in economics and business, John Law (1671–1729) is known as a famous Scottish economist, who first distinguished money as a means of exchange, from national wealth dependent on trade. His book *Money and Trade Considered – With a Proposal for Supplying the Nation with Money* (1705) is called a milestone in modern monetary theory. He also originated ideas such as the scarcity theory of value, better known as the 'snob effect' and the real bills doctrine, that as long as bankers lend to businessmen only against the security (collateral) of short-term (less than 90 days) commercial paper representing claims to real goods in the process of production, the loans will be just sufficient to finance the production of goods. He also argued that money creation stimulated an economy, and that paper money was preferable to metal. Even though John Law was not the inventor of paper money in Europe, he was the first suggesting not only backing paper money on metal, but also and more preferable on real property, namely Louisiana, a French colony. John Law was totally convinced from his idea that an economy could be stimulated by money—but what he needs to prove his ideas in practice is not a private bank, but a central bank. Law's propositions of creating a national bank in Scotland were ultimately rejected, and he left to pursue his ambitions abroad.

Historian Niall Ferguson (2008, 138–157) provides an overview of John Law's life besides the great monetary theorist, and describes Law as the gambler, the English spy and entrepreneur. John Law joined the family business at the age of 14 and then studied the banking business until his father died in 1688. He then subsequently neglected the firm in favour of extravagant pursuits and gambling. Law was a professional gambler, winning card games by mentally calculating odds, where he relied on calculations by famous mathematics like Jakob I. Bernoulli, the inventor of modern probability theory. On 9 April 1694, John Law fought a duel with another British dandy and killed him with a single pass and thrust of his sword. Law was arrested, found guilty of murder and sentenced to death, later commuted to a fine, on the grounds that the killing only amounted to manslaughter. But Law escaped to Amsterdam, the place to be for bankers and investors in that time with the largest stock market, and also the first modern Central Bank, the Bank of Amsterdam (Amsterdamsche Wisselbank) founded in 1609. He then spent more than 10 years moving between France and the Netherlands, dealing in financial speculations. Problems with the French economy presented the opportunity to put his system into practice and the Duke of Orleans, a friend from old gambling days in Paris, the right person who finally presented Law with the opportunity to display his ingenuity. Philippe II, Duke of Orléans (1674–1723), served as Regent of the Kingdom of France from 1715 to 1723 during the minority of Louis XV. In 1716, John Law set up a private Banque Générale in France, funded mainly by himself and Louis XV (i.e. the Duke of Orleans), and a year later it was nationalized at his request and renamed as Banque Royale, whereby three-quarters of its capital consisted of government bills and government-accepted notes, effectively making it France's first central bank, like the Dutch one, but with the difference that Banque Royale would issue paper money. As money was invested in the bank, the government's huge debt would be consolidated and, at the same time, paper money would revive French trade and thus regain economic power, John Law promised: 'I will produce a work which will surprise Europe by the changes which it will effect in favour of France – changes more powerful than were produced by the discovery of the Indies'.[2]

He therefore proposed to take over France's trade with the Louisiana territory, a vast but wholly underdeveloped tract of land stretching from the Mississippi Delta across the Midwest, a quarter of what is now the United States. In 1717, the 'Company of the West' was granted a monopoly of the commerce of Louisiana. The Company's capital was fixed at 100 million livres, and the shares in the Company where priced at 500 livres each. Frenchmen and foreigners, regardless of rank, were encouraged to buy them. The Company of the West continued to expand, taking over the East India and China companies to form the Company of the Indies, better known as the Mississippi Company. On June 1719, the Company issued 50,000 of these shares at a price of 550 livres a piece. To ensure the success, Law devoted much effort to conjuring up rosy visions of the colony, with the narrative of Louisiana as a 'veritable Garden of Eden, inhabited by friendly savages, eager to furnish a cornucopia of exotic goods for shipment to France' (Ferguson, 2008, p. 144). Predictably, the share price soared to 2750 livres on 1 August, 4100 by the end of August and 5000 on 4 September. This prompted Law to issue 300,000 more shares in the next four weeks and some smaller blocks later. The shares reached a new high with 10,025 livres on 2 December 1719 and the informal futures market saw them trading at 125,000 for delivering in March 1720. At that time, the Irish Banker and Economist Richard Cantillon was sure that Law's System would explode and left Paris, after selling all his shares and started gambling against the Company. In contrast to the Dutch colonies with exotic fruits, spices, gold and silver, perhaps a veritable Garden Eden, what was found in Louisiana was a sweltering, insect-infested swamp, where about 80% of the immigrants from Europe had died of starvation or tropical diseases (Ferguson, 2008, p. 145). What happened after the peak in December 1719 is history, and the 'bubble' burst at the end of 1720. The narrative told by John Law led the whole nation to 'become a body of traders', leaving a ruined country behind the boost and leading at the end to the French Revolution in 1789. The term 'millionaire' was coined for beneficiaries

[2] Cited by Ferguson, p. 139/140.

of Law's scheme and Richard Cantillon coined the term 'entrepreneur'. Millionaire and entrepreneur, two strongly linked terms and definitions today, are the heritage of a great narrative in France, told by a Scottish storyteller.

3 Stories as tacit knowledge in entrepreneurship

3.1 Stories as tacit knowledge

While knowledge is a widely understood and used concept in the field of entrepreneurship, it poses the challenge of being 'too slippery to handle', as Edith Penrose (1959, p. 77) pointed out. It is diffuse and elusive. We therefore begin with the concepts of knowing, knowledge and information and how narrative and stories fit into these subjects (see Appendix Fig. 1).

When referring to knowledge and how and why it matters for outcomes, studies typically refer to Arrow (1962) and argue that knowledge may have an economic value which presents opportunities for exploitation and commercialization. However, what Arrow (1962) had in mind, and explicitly referred to, is the word 'information', and not knowledge per se. In fact, the word 'knowledge' is never actually used in his seminal article. Perhaps because knowledge, in contrast to information, is 'too slippery to handle', as Edith Penrose argued over six decades ago (1959, p. 77). Since then, scholars have made great efforts to explain and analyse the concept of information in a broad spectrum of fields (distinguished by the Swedish Reichsbank with the 'Nobel Prize in Economics'), such as strategic information transmission (Michel Spence, George A. Akerloff and Joseph E. Stiglitz in 2001), strategic decision-making with asymmetric and private information (John C., Harsanyi, Reinhard Selten and John Nash in 1994), information and auction design (Alvin E. Roth and Lloyd Shaple in 2012), and, of course, Kenneth Arrow in 1972 for the economic value of information (just to name the tip of the iceberg of Nobel prizes awarded in the field of 'information economics'). There is also a plethora of prizes awarded for introducing the insights about knowledge into fields like finance, policy making, macroeconomics and institutional economics.

