SCHOOL OF ECONOMICS AND MANAGEMENT

Master Thesis

Becoming Both: A Processual Study On How Academic Entrepreneurs Use Temporality To Construct And Negotiate Identity

BUSN49 Spring 2026

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Disclaimer: In this assignment Grammarly was used to polish grammar and spelling.

Abstract

Title: *Becoming Both: A Processual Study On How Academic Entrepreneurs Use Temporality To Construct And Negotiate Identity*
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Purpose: As academic entrepreneurship becomes increasingly common, yet insufficiently understood as an ongoing identity process, this study examines how academic entrepreneurs construct and negotiate dual role identities, i.e. as academics and as entrepreneurs. Particular attention is paid to the role of temporality in that process. This study therefore asks: *how do academic entrepreneurs use temporality in the construction and negotiation of role identities, and which processes does this involve?*
Methodology: Eleven semi-structured interviews were conducted with academic entrepreneurs affiliated with Lund University, ranging from PhD researchers to professors across various innovation-related disciplines. Interviews were complemented by participative observation across four workshops at LU Innovation's Insights Program. Data were analyzed through a combination of narrative analysis and grounded theory strategy, attending to how individuals reconstruct and reorder temporal selves in conversation.
Theoretical framing: The study draws on role identity theory, identity work, narrative self-identity, liminality, and boundary work, situated within a process-philosophical ontology. In this study, temporality, understood as the lived experience of past, present, and future, serves as the central analytical lens, extending Kaplan and Orlikowski's (2013) concept of temporal work to the level of individual identity construction.
Contributions: The main contribution of this study revolves around the role of temporality in identity construction, which is addressed in relation to several existing concepts. Firstly, we argue that "the use of temporality" is an active mechanism through which academic entrepreneurs reconstruct past events and project future selves to stabilize identity in the present. Secondly, it argues that boundary work is itself an ongoing temporal practice rather than a stable outcome. Thirdly, we reframe role duality as a permanent condition managed through shifting role salience, expressed through three microprocesses: 'unifying dual roles', 'transitioning between salient roles', and 'transitioning between non-salient roles'. The study ultimately proposes a conceptual model that integrates these findings, and captures identity construction as a dynamic and non-linear process in which past reconstructions and future projections shape how dual roles are enacted in the present. In the model, role duality, boundary work, and identity work are depicted as three interconnected macroprocesses through which academic entrepreneurs continuously move, conditioned at every point by the use of temporality.

Key words: academic entrepreneurship, role identity, identity work, temporality, boundary work, process philosophy, liminality, role duality, narrative identity

Acknowledgements

This thesis was conducted as a degree project of 15 ECTS in the master's program Managing People, Knowledge and Change at Lund University, class of 2025/2026.

We are grateful for the valuable supervision we got from Stephan Schaeffer, Associate Professor and program director of our master's programme. Over the course of almost three months, his guidance has helped us greatly to deliver our thesis up to Lund University's academic standards. We particularly enjoyed the in-depth and sometimes philosophical conversations we had during our meetings. Furthermore, we would like to thank our other lecturers for presenting and explaining to us the possible ways for how qualitative studies could be conducted.

We would like to extend our gratitude to the studied participants for their availability and openness.

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1 Introduction

Scientific research is increasingly becoming a key source of innovation, where academics occupy a central position in the development and commercialization of novel solutions. To encourage innovation in Sweden, distinctive legislation grants researchers legal ownership of intellectual property of discoveries made in academia, also termed as the 'professor's privilege'. Legislative incentives like the professor's privilege have fostered academic entrepreneurship, defined as the commercialization of technologies derived from university research (Siegel & Wright, 2015, p.582). As a result, academics who pursue entrepreneurship are no longer a rarity but have become a recognizable professional type. However, this transition can be seen as problematic through multiple perspectives. A critical management perspective could highlight that academic entrepreneurs in dual roles may experience difficulty with significant conflicts of interest. Research findings that threaten commercial interests could be suppressed or discredited; a risk that becomes especially acute in medical and pharmaceutical contexts. However, our study does not adopt a critical perspective. Instead, we focus on how academic entrepreneurs experience and construct their dual roles. Role duality refers therefore to one's identification with multiple roles. As academic entrepreneurship becomes increasingly common, it matters that universities understand what academic entrepreneurs struggle with and how they might be better supported.

Jain et al., (2009) notes that there is a tension between the epistemic logic of science, that is oriented toward knowledge production and peer validation, and the market logic of entrepreneurship, that is oriented towards commercialization (p.922). This conflict is arguably an identity conflict which could be studied through identity theory, also known as role identity theory (RIT). RIT states that the self is composed of multiple role identities that vary in their importance to the individual (Stryker, 1982; Stets & Burke, 2000). It also assumes that people model identity based on their interpretations of behaviours and meaning associated with a professional role (Stets & Burke, 2000, pp.225-227). Drawing from RIT, we argue that if there are conflicting meanings and behaviours associated with the role of entrepreneur, academics may fail to extract an "identity script" to model their behaviour toward, which might hinder or impact the development of their entrepreneurial role identity.

Entrepreneurial behavior among academics is attributed to the construction of a hybrid role identity that balances both academic and entrepreneurial behaviors and responsibilities (Jain et al., 2009 p.923; Karhunen et al., 2017). Other scholars have claimed that individuals shift between different identities and that the entrepreneurial role identity depends on the identity's centrality, i.e. the subjective importance of an identity relative to other role identities (Farmer et al., 2011; Fauchart & Gruber, 2011; Hoang & Gimeno, 2010). Studies within entrepreneurial identity literature have shown a relationship between the centrality of the entrepreneurial identity and the individual's passion for their venture (Murnieks et al., 2014), the effort to grow and sustain their business (Farmer et al., 2011) and the development of capabilities to spot and target market opportunities (Fauchart & Gruber, 2011). Yet, these studies all treat the entrepreneurial identity as a stable outcome, rather than a process that is continuously negotiated.

The professional identity of academics have been shown to remain central throughout their career (Jain et al., 2009, p.929), yet academics can experience internal conflict between the respective logics of academia and entrepreneurship as they develop a new entrepreneurial self (Meek & Wood, 2016). For academics, the research role might be deeply central, which makes the construction of a new entrepreneurial identity an additional identity that must be actively negotiated. This leaves the process of becoming an academic entrepreneur, and specifically how, why, and when identity shifts occur, insufficiently understood (Hayter et al., 2021, p.1470). Closer attention must be paid to how academic entrepreneurs continuously develop and enact who they are and who they are not (Hayter et al., 2021, p.1470). As process-philosophical approaches for studying ongoing change are becoming increasingly common in management studies (Langley et al., 2013, p.1), we suggest this approach could be used to study identity construction.

Process-philosophical research draws on thinkers like Whitehead, Heidegger, and Heraclitus, treating reality as constituted by becoming (Hernes, 2014). From this view, organizations are a secondary accomplishment emerging from change, which is shaped and reshaped through the ongoing reinterpretation of actors' beliefs and habits as they accommodate new experiences (Tsoukas & Chia, 2002, p.567). Central to this ontology is temporality, where actors are seen as operating in an ongoing present, continuously drawing on their past and projecting their future (Hernes, 2014, p.45). Temporality is often referred to as the lived experience of being in time (Oxford Reference, 2026). This perspective is emphasized by

Helin (2020) who claims that temporality is a force experienced within us that is embodied and lived (p.387), yet shaped by a clock-organized view of time that governs academic and organizational work (p.381). Existing studies of academic entrepreneurship have treated identity construction as a macro-level transition between rather abstract role categories (Hayter et al., 2021; Jain et al, 2009). These studies pay little attention to how identity is accomplished in the temporal flow, and how the individual's use of interpretations of past, present, and future events, play a role in the process of constructing, negotiating and maintaining identity.

In this study, we approach identity as an ongoing becoming, with a focus on the dual role identities, i.e. 'the academic' and 'the entrepreneur'. Empirically, we examine this through 11 semi-structured interviews with academic entrepreneurs that are in some way affiliated to Lund University. We analyse these interviews through a 'process as narrative' approach that attends to how individuals reconstruct and reorder their temporal selves in conversation. This thesis therefore asks: *How do academic entrepreneurs use temporality in the construction and negotiation of role identities, and which processes does this involve?*

The thesis is structured as follows. Chapter 2 reviews the theoretical foundations of identity, liminality, and process philosophy. Chapter 3 outlines the methodological approach and choices. Chapter 4 presents the findings and analysis. Chapter 5 discusses theoretical contributions and implications, before we arrive at our conclusion in chapter 6.

2 Literature review

In this chapter our aim is to create an understanding of how a process perspective can help us understand identity construction and negotiation. The section starts with an introduction to the concept of personal identity to ground our study. We then proceed toward 'multiple identities' and create our framework of role identity theory, identity work, narrative self-identity, and liminality. Lastly, we conclude with a process-philosophical review, providing the reader with an understanding of our ontological positioning and processual language used throughout our study.

2.1 Identity

Personal identity is often referred to as an individual's core concept of self and their most fundamental values (Ashfort & Schioff, 2016 p.115; Karhunen et al., 2017). Questions such as 'who am I?' and 'who am I not?' are deeply personal but often determined in a social context (Sveningsson & Alvesson, 2023, p.1168). 'The I' is often conceptualised as the deepest thoughts, values and as the internal narrator of one's life (Giddens, 1991). Personal identity is often considered the deepest level of identity, implying it exists at a deeper level than the dual role identities we seek to study. However, as personal identity and role identity are known to interact (Stets & Burke, 2000, p.229) and are difficult to uncouple, it follows that by studying the construction process of the entrepreneurial identity, we study both the researcher's personal and role identity.

2.2 Multiple identities

Psychologists, sociologists, and philosophers have discussed the existence of multiple identities for over 70 years (Rosenberg, 1997; Deaux, 1996; Hermans & Kempen, 1993; Gergen, 1991; Thoits, 1983; Simmel, 1950; James, 1890, as cited in Ramarajan, 2014, p.591). Ramarajan (2014) argues that research on multiple identities is scattered across multiple theoretical paradigms, such as social psychological perspectives (social identity theory, self-concept, self-complexity), microsociological theories (identity theory, also known as role identity theory, identity construction), developmental/psychodynamic, critical, and intersectional perspectives (pp.591-605). Ramarajan (2014) also suggests that there is a significant degree of conceptual overlap between the theoretical paradigms (p.593). However, the theories focus on distinct aspects of identity and make different predictions.

Our focus in this study is on two individual roles, i.e. the academic role identity and the entrepreneurial role identity. When we refer to role duality, we refer to one's identification with both role identities. Furthermore, we aim to understand how this role duality is managed by individuals with an inward focus. Hence, we disregard social identity theory that focuses on belonging to social categories, such as race, gender, and nationality (Ashforth, 2001; Hogg et al., 1995; Tajfel & Turner, 1979; Ramarajan, 2014). The theoretical grounding of this study is leaning on the microsociological perspective of identity theory and identity construction. Alvesson et al. (2008) note that there is no universal acceptance of a definition of identity, and the difficulty in reaching consensus may stem from different meta-theoretical approaches to the study, based on the research paradigm (p.6). Scholars from a microsociological perspective define identity as "parts of a self composed of the meanings that persons attach to the multiple roles they typically play in highly differentiated contemporary societies" (Stryker & Burke, 2000, p.284; Ibarra, 1999). Given that when individuals inhabit a role, they also take on the expectations and meanings of others associated with that role, which are integrated into the sense of self (Stets & Burke, 2000, pp.225-227; Burke & Tully, 1977; Thoits, 1986). These expectations and meanings form a set of rules that direct behavior (Stets & Burke, 2000, p.229; Burke, 1991). We alter this definition to fit a process perspective, where identity is involved with the process of identifying with a past, present or future role, and this serves as the basis of our study.

2.2.1 Role identity theory

Identity theory, also known as role identity theory (RIT), has its roots in the symbolic interactionist tradition of Mead (1934; as cited in Prasad, 2018). RIT assumes that society shapes the self and, by extension, social interactions (Stryker, 2007, p.1083). The self is composed of multiple components, denoted as role identities, which correspond to the positions individuals occupy in society. These roles provide cognitive schemas of prescribed behaviours associated with the role (Stets & Burke, 2000, p.228; Ramarajan, 2014). RIT suggests that identity is constructed through internalization and personalization of the meanings associated with the roles (Ramarajan, 2014, p.603). Although RIT partly overlaps with social identity theory, the focus in RIT is on what differentiates an individual's role rather than focusing on group belongings through social categories (Stets & Burke, 2000, p.224).

Stryker & Serpe (1982) defined a few central concepts in RIT: salience, centrality, and commitment (pp.206-207). *Salience* refers to the readiness to enact an identity in a given situation (Stets & Burke, 2000; Stryker & Serpe, 1994). *Centrality* reflects the importance the individual assigns to a particular identity (Murnieks et al., 2014). *Commitment* refers to the degree to which one's social relationships depend on occupying an identity (Stryker & Serpre, 1982, p.207). These concepts are used to explain how people switch between multiple identities. As most of our study focuses on narratives outside of social group settings where observations could give insight into commitment, this concept is not further addressed. Most theories of identity assume that a single identity influences behavior at a distinct moment in time (Ramarajan, 2014, p.603; Stryker & Burke, 2000). In RIT, multiple identities are organized in a salience hierarchy, where the salience of an identity is based on how central and important that identity is, diverging from social identity that focuses on contextual cues as drivers for salience (McCall & Simmons, 1978, as cited in Ramarajan, 2014, pp.603-604). These properties of identity provide a lens of understanding when and how different identities will be activated and how competing identities may be resolved.