The field of entrepreneurship has similarly benefitted from introducing the concept of information, albeit with considerable ambiguity, in particular for entrepreneurial judgement (see Foss & Klein, 2012). Information is a public good. Arrow (1962) is once again a main source when analysing the role of knowledge in entrepreneurship. However, what Arrow had in mind is information, and what entrepreneurship scholars have in mind is knowledge. Gilbert Ryle (1945), a British philosopher, distinguished between what people know and how this knowledge could be used and transmitted. He focused on self-knowledge which is, by contrast, characteristically immediate, and an individual is expected to know what to do, without having discovered an external opportunity. Knowledge is acquired through introspection and the social context, so that the 'logical geography' is taught by one's daily walks (Ryle, 1945, p. 207). 'Know how' or 'knowing how' thus refers to knowledge in a general sense, while 'knowing that' might be called information (Gibbons & Prusak, 2020, p. 187). So too do people know how to operate with ordinary, non-technical, and even semi-technical and technical expressions as well as with relatively concrete and some abstract ideas without being able to codify the rules, permissions or sanctions that govern their operations.

Michael Polanyi (1966), half a century ago, popularized Ryle's thoughts on 'knowing how' and 'knowing that', distinguishing further between tacit and codified knowledge, arguing that we know more than we can tell. In an entrepreneurial context, knowing how and knowing that plays a crucial role. Tacit knowledge is, since Polanyi (1966), a widely used concept in the field of entrepreneurship, and has emerged as the basis for a broad spectrum of spillover and agglomeration effects. Tacit knowledge refers to ideas implicitly understood as embodied in individual skills and abilities, which are typically difficult and costly to communicate, and when possible, even then only on a personal level. In the simplest of terms, tacit knowledge is not explicit and not yet documented or codified. For implicit knowledge to become explicit knowledge, it needs to evolve from being implicit to codifiable. When defining knowledge as explicit or tacit, we reject a dichotomous 'either/or' approach. Rather, we look at each type of knowledge possessed by an organization or individual on a continuum. Codifying tacit knowledge adds value to the content

of implicit knowledge. Stories are an important way to codify tacit knowledge and communicate and transmit—but not for information. Tacit knowledge becomes useful and valuable to others only when it's shared by those who possess it. By communicating tacit knowledge in a compelling and understandable manner, the value of the tacit knowledge is leveraged and multiplied considerably, albeit to team members internally within the organization or externally to partners in other organizations. Each team members is able to share their tacit knowledge with ease.

More recently, as knowledge has become recognized as being increasingly important in value creation and enhancing competitiveness, the subject has undergone a further refinement. Nonaka and Takeuchi (1995), drawing on Polanyi (1966), move beyond 'knowing how' by including cognitive constructs such as schemata and mental models (p. 12) as one part of tacit knowledge. They distinguish between the translation from explicit knowledge to tacit knowledge, 'internalisation' (p. 69) and from communicating tacit knowledge from one person to another, 'socialisation' (p. 62). The attempts 'to express the inexpressible'[3] (Gibbons & Prusak, 2020, p. 188), to transmit and communicate meaningful tacit knowledge, require a communication beyond the usual language and refer to figurative language, metaphors and symbols.

Narrative, as emphasized by Davenport and Prusak (1998) is one such method for communicating meaningful knowledge from one person to another. A narrative, a story or a tale is any account of a series of related events or experiences, presented through a sequence of written or spoken words, still or moving images, or any combination of these. In most people's childhoods, narratives are used to guide them on proper behaviour, cultural history and formation of a communal identity and values (as especially studied in anthropology today among traditional indigenous peoples), simply because 'narrative comprehension is among the earliest powers of mind to appear in the young child' (Bruner, 1991, p. 9). While narratives and stories can be organized into a number of thematic or formal categories in the different fields of ethnology, history and literature, among others, we instead consider the idea that narrative is helpful in coordinating and motivating people by serving as a guideline in equivocal situations.

3.2 Categorizing stories in entrepreneurship

In his bestselling book, Harari (2014, p. 53) differentiates between three kinds of narrative and stories shaping human evolution by their impact on coordinating and motivating humans. Of course, narrative and stories are a mixture of all three categories (see Appendix Table 1), with the focus on decreasing transaction costs by lowering the costs of coordinating and motivating individuals subject to group size and the social ties within the group.

The first is an informational story, infotainment, to transmit a plethora of information to coordinate joint activities. Informational stories reduce the coordination costs of planning and realization of joint actions. Story telling here requires the ability to communicate a large set of information to others. In this sense, knowledge means knowing the right words to use to attract investors, finance and engage your audience, while also knowing how to deliver to a customer based on their expressed needs, knowing that a business plan is needed and which facts and figures to present to convince the investors.

The second kind of stories are gossip like chit-chats, used to improve the team spirit and to coordinate and motivate larger groups of individuals within a group or organization. Gossip and chit-chat reduce the costs of coordinating across members within the group but also helps to motivate them to behave and act in the interest of the group and requires the ability to transmit and communicate a large set of information revolving around social relationships. This involves knowing how to motivate the team, to inspire the team to be actively committed towards and in alignment with goal achievement and to induce them to work harder. It involves knowing how to convince them that the team is the family.

Finally, fictional stories play a key role. Fictional stories require the ability to transmit and communicate a large set of information over events and things which did not exist (yet) or are rather just constructs like a firm, a business idea, a mission and vision.

[3] Similarly, 'know-how' refers to the idea that, sometimes, an individual just can't explain how they know what they know or know how to do what they do.

Fictional stories primarily reduce the costs to motivate a large group of individuals, whom are almost unknown to each other, to work together, i.e. to invest in division of labour and specialization and but also to induce a change of social behaviour of the group. This is knowing how to tell 'the big story', the narrative, like saving the planet, cleaning the oceans, interlinking the world, beating the pandemic or just making the world smarter.

3.3 Good stories in entrepreneurship

What is a good story? In general, a good story entertains, is fun to hear, makes us pensive or puts us in a good mood—triggering individual emotions is the key distinguishing the good from the bad and the ugly. In this case, we argue that a good story in entrepreneurship is about a story or narrative, which shapes entrepreneurship positively by motivating and coordinating individuals linked to entrepreneurship towards a desired outcome. A good story or narrative in entrepreneurship is effective, when it motivates people 'to do the right things' in an efficient manner, when they are 'doing these things right'. Narrative and stories are a kind of tacit knowledge, even when written in words, to coordinate and motivate individuals to behave and act in respect of a desired outcome or way. By the fictional part of every story, stories and narrative differ from objective information, which is verifiable. Insights from information economics are thus not necessarily appropriate to analyse the role and impact of narrative and stories. Narrative and stories also differ from 'cheap talk' as non-verifiable information, a concept widely used in game-theory models and strategic behaviour when communication is not perfectly verifiable (Farrell and Rabin, 1996). Narrative and stories differ from the recently popular concept of 'fake news', 'alternative facts' or simply lying which falls into the group of strategic information transmission (Grunewald & Kräkel, 2017).

While knowledge should be applicable, information verifiable and cheap-talk a costless 'truth-telling', there are several requirements for a narrative and story. Two key aspects of an effective story are identified in the literature. The first is that stories and narrative should attract attention. As social creatures who regularly affiliate with strangers, stories are an effective way to transmit important information and values from one individual or community to the next.[4] So stories that are personal and emotionally compelling engage more of the brain, and thus are better remembered, than simply stating a set of facts. The second thing an effective story does is 'transport' us into the characters' world. From a story-telling perspective, the way to keep an audience's attention is to continually increase the tension in the story. We attend to this story because we intuitively understand that we, too, may have to face difficult tasks and we need to learn how to develop our own deep resolve. Transportation is an amazing neural feat; we observe an image that we know is fictional and we begin to feel those emotions, too. Emotional simulation is the foundation for empathy and is particularly powerful for humans because it allows us to rapidly forecast if people around us are angry or kind, dangerous or safe, friend or foe. The ability to quickly form relationships allows us to engage in the kinds of large-scale cooperation like fast-growing start-ups in the platform economy. By knowing someone's story—where they come from, what they do and who you might know in common—relationships with strangers are formed.

It turns out that not all stories keep our attention and not all stories transport us into the characters' worlds. Scholars claim every engaging story has this structure, called the dramatic arc. It starts with something new and surprising and increases tension with difficulties that the characters must overcome, often

[4] The trigger is a neurochemical called oxytocin, produced when we are trusted or shown kindness, and it motivates cooperation with others. It does this by enhancing the sense of empathy, our ability to experience others' emotions. When the brain synthesizes oxytocin, people are more trustworthy, generous, charitable and compassionate. Empathy is important for humans because it allows us to understand how others are likely to react to a situation, including those with whom we work. Furthermore, the amount of oxytocin also shapes our disposition—how much we are were willing to help others, like donating money to a charity associated with the narrative, or even to a friend or family member when founding a start-up company. Zac, Paul (2014). Why Your Brain Loves Good Storytelling, *Harvard Business Review*, Communication, Oct. 14th. 2014, accessed December 9th. 2020. https://hbr.org/2014/10/why-your-brain-loves-good-storytelling

because of some failure or crisis in their past, and then this leads to a climax where the characters must look deep inside themselves to overcome the looming crisis, and once this transformation occurs, the story resolves itself. The field of entrepreneurship is a prime example for the application of narrative and stories (Cappa et al., 2021).

In terms of making an impact, this blows the standard PowerPoint presentation to bits. Why should investors, customers, team members or any other person care about a project an entrepreneur is proposing? How does it change the world, improve lives or just generate some value for the audience? How will people feel when it is complete? These are the components that make information persuasive and memorable. When to motivate, persuade or even just be remembered, start with a story of human struggle of an entrepreneur and their triumph. That is what Paul Zac, Director of the Center for Neuroeconomic Studies and a professor of economics, psychology and management at Claremont University would advise (Zac, 2014). It will capture people's hearts by first attracting their brains. The brain is wired to encode memories in terms of narrative as it is the basis for building causal chains: if *A* happens, then *B* happens, then *C* happens. And people can remember that narrative, as the brain can predict the future if it cares very little about the past, since only worrying about making future decisions benefits survival. This involves survival as an entrepreneur but also for survival as an entrepreneurial team or subsequently an established company. What passion led the founder(s) to risk health and wealth to start the enterprise? Why was it so important, and what barriers had to be overcome? These are the stories that, repeated over and over, stay core to the organization's DNA—and the entrepreneurship literature is replete with examples and evidence. Narrative and stories thus provide guidance for daily decision-making as well as the motivation that comes with the conviction that the work must go on, and the full engagement is required by everyone to make a difference in people's lives. Building on the importance of stimulating the brain, we next turn to the economic value of stories and narrative, i.e. how to create value for entrepreneurial firms.

3.4 Stories as a means mastering equivocal situations in entrepreneurial firms

Whether all stories told are true is not critical; the point is that such stories are told and shared within groups of individuals. Storytelling did not appear in concise sequence of storytellers recounting full texts to passive listeners, as Boje (1991, p. 107) points out, but often in conversation engaging the listeners in several ways. So good stories can enable a 'leap in understanding' by having the listeners 'fill in the blanks' (Gibbons & Prusak, 2020, p. 188, referring to Denning, 2001). Stories are often told and performed to make sense of an equivocal situation (Boje, 1991, p. 106) and are thus a means to transmit meaningful tacit knowledge even in unequivocal situations, where meaning refers to interpretation which implies that it is shared with others. One single person cannot make meaning since, 'culture is public because meaning is' (Geertz, 1973, p.12) and '…something to which events, behaviors, institutions or processes can be causally attributed' (Geertz, 1973, p. 14), such as what happened in the lives of entrepreneurial firms.

Equivocal situations require appropriate entrepreneurial activities. These are actions to be undertaken in order to pursue and perform the project and are in particular characterized by uncertainty and risk, requesting specific judgement and leadership abilities (see Foss & Klein, 2012). Entrepreneurial activities occur in an environment where the state of the world, say *s*, is uncertain. How should an entrepreneur behave in an unforeseen and equivocal situation, where action *a* is more appropriate to react on the unexpected event of state *s*? What is the plan C for the unforeseen and equivocal situation, when plan A and the alternative plan B are not appropriate? One means to overcome equivocal situations and mastering crises and challenges are stories and narrative, as told by others before. A story and narrative serve as a guideline, an instruction manual, performed to transmit meaningful tacit knowledge to make sense in an equivocal situation, a mechanism to coordinate and motivate listeners in an equivocal situation where multiple actions are possible but not all are desirable to act and which could not perfectly be codified by operating instructions.

To express these thoughts, we follow Gibbons and Prusak (2020), assuming that a story consists of two variables. At the time the story was performed, the state of the nature was *s* and the appropriate action was *a*. Further assuming an atomless probability distribution[5] on a continuous state, space has a probability of zero that any particular state of the world *s* will recur, so this story is useless if it guides behaviour only in state *s*, just like a perfect contract is useless when only conditioned on the state *s* in an uncertain real life environment, and state *s* does not occur.

An example is the story of Terry Allen, told in 1984, how he started a toy store, and handled and mastered the several equivocal situations, published in the 2007 JBV Special issue on entrepreneurial narrative (Allen, 2007). Even though the events occurred in 1984, where the state *s* and appropriate action was *a* and will not happen exactly in the same way today (or in 2007, when his story was published), similar equivocal situations may also occur. Being aware of Terry Allens' story and how he mastered a similar equivocal situation then may serve as a guideline to undertake the same action *a* in situation *s*. While the Terry Allen story may be less known by real-life entrepreneurs, prominent examples are now bestselling books with stories of the famous entrepreneurs like Steve Jobs, Elon Musk or Bill Gates and how they behaved in equivocal situations (or the bulk of guiding books written to help people in equivocal situations).