An important process in RIT is self-verification, referring to when the individual acts in accordance with the identity standard (the cognitive schematics of what the role means to the individual) and the norms and meanings associated with the role (Stets & Burke, 2000, p.225; Stryker & Burke, 2000). When a role is activated the person tries to maintain behavioral consistency with the identity standard (Stets & Burke, 2000, p.231; Burke, 1991; McCall & Simmons, 1978, as cited in Ramarajan, 2014). The process of self-verification implies that 1) if disturbances occur where the individual perceives their situated self meanings as different from the role template, they try to counteract the disturbance, and 2) when no disturbances occur individuals act consistently with the meanings of their standard role (Stets & Burke, 2000, pp.232-233). As long as an identity is active, this process is assumed to be constant. For our study, self-verification is particularly interesting if the role duality is experienced as a constant disturbance, creating the need for individuals to counteract disturbances. Recently, Burke & Stets (2023) expanded on self-verification and suggested that multiple identities could be salient simultaneously (p.196). Further they argued that this might generate friction as verifying multiple identities simultaneously is bound to one stream of output. Their model posits that reprioritization or change of behavioral standards occur when identity standards are misaligned or dependent on each other (Burke & Stets, 2023, pp.189-190). In our case, the roles are dependent as they receive the same environmental cues, as the individual's entrepreneurial identity to some extent depends on their academic identity since the businesses are born from scientific advancements. Further, this implies that the self-verification process would stimulate identity work which is reviewed in the next section.

2.2.2 Identity work and narrative self-identity

Professional identity is often portrayed as a stable position, though it is widely critiqued by scholars. For instance, Sveningsson & Alvesson (2003) found that identity is continuously negotiated and maintained through the process of identity work, that is the forming, repairing, maintaining, and revising of self-constructions that individuals do in response to competing organizational discourses (p.1165). In their study, the studied manager experiences a prolonged identity struggle with difficulties in forming a coherent sense of self, due to contradictory discourses (Sveningsson & Alvesson, 2003). This implies that identity work is not always adaptive and convergent on a role, but can also persist as ambiguity when multiple internal logics coexist. We speculate that some academics who transition from the research field may experience a similar collision due to the contradictory logics of the two roles.

Another concept in the framework of identity work is Ibarra's (1999) provisional selves, referring to a self-conception that individuals test against internal and external feedback. Whenever the provisional self differs from the desired self, the misalignment provokes identity work (Pratt et al., 2006). Similarly, Sveningsson & Alvesson (2003) argue that their studied manager used a narrative self-identity to stabilize herself by rejecting certain discourses that did not match her personal story (pp.1184-1185). In addition, they found narrative self-identities to be relatively stable, although not static (Sveningsson & Alvesson, 2003, pp.1185-1186). They also argue that the self-identity is based in these narratives, and draw from the development literature stream of identity (Dunne, 1996; McAdams, 1993, as cited in Sveningsson & Alvesson, 2003, p.1166). Scholars, who are interested in narrative identity, argue that 'who we are' is defined by narrating stories about ourselves to others (Ramarajan, 2014, p.607). People construct narrative identities to maintain meaning and purpose, and these stories grow over the course of their lifetimes. Because stories contain multiple themes, they naturally accommodate multiple identities, which are expressed more explicitly in conflict (Ramarajan, 2014, p.607).

While identity work captures the internal process of forming and revising one's identity, boundary work is "the active agency role of scientists in drawing and redrawing the boundaries of their work" (Gieryn, 1983; 1999, as cited in Lam, 20120, p.311). We understand this activity as an active negotiation of where one role ends and another begins. Academics engaging in commercialization typically preserve their core researcher identity rather than displace it, by constructing a secondary entrepreneurial identity through delegation and buffering (Giunti & Duberley, 2023; Lam, 2010; Jain et al., 2009). These strategies create psychological distance between research and commercial activities. Yet, the way in which this boundary is managed is not uniform. The construction of dual identities hinges on boundary work, referring to the active negotiation of where one domain ends and another begins (Mäkinen & Esko, 2023; Karhunen et al., 2017; Ashfort et al., 2000). In a similar study to ours, Mäkinen & Esko (2023) identified different outcomes of boundary work: *hybridization*, in which individuals compartmentalize both identities and move fluidly between them, developing a bridgeable boundary that allows a hybrid professional identity to emerge, *rejection* through which individuals actively protect their academic identity by maintaining an impermeable boundary, positioning entrepreneurship as incompatible with who they are, and *transitioning*, where individuals reframe the boundary as permeable and build distance from academia, moving toward a single entrepreneurial identity (pp.171-174).

2.3 Liminality & Liminal venturing process

Liminality refers to being 'betwixt and between' two identity construction phases and was developed by Turner (1967, as cited in Beech, 2011, p.286). More recently, it has been adopted to fit organizational studies by authors (Starkey; 2004; Sturdy et al., 2006, as cited in Beech, 2011, p.286). Beech (2011) tries to synthesize the concept of liminality with the identity work and identity construction literature of Sveningsson & Alvesson (2003). Previous literature suggests that academics that pursue entrepreneurship are likely to construct a new identity and integrate it to their identity. Yet, the process of how this unfolds is less understood, but has been attempted to capture in a theoretical study by Hayter and colleagues (2021). In their 'liminal venturing process' model (see Appendix 1), Hayter et al.

(2021) conceptualize microprocesses, among which is 'identity play', referring to a provisional exploratory process of trying on a possible self – a provisional identity (Ibarra & Petriglieri, 2010, as cited in Hayter et al., 2021, p.1472). Their model also includes identity work as a pivotal process, defined by Sveningsson & Alvesson (2003). Furthermore, many identity researchers agree on the idea that scientists begin with a developed and central scientific identity (Jain et al., 2009), before they are triggered by either some extrinsic factor, or by identity play, that pushes them to engage in identity work (Hayter et al, 2021, p.1471, also see Appendix 1). When engaged in identity work, entrepreneurial identity enactment can be developed through 'identity incorporation' or 'identity conflict' (Hayter et al., 2021). At the stages of identity play and identity work, scientists either engage in exiting or remain in a stage of inactivation (Hayter et al., 2021, pp.1472-1473).

While the 'liminal venturing process' presumes that the academic entrepreneur can reach a stage where the old and new identities coexist, the findings from Bousfiha & Berglund (2025) contradict the models' take on identity formation as a one-off liminal passage. More specifically, they refute that permanent liminality involves a cognitive and emotional cost (Bousfiha & Berglund, 2025, p.7). Their study also challenges the claim from Jain et al. (2009) that academic entrepreneurs protect their central academic identity through delegation and buffering (Bousfiha & Berglund, 2025, p.6). Instead, they suggest identity development is associated with recurring microtransitions; they found that although scientists delegate tasks in both roles, entrepreneurial work is embraced as an extension of their professional identity, and therefore argue that academic entrepreneurs always remain in a liminal state (Bousfiha & Berglund, 2025, pp.26-28).

We find that the liminal venturing process model rests on a rather weak processual foundation, suggesting a sequential process that follows distinct phases. It appears to be a stage model, but constituted by processual language. Although the model provides value as it signifies what it is that is "becoming", i.e. the entrepreneurial self, our ontological grounding suggests that in reality this is a more messy process, Additionally, the suggested stages may not happen only in a sequence, but there might still be activities occurring ongoing at different times.

2.4 Process philosophy and temporality

Process philosophy is a broad paradigm encompassing various perspectives on processes. To ground our analysis within a process ontology, several fundamental concepts are outlined in this section.

Drawing on Heraclitus (560 b.c.), Heidegger (1927) and Whitehead (1959; 1929), process philosophy holds that reality consists of events rather than static substances. Heraclitus' idea that one never steps into the same river twice represents ongoing change as a core theme in process philosophy (Seibt, 2025). This philosophy claims that 'being' is dynamic and argues that philosophy should study this constant change (Seibt, 2025). It opposes the traditional Western view that the world is primarily static and only secondarily dynamic, even though our experiences are marked by continual internal and external change. Although process philosophy primarily focuses on ontology and metaphysics, it also considers broader concerns, including the idea of 'being' as becoming or event, the conditions of space and time, the types of dynamic entities (including mental events and actions), the connection between mind and world, and how values are realized through action (Seibt, 2025). Seibt (2025) lays out the main claims of process philosophy:

1. The basic assumptions of a substance paradigm, i.e. metaphysics based on static entities, such as substances, objects, and states of affairs, are theoretical assumptions, rather than laws of thought.
2. Process-based theories perform as well as or better than substance-based theories, in philosophical topics dealt with in the substance paradigm.
3. There are other important topics that can only be addressed within a process ontology.

This paper does not attempt to prove any of these claims; rather, it assumes that as individuals progress through life, they experience reality, continuously developing and reshaping their minds and identities. Accordingly, process theory is likely to offer better explanations for how identity is negotiated over time and in the moment than any theory that characterizes identity as static. In what follows, we try to provide conceptual clarity by discussing important distinctions between 'process', 'time', and 'temporality'.

Process

Process is the becoming of being, the way potentialities become actualities, through the becoming of events (Hernes, 2014, p.39, pp.66-67, p.87). The foundational unit in Whitehead's process philosophy is the event-like entity called 'actual occasion', considered as the process of 'becoming' (Seibt, 2015). What appears to us as stable entities through this perspective are actually patterns of societies (groups of actual occasions) that temporarily stabilize. Through what Whitehead calls 'prehension', each occasion incorporates its past, enabling the past to influence and become part of the present events (Hernes, 2014, p.95). One constantly reinterprets the past and projects interpretations into the future. Rather than seeing these patterns as static 'things' is, Whitehead suggests that entities are made up of their relationships. In other words, stability is a form of ongoing change (Hernes, 2014; Tsoukas & Chia, 2002; Langley et al., 2013).

This perspective is useful in organizations, which are constantly changing and merging past, present, and future through the process Hernes (2014) refers to as the 'living present', emphasizing the ongoing nature of organizations that can be conceptualized as a pattern of becoming (pp.80-84).

Time

In the ontological debates about the nature of time two camps are typically heard: the A-theorists and the B-theorists (McTaggart, 1908, as cited in Dowden, 2026). The A-series of time suggests that each event has a past, a present, and a future, anchoring these aspects to a point of reference. In contrast, the B-series anchors events by stating that one event precedes another, rendering the relation between events static. Compared to the A-series, where the underlying property shifts (an event that is present was future and will be past), the B-series remains fixed (McTaggart, 1908). McTaggart claims that time requires change to be real and that only the A-series produces real change. If event A is always earlier than event B, then, he suggests, no real change occurs. However, a common objection is that no event is past, present, and future at the same time. By introducing the property of 'was future', McTaggart identified an infinite regress and concluded that time is unreal (Dowden, 2026; McTaggart, 1908).

Process philosophy addresses this issue of infinite regress differently. It makes 'change' ontologically primary, arguing that change itself gives rise to time. By adopting this ontology, we subscribe to the A-series of time. Whereas 'time' is an abstraction of the pattern of change, ‘process’ refers to ‘change’ (Hernes, 2014). Thus, our focus is on studying change, by paying attention to how individuals experience time and employ different temporal logics to interpret events. We expect to witness how individuals reorder events by interpreting the present using references to both past and future.

Temporality

Ongoing temporality assumes the A-series of time to be true, and centers around how people experience time, where the past and future are seen as dimensions of the present and where actors are always in the present (Hernes, 2014, p.45). Through the passage of time, we are thrown into situations where we recreate the past and future, always in the present. Whitehead suggested that the perishing of time is what marks the ontology of becoming (Hernes, 2014, pp.45-46). His view was that the experience of time comes into being and then vanishes. That continuity is something imaginary (Hernes, 2014, p.46), rather than addressing the ontological debate about time itself (Oxford Reference, 2026). This is the perspective we adopt; temporality for us refers to the experience of time. We reject the clock-based view of time that removes agency and connects to the B-series of time, often referred to as periodic temporality (Hernes, 2014, p.44). Related to temporality is the concept of temporal work, defined as the process by which organizational members actively engage with and align their conceptions of the past, present, and future to develop strategic projects (Kaplan & Orlikowski, 2013, p.965). However, we suspect that temporal work occurs outside the organization as well, and are therefore curious about how individuals in the field of academic entrepreneurship use temporal work to align their past and future to negotiate and stabilize their identity in the present.

In plain english: We refer to temporality to address the experience of time. We refer to a process to address what is changing. Temporality for us is a way to abstract change in the ongoing construction of identity. This study coins “the use of temporality” as a way individuals actively engage with temporal work outside of an organizational context, and potentially as a mechanism for constructing and negotiating identity.

2.4.1 Process research in organizational studies

The discourse of research that studies identity-related processes in organizational contexts has gained traction in recent years. Fachin & Langley (2017) use organizational identity to illustrate how concepts typically treated as static can be understood as something people do and work on. They distinguish four conceptions of process research, each progressively moving toward a stronger process ontology (Fachin & Langley, 2017). We discuss these here in order from weakest to strongest process ontology, before we take and justify our position moving forward.