Entrepreneurs operate in a world where the status *s* is not contractible and thus the economic value *P* of a story is zero when nobody could improve her/his outcome when following the story by the preassigned action *a*. 'But a story could be useful if it inspires a "leap in the gap" from listeners to "fill in the blank"' (Gibbons & Prusak, 2020, p. 190). Then the story (*s, a*) might evoke other state-action pairs consistent with the story, without directly articulating them—they are tacit and not codified. As a result, yesterday's story might guide thinking and decision-making today and tomorrow, leading to a path dependency. Then the story adds an economic value if the outcome in the new state *s'* which is sufficiently similar to the state *s* in that the story warrants the same action *a* in response:

$$P'\left(s', a\right) > P(s, a) > P(s, b)$$

This implies a relationship between *P*, *s* and *a* and P', *s', a* and the alternative action *b*, an action chosen outside the story. An equivocal situation *s'* requests an appropriate action *a*. Stories are thus a mechanism to motivate listeners (or the audience) to perform action *a* in an equivocal situation which differs not significantly from the state *s* when the story was told. Significantly in this sense, that means as long as action *a* increases the outcome *P*' even in the new situation *s*' compared to an alternative action *b* and $P'(.) > 0$. It is not critical whether such a story is true and happened at the state *s*, but what is important is that the story inspires a 'leap in the gap' from listeners to 'fill in the blank'—resulting in action *a*. Building on these ideas, we turn next to the role for stories and narratives for the field of entrepreneurship.

4 Stories, narratives, passion and entrepreneurship

One application among others is the contagion of the passion effect (Cardon et al., 2017a, 2017b; Hubner et al., 2020). Entrepreneurship research has identified entrepreneurial passion as an intense positive emotional experience felt by individuals engaging in entrepreneurial activities, tied to entrepreneurial activities such as inventing, founding or developing a business (Breugst et al., 2012; Cardon et al., 2013). Passion is particularly important in entrepreneurship because entrepreneurial activities require higher persistence in potentially adverse, stressful and unpredictable statuses (*s*) and higher and more continuous effort (a) than do other work actions (Baron, et al., 2016).

In this section, we briefly link the idea that storytelling and narratives may induce a particular kind of action in four different stylized stages of an entrepreneurial firm. The first is the stage of the individual decision-making of an entrepreneur, and the formulation of the idea. The second is the stage where outside investors must be convinced to invest their money towards the realization of the idea. The third is the stage of the new venture creation, and the last stage

[5] An atomless distribution is any distribution that has unit point of mass equal to zero $P[X=x]=0$, i.e. the probability of any particular value is zero. Most continuous distributions satisfy this.

involves the growth and place and the entrepreneurial ecosystem.

4.1 The venture creation process: conviction and passion

For over a century, scientists have interpreted the origin of a firm as emanating from the founder or entrepreneur, as the initial starting point, and the opportunity behind, or what constitutes the mindset of entrepreneurs (Kuratko et al., 2021). Of particular interest are questions about the sources of entrepreneurial opportunities (Alvarez & Barney, 2013), whether they are 'made' or 'found' (Shane and Venkatamaran, 2012), 'discovered' or 'created' (Alvarez & Barney, 2007), 'opportunities' or 'business ideas' (Shane, 2012) or a 'tripod' of 'subjective', 'intersubjective' and 'objective' interactions (Davidson, 2001). A narrative perspective may serve as an opportunity to contrast with these different positions as Garud and Giuliani (2013) argue, since opportunities are also 'co-created' by the entrepreneur, their committed stakeholders (Read et al., 2009) and within the start-up creation process, which is less controversial and evidenced in meta-analysis (Rauch & Frese, 2007; Read et al, 2009). In a methodological way, by combining the exogenously given opportunities, the context, with the subtexts and the entrepreneurial aspiration articulated within the cultural context (Welter et al., 2019), a narrative perspective considers then both discovery and creation as parts of entrepreneurial opportunities in a dynamic process requiring continual adjustments by the entrepreneur.

The endogenous view of narrative entrepreneurship may shape the dynamic and procedural adjustment of entrepreneurship. The creation of an idea does not take place in isolation but in a cultural context, often broadly defined as 'entrepreneurial culture' or 'cultural entrepreneurship capital', the importance of narratives and stories as an ingredient in building and forming 'entrepreneurial culture'. In particular, stories, both codified and tacit, motivate the individual entrepreneur to transfer their idea into a marketable good. Stories of successful entrepreneurs—bibliographies, monographies or reports in newspapers and magazines—may serve as focal points highlighting situations and actions successfully mastered and told in the stories. Such stories often consist of elements expressed as concepts in the academic literature. Examples are 'giving up the paid job or academic degree to live the dream' (the occupational choice concept) or 'disregarding the risk of failure' (the risk-taking concept), but also stories to motivate entrepreneurs to overcome the hard times required for the start-up to succeed, often losing sight of friends and family members (the overconfidence concept). Stimulating the overconfidence of entrepreneurs in this stage is an important role of stories and narrative. While $P(s',a')$ is an expected value, $E(P)$, and entrepreneurial activities are associated with a high failure rate, entrepreneurs should be less risk averse but also overconfident towards the expected value of their venture. Treating risk aversion as exogenously given, stories and narrative may work as a self-selection mechanism shaping less risk-averse individuals to become an entrepreneur and also by shaping their overconfidence, drowning out doubts and uncertainty that in turn reduces cognitive dissonances about the anticipated success of the entrepreneurial venture. In sum, there is also causality from narrative and stories towards the entrepreneurial process encompassing opportunities, discoveries, creation and beyond.

4.2 The start-up creation: convince and impassion key stakeholders

'Entrepreneurial ideas without money are mere parlour games until the money is obtained and committed to the projects', as Rothbard (1985, p. 283), an Austrian economist, lamented decades ago. The key word is 'pitching', convincing investors like business angels, venture capitalists or friends and family to invest into the start-up with a good story (Herzenstein et al., 2011). A pitch is a critical component in the investor's vetting process for funding, often the initial introduction and presentation to potential investors (Chen et al., 2009) and to create interest for further investment consideration (Hargadon & Douglas, 2001; Vismara, 2016; 2019). During the pitch, investors evaluate the venture's market potential, as well as the entrepreneur's capabilities to lead and grow the venture. Thus, a pitch consists of both information about the recent stage of the firm, a state and the expected state (s) in the future and the bundle of actions (a) undertaken to reach this state. Entrepreneurs have to avoid that investors form negative impressions of the entrepreneur's abilities to lead the venture, thus convincing them with infotainment and

stories as a credible signal for both the quality of the project and the entrepreneur's leadership quality. In the lack of contractible and verifiable information, narrative and stories are used to 'fill in this blank' by the listeners, the investors. Letting them 'fill in the blanks' with beliefs that the venture is 'the next Microsoft, Apple, Facebook, Amazon or Tesla', by offering a few facts and numbers in combination with a success story, infotainment wins over the listener though a combination of information and entertainment by storytelling.

Such stories in this early stage of the venture creation process are less about the transmission of pure information like exact calculations of (expected) profits, revenues or market shares, but more about how the idea and how the project will satisfy the needs of consumers, and ultimately revolutionize the industry or to make the planet smarter. Crowd funding is an example of infotainment where stories and narrative are combined with information about the project and some numbers to convince the crowd. Based on the analysis of 54 crowdfunding campaigns on the platform Kickstarter, Manning and Bejarano (2016) examine the structure of entrepreneurial stories to mobilize financial resources from the crowd and confirm the importance of narrative and stories in attracting crowd investors. Of particular interest is when projects are narrated in an infotainment style like 'ongoing stories' or 'results-in-progress' to convey the project value. Martens et al. (2007) is one of the few empirical studies and also a great reference in this field. Analysing IPO prospectuses (1996–2000), they confirm that narratives help leverage resources by conveying a comprehensible identity for an entrepreneurial firm, elaborating the logic behind proposed means of exploiting opportunities and embedding entrepreneurial endeavours within broader discourses. Initial public offering prospectuses in three high-tech industries reveal how identity constructions, story elaboration and contextual embedding are invoked within narratives. Their quantitative findings show how these aspects of an entrepreneurial narrative impact resource acquisition next to previously emphasized factors.

However, not only financial investors have to be attracted in the early stage, but also key employees have to be convinced of being part of the endeavour, instead of working in an established but less 'challenging' or passionate occupation (Hubner et al., 2020). In the absence of routines, well-defined and structured programmes and processes, the situations are equivocal and not well defined. There is no well-defined and codified behaviour for employees to follow. Social ties and relationships matter a lot in these start-ups, and gossip or chit-chat are the best way to improve the team spirit, commit the team to pull together, 'work, work, work', think of the firm as the family, and the colleagues as teammates and friends; these are examples of such stories. Employees can then sense that they all pull together, 'to join the story', 'being part of the endeavor' together with the entrepreneur (Breugst et al., 2012). Passionate entrepreneurs might attract and select employees who are already passionate, who feel deeply involved in and are in turn passionate about their entrepreneurial tasks (Monsen et al., 2010). Employees can thus be involved in entrepreneurial activities although they are not founders or owners of the firm (Breugst et al., 2012) and can experience strong positive emotions related to entrepreneurial activities within the firm of the entrepreneur (Cardon, 2008).

4.3 The start-up growth process: contagious passion and convincing the masses

Up to a certain point, the new venture and start-up firm is at a stage where the transactions costs, the costs of motivating and coordinating key members, exceeds an efficiency level. Attracting new clients/customers, investors and employees exceeds the transaction costs dedicated to motivate and coordinate the entrepreneurial network. The firm itself is too large to enable all relevant stakeholders to know each other personally. In this stage, fictional stories reduce the transaction costs to coordinate and motivate employees, investors or customers.

The narrative of the big story typically is a cornerstone of the platform companies, the unicorns (where the label unicorn itself works as a metaphor, filling in the blank by the listeners). The success and survival of such ventures mostly relies on high growth rates on

the demand side, investments in network and lock-in effects, requesting a scalable, super modular production function on the supply side. Such a super modular production function, based on strong complementarities of the demand and supply side, requires a fast-growing number of new clients and customers, new employees and, in particular, an immense growing capital base to finance this high growth strategy. The bottleneck and competitive advantage is the time to attract the critical resources and narrative could play an important role and a good story a competitive advantage (Martens et al., 2007), in particular, as complements to new vehicles to overcome financial problems (Block et al., 2018), like crowdfunding ICO, or retain popularity, like SPACS, to feed the unicorns with the capital they need, and narrative, factionary stories, a means to coordinate and motivate investors within a short time span.

Summing up, storytelling and narratives may induce a particular kind of action in different stages of an entrepreneurial firm. However, it should be emphasized that not only do 'success stories' serve as good stories, but also stories of failure, disappointment and disillusion and in particular stories about how to overcome and learn from past experience provide cautionary tales (see Shepard, 2004; Wyrwich et al. 2016).[6]

5 Summary, conclusion and future research

The most fundamental questions in the field of entrepreneurship is why do some people engage in entrepreneurship while others abstain. In searching for an answer, the field of entrepreneurship has looked to personality traits, cognition, individual specific characteristics and the external context. This paper has posited a very different source motivating entrepreneurship—the narrative. The narrative can spur the motivation to become an entrepreneur for individuals, firms, organizations, regions and entire countries.

Just as for the other forces driving entrepreneurship identified in the extant literature, the role of the narrative is a double-edged sword, with both a bright and dark side. The positive narrative focusing on entrepreneurship as a positive and uplifting force can be found in the highly compelling heuristic of Silicon Valley, foundation and subsequent intoxicating growth and impact of start-ups such as Apple Computer by Steve Jobs, Microsoft by Bill Gates and Facebook by Mark Zuckerberg. Such narratives have become the lore of entrepreneurship, which underlies so much of the interest in, and enthusiasm for, entrepreneurship, not just as an attractive business form, but also as a compelling field of research with profound significance and importance.

By contrast, the dark side of the narrative focuses instead on what Baumol (1990) characterized as constituting 'destructive entrepreneurship'. Examples of the negative narrative include the fraud and damage inflicted by Theranos, the blood testing start-up founded in 2003 by 19-year-old Elizabeth Holmes. Theranos raised more than US$700 million from venture capitalists and private investors, resulting in a $10 billion valuation at its peak in 2013 and 2014. The company went bankrupt in 2016, after investigative journalist John Carreyrou of *The Wall Street Journal* questioned the validity of Theranos' technology: all stories told to convince investors, employees or politicians were fictional (see Carreyrou, 2018). Even some of the stalwart Silicon Valley entrepreneurial start-ups of the last century, such as Facebook, Google and Amazon, have been recently burdened by the negative narrative focusing on what has been alleged to constitute anti-competitive behaviour in violation of the antitrust laws in the United States and the anti-competition laws of the European Union. Narratives might also draw unrealistic illusionary and romanticized versions of entrepreneurship and entrepreneurs, like the story of John Law depicted in Sect. 2. Narratives and stories may also discourage nascent entrepreneurs, in particular from ex post rationalization of the previously promised success story—the narrative. Whether and how exactly this new negative narrative emerging for Silicon Valley technology giants impacts entrepreneurship remains to be seen.

[6] We are gratefull to an anonymous referee for this valuable comment.