Process as evolution

Process as evolution assumes some form of substance ontology. The concept that is being studied is considered to be temporarily stable and treated as an entity (Hernes, 2014; Fachin & Langley, 2017). Studies within this perspective are often longitudinal and the processes refer to how and why the entity changes over time. Analytically, this perspective often uses grounded theory, temporal bracketing and visual mapping (Gioa et al., 2013, as cited in Fachin & Langley, 2017, p.312). The strength of this approach is that it generates parsimonious processual models of how concepts evolve. However, it often holds monological process stories that show movement between well-defined states. Divergence between individuals, the fragility of identity constructions, and the possibility that multiple competing identities co-exist are often underplayed in favour of a single theoretical account of "what happened". We consider this as a problem since identity construction is often messy and conflicting stories may often be true at the same time (Fachin & Langley, 2017, p.323).

Process as narrative

The process-as-narrative perspective focuses on the reconstruction of time and processes through language. Studies from this perspective make sense of processes by retelling and reinterpreting events. Stories give meaning to the processes, and a story involves a beginning, a middle section and an end, or a past, present and future that is being woven together (Bruner, 1991; Polkinghorne, 1988, as cited in Fachin & Langley, 2017). From this narrative perspective, the process under study is not the actual temporal evolution of an entity but the temporality constructed within respondents' accounts and texts. This approach captures the diversity of possible meanings behind organizational action (Rhodes & Brown, 2005, as cited in Fachin & Langley, 2017, p.314), drawing attention to multiplicity and fragmentation rather than unified accounts. Unlike the evolutionary perspective, the focus is on how participants themselves reconstruct past, present, and future through language rather than on the researcher piecing together what objectively happened. Because language is assumed to constitute reality, identity is not treated as existing outside members' narratives. The limitation of the narrative perspective, however, is that it tends to remain bounded by the particular texts or interviews analysed. It captures how individuals reconstruct their experience in conversation with the researcher, but it does not show how different understandings interact and influence each other in real-time situations. In our study, interviews capture what individuals say about their identity and how identity is negotiated in the moment of conversation, but not how it was experienced at the moment of occurrence.

Process as activity

According to Fachin & Langley (2017), the process-as-activity ontology focuses on the construction of the everyday world through daily activities and interactions, and seeks to capture organizational becoming as it happens. This approach aligns more closely with an ontological process than the two previous perspectives (Langley et al., 2013). Here, identity is continually accomplished in successive interactions while never reaching a final form. Studies of conversations during meetings have shown how personal and social identities are positioned through identity work in the moment (McInnes & Corlett, 2012, as cited in Fachin & Langley, 2017, p.318). However, micro-interactions risk becoming their own explanation without connection to broader patterns, and interactions are ephemeral yet carry longer-term origins and consequences invisible in the moment itself. Studies adopting this perspective therefore typically combine fine-grained observational data with rich contextual sources (ethnographic observations, etc.) to avoid detaching fleeting events from their surroundings (De Cock & Sharp, 2007; Denis et al., 2010; Samra-Fredericks, 2003, as cited in Fachin & Langley, 2017, p.319). By participating in LU Innovation's Insights Program, we aspire to observe identity enactment through activities as they unfold; when participants practice, pitch and evaluate business ideas.

Process as withness

The strongest process ontology perspective, process as 'withness', rests on the ontological claim that the researcher participates in the ongoing becoming of reality (Shotter, 2006, as cited in Fachin & Langley, 2017, pp.319-320). Shotter presents this ontology as opposed to 'aboutness thinking', which refers to the conventional mode of research where scholars stand back, observe phenomena that have already occurred and construct retrospective explanations of them. 'Withness' thinking insists that the researcher must be in the flow of experience alongside the people being studied, encountering the world as it unfolds and moving into an "unsettled, emergent, contingent" future (Weick, 1999, p.135, as cited in Fachin & Langley, 2017, p.319). From this perspective, our retrospective theoretical accounts that usually depict events as causally connected and coherent, are seen as cleaned-up reconstructions that impose an order that was never experienced in the moment. A 'withness' perspective tries to recover what was actually experienced before that retrospective ordering took hold. Shotter further posits that conversations do not merely extract information about the past, but actively explore the potentials of the present moment in order to change understandings of what is possible to shape future actions (Shotter, 2006; 2010, as cited in Fachin & Langley, 2017, p.320).

On the spectrum of process ontology, our main positioning lies in the middle. Given that the data for our study is most easily accessible to us through our interviews, the main focus of this paper is on processes as narratives, aiming to capture the stories of how identity unfolds through reconstruction of events. However, we also occasionally engage with weaker and stronger process perspectives. On the one hand, we investigate some processes as they occur in real-time, aligning more with an ontology of 'process as activities'. On the other hand, as we analyse similarities and patterns through a grounded theory strategy, we also engage with a weaker processual ontology. Lastly, our research engages with people's future and imaginative scenarios, through questions like "what advice would you give to yourself if you could go back in time?" and "what is the future for you and your company?". These questions capture some of the process-as-withness perspective, focusing on bringing in future potentialities into the present. We recognize that conducting interviews narrating the past can trigger reinterpretation that actively shapes what becomes in the world.

2.5 Summary of literature review

The literature review aimed to provide a conceptual framework that follows through the rest of our study. Our conceptual framework is shown in an overview in Figure 1. The process-philosophical ontology, including its assumptions and limitations, is foundational to our study, hence it was already emphasized in the literature review.
The start of the literature review discussed identity and role identity theory. We outlined important concepts of salience (i.e., the readiness to enact an identity) and centrality (i.e., the value and importance attributed to a role identity). We discussed the process of self-verification as a potential reason for ongoing identity struggles, and reviewed the role of

identity work in establishing and negotiating between the academic and entrepreneurial roles. We also covered the concept of liminality, the process of being in between identities, and discussed the relations between role identities, identity work, and liminal venturing, as we highlighted the sequential processual model proposed by Hayter et al. (2021). In the process philosophy section, we introduced the reader to the process-philosophical language and concepts that underpin our study. Lastly, we discussed our ontological stance, positioned ourselves in the middle between a weak process ontology (process as evolution) and a strong (process as withness), and outlined the implications of our choices.

Concept	Definition	Characteristics	Relevant literature
Boundary work	The active agency role of scientists in drawing and redrawing the boundaries of their work; the active negotiation of where one role ends and another starts.	Active and intentional, goal-oriented and strategic, operating both outward (demarcation from other fields) and inward (affecting role identity).	Lam, 2010; Gieryn, 1999; 1983
Identity work	The forming, repairing, maintaining, and revising self-constructions that individuals do in response to competing discourses.	Ongoing (no one-off event), responsive to struggle or disturbance (triggered when existing conceptions of self are disrupted).	Pratt et al., 2006; Sveningsson & Alvesson, 2003; Ibarra, 1999
Narrative self-identity	A personally constructed life story, rooted in personal history that provides a relatively stable sense of self which individuals draw on during identity work.	Anchor against external turbulence and a potential source of conflict when it clashes with dominant role expectations or discourses.	McAdams, 2009; Sveningsson & Alvesson, 2003
Process	The becoming of being. It refers to change through "the act of proceeding", i.e. continued forward movement; progress.	Continuously becoming (stability is a form of ongoing change), prehensive (on each occasion the past influences the present), relational (entities are made up of their relationships).	Seibt, 2025; Whitehead 1959; 1929
Role duality	The identification with two different role identities.	Hierarchy (salience and centrality).	Ramarajan, 2014; Stryker & Burke, 2000
Role identity	The meanings individuals attach to the roles they play in society, incorporating the expectations and norms associated with those roles into their sense of self.	Structural (cognitive schemas and prescribed behaviour with role), intertwined with personal identity.	Burke & Stets, 2009 Stets & Burke, 2000 Stryker & Burke, 2000 Stryker & Serpe, 1982
Temporal work	The set of practices that settle on particular strategic accounts that link interpretations of the past, present and future in ways that appear coherent, plausible and acceptable.	Interpretive (i.e. focused on alignment), iterative and non-linear process, contingent outcomes (allow for action, but remain open to reinterpretation as circumstances change).	Kaplan & Orlikowski, 2013
Temporality	The linear progression of past, present and future; refers to how time is experienced.	Ongoing, refers to 'being' in time and aligning with the A-series of time.	Helin, 2020 Hernes, 2014 Oxford Heidegger (1927)
Use of temporality	The way individuals engage with temporal work outside of an organizational context and draw on past experiences and future projections to negotiate and stabilize their identity in the present.	Same as temporal work, but applied to an individual level.	Our extension on Kaplan & Orlikowski, 2013

Figure 1 - Conceptual framework

3 Methods

This section outlines our research tradition and our methodological approaches and choices. Also, we reflect on the problems with dealing with process data and motivate our related strategies. Lastly, we present our process of data collection, data analysis and coding strategy.

3.1 Research tradition

This study examined how the process of researchers becoming entrepreneurs influences identity. We adopted a processual ontology through a qualitative analytical interpretive tradition grounded in symbolic interactionism, which prioritizes processes over outcomes (Prasad, 2018). In studying identity, we aimed to understand meanings, symbols, actions, and events as they appear to us (Prasad, 2018). The combination of process ontology and symbolic interactionism allowed us to interpret perceived stabilizations around identity as the 'becoming' of a self, or the ongoing construction of identity.

Our goal was to generate new knowledge through ampliative inferences and explanatory reasoning (Douven, 2011). We first approached the empirical material inductively, generating codes and themes with limited reliance on theory, and then iterated between theory and data to develop the most compelling explanation of the observed phenomenon.

3.2 Problems with theorizing from process data

We acknowledged that several problems could arise from our attempt to generate theory from process data. Langley (1999) identified two camps of processual researchers that approach process-based research differently. One camp formulates a priori theories that are tested using longitudinal historical data, time-series analysis, and event-history analysis (Langley, 1999, p.691). We subscribed to the other camp, which takes an immersive approach to processes as they unfold. This camp tries to construct theory from the ground up (Bower, 1997; Pettigrew, 1992; Van de Ven, 1992, as cited in Langley, 1999, p.691). The logic is that to understand processes and why events unfold the way they do, we must examine processes directly (Mintzberg, 1997, as cited in Langley, 1999, p.691). The four key characteristics of process data identified by Langley (1999) are data composed of *events*, data on *multiple units and levels of analysis with ambiguous boundaries*, data of *variable temporal embeddedness*, and data that are *eclectic* (pp.692-694). We briefly discuss these key characteristics here.

Process data composed of *events* consists largely of stories about what happened, who did what, and when, i.e. events, activities, and choices ordered over time. The researchers face the task of conceptualizing and identifying patterns, which has traditionally been done in a linear sequence of events. Langley notes that this is only one of many possible forms. The researcher is also tasked with the complexity of isolating analytical units, as process phenomena have a fluid character that spreads across both space and time (Pettigrew, 1992, as cited in Langley, 1999, p.692).

Furthermore, one of the main reasons for adopting a qualitative process approach in the first place is to take context into account, which inevitably brings in *multiple units and levels of analysis with ambiguous boundaries* (Pettigrew, 1992; Yin, 1994, as cited in Langley, 1999, p.692). These levels form more of a continuum than a neat hierarchy, complicating sensemaking considerably.

Variable temporal embeddedness refers to the tendency of process data to resist placement at a single level of temporal precision or duration (Langley, 1999, pp.692-693). Gradual background trends, such as slowly eroding trust or shifting competitive pressures, shape processes yet cannot be pinpointed to specific moments on a timeline. Similarly, cognitive shifts happening inside people's heads often leave no concrete trace of the exact moment of their passing, making their temporal placement approximate at best (Langley, 1999, p.693). Events themselves vary in scale, from a handshake to a yearlong crisis, making it difficult to represent them in a single chronological account (Langley, 1999, p.693). These temporal unevennesses are often unavoidable but they render process data analysis and interpretation more difficult (Langley, 1999, p.693).

Lastly, Langley (1999) notes that process data are *eclectic*, meaning it is difficult to separate variance and process theories, and that the requirement to do so is overly restrictive (pp.693-694). She posits that events and variables are intertwined. Understanding how an event changes the state of an entity (a variable), or how a contextual variable shapes the evolution of events, may be essential to building good theory.

These difficulties with theorizing from processual data meant that we tried to thread carefully when arguing for analytical boundaries of concepts (processes), and we remain aware of many different alternative interpretations. We also approach these difficulties, employing some of the strategies outlined by Langley (1999).

3.3 Dealing with process data

Langley (1999) proposes seven strategies for dealing with process data: narrative analysis, grounded theory, temporal bracketing, quantification strategy, the alternate template, visual mapping, and synthetic strategy (pp.694-705). This section reviews if and how these strategies were used in our study.

Narrative analysis (pp.695-697)
A narrative analysis involves constructing a story from the data, anchoring the events in time. Process research almost always involves narrative analysis cirat some point, but it can serve different purposes. For some researchers, it serves as a data organization device and validation tool. For contextualists, it plays a substantial analytical role, incorporating causal linkages between levels and establishing early analytical themes. For constructivists and naturalists (Dyer & Wilkins, 1991; Guba & Lincoln, 1994, as cited in Langley, 1999), the narrative can be the main product of the research, providing “vicarious experience” of a real setting rather than formal propositions (p.695). Because narrative avoids commitment to any specific anchor point beyond time and stays close to contextual detail, it works best for one or a few cases. It easily accommodates ambiguous boundaries, variable temporal embeddedness, and eclectic data. Accuracy is therefore expected to be high. However, Langley warns that the narrative approach on its own does not lead to either a simple or a general theory. One may too easily end up with an idiosyncratic story and a thin conceptual contribution. In our case, we focused on narratives, to get rich context, but through the use of multiple strategies, we aimed to provide some general insights about the relations between processes in identity construction.

Quantification strategy (pp.697-698)

We rejected the quantification strategy that systematically codes qualitative incidents into statistical time series, sacrificing ambiguity, richness, and temporal embeddedness, as it did not fit with our qualitative approach.

The alternate template strategy (pp.698-699)

This strategy proposes alternative interpretations of the same event based on different, yet internally coherent sets of a priori theoretical premises, and then assesses which template best explains what occurred. We saw this as connected to abduction in the sense that the best explanation for a phenomenon is chosen, hence we implicitly adopted this strategy in analyzing our findings.

Grounded theory strategy (pp.699-700)

Grounded theory involves systematic comparison of small units of data (incidents) and the gradual construction of categories that describe the observed phenomena. Categories have subcategories, dimensions, and properties, which are elaborated and refined as incidents are examined, coded, and compared. Langley argues that the strategy works better for process data with a large number of comparable incidents, all richly described. It is most powerful when the level of analysis drops to a microlevel, exploring interpretations and emotions of individuals or groups living through the same processes (e.g., Isabella, 1990 as cited in Langley, 1999). By doing this we intended to zoom in on processes that we could notice from narratives and compare similarities and differences of subjects going through similar processes.

Visual mapping strategy (pp.700-703)

This strategy involves the use of graphical representations and flowcharts or timelines to illustrate the processes. Visual representations are attractive for process data because they allow the simultaneous representation of a large number of dimensions and can easily show precedence, parallel processes, and the passage of time. We cautiously adopted the visual mapping strategy as our discussion presents a processual model, however, we explicitly addressed the risks around establishing causal relationships and implications of linearity.

Temporal bracketing strategy (pp.703-704)

The temporal bracketing strategy separates processual periods at discontinuities or important events. The bracketing does not need to be sequential or linear, but serves as an analytical device, structuring descriptions of events. The strategy is useful as it constructs comparative units of analysis and multidirectional causality. The drawbacks are that there is no a priori guarantee that discontinuities will naturally synchronize to produce unequivocal periods, and the choice of bracket boundaries is subjective. Accuracy is moderate to high depending on the appropriateness of the temporal decomposition. In our study, temporal bracketing was embedded in our description of the participants' career trajectories, where we drew on their narrative and bracketed their story through important events.

Synthetic strategy (pp.704-705)

The synthetic strategy takes the process as a whole as the unit of analysis. The researcher constructs global measures from the detailed event data to describe each process, then uses these measures to compare different processes and identify regularities forming the basis of a predictive theory relating holistic process characteristics to other variables such as outcomes and contexts. When this strategy is used, the original process data are transformed from stories composed of events into variables that synthesize their critical components. The emerging models are therefore "variance theories" rather than "process theories" in Mohr's terms (Mohr, 1982, as cited in Langley, 1999, p.704). We used some of the synthetic strategy to describe how macroprocesses may relate to each other and what their expected outcomes deal with, along with a temporal analysis applied to the entire "processual unit".

Based on these strategies for dealing with process data, we aimed to focus on narrative analysis and grounded theory strategy. Our idea was that by allowing us to have multiple analytical tools and perspectives, we could show the processes without abstracting and reducing away the complexity that is present when the subjects construct and negotiate their identity.

3.4 Data collection and analysis

After iterative movement between codes and theory, findings were presented and analyzed using Emerson's excerpt-commentary-unit structure, involving an analytical point, providing an orientation of the excerpt, presentation of the excerpt and elaborating the analytical point (Rennstam & Wästerfors, 2018, p.155). By doing so, we address what is happening, and how we see it happening, to generate explanatory power to address why it is happening, addressing the debate of 'whats and hows' (Rennstam & Wästerfors, 2018, p.55).

The primary data source consisted of 11 semi-structured interviews which enabled us to draw out identity talk (Prasad, 2018). Interviewees were affiliated with Lund University and had moved beyond a master's degree, ranging from PhD's to professors and in between. Each interviewee was or is engaged in entrepreneurship to some extent, ranging from former researchers who have become founders or CEOs to individuals currently developing business ideas.

In addition to interviews, and in line with symbolic interactionism, we conducted participative observation at the Insights Program run by LU Innovation. This workshop-based program supports aspiring academic entrepreneurs in developing research insights into business solutions and may also help with financing later in the process. The program consisted of four workshops between March and May 2026 and follows the NABC framework (Need, Approach, Benefit, and Competition) for developing business ideas. By observing and interacting with participants, we aimed to enter the *Lebenswelt* of our targeted population to understand how they perceive and integrate the program's messages (Prasad, 2018, p.25-26).

3.4.1 Inclusion criteria

Although our sample was broad, our requirement was that the participant had begun a PhD program, and had engaged in entrepreneurship as we deemed the academic identity likely not to be inhabited strongly enough by master's students that are not paid to study. However, all participants in our study had completed their PhD and were engaged in entrepreneurship.

3.4.2 Data collection process

Regarding generative AI, we used Anthropic's AI model Claude to find our sample. We asked the model to find academics connected to Lund University that also had started a business related to their scientific pursuit, and asked Claude to put these with available contact details in an Excel file, which we then used as a starting point for recruitment. Two participants came from reaching out to LU Innovation for support, and one participant was recruited through an acquaintance. All interviews were attended by both of us, except for one. Furthermore, every interviewee was promised anonymity and asked for consent to record the interview. Besides specific preparation for each interviewee, a general set of questions was used to initiate conversation topics (refer to Appendix 3). The interviews lasted between 30 to 90 minutes, with an average interview time of around one hour. The interviews were transcribed through the Lund University approved Klang AI.

3.4.3 Data analysis process

Our analytical starting point was a traditional grounded theory approach with aggregated data, in which we conducted rigorous thematization using Taguette, a digital tool for thematic analysis. Despite our grounded theory approach (Glaser & Strauss, 1967, as cited in Langley, 1999), we soon started to struggle with this approach; the data were conflicting, often involving multiple temporalities and levels of ongoing processes. Furthermore, cutting the excerpts removed too much context, temporal aspects, and internal reasoning, all of which were crucial for understanding why, how, and what changes were occurring in the ongoing identity construction.

As we recognised these limitations, we decided to revise our coding strategy without abandoning the grounded theory strategy. This happened after our sixth interview. We shifted our focus to narrative analysis, including longer quotes with richer context allowing the quotes to speak for themselves. In the narrative analysis we used temporal bracketing to some extent, as we outlined the temporal trajectories by summaries of each interviewee's career path. This transition allowed us to draw out the processes we observed in an organic way. We decided to carry out a systematic thematic analysis, less strict than a traditional grounded theory approach, and to be more open-ended, following the thematic analysis process of

Braun & Clarke (2006). We familiarized ourselves with the data, generated initial codes, identified first-order themes, reviewed and renamed the identified themes. This was done iteratively and through this process higher order themes were abstracted. We aimed for transparency of the data structuring process and outlined this further in Appendix 2.

4 Findings and analysis

This chapter presents the findings and analysis of eleven interviews with academic entrepreneurs and the observations during our participation in the Insights Program at LU Innovation. The Insights Program allowed us to observe academics attracted to entrepreneurship. Although our participation in the program had limited impact on our findings, it did provide useful context about the practices and processes an academic becoming an entrepreneur needs to go through.

The program focused on activities such as idea evaluation (e.g. market research) and provided a step-by-step script to move from a business idea to a developed prototype or product. In addition, our participation in the program involved actively discussing business ideas with PhD students that were aspiring entrepreneurs, providing insight into their reasoning process at an early stage. This filled a small gap, as most of our interviewees were further along in the process.

Most interviewees described similar stories of how their business came into being. To different extents, all business ideas grew from attempts to solve a scientific problem and the realization that the solution might have commercial value. We noticed that their stories echoed the NABC framework taught in the Insights Program, emphasizing ways to solve problems, business models, and best practices. There was substantial overlap between the lessons learned by the interviewees and workshop material.

Before moving forward with the findings, it is important to make two explicit statements.

1) For the purpose of conceptual clarity, section 4.2 presents the different roles that were identified from the interviews. We acknowledge the existence of different role identities in both academia and entrepreneurship as relatively stable processes, and we briefly describe how they overlap and differ.
2) It is essential to note that the order in which the findings are presented do not imply linearity and should not be understood as such. In fact, the findings illustrate microprocesses that appear to interact with certain macroprocesses in identity construction and negotiation. Linearity is also rejected as individuals appear to unpredictably engage in and out of different processes throughout time.

4.1 Career trajectories

All interviewees shared their unique career trajectory that provided the context for their orientations, activities and choices. This section functions as an overview that can be used as a reference point in the rest of this chapter.

Charles studied Engineering Physics and became a PhD student when his supervisor asked him to apply. During the PhD project, he and colleagues realized that what they were developing could have commercial value. They won an procurement and the company became profitable from day one. Charles and his PhD companions quit their job after a period of dual role work and started full time as entrepreneurs. Charles had an operational role at first, and later became the CEO for 12 years, leading the company during a period of immense growth. Charles ultimately stepped down after bringing in venture capital, and then became involved with LU Innovation as an Innovation Developer which is his current role.

Rosalind studied Biotechnical Engineering and Immunology. During her PhD, she participated in a project where she and her companions recognized the commercial value. They contacted LU Innovation that helped to establish their company. Rosalind worked in dual positions, having a research role at Lund University and a role in the company. After a couple of years, she decided to step down from her role in the company to focus on her academic career, while remaining one of the majority shareholders. The company became publicly traded and has grown since she stepped down. Currently, Rosalind is an active Professor at Lund University.

Isaac received his PhD in Inorganic Chemistry. From there, he was headhunted and worked as a process engineer in Germany for a decade. He later received a lab manager position at a leading lab in Lund. His pioneering technique in the semiconductor industry reduced processing time and costs. He realized there was a huge potential market, and after patenting the solution, he left his position at the university and pursued entrepreneurship full time. Isaac is currently the CEO of his company.

Galileo has a PhD in Biotechnology/Synthetic Chemistry. After obtaining his PhD, he started working at a startup that focused on polymeric separation materials, i.e. smart filters, for life sciences. When his site was closed down, he decided to establish his own business. Galileo is now the founder and CEO of his company and operates in the life science business, developing smart filters for pharmaceutical, and life science companies. The business is currently expanding.

Lise has a PhD in Seed Science. She worked in academia for 12 years before venturing into the industry. She established her business after being laid off from a larger company. She has developed a machine in the agricultural technology business that increases the efficiency of harvest by allowing seeds to grow that otherwise would have remained dormant. She is currently the founder and CEO and works full time at her company.

Ernest is a biologist with a PhD in Molecular Biology. Ernest's research has been centralized around different novel treatments of cancer. After his PhD, he recognized that 3D cells could be used to give personalized treatment, testing drug efficacy with a patient's cells, grown in a structure that mimics the human body better than regular 2D cells. He developed a technical solution within this technology and has just recently founded his company. Currently, Ernest holds dual roles as a researcher and the founder/CEO of his company.

Louis is an Associate Professor at Lund University. He works clinically at the hospital in combination with applied research. Together with his companions, he established a business that helps patients by preventing and detecting a stroke. Louis holds dual positions, prioritizing his role at the hospital and the university, while working in a R&D position for the company on weekends and evenings.

Marie is a Professor in Biotechnology. She obtained her PhD in Biotechnology over 40 years ago. Ranji works interdisciplinary and focuses on sustainable chemistry and biotechnology. She has co-founded multiple companies in the green chemistry sector and is actively involved in them, in addition to her role at the university.

Werner is a Professor Emeritus, who came from a chemical engineering background but received a role at the medical faculty in microbiology. He co-founded a company that produces a product that catches and binds hazardous substances to enable a clean and healthy indoor climate. Currently, Werner is active as a board member of his company, but formally retired from operational roles.

Nikola is an Associate Professor at the department of Computer Science. With a background in mechanical engineering and having worked in the industry, he went back into academia to improve control systems that had always been the bottleneck for his desire to build robots. After years of providing guidance to other companies that built robots, he decided to try to become an entrepreneur himself. The company currently employs over 40 employees, and Nikola is working as the CTO while retaining a small role in academia.

Max is a successful serial inventor. Max has a master's degree in Electrical Engineering and a PhD in Mathematical Statistics. After his PhD, he started working in the mobile industry, solving engineering problems and writing patents for his employer's and own solutions. He later founded his own consulting company, helping companies with inventing and patenting technical solutions. Max is a prominent figure in the deep tech business as he has hundreds of patents to his name. Recently, he has been reconnecting with academia, working on a research paper in his spare time.

4.2 Role identities

Our interviews brought forward multiple role identities. All individuals in our sample had engagement in both academia and entrepreneurship in common, but given that they operate in different fields (in academia) and positions (in business), many combinations of roles surfaced. We have therefore attempted to distinguish and conceptualize these roles that interviewees identified with, by stating the essence, the similarities and distinctive aspects of each role. The academic roles, i.e. *the engineer, the scientist, the researcher* and *the clinician*, were grouped under the term 'the academic'. The entrepreneurial roles, i.e. *the CEO, the founder,* and *the R&D*, were grouped under the term 'the entrepreneur'. Through this approach we aim to provide conceptual clarity for we permit ourselves to refer to 'the academic' and 'the entrepreneur' moving forward. NB: This section acknowledges and addresses specific roles, provided with a low degree of interpretation. Quotes that illustrate more than just a role and require further analysis are therefore presented again in our analysis of processes and temporality.