In fact, a more general but certainly valuable contribution to the scholarly literature of entrepreneurship would be to provide measurement of narratives and flesh out their impact on entrepreneurship. The promise for linking the narrative to entrepreneurship holds for research at the level of the individual, organization, firm, region and even entire country, or entrepreneurial ecosystems (Hubner et al., 2021). How the narrative can be measured and what both the theoretical underpinnings and the appropriate empirical methodologies, for uncovering the ways that the narrative shapes entrepreneurship, is clearly a path forward in addressing the most fundamental questions in the scholarly literature of entrepreneurship. Also, of importance is understanding how narratives are, or should be, constructed to appeal various audiences and the way they address and connect ideas, project development and future plans, particularly in a rapidly changing environments like those of entrepreneurial ecosystems.

While introducing stories and narrative as a new approach in analysing entrepreneurship, in particular the 'reverse causality' focus that entrepreneurship is shaped by stories and narratives, is one side of the medallion; the other is how could future research be guided to increase our understanding accordingly, both theoretically and empirically. The first contribution would be to provide a more elaborate theoretical understanding of this 'reverse causality'. Those interested in game theory may have in mind that storytelling is similar to advertising and cheap talk: no storytelling, just providing information may not work to motivate and coordinate agents, in particular when reliable information is scarce—like in new ventures. Or what is the information, the content, when explaining an idea? But too much of 'storytelling', exaggeration and overstatement could also result in overkill. As Milgrom and Roberts (1986) show by analysing advertising and prices as a signal of product quality, advertising could be replaced by storytelling and prices by reliable information like patents, customers or even prices. Crawford and Sobel (1982) provide a theoretical model when and under which circumstances cheap talk, like storytelling, leads to a separation (or pooling) equilibrium. Gibbons (1992), a co-author of the model we applied in our paper, is still the best address for analysing such coordination games for those not familiar with the mathematical approaches in game theory (like us). Beyond that, future research should also 'translate' these findings into testable theories, since 'the proof of the pudding lies in the eating', which in this context means identifying whether narrative and storytelling explain the 'residual' in regressions. Just as Solow (1956) introduced technological progress by investment in R&D in explaining the 'residual' in estimating GDP-Regressions (beyond capital and labour) and later on Acs et al. (2009) introduced entrepreneurship to explain the 'residual', beyond investment in R&D, our approach is to introduce narrative and stories to further explain the 'residual'.

Testing the 'reverse causality theory of narratives' in the field of entrepreneurship brings us back to the title of the paper and our story about John Law in Sect. 2. The first would be at the aggregate levels of countries and states. While the United States have a compelling narrative in entrepreneurship, 'The American Dream', where you can make it from the 'rags to riches', anchored in the United States Constitution (1787), the French, who coined the word 'entrepreneurship', suffered from a misleading experiment, as explained in Sect. 2 until today. In Germany, the 'German Angst' is a national narrative, often assumed that it hinders people to take more risks and being more 'entrepreneurial'. What holds on the national or state level should also hold on the regional or urban level. As Audretsch and Lehmann (2005) confirm that the knowledge spillover theory of entrepreneurship (KSTE) also holds for regions, suggesting that including narrative and stories into the KSTE will provide new insights. The narrative told about some regions, like 'The Silicon Valley Story', or the 'Research Triangle' in the Piedmont region of North Carolina, serves as a selection mechanism for entrepreneurs and creative people. Not only 'if you build it, they will come', but also 'if you tell it, they will come', which could be a strategic option to self-select, creative people, to motivate and coordinate them (Audretsch et al. 2021). Such an approach could also stimulate the 'entrepreneurship ecosystem literature' by introducing narrative and story as an additional key element not only to self-select actors and agents but also as a governance mechanisms and architectural instrument in ecosystems (Cunningham et al. 2022; Audretsch et al. 2019) And finally, empirical

research should focus on the individual level, whether narratives play a key role in motivating nascent entrepreneurs to start their own business.

Another direction of future research would be the measurement of measure narrative and stories (how to put them in the data sets), and identifying 'good stories and narrative' and testing them against 'bad' ones. Here, future research could revert to the results provided in the arts and humanities, identifying recurring elements of a 'good' story, like 'against all odds' (stories about surviving), 'David beating Goliath' (when new ventures are beating the incumbents), with Martens et al. (2007) as an excellent example. As research methods advance, and as more and more social media data are available, textual analysis will be a promising field in this area in the upcoming years (see Gentzkow et al., 2019). As the Nobel Prize winner Robert J. Shiller (2017, p. 999), in his presidential address delivered at the 2017 meeting of the American Economic Association concluded, including narrative and stories will help to better understand the kinds of feedback that really drive economic events, including entrepreneurship, and to formulate some positive policies that leverage the promise of narratives.

Funding Open Access funding enabled and organized by Projekt DEAL.

Appendix

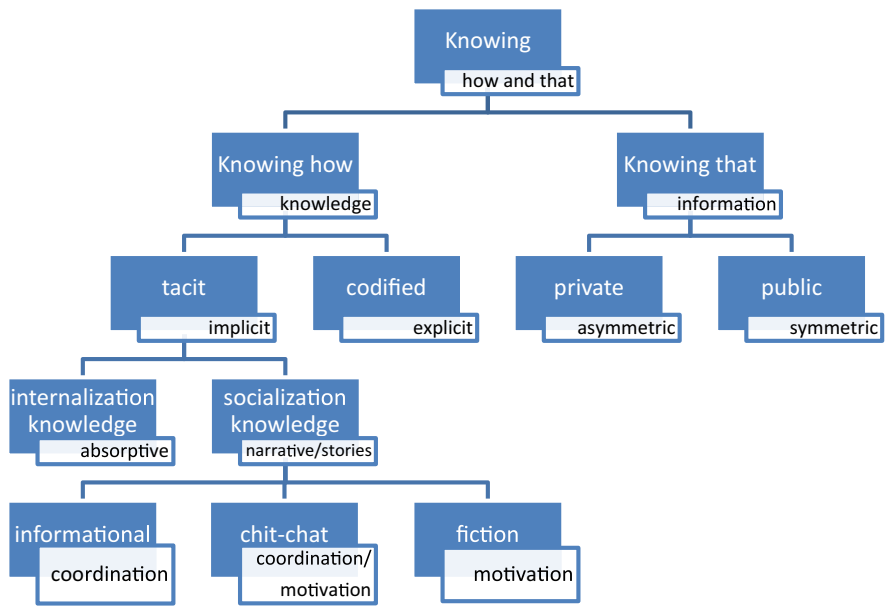

Fig. 1 The concept of knowing

Table 1 Categorizing narrative and stories in entrepreneurship

Type of story/narrative	Ability of the storyteller	Utility	Examples
Information	To communicate and transmit information about state of things to a few people	Coordinating and motivating a small group of key stakeholders, like business angels, friends and family, key inventors, to support the founder or entrepreneurial team	'Pitches': transmission of information in a way the audience would like to hear and believe—infotainment. Overestimation of the future market share, and expected profits for investors, who underestimate the costs. Stories about successful entrepreneurs in the same situation
Chit-chat	To communicate and transmit a large amount of information on social relationships and behaviour to a larger group of people	Coordination and motivation of group members of a larger group to work hard in order to reach the goal, guiding new and existing group members in fast growing new ventures, strengthening the team spirit, contagious with passion	Chit-chat about the founder, the employees from the first days, or examples from the day-to-day business. Stories and gossip, to swear the group members towards reaching the goal, also inducing peer-pressure by fostering chit-chat and gossip
Fiction	Ability to communicate and transmit information about perception of a situation and context and actions which do not exist in reality (yet)	Coordination and motivation for a huge group of people who do not know each other as individuals to act and behave in a desired way. Also to rapidly change the strategy and orientation	Mission and vision statements for a very large group of stakeholders: employees, shareholders, customers and clients. Used by all kinds of platform companies like Tesla, Airbnb, Uber, Facebook and Google

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References

Aldrich, H. E., & Fiol, M. C. (1994). Fools rush in? The Institutional Context of Industry Creation. *The Academy of Management Review, 19*(4), 645–670. https://doi.org/10.2307/258740

Zak, P. J. (2017). *The trust factor: The science of high-performance companies*. Amacom (American Management Association).

Allen, T. (2007). A toy store(y). *Journal of Business Venturing, 22*(5), 628–636.

Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal, 1*(1–2), 11–26. https://doi.org/10.1002/sej.4

Alvarez, S. A., & Barney, J. B. (2013). Epistemology, opportunities, and entrepreneurship: Comments on Venkataraman et al (2012) and Shane (2012). *The Academy of Management Review, 38*(1), 154–157.

Arrow, K. (1962). Economic welfare and the allocation of resources for invention. In R. Nelson (Ed.), *The rate and direction of inventive activity* (pp. 609–626). Princeton University Press.

Baron, R. A., Franklin, R. J., & Hmieleski, K. M. (2016). Why entrepreneurs often experience low, not high, levels of stress: The joint effects of selection and psychological capital. *Journal of Management, 42*(3), 742–768. https://doi.org/10.1177/0149206313495411

Baumol, W. J. (1968). Entrepreneurship in economic theory. *American Economic Review, 58*(2), 64–71.

Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy, 98*(5), 893–921. https://doi.org/10.1016/0883-9026(94)00014-X

Block, J. H., Colombo, M. G., Cumming, D. J., & Vismara, S. (2018). New players in entrepreneurial finance and why they are there. *Small Business Economics, 50*, 239–250. https://doi.org/10.1007/s11187-016-9826-6

Boje, D. M. (1991). The storytelling organization: A study of story performance in an office-supply firm. *Administrative Science Quarterly, 36*(1), 106–126. https://doi.org/10.2307/2393432

Brattström, A., & Wenneberg, K. (2021). The entrepreneurial story and its implications for research. *Entrepreneurship, Theory & Practice,*. https://doi.org/10.1177/10422587211053802

Breugst, N., Domurath, A., Patzelt, H., & Klaukien, A. (2012). Perceptions of entrepreneurial passion and employees' commitment to entrepreneurial ventures. *Entrepreneurship Theory and Practice, 36*(1), 171–192. https://doi.org/10.1111/j.1540-6520.2011.00491.x

Bruner, J. (1991). The narrative construction of reality. *Critical Inquiry, 18*(1), 1–21. https://doi.org/10.1086/448619

Bruner, J. (1986). Two modes of thought. In: President and Fellows of Harvard College (Eds.), *Actual minds, possible worlds* (pp. 11–43). Cambridge, MA:, Harvard University Press.

Cappa, F., Pinelli, M., Maiolini, R., & Leone, M. I. (2021). "Pledge" me your ears! The role of narratives and narrator experience in explaining crowdfunding success. *Small Business Economics, 57*, 953–973. https://doi.org/10.1007/s11187-020-00334-y

Cardon, M. S., Glauser, M., & Murnieks, C. Y. (2017a). Passion for what? Expanding the domains of entrepreneurial passion. *Journal of Business Venturing Insights, 8*, 24–32. https://doi.org/10.1016/j.jbvi.2017.05.004

Cardon, M. S., Post, C., & Forster, W. R. (2017b). Team entrepreneurial passion: Its emergence and influence in new venture teams. *Academy of Management Review, 42*(2), 283–305. https://doi.org/10.5465/amr.2014.0356

Carreyrou, J. (2018). *Bad blood: Secrets and lies in a Silicon Valley Startup*. Knopf Doubleday Publishing Group.

Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: A persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal, 52*(1), 199–214. https://doi.org/10.5465/amj.2009.36462018

Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business School Press.

Davidson, D. (2001). *Subjective, intersubjective, objective*. Clarendon Press.

Denning, S. (2001). *The springboard: How storytelling ignites action in knowledge-era organizations*. Butterworth-Heinemann.

Farrell, J., & Rabin, M. (2016). Cheap talk. *Journal of Economic Perspectives, 10*(3), 103–118. https://doi.org/10.1257/jep.10.3.103

Ferguson, N. (2008). *The ascent of money*. A financial history of the world, Penguin Books.

Fisher, G., Neubert, E., & Burnell, D. (2021). Resourcefulness narratives: Transforming actions into stories to mobilize support. *Journal of Business Venturing*, 36(4). https://doi.org/10.1016/j.jbusvent.2021.106122

Fletcher, D. (2007). 'Toy Story': The narrative world of entrepreneurship and the creation of interpretive communities. *Journal of Business Venturing, 22*(5), 649–672. https://doi.org/10.1016/j.jbusvent.2006.10.001

Foss, N. J., & Klein, P. G. (2012). *Organizing entrepreneurial judgement*. Cambridge University Press.

Gartner, W. B. (2007). Entrepreneurial narrative and a science of imagination. *Journal of Business Venturing, 22*, 613–627. https://doi.org/10.1016/j.jbusvent.2006.10.003

Gartner, W. B., Shaver, K. G., Carter, N., & Reynolds, P. D. (Eds.). (2004). *Handbook of Entrepreneurial Dynamics*. The Process of Business Creation, Sage Publications.

Garud, R., & Giuliani, A. P. (2013). A narrative perspective on entrepreneurial opportunities. *Academy of Management Review, 38*(1), 157–160. https://doi.org/10.5465/amr.2012.0055

Garud, R., Dunbar, R. L. M., & Bartel, C. A. (2010). Dealing with unusual experiences: A narrative perspective on organizational learning. *Organization Science, 22*(3), 587–601. https://doi.org/10.1287/orsc.1100.0536

Garud, R., Gehman, J., & Giuliani, A. P. (2014a). Contextualizing entrepreneurial innovation A narrative perspective. *Research Policy, 43*, 1177–1188. https://doi.org/10.1016/j.respol.2014.04.015

Garud, R., Schildt, H. A., & Lant, T. K. (2014b). Entrepreneurial storytelling, future expectations, and the paradox of legitimacy. *Organization Science, 25*(5), 1479–1492. https://doi.org/10.1287/orsc.2014.0915

Geertz, C. (1973). *The interpretation of culture. Selected Essays by Clifford Culture*, Basic Books, Inc. Publisher: New York.