All interviewees in some capacity expressed their desire to make a positive contribution to society, either through science or through business. One academic entrepreneur captured this as: “We are in the lucky position that we can be quite close to making a real big impact on the world.” We therefore saw this as the most prominent overlapping element between academics and entrepreneurs. However, differences between both disciplines were also addressed as multiple distinctive characteristics were highlighted. All roles are assembled in an overview in Figure 2, which can be used as a reference moving forward.

Role	Category	Role essence	Distinctive aspect	Overlap
Engineer	Academic	Builds real-world solutions to increase technical efficiency	Focus on technical aspects and applicability	Problem-solving & making impact
Scientist	Academic	Drives understanding of the world	Focus on theory	Problem-solving & making impact
Researcher	Academic	Applies scientific thinking in specific field	Focus on actively doing research	Problem-solving & making impact
Clinician	Academic	Possesses formal title and works at a healthcare institution	Focus on service and value creation for patients	Problem-solving & making impact
CEO	Entrepeneur	Is resposible for strategy execution and daily operations	Focus on execution of business idea	Commercialization & making impact
Founder	Entrepeneur	Establishes a business	Focus on vision of business idea	Commercialization & making impact
R&D	Entrepeneur	Runs the R&D department and reports to CEO	Focus on technical advancement of business	Commercialization & making impact

Figure 2 - role identities identified from sample

The engineer role

The interviewees highlighted the role of ‘the engineer’, with problem-solving deemed a typical characteristic.

I think that there is a very large difference between engineers and non-engineers. Engineers, they are problem-solvers. - Max

Research and engineering were distinguished by the ability to produce something tangible.

I wasn't thinking about research. I was engineering. [sic] What corresponds to engineering is to make something for real, in real life. So you can graduate people that know all the theory and the principles of how things should be done; they can't do it. - Nikola

On ‘the scientist’ and ‘the engineer’ as distinct roles:

It's just that they need to develop the skill-set once they are going from being the number one in their field locally in some research group. They have to sink down to an engineer level. - Isaac

Like the role of ‘the researcher’ and ‘the scientist’, the engineer is driven by problem-solving, however the distinguishing factor is the strong purpose of building applied solutions. This purpose involves a high degree of technical problem-solving. By spending a lot of time with the problem, engineers develop strong problem-solving skills that shape how they think and orient themselves in the world. Yet, science and engineering can also support each other as addressed by Nikola and Isaac, as theory and application go hand-in-hand. Science resides in engineering, but it is the engineer’s primary focus that allows the identified role identity to be distinguished from others.

The scientist role

During the interviews ‘the scientist’ role was discussed multiple times. In contrast to ‘the engineer’, ‘the scientist’ was considered to be focused on novel theories.

As a scientist, you just come up with new things. As an engineer, you should turn this knowledge into something useful, value something. - Charles

The role of ‘the scientist’ was also compared to entrepreneurial competencies.

Marketing is something amazing, but as a scientist, we don't know that much about it. [sic] Because marketing, sales, our business development; these kinds of points are not easy to understand for a scientist. - Ernest

The scientist is primarily concerned with furthering our understanding of the world, and takes pride in their scientific capacities to systematically break down problems and think logically. Similar to ‘the engineer’, the problem-solving mindset is a dominant trait. Although a scientist may or may not be involved in research, the focus is on scientific training and understanding.

The researcher role

The majority of our interviewees expressed their motivation for applied research as their key driving factor.

I think that what really mattered, and still matters for me, is that this is something that helps now. It can be used now. - Werner

Applied research was compared to theoretical research, arguably the realm of 'the scientist'.

Theoretical research is also interesting, but it feels it's more interesting if the research result can be used directly in the application. So all the time I'm interested in applied research. - Lise

The role of 'the researcher' was connected to implications for usability that applied research, and separated from the role of 'the entrepreneur'.

I've always been very interested in the research and the academic aspects of this. I identify as a researcher more than an entrepreneur. - Rosalind

Galileo also described making a big impact as his driving force:

The real driving force is that we, as technical people, science people, are in the lucky position that we can be quite close to making a real big impact on the world, even if it's on the nerdy scientific side. - Galileo

Both Lise and Galileo distinguished between a theoretical or 'nerdy' side and an applied side within research, nonetheless both serving the same purpose of making an impact on the world. This also addresses the intersection at which the researcher, the scientist and, in parts, the engineer cross paths. We acknowledge that 'the researcher' role and 'the scientist' role largely overlap (and were often used interchangeably during the interviews), yet we argue that 'the researcher' can be characterized by a focus on applicability over a focus on theory. NB: by 'the researcher' we refer to the scientific researcher.

The clinician role

One interviewee inhabited the role of 'the clinician'.

My first role is that I'm a doctor. - Louis

NB: although Isaac referred to himself as a doctor, we classify his role as 'the clinician' to avoid a misconception between clinicians and individuals that hold a formal doctor title.

As healthcare is anchored in scientific research, the clinician's mindset is trained by scientific standards and practices. Yet, the distinguishing element for this role identity is the clinician's drive for making a humanitarian impact and the focus on providing service and creating value for patients. This was expressed by Louis in the context of how he developed his business idea for a stroke detecting watch.

There was a need that I saw in my clinical work. There were new treatments for a severe stroke and the treatments are very effective. But we only got very few patients. And when the patients came, I wanted to solve that in some way. And in a lot of the cases that arrived too late. We could see that this hemiparesis that the patients have when they suffer a stroke is very prominent, and that was at a time when these wearables were new and, of course, they were then used for leisure things, like training or exercise. So I thought we would be able to measure this difference in our movements using wearables. And if that would be possible we could then perhaps help these patients to call for help since they are typically unable to do that themselves when they suffer a stroke.

We detect that within the frame of 'the academic', 'the clinician' and 'the engineer' differ the most. Both roles wish to create a positive impact on society, but whereas 'the engineer' can build a business idea into existence, 'the clinician' might not be capable of building an innovative product or service (other than a medicine) and is therefore required to outsource the technical development of the business idea.

Within the collective term of 'the entrepreneur', three possible roles came forward from the interviews: the role of 'the CEO', the role of 'the founder' and the role of 'researcher and developer'.

The CEO role

The Chief Executive Officer (CEO) carries the responsibility for daily operations and steers the business towards its mission and vision. Some interviewees inhabited the role of the CEO themselves:

When I go out and pitch my business, I mean, I have the title CEO, but I take the front position in the public space as going out and raising capital and talking to investors. - Isaac

Other interviewees addressed that they had installed an external CEO.

Now we have a CEO, actually he left Company Y and joined this company and I think he's doing quite a good job. - Marie

Further supported by:

The CEO you hire in the company, that's extremely crucial. - Marie

These quotes illustrate that the founder of a company does not always inhabit ‘the CEO’ role, therefore ‘the CEO’ and ‘the founder’ are not necessarily identical. Also, although the CEO of a science-driven enterprise has in-depth knowledge about the technicalities of the company’s product or service, the CEO usually is not directly working on research and development (R&D). The wider scope of the CEO’s responsibilities allow for separation between ‘the CEO’ role from ‘the R&D’ role.

The founder role

The distinct roles of ‘the CEO’ and ‘the founder’ have already been described above. The role of founder is characterized by establishing the business from a vision. The founder may or may not be involved in the daily operations thereafter, but often stays on in an impactful position.

Well, that's a good question. I'm the principal owner and I'm on the board. - Werner

The R&D role

The role of ‘the researcher and developer’ (R&D) emphasizes on pushing on innovation within the established company. It differs from ‘the CEO’ and ‘the founder’ in the sense that ‘the R&D’ is a department head in the organization and reports to the CEO. Furthermore, in contrast to academic roles, this role is driven by commercial motives.

Some of my work here at the hospital also includes some research work that is related to this stroke alarm product. I can also do that here. - Louis

4.3 Exploring an entrepreneurial identity

As ‘the academic’ role was found to be a central and fundamental identity among the interviewees, we enquired about what initiated their interest in entrepreneurship. Various context-dependent triggers for exploring the development of an entrepreneurial identity can be derived from the findings, i.e. push factors from academia, being laid off and inspirational actors.

4.3.1 Being pushed from academia

The findings suggest that the process of exploring an entrepreneurial identity can be triggered when one feels pushed away from academia. Most interviewees shared reasons for moving away from academia as it conflicted with their bigger picture in some way.

I want to use this energy from academia for the solution for the public, because sometimes I feel like what we discover or what we investigate stays in the academic world and only we read it and we just do citations. That's all. There's no public benefit. - Ernest

This quote addresses how motivation dropped when a lack of public benefit was experienced. Others experienced academic policies around hiring as constraining.

I stopped having PhD's 5 years ago. [sic] I stopped when the department did not let me hire the best PhD student. Because he had not studied enough data courses at the masters level, but he had worked with software development at Sony. Academia is becoming worse and more constraining. - Nikola

We argue this example illustrates a frustration that led Nikola to feel mentally pushed away from academia.
When perceived downsides from academia were compared to entrepreneurship, a sense of liberation seemed to surface.

You do what you want, you don't depend on anything. You don't have to apply to foundations, you don't have to have a boss who tells you you should do this and that. You just do it and let the society decide, let the market decide if you're doing the things you're doing, if they are good or not, if they are useful. - Werner

These quotes highlight different critiques and frustrations toward academia through narratives about bureaucracy, narrowness and the lack of public benefit. These influences could trigger or expedite a disengagement from academia, prompting the academic role to become less central and creating room for a new role to emerge. We argue that the academic identity develops cracks as it is repeatedly confronted with institutional limitations. As a result, such limitations might foster the process of exploring the development of an entrepreneurial identity.

Temporality analysis

We noticed that push factors from academia are narrated as events that gradually accumulate. Ernest, Nikola, and Max each described a present frustration that built up over time, creating a past that is reinterpreted as increasingly constraining. However, Werner introduced a hypothetically possible world. With his narrative of entrepreneurship as freedom from bosses and grant applications, he imagined a self that operates outside academia. He reconstructed the past as a period of dependence, which gives the alternative present as an entrepreneur its appeal. We argue that this illustrates a temporal pattern of gradual disengagement, through which the academic identity gradually loses its centrality.

4.3.2 Being laid off

The event of being laid off due to reorganization was found as another trigger for exploring entrepreneurial identity development.

After I had worked in this big seed company and as they are doing reorganization, my position could not be kept in the company. So I needed to leave the company. Then I needed to think about what I should do. I know that I have a lot of background in technology, both the basic background and also the applied technology, and also I know the need in the market. So then I started thinking, yes, why would I not build a company? And then I started to further develop the technology to meet the market need. - Lise

Knowing that the technology she had helped develop was commercially viable, the layoff became the event that made Lise pursue entrepreneurship.

Similarly, Galileo found that being laid off in combination with visiting his family, was the starting point for developing his own business idea.

Our investors sold us in 2010. It took a while, and after a couple of years those new owners closed the whole site. They just said 'ah, it's too complicated'. So they fired everybody. So in 2017, I got unemployed. Then I thought, okay, I can do something else because I have been working with these filters all my life since my thesis. So I was working at the agricultural university for three years [sic] and then after three years I got an idea. I visited my parents in

Stuttgart and I said 'when my project finishes, I will start a company with this new technology.' - Galileo

In contrast to being gradually pushed out of academia, layoff from employment can be considered an impactful event that is relatively short in duration and clearly identifiable in time. These quotes show how being laid off is experienced as a key event and can be seen as a catalyst for a business idea. Inherently, we argue that this triggers a negotiation process within the individual's identity to figure out whether an entrepreneurial identity is desirable, feasible and justifiable.

Temporality analysis

The event of being laid off can be considered as a temporal discontinuity of an expected future. We identified that whereas push factors accumulate gradually, the layoff is experienced as a discrete event that closes off one future and forces the construction of another. Both Lise and Galileo narrated their layoffs as moments that made the past abruptly less relevant and demanded a focus on what comes next. Galileo's excerpt highlighted a future-oriented point of view that precedes the layoff. His visit to his parents produced the forward-looking commitment of 'when this project finishes, I will start a company.' However, we noticed that the layoff decreased the distance between the present and that projected future. The void left by the layoff highlights temporality as the individual is left without a structured future, opening the space for exploring an entrepreneurial identity as a way of rebuilding one.

4.3.3 Being inspired

Multiple interviewees suggested that their exploration of an entrepreneurial identity was triggered by inspirational figures. While some individuals talked about their first exposure to entrepreneurship in general, others highlighted specific actors that they felt inspired by.

For example, Company B, and the founder is John Doe; he is running his business and has a very nice research group. So he's doing it together. And also John Doe 2 here; he has his own company and he also has his own group. And also John Doe 3; he has Company C and he's a genomic analyst, those kinds of things. So there are several examples here that this ecosystem shows us that, okay, this is working. - Ernest

We interpret that "this is working", referring to a dual career as both an academic and an entrepreneur, reflects an orientation towards specific peer scientists that prove it is possible to explore entrepreneurship coming from a scientific background.

Other people at the department had similar journeys and were involved in different activities. So I think I was inspired by many people. - Rosalind

On a more specific example:

He's the former head of department here. He was my main supervisor when I did my PhD. And he was very – although had always been – very interested in entrepreneurial activities and engaged in a lot of different companies and had that mindset. So I learned a lot from him; he was kind of my mentor in this. - Rosalind

One of the core roles that a mentor fulfills, besides the transfer of knowledge, is to pass on the torch and inspire the next generation. We therefore reason that entrepreneurial mentorship could increase the probability of exploring an entrepreneurial identity.

Family was found as another way one could be exposed to entrepreneurship.

My father was his own boss. My older sister, she's her own boss for a long time. My brothers, they tried. - Galileo

Further expanded by the narrative of the father that refused to give up after suffering from permanent injury from a dangerous job.

So with a lot of permanent pain and everything. So that was really shitty. But after this incident, my father flourished. He said 'oh, I have the whole day free. I just have to take my painkillers three times a day'. But then he started his own journey. So he's German and was like so-so, not so good. So I did a lot of his paperwork. So he was starting to get busy buying old bicycles, fixing them, and selling them for more money. And then after a while that got boring so he bought cars, fixing them, selling for more money. - Galileo

We argue that this narrative reflects how family as a source of inspiration could introduce the individual to entrepreneurship, and, especially after a layoff, may help to trigger the development of an entrepreneurial identity.

Besides peers, mentors or family members as inspirational actors, other interviewees mentioned to have been inspired by public figures, like Warren Buffett and Elon Musk. Regardless of who one feels inspired by, the inspirational actors expose the individual to entrepreneurship, sparking engagement inside the individual that could make the exploration of developing an entrepreneurial identity more plausible.

From these findings, we notice that the identified triggers for exploring entrepreneurial identity development all differ in nature and characteristics. Whilst push factors from academia are concerned with inner tension and misalignment with personal purpose, e.g. making a real impact in society, these factors are also characterized by a gradual build-up over time, creating a 'crack' in the academic role identity that becomes more salient every time the individual is confronted with this misalignment. We speculate that once the central academic role identity gets a crack it might lose its immunity to other logics and purposes. Depending on the individual, this potentially triggers the exploration for entrepreneurship as it is anchored in a market logic, which could be more likely to satisfy the individual's purpose of making a real impact in society. On the contrary, there is the event of reorganization and the consequence of being laid off. This trigger is characterized by a rather acute event with a short duration. What's more, being laid off is an external trigger that the academic has no control over and suddenly has to deal with. An event as such leaves the individual with a void in the future and can cause the individual to re-evaluate his/her options and recalibrate his/her values and purpose. Despite being laid off, the academic possesses valuable, sector-specific knowledge that could create a strong competitive advantage if it were to be commercialized. This could indicate that this microprocess can give rise to the exploration of the development of an entrepreneurial identity.

Temporality analysis

When Ernest shared that peers are successfully combining academia and entrepreneurship, he translated a possible future self into a possible reality in the present. The phrase "this is working" signaled that Ernest's imagined future is already being enacted by others in a similar context. Galileo's family story exemplifies the past coming to the present. We understand his narrative as a formative past that shaped how Galileo understood entrepreneurship long before he was laid off. This created an entrepreneurial role model in his childhood and when the layoff created the opportunity for the startup, the past could provide the role template for Galileo to work his entrepreneurial identity toward.

4.3.4 Skills, practices and activities

The findings brought forward a focus on the process of learning certain skills, practices and activities needed for entrepreneurship, both from our interviews and from our observations at the Insights Program. For example, we observed how learning the methods for transforming a vague business idea into a viable business model was the main focus for participants in the Insights Program.

I don't think that I am a good storyteller. But I have to be. I need to be. I need to be able to explain in a simple way. - Ernest

Further elaborated by:

I am not able to transfer the message. Because the receiver is expecting from here. I need to simplify. The problem is, it's very difficult to simplify. So I need to train that side. - Ernest

Not only do these quotes highlight the skills Ernest actively tries to learn and the difficulties associated with them, but also this illustrates an awareness of essential entrepreneurial practices that are needed to develop an entrepreneurial identity. Therefore, we argue that being aware and expressing the need to improve specific entrepreneurial practices could suggest engagement with the process of exploring an entrepreneurial identity. Responsibilities within the entrepreneurial role were also shared.

I can never say that I will be good at marketing. Actually, I don't want to be. And I want to trust someone who is really good at marketing. - Ernest

While earlier talking about what to improve on, this quote refers to the practice of delegating. It implies a preference to remain in a technical domain moving forward, focusing on the science behind the business idea. We interpret this as another example of engagement with the process of exploring an entrepreneurial identity as it reflects an ongoing process of defining what the entrepreneurial role does not entail. The process of defining the entrepreneurial identity was echoed by:

I think as a CEO, you are either a very technical CEO or a selling CEO. And I would say I'm a selling CEO. - Galileo

Here, the CEO role is examined and divided into technical skills and the practice of selling. More interestingly, however, is that regardless of this classification, the technical CEO role intentionally or unintentionally seemed to be neglected; a role that was clearly engaged with given the technical explanations throughout our conversation with Galileo. This highlights how skills and practices in one's narrative relate to the view of self and how this could affect the development of an entrepreneurial identity.

Furthermore, we noticed that the decision of wanting to pursue a role or not can depend on role-specific activities. Nikola worked in the industry, but then went back to academia to get a PhD while still being employed, to ultimately establish his own business.

I had no plan of going back to industry. And I was also offered a couple of times a leading position at a company. And I was asking 'OK, what's this position? What would be my task?' Then I said, no. This would mean I spend my time writing PowerPoints instead of doing something real. So no thanks. - Nikola

The quote shows how role-specific activities can be meaningless if the individual is already strongly engaged in a conflicting process. We argue that this quote, like Ernest's, reflects a personal definition of what the entrepreneurial role does not entail in terms of skills, practices and activities, thereby demarcating the entrepreneurial identity.

Lastly, two interviewees mentioned that they are in the early stage of developing their business, and emphasized that there are plenty of things they do not know yet. Their founder identity is almost like a provisional role that one plays.

I still try to understand how to be one, but the basic concept: I see the problem and I solve it – an entrepreneur also basically sees the problem and solves it in a smart way and provides this solution publicly. [sic] A problem-solving mindset is critical to be an entrepreneur.
- Ernest

Temporality analysis

When individuals talked about skills, practices and activities, they narrated primarily in the present tense. This indicates an orientation toward a future entrepreneurial self that is pending and has not been fully realized. By addressing the practice of storytelling as something he has to learn, Ernest positioned the present as a period of active becoming. While learning is future-oriented, the decision to delegate marketing responsibilities reflected a present boundary of the future self; Ernest described what he has decided he will not become. Furthermore, Ernest's framing of the entrepreneur as someone who sees and solves problems creates continuity between the scientific past and the entrepreneurial future. On the contrary, Nikola grounded the boundary of his identity in the past. His refusal of the industry position is narrated through a commitment to solving problems through engineering, basing his (dis)engagement with an identity on the activities he foresaw that he would be required to do. We hypothesize that individuals who are in an early-stage development of an entrepreneurial identity engage with a provisional present where the entrepreneurial identity is being tried on.

4.4 Struggling and juggling

As we continue to attempt to address identity development processes from our data, it is important to acknowledge that the process of identity development in general, including its microprocesses, by its nature involves struggling. Nonetheless, we noticed that the process of struggling with dual roles at times became more salient throughout the interviews. Hence, this section tries to capture and analyse specific instances where individuals more explicitly struggle in unique ways with the duality of the academic role and the entrepreneur role.

Multiple interviewees addressed the complexity of dealing with dual roles and how it can impede maximum value creation. For example, having dual roles was seen as time consuming.

It is quite time consuming to have two careers in parallel and trying to build maximum value or contribute to both activities for a long period of time. - Rosalind

Seeing both roles as parallel to each other, indicates that they exist together but separately. We argue that experiencing the roles as dual can play into the hand of role 'juggling', understood as managing conflicting obligations of more than one role identity simultaneously. Role juggling, in relation to time allocation and value creation, was also addressed by Marie.

What my lesson has been; it's not easy to run two things optimally. Because being a *researcher, even if I'm a professor, it's a time-consuming work here. And especially when you need to raise your money for your own salary, that's quite tough and competitive. On the other hand, when you start a company, that also needs funding. I was very successful in getting initial funding, because I'm used to applying to Vinnova and Formas and all these agencies that support innovation. So that part was okay, but after that period, when you have a patent that has to be funded over the years, then it starts to get a little tricky.* - Marie

This led to a personal reflection:

I think I get distracted by too many ideas. That's my problem. That's why I'm an academic. I mean, in order to move these companies forward, you really need to focus and you have to be out there and talk about your company. - Marie

Resulting in a more general statement:

I think you need to make up your mind rather soon; not vacillate like me. - Marie

Taken the quotes together, it illustrates how struggling with dual roles can become inevitable over time. The process of struggling with dual roles might be mitigated for some time when mutual activities in academia and entrepreneurship, like raising funds, are identified and used as a justifying mechanism, but the struggle resurfaces when other areas of responsibility are neglected due to a lack of time or focus. Furthermore, the narratives illustrate how an individual's personal reflection interacts with role centrality. The reflection surfaces an awareness of what is done versus what should be done, and seems to interact with role identification, indicated by "that's why I'm an academic". Yet, we argue that the notion of what should be done to "move these companies forward" reveals that the entrepreneur role is present, but is not engaged with at the time of reflection.

The process of struggling also surfaced as the attempt for role separation was acknowledged but some overlap was deemed to be inevitable.

It's difficult in a way because my main occupation is being a doctor here at the hospital and that's most of my time. So the work I'm doing for the startup company is done mainly in my spare time and time that I'm free from clinical work. So I combine it in that way. Some of my work here at the hospital also includes some research work that is related to this stroke alarm product. I can also do that here. - Louis

Internal identity struggle seemed to surface on multiple occasions and appeared to be negotiated continuously. We noticed that time was seen as a limiting factor for the academic's ability to effectively manage dual roles, supported by other motives such as wanting to spend time with family and friends more, and how the company's maturity level could require capabilities that were perceived to be outside of the scope of oneself.

Temporality analysis

Our findings indicate that the ongoing process of struggling with dual roles is experienced primarily as a problem of time. Both Rosalind and Marie described how commitment to one role inherently omits the other. We understand this experience as two roles competing for a finite present. The struggle is mitigated temporarily rather than resolved, and resurfaces when circumstances change. This might point at a cyclical temporal pattern. The struggle seems to become less salient when overlapping activities, such as grant writing, allow both roles to be served simultaneously, and seems to resurface when responsibilities specific to one role are neglected. Through the statement "that's why I'm an academic", Marie explained a past identity by present behavior and attributed her problem of getting lost in ideas as an identity trait. Her acknowledgement that her companies need focus to move forward projects a future in which the entrepreneurial identity demands fuller engagement and enactment.

Another way of mitigating the struggle was shown by Louis, who managed the temporal tension through compartmentalization, i.e. mentally separating roles, as exemplified by allocating the entrepreneurial role to spare time and evenings. This strategy was also shared by Lise. We argue that compartmentalization can help to create an ordered account of the present, although boundaries might be broken down in practice, as seen by Louis' narrative of when research and clinical work feed directly into his company.

Across these accounts, we identify that the shortage of time acts as the central constraint. The roles are both present and recognized, but time prevents full engagement with both. Therefore, the struggle seems to surface most acutely at the points in time where that limitation becomes impossible to avoid.

4.5 Coming to terms

The struggle with dual roles seemed to be resolved when the individual came to terms with the struggle. More specifically, as the individual makes sense of experiences related to the duality struggle over time, he/she ventures into a different microprocess that can decrease the centrality of the struggle and can create a workable way forward, regardless of which role identity the individual engages with. As mentioned before, while we acknowledge that the process of struggling remains, this process seems to interact with the process of coming to terms, exploring workable ways forward. We identified different ways of how individuals come to terms; some individuals seem to be able to merge or compromise roles, whereas others interact with the process of oppressing a certain role.

4.5.1 Unifying dual roles

One microprocess that appeared to interact with the process of coming to terms is the unification of the dual roles. This would be typically characterized by the absence of boundaries between both roles, sparking a form of synthesis. We identified different ways by which individuals engage with this process.

Synthesis of logics

Unification of the dual roles seemed to occur when individuals had seen enough similarities between the roles for their boundaries to become blurred. We localised unification when no clear struggle was visible and when the individual seemed to have synthesized the logics of both roles.

No, no, it's actually one thing. It's one thing. If I had to explain it to a very simple person, I would say I'm like a bakery shop and I'm trying to make really good cookies. I just don't tell anybody how I do it, but all the research I'm doing is to make you a really good cookie.
- Galileo

This exemplifies that the technical entrepreneur still engages in science (and doing research); the main difference is that the production process is kept hidden. The analogy makes the entrepreneurial role almost more akin to that of a craftsman than to a scientist, thereby smoothing over the epistemic contradiction between science, where knowledge is understood as something that should be publicly available, and commercialization, where knowledge is understood as intellectual property and can reside in trade secrets. Further supported by:

My customers are also scientists. - Galileo

In combination with the bakery analogy, this quote also supports unification by explaining how his role and background enable him to speak to his customer base. Simultaneously, the word "also" reveals a continuous engagement with the academic identity, while "my customers" establish the entrepreneurial context. The individual does not seem to be concerned with aligning context and role. Instead, 'the scientist' and 'the entrepreneur' are used interchangeably, which we interpret as a form of engagement in the process of unifying dual roles.

Responsibilities

Some interviewees implicitly addressed unification as they narrated about responsibilities that are prevalent in both roles.

I think there are many similarities between what I did. Because as a researcher, I had to find funding for the projects. So what does one do? One will write his grant proposals and send them in. So the idea is the same there. I have a product here. I'll try to make it as good as possible so that those who sit on the money are willing to pay me for this. So it's the same now. I mean, we have a product and I write about what I do in the company. I sit there and write the articles. - Werner

Werner focuses on the similar responsibilities that the role entails, which gains support from Marie, that focuses on the central activity and responsibility of generating funding to the business and to the science projects she participates in.

In many of my projects that I apply for, I try to see which would also favour the companies. I mean, by taking them as partners, or applying for funds for the companies. - Marie

Both individuals make the same implicit reference to a crossover activity between academia and entrepreneurship. Marie even explicitly addressed the value this activity could bring to her companies. These findings suggest that one might engage with the process of unifying both role identities, when a specific responsibility that was central in the academic role functions as a starting point to engage with the entrepreneurial role. We therefore argue that in the process of unifying both roles, both identities are enacted simultaneously and the boundary between them is no longer experienced as meaningful.

Temporality analysis

We distinguish ‘unifying dual roles’ from other microprocesses by the relative absence of struggle. Those who have unified their roles tend to speak in a stable present tense where the struggle appears to have dissolved. Galileo’s bakery analogy removed the distinction between scientific and entrepreneurial activity into a single present practice. There is no indication of a past in which the roles were separate or a future in which they might be. Furthermore, Werner and Marie grounded their unification in continuity with the past. Their skills developed across their scientific career, particularly in securing funding, and are carried forward into the present. We speculate that temporality functions differently when unifying dual roles, than in the other sections. The past seems to provide continuity rather than a contrast, and the future introduces no particular struggle where the new identity is experienced as extension rather than a transition.

4.5.2 Transitioning between salient roles

In some instances, we noticed that both roles were salient and experienced as distinct but easily engageable, sometimes suggesting that both roles could reinforce each other. This was supported by the fact that every interviewee was still engaged in academia to some degree.

I think having a leg in academia is advantageous, but I would like to work more like an entrepreneur. You have some advantages of being here in academia, but it doesn't have to be more than 20% or so. - Marie

Marie emphasized that it could be advantageous to remain in academia at least partly and Louis reaffirms this expanding on the benefits.

The combination is really great, because as a doctor I have a steady income. I have access to all the resources of the hospital and my platform here as a doctor, which gives me knowledge and authority in this field and so on. [sic] I understand it's difficult to be an all-in entrepreneur, because if you rely on that for your steady income, it's difficult to raise funds and all that. So for me that has also been, you know, being able to provide for my family, it's a security in the entrepreneurial life to have this fallback position as a doctor. - Louis

Louis' excerpts indicate that transitioning between both roles can create a sense of security and comfort, without compromising on the salience of both role identities. The roles were also perceived as a way to increase business credibility.

Had I not had this background, I think it would have been more difficult for me to communicate the benefits of stroke alarm, if I had not been a doctor in the beginning and working with these patients. I think also it has helped to shape the product into something that is really going to be useful in clinical everyday life. So I think it's beneficial for people in both ways. - Louis

Interviewer: *So it brings some credibility to what you're doing?*
– Yes, absolutely. - Louis

We reason that Louis' counterfactual reasoning of 'what if' could help to keep both roles salient and could solidify his engagement with the process of transitioning between both roles.

Security and comfort was also implicitly addressed from a management perspective.

As a company, since we do a lot of R&D, we still publish so we regularly go to conferences and publish papers and presentations. [sic] It also means that the other part of the team can continue to publish [sic] because scientists, they may not firstly think about their salary, but what they definitely want to have are a lot of papers, because that's how they build their career and their CV. [sic] So they can continue to publish and that I think is a good situation to get those people to join the company. And it's also part of our marketing, so this is where we do marketing of our technology and talk to potential customers in the industry also so it works quite good for a deep tech company that comes from science. - Isaac

Viewing the roles as supportive of each other, might increase engagement with the process of coming to terms. Benefits from academia, like a steady income and freedom of creativity seem to be perceived as risk-reducing factors for entrepreneurship. Both roles were seen as salient as the interviewees oscillated between them based on contextual factors, even among those whose entrepreneurial identity appeared to be both central and salient.

I decided like, either I go all in now with my co-founders, 100%, and drop everything else we have on the plate and just go in and start a company. Or we can as well. fail and skip it, basically. So I think this was the realization that I had. - Isaac

He revealed that he has not abandoned academia.

I haven't really abandoned academia. So I have a support role at Linköping University with the research group, which I still do. I don't get paid for it, but I have a research group which I support. I sit in their group meeting and advise them and every second year I give training, like a PhD class in semiconductor manufacturing. So I have one foot left in academics through this. - Isaac

Despite spending relatively little time in academia compared to the time on his business, Isaac is still felt engaged enough to comfortably express that he has not abandoned academia. Though this excerpt could be interpreted as a contradiction, we suggest that both roles apparently are salient enough to oscillate between them.
Transitioning between roles was also shared as a past engagement.

Yeah, you had the previous question. I don't think I answered completely; the moment I started to feel like an entrepreneur… I think… We started planning for this already when we were doing our PhDs. So that was already a small part at that time. I would say it was maybe not a clear moment. It was more of a continuous thing. But when you start to do this double shift job, yes, that's one thing. I think when you quit your real job and you completely rely on this startup, that's maybe when you get to be a 100% entrepreneur. - Charles

Here, the issue of time reappears; working as a researcher by day, and building the company on the weekends, before Charles ultimately being able to quit his job in academia and become an entrepreneur, when the company took off.

In summary, this section highlighted how individuals engage differently in the process of transitioning between both roles. Motives such as security, comfort and role reinforcement seemed to represent important microprocesses involved in coming to terms with the struggle of role duality. However, it is important to note that the narratives that are highlighted may be external relational events that are being framed as identity decisions in retrospect. The decision moment might be better understood as a series of role adjustments that occurred over time, then narrated as a singular discrete turning point. We argue that these strategies could involve active transitioning between the roles, which highlights how both roles are experienced as present or easily engageable, indicating that both roles are salient.

Temporality analysis

This section showed how dual roles are narrated as a continuous negotiation. Interviewees describe oscillating between salient roles in the present, with both identities remaining accessible and active. Louis and Marie framed the dual roles in the present as a deliberate arrangement that reduces risk in the future, orienting their current engagement with a role identity toward a future where the entrepreneurial identity becomes more central.

Charles described the double shift period as a transitional present, and quitting academia as the moment of becoming a full entrepreneur. Yet, he framed the transition as a continuous process rather than a discrete event. His narrative moves between wanting a clear turning point and acknowledging that none existed. This paradox of both being continuous and discrete was also seen by Isaac. His "going all-in" suggested a decisive break with the past, but his continued involvement in academia showed that his past still has a foot in the present. We identified how individuals construct narratives that produce clearer temporal boundaries on what actually might have been gradual and ongoing role adjustments. The present is experienced as a negotiation, but it tends to be narrated as a resolution.

4.5.3 Transitioning between non-salient roles

Several expressions from the interviews suggested that a role identity can be suppressed and stored in the background. This process is characterized by the lack of a role's salience, implying the role is engaged less easily. While the role seems to remain, it appears to be overshadowed, locked away or dominated by another role, thereby affecting the centrality of one or more role identities. Some individuals appeared to be in a place in time where they disengaged with identity development that suppressed their entrepreneurial identity; others seemed to exist in a timeframe in which disengagement suppressed their academic identity. On the question if academia was considered after being laid off:

Oh, no, no, never. Never. No, because academia was too, how can I say? You're so far from making something that's useful. No, no, that was no option for me. I didn't even think about it.
- Galileo

This quote shows how the desire to make something useful made the individual, at least temporarily, disengage from academia and engage with entrepreneurship. We interpret this as an example of how the entrepreneurial identity appeared to be more salient than the suppressed academic role. Disengagement from the entrepreneurial identity was also detected from Rosalind's narrative.

I took a step back and I stepped down because there were other people that could take over. [sic] I contributed as long as I could, but there is a stage when it becomes something else than research. My strong points were maybe the research. - Rosalind

Further explained by:

You need to decide at some point what to focus on because you can't focus on everything. You have to prioritize. And then kind of that naturally became, you know, I took a step back and I stepped down because there were other people that could take over and do what I couldn't. [sic] There were a lot of excellent collaborations with industry along the way that allowed us to test their specific chemicals on our test and validate. It's just been a very nice journey, a little rough on me personally when I took a step back, but that is, I think, completely natural. - Rosalind

We understand this narrative as an example of the entrepreneurial identity being suppressed and transitioning back to the academic role identity. This excerpt addresses a moment in time when coming to terms with dual roles helped to clarify which role identity should prevail, encapsulated by "It's just been a very nice journey". Yet, on the question if she were ever to start a business again:

Yeah, absolutely. I think it would be fun to do it again. - Rosalind

This suggests that the role of entrepreneur hypothetically could be recalled and revived. Revival of a role was supported explicitly by:

In my spare time the last month, I've just looked at these kinds of things that I have had in my head, but not had time before. So now, yeah, there we have the result. So what has happened is that my research gene has revived after 30 years. - Max

We understand the revival of roles as a possible indicator of how the role of entrepreneur could live on in the individual's mind while the role is not salient.
'Letting go of the company' was a recurring narrative that seemed to interact with being attached to a role and the struggle one could experience from that.

We were transforming [sic] It was quite an intense time. So there were several moments where I said, well, okay, because you set some kind of goal. So when I have reached this goal, then I should probably step down and hand it over. But I did that quite a few times. - Charles

After finally stepping down Charles experienced relief.

Interestingly, during all these 12 years, it was hard work and absolutely stressful, but never really in a negative way. But when I actually did step down, I felt this very strange sense of relief that I couldn't imagine. Because I was so used to carrying all this responsibility 24-7, and suddenly it was not there. It's a light feeling, and at the same time, it's a strange feeling, because the company that you have brought up is almost like your child. I really think of it in that way. So that child had grown up. So it's like, 'Now you go, you can take care of yourself. You'll survive.' And then you're standing on the sideline looking at this person and you realize 'it's not exactly what I would do', and you have to sit on your hands. So, it's a strange feeling, but it's a great feeling. And I wasn't sure what to do next. I mean, should I stay within the industry, which I know very well? Should I start a new company? - Charles

The decision was filled with conflicting emotions, both relief in terms of removing the responsibility from the shoulders of the entrepreneur but also accepting that the future decisions happen without you. Also, the transition from CEO to unemployed created a new search for meaning.

I took the time to think of it. Then at some point in time, just to get inspiration, I started more actively to look at open job positions. And I also started to apply for some, basically just for fun, to see what it felt like to sit on that side of the table. It was interesting. But then this position as an Innovation Developer came up, and I looked at it and to be honest, I didn't even know that this position existed at the university. But it just ticked many boxes of what I think is interesting, what I would want to work with. - Charles

From this narrative, we detect how the entrepreneurial role was deliberately put to the background. We understand this as a way of coming to terms in which identity negotiation appeared to be rather stable; the feeling of having proved to oneself to be able to inhabit the entrepreneurial identity, may have allowed the entrepreneurial role to be sidelined. It has therefore been made non-salient, rather than become non-salient.

From our findings, we can even speculate that one could disengage from both the scientific and entrepreneurial roles in a post-career context.

I feel more like a musician nowadays. - Werner

As Werner is not simply deflecting the question but rather showing how “what one is” is connected relationally to “what one does”, it could suggest that the daily activities can influence role identity and could decrease the salience of both the entrepreneur and the academic identity.

In summary, we posit that role duality was sometimes seen as a risk. Interviewees felt the need to engage in narratives that suppressed at least one role identity, sometimes by framing their engagement as a definitive choice. This seemed to mitigate the identity struggle, by not having to continuously negotiate role identities rather than focus on the becoming of the desired identity. We refer to this as the process of transitioning between non-salient roles, as this way of coming to terms decreases the salience of the role duality. We also speculate that identity salience might interact with the activities that one does.

Temporality analysis

The microprocess of transitioning between non-salient roles was narrated through multiple temporal orientations. We argue that Rosalind’s retrospective narrative reconstructs her experiences through a present sense of resolution, and that reconstruction allows her to project a potential future where she returns to entrepreneurship.

Another version of this was seen by Charles, whose narrative about stepping down from his CEO role highlighted a structure of self-imposed temporal thresholds that were repeatedly procrastinated. These thresholds arguably functioned as prospective anchors and projected a future self that justified his engagement in the present (narrated as the past). We argue that the relief that he felt when he stepped down, later reinterpreted through the metaphor of a child that had grown up, is exemplary of an entrepreneurial role identity becoming less salient. Furthermore, Werner introduced a different pattern, i.e. gradual withdrawal from both roles through disengagement from the activities that characterized them. His statement “I feel more like a musician nowadays” suggests that identity salience is shaped by what one does in the present. Without ongoing engagement, past identities become less salient. We suspect that role identities can be suppressed, revived, deferred, and reinterpreted in the present, with reference to futures and pasts.

4.6 Enacting the entrepreneurial identity

Some individuals enacted their entrepreneurial identity as they were narrating. The entrepreneurial identity surfaced through descriptions of competencies and activities, consistent with our observations from the Insights Program where participants actively sought to learn business methods and frameworks. We detected a wide variety of ways in which an entrepreneurial identity was performed.

One way that individuals enacted their entrepreneurial identity was performatively. Interviewees engaged with their entrepreneurial identity as they highlighted aspects of the life of an entrepreneur.

> *When you're in a startup company, you're everything. I mean, you need to work with everything, high and low. It's from emptying the dishwasher, to helping with the IT systems, to sales, to the technical stuff. I really liked that period.* - Charles

Entrepreneurial enactment was also detected through different acts of speech.

> *I go all in, I work 24-7. I sit in the middle of the night and have calls with Japan and things like this. And I work weekends. I go on vacation, but I don't take vacation.* - Isaac

Some used specific entrepreneurial jargon.

> *It's also aligning with my target clients, or their pain. So, they can gain from my solution or they can relieve their pain with my solution.* - Ernest

The use of "pain" and "gain" reveals an orientation toward the value proposition canvas, a well-known framework for developing a business idea and specifying the value for customers, as taught in the Insights Program. The importance of using business language was also addressed.

> *You have to learn the financial lingo. [sic] Basically, they want to know about your pre-revenue or do you have any revenue? Then you need to know financial facts and data. What's your burn rate? And I need to tell them what the burn rate is. So, then I open the calculator: "Do you want to know it in Euros or SEK?"* - Isaac

Some engaged with their entrepreneurial identity when narrating about entrepreneurial activities.

For example, in Sweden I can take the list which company is working in this area. I call every company and try to meet with them. - Lise

Others spoke as a company owner as they highlighted and assessed entrepreneurial matters like the market position and trustworthiness of the business.

Now we have so many years of experience and now we are established. Now people can trust us, we think. But the problem we have, of course, is that we have much too little visibility in society. - Werner

The increased trustworthiness by delivering good results throughout time has become integrated into the identity, and we interpret the use of 'we' as indicative of a strong identification with the organization and by extension the entrepreneur.

The key is you have to be totally selfless. You have to give, I don't want to have a tough language, but you can't give a shit about what you think. You have to care entirely about what the customer wants. Everything. You have to almost be their servant, their provider, their service guy. - Galileo

Particularly Galileo's quote shows conviction, urgency, and vivid language. The performative character of the delivery itself enacts the identity. In this particular moment, the entrepreneurial identity seems to be internalized and central enough to be transmitted to others. We interpret the performative aspect of the entrepreneurial identity not only as a skillset that the entrepreneur needs to master 'the rules of the game', but also as a mechanism to convince oneself and others that one has what it takes to be an entrepreneur.

The findings also brought forward how individuals perform their entrepreneurial identity through managing people and responsibilities. Most individuals emphasized company achievements and managerial tasks when talking about themselves as entrepreneurs.

I was working quite much with operations, you could say, managing; keeping all of this together in some systematic way. We started without any financing, and we won this first deal with the German automotive industries, so we actually became profitable from one day to the *next with the founding team, and then from there we continued to grow the company with profit for the next 15 years. [sic] I took on the CEO position after 2012, I think that was a phase when we were with about 50 to 60 people. We were starting, or continuing, international expansions, with offices in the US, in Japan and India during my period there. We continued to grow the company with profits to around 100 people.* - Charles

Entrepreneurial identity is enacted here through the narrative of achieving business growth successfully and the role oneself played throughout this period.
Performing an entrepreneurial identity also seemed to interrelate with the degree one identifies with a formal title.

Interviewer: *How do you refer to yourself in a professional context? Is that more as a professor?*
– I have the professional title, but I never use it. - Isaac

Isaac then narrated the story of how his formal title affects him in daily life settings.

I live in Germany, on my visa credit card, it says Dr. S., of course, because I'm in Germany. And when I went to the dentist, somehow my dentist figured out that I'm a doctor. So he screamed out in the meeting room, "Dr. S., next!" And then the whole meeting room looked at me, because I sat there with the hoodie and the baseball cap. It's a funny situation. - Isaac

The emphasis on clothing and appearance symbolizes the disengagement from his formal title. The disengagement, together with the example itself as a narrative, suggests that the entrepreneurial identity is enacted. The symbolic value of clothing and appearance were also surfaced when role models were also discussed.

I also looked at Elon Musk. But while I was studying him, he developed into one of these cases you don't really want to have as a role model. Before, when it was still Twitter, it was quite okay. And then when it became X, he became like an anti-model. I was running around with SpaceX t-shirts and now it's in the washing basket. - Isaac

We argue that informal clothing could be a recurring symbol for the entrepreneurial identity. The "hoodie and the baseball cap" and the "SpaceX t-shirts" are an expression of self with symbolic value that may derive from an early entrepreneurial role model, whose casual dress may have made that informal self-presentation feel aspirational. Even though the t-shirts are eschewed and the role model became an anti-model, the prioritization of comfort over social conformity might have made an impression.

The findings further suggest that managing others could also trigger an individual to engage with entrepreneurial identity enactment. Isaac described how his own experience influenced his management style.

It's just that they need to develop the skill set that they need as they are going from being the number one in their field locally in some research group. They have to sink down to an engineer level. I went through that process when I came to Germany. It was clear from day one that everybody else was much more experienced than me, and I was just a new guy. I had to prove myself. And this is an ego thing that is difficult for scientists to go through, because I joke with them. I tell them, "I'm going to make engineers out of you." And this is the worst thing you can say to a scientist, because they are just so fantastic; they have published their PhD, and they defended it, and they have a Nature publication. And then I tell them: "I'm going to make an engineer out of you", but I explain what I mean with that. - Isaac

This quote not only illustrates how the individual ranks certain roles in terms of prestige, but also highlights how one's own past identity transition can lead to imposing roles on others. Similar to a founder's attempt to convert employees to follow his identity journey, we argue that efforts to transform employees could exemplify a manifestation of performing an entrepreneurial identity. In line with this, a personal method for managing employees was specified.

Other people have a 30 day vacation and they want to have regular working time. So in the beginning, I got upset about this. But I found a way; I just divide each person in the company. There are the people that I can give a nice contract to and they can perform like a normal job, and then you have people that want to do something new, they may take a bit more risk. They are more entrepreneurial. And if you can group people into these two groups, it works perfectly. So what's difficult are these in-between people I found. [sic] So what helps me is to just tell the person 'you can go all in'. Then you become more like a founder and you get the stock options and everything. Or you can just see it as a work and then you just get a nice work balance situation and so on. You just have to choose. It's like in the Matrix; red or blue pill. - Isaac

The Matrix-analogy signifies a binary belief; employees either have to 'go all-in' and adopt a more entrepreneurial role, or see work as a nine-to-five.

Taken together, we interpret the active attempt to shape the identity of others according to a predetermined role as a way of engaging in entrepreneurial identity enactment. Also, we posit that engaging in the activity of kneading others' identity requires the individual's own entrepreneurial identity to be central.

Temporality analysis

We saw how the interviewees engaged with performing their entrepreneurial identity predominantly in the present tense, in which they perform a role that is currently inhabited rather than claimed retrospectively or imagined prospectively. Individuals actively demonstrated their entrepreneurial identity; Galileo's customer-centricity philosophy, Werner's assessment of market position, and Ernest's entrepreneurial jargon all firmly ground the entrepreneurial self in the present moment of speaking. Furthermore, we detect more complex temporal patterns with Isaac. His disengagement from his formal title and his preference for casual clothing suggest a present self that has moved away from a past academic identity. Also, despite his shift in role models, the underlying disposition toward informality and comfort over conformity persists. Here, the inspiration he gained from the past leaves a mark on the present self, even after the source of that inspiration is discarded. Lastly, we posit that Isaac's entrepreneurial identity appeared secure enough in the present that he can attempt to prescribe the identity development to others. We suggest that this shows how his temporal logic is extended outward by his way of managing employees.

In summary, our analysis indicates that there are processes that involve role identification, as people identify with different roles. We also show that there can be different reasons individuals *explore entrepreneurial identities,* like feeling pushed out, being laid off, and being inspired. Our findings also suggest that the process of constructing a new role identity involves learning the *skills, practices, activities,* and language of the role, in order to integrate it into oneself. Furthermore, our most substantial processes revolve around the *struggling and juggling* with role duality, and *coming to terms,* highlighting microprocesses that individuals engage in to cope with their identity struggle, described as *unifying dual roles*, *transitioning between salient roles*, and *transitioning between non salient roles*. Moreover, we found that individuals use temporality to construct personal narratives, which appears to play an important role in the ongoing construction and negotiation of one's identity. We will argue for this more extensively in our discussion.

5 Discussion

This study examined how academic entrepreneurs use temporality to construct and negotiate their identities. We found that temporality plays a central role in the identity construction and negotiation processes of academic entrepreneurs. Through this main contribution, we discuss the implications of the role of temporality in relation to established identity-related processes.

Our study highlights how temporality functions as an active mechanism in identity negotiation, enabling academic entrepreneurs to continuously reconstruct past events and bring them into the present. Individuals actively engage with reinterpretation and imagination of past and future events, to stabilize their identity in the present which we conceptualize as "using temporality". We also argue that boundary work is partially a temporal practice, as academic entrepreneurs continuously draw, dissolve, and redraw role boundaries when engaging with temporality, making it an ongoing mechanism for identity negotiation. Lastly, our findings suggest that role duality is not resolved but continuously managed through shifting role salience, and that managing it is itself a permanent process rather than a transitional stage.

Importantly, our study distinguished between macroprocesses and microprocesses. However, there is a need to thread carefully, as abstracting microprocesses from macroprocesses implies designating causal relationships that we would prefer to avoid. It easily becomes a slippery slope and can lead to stage models that lack empirical grounding. On the other hand, viewing every small process as distinct would make every finding unique and take away the possibility to make general claims. While this means that our categorization could be changed as well, we argue that it serves a purpose to hierarchically arrange micro- and macroprocesses without marking our conceptualization as definitive and static. One definitive note is that although some processes may sound definitive (e.g. 'coming to terms'), they are understood as ongoing; the individual can engage in every identified process throughout the passage of time.

5.1 The use of temporality in identity construction

Our findings indicate that academic entrepreneurs continuously draw on reconstructions of past events and projections of future selves to construct a coherent identity in the present moment of narration. This is what we refer to as the “use of temporality”. With that claim, we expand on Kaplan & Orlikowski’s (2013) notion of temporal work and apply it to identity on an individual level. Using this framework, we see that the individual engages in temporal work by aiming for internal alignment among past, present and future potentialities through their narrative.

This could be understood as a narrative self-identity (Sveningsson & Alvesson, 2003). We detect that temporal work in identity construction is active and purposeful. Individuals select, frame, and sometimes idealize past events and future scenarios in ways that serve their current identity needs. For example, the findings show explicit forms of counterfactual and hypothetical reasoning helping the individual to justify decisions in events that were crucial to their identity construction. Not only does this illustrate the practice of constructing a narrative to encourage internal alignment of provisional selves (Ibarra, 1999), but more interestingly, we suggest that this is how the use of temporality differs from ongoing temporality (Hernes, 2014, p.45). Using temporality is characterized by an active and purposeful engagement in the present, in contrast to the more passive general experience of being in time (referred to as *Dasein* by Heidegger, 1927).

Furthermore, the use of temporality can help to explain an underdeveloped aspect of the liminal venturing process by Hayter et al. (2021). By our ontological stance we reject stage models that do not assume continuous change. Although this means that we reject the assumed linearity of the liminal venturing process from Hayter et al. (2021), we do acknowledge similarities between our findings and their conceptualization. For example, our findings showed how triggers from the environment can make the academic engage in the process of *exploring an entrepreneurial identity.* We subscribe to the idea that this process interacts with the process of identity work, as these findings correspond to the ‘extrinsic triggers’ as conceptualized in the liminal venturing process (Hayter et al., 2021), however we stress the individual can engage with these processes at any given moment. Furthermore, Hayter et al. (2021) identified ‘identity play’ as a microprocess that instigates identity work. Although our findings suggest that academics can indeed ‘try on’ an entrepreneurial identity, provided that they are recently engaged in the liminal process, we argue that provisionally 'testing out' the entrepreneurial identity already is a form of identity work. We therefore reject the claim that an identity is tested out *before* it is further constructed. Rather, the entrepreneurial identity is continuously reworked through one's projections of the past and the future that reside in narratives.

We argue that the liminal venturing model falls short because it does not account for individuals being simultaneously oriented towards past and future. There is no temporally neutral moment in which identity play occurs before identity work begins. From this, we reason that identities remain and can be continuously negotiated. This indicates a constant liminal stage, as found by Bousfiha & Berglund (2025). Our findings echo this, as identity work and role transitions occur continuously rather than in distinct phases as phase-based models suggest. For instance, *entrepreneurial identity enactment* could sometimes be constructed before any real external triggers or conscious comparison of role enactment, rather than as something people did only in the present. The processes we observed did not appear linear. People identified with different roles at different times in the present when narrating. They often bridged the past and the present, sometimes justifying their current roles by reference to past events. Conceptually, our findings align with Hayter et al. (2021), however, we claim that the sequential ordering of processes is problematic because identity work appears to occur continuously and non-linearly.

Our study posits that academics tap in and out of microprocesses as they continuously seek ways to address the internal struggle of becoming an entrepreneur. One way to do so is for the individual to engage in *enacting entrepreneurial identity.* Hayter et al. (2021) posit that entrepreneurial identity enactment is an outcome of either 'identity conflict' or 'identity incorporation' and present entrepreneurial identity as an achieved end state when enacted. Yet our findings indicate