Gentzkow, M., Kelly, B., & Teddy, M. (2019). Text as data. *Journal of Economic Literature, 57*(3), 535–574. https://doi.org/10.1257/jel.20181020

Gibbons, R., & Prusak, L. (2020). Stories and identity in organizations. *American Economic Review, Papers and Proceedings, 110*, 187–192.

Grunewald A. & Kräkel, M. (2017), Fake news, IZA Discussion paper series No. 11207, www.econstor.eu/bitstream/10419/177011/1/dp11207.pdf

Harari, Y. N. (2014). *Sapiens: A brief history of humankind*. Harvill Secker.

Hargadon, A., & Douglas, Y. (2001). When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly, 46*, 476–501. https://doi.org/10.2307/3094872

Herzenstein, M., Sonenshein, S., & Dholakia, U. M. (2011). Tell me a good story and I may lend you money: The role of narratives in peer-to-peer. *Journal of Marketing Research, 48*, 138–149. https://doi.org/10.1509/jmkr.48.SPL.S138

Hjorth, D., & Steyeart, C. (Eds.). (2004). *Narrative and discursive approaches in entrepreneurship*. Edward Elgar.

Hubner, S., Baum, M., & Frese, M. (2020). Contagion of entrepreneurial passion: Effects on employee outcomes. *Entrepreneurship, Theory & Practice, Forthcoming,*. https://doi.org/10.1177/1042258719883995

Hubner, S., Most, F., Wirtz, J., & Auer, C. (2021). Narratives in entrepreneurial ecosystems: Drivers of effectuation versus causation. *Small Business Economics*. https://doi.org/10.1007/s11187-021-00531-3

Kuratko, D. F., Fisher, G., & Audretsch, D. B. (2021). Unravelling the entrepreneurial mindset. *Small Business Economics, 57*, 1681–1691. https://doi.org/10.1007/s11187-020-00372-6

Lachmann, L. M. (1986). *The market as an economic process*. Blackwell.

Manning, S., & Bejarano, T. (2017). Convincing the crowd: Entrepreneurial storytelling in crowdfunding campaigns. *Strategic Organization, 15*(2), 194–219. https://doi.org/10.1177/1476127016648500

Martens, M., Jennings, J., & Jennings, P. (2007). Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition. *Academy of Management Journal, 50*(5), 1107–1132. https://doi.org/10.5465/amj.2007.27169488

Mitteness, C., Sudek, R., & Cardon, M. (2012). Angel investor characteristics that determine whether perceived passion leads to higher evaluations of funding potential. *Journal of Business Venturing, 27*(5), 592–606. https://doi.org/10.1016/j.jbusvent.2011.11.003

Monsen, E., Patzelt, H., & Saxton, T. (2010). Beyond simple utility: Incentive design and trade-offs for corporate employee-entrepreneurs. *Entrepreneurship Theory & Practice, 34*(1), 105–130. https://doi.org/10.1111/j.1540-6520.2009.00314.x

Nonaka, I., & Takeuchi, K. (1995). *The knowledge creating company*. Oxford University Press.

O'Connor, E. S. (2007). Reader beware: Doing business with a store(y) of knowledge. *Journal of Business Venturing, 22*(5), 637–648. https://doi.org/10.1016/j.jbusvent.2006.10.005

O'Connor, E. S. (2004). Storytelling to be real: Narrative, legitimacy building and venturing. In D. Hjorth & C. Steyaert (Eds.), *Narrative and Discursive Approaches in Entrepreneurship: A Second Movements in Entrepreneurship Book* (pp. 105–124). Edward Elgar.

Penrose, E. T. (1959). *The theory of the growth of the firm*. Blackwell.

Polanyi, M. (1966). The Logic of Tacit Inference. *Philosophy, 41*(155), 1–18. https://doi.org/10.1017/S0031819100066110

Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology, 16*(4), 353–385. https://doi.org/10.1080/13594320701595438

Read, S., Song, M., & Smit, W. (2009). A meta-analytic review of effectuation and venture performance. *Journal of Business Venturing, 24*(6), 573–587. https://doi.org/10.1016/j.jbusvent.2008.02.005

Riessman, C. K. (2008). *Narrative methods for the human sciences*. Sage Publications.

Rothbard, M. (1985). Professor Hébert on Entrepreneurship. *The Journal of Libertarian Studies, 72*(2), 281–286.

Ryle, G. (1945). Philosophical Arguments, originally delivered as the Inaugural Lecture as Waynflete Professor of Metaphysical Philosophy, reprinted in Ryle, G. (1971), Collected Essays, Vol. II, London: Hutchinson, 194–211.

Ryle, G. (1946). Knowing how and knowing that, *Proceedings of the Aristotelian Society*, XLVI. (Page references are to the reprint in Collected Papers, vol. 2, 212–225.)

Shane, S. (2012). Reflections on the 2010 AMR Decade Award: Delivering on the promise of entrepreneurship as

a field of research. *The Academy of Management Review, 37*, 10–20. https://doi.org/10.5465/amr.2011.0078

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*, 217–226. https://doi.org/10.5465/amr.2000.2791611

Sheperd, D. A. (2004). Educating entrepreneurship students about emotion and learning from failure. *Academyof Management Learning & Education*, *3*(3). https://doi.org/10.5465/amle.2004.14242217

Schumpeter, J. A. (1934). *1911*. The theory of economic development. Harvard University Press.

Shiller, R. (2017). Narrative economics. *American Economic Review, 107*(4), 355–374. https://doi.org/10.1257/aer.107.4.967

Spence, M. (1973). Job Market Signaling. *Quarterly Journal of Economics, 87*(3), 355–374.

Steyaert, C. (2007). Of course that is not the whole (toy) story: Entrepreneurship and the cat's cradle. *Journal of Business Venturing, 22*(5), 733–751. https://doi.org/10.1016/j.jbusvent.2006.10.004

Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Small Business Economics, 46*(4), 579–590. https://doi.org/10.1007/s11187-016-9710-4

Vismara, S. (2018). Information cascades among investors in equity crowdfunding. *Entrepreneurship Theory and Practice, 42*(3), 467–497. https://doi.org/10.1111/etap.12261

Welter, F., Baker, T., & Wirsching, K. (2019). Three waves and counting: The rising tide of contextualization in entrepreneurship research. *Small Business Economics, 52*, 319–330. https://doi.org/10.1007/s11187-018-0094-5

Wyrwich, M., Stuetzer, M., & Sternberg, R. (2016). Entrepreneurial role models, fear of failure, and institutional approval of entrepreneurship: a tale of two regions. *Small Business Economics, 46*, 467–492. https://doi.org/10.1007/s11187-015-9695-4

Zak, P. J. (2012). *The moral molecule: The source of love and prosperity*. Penguin Books.

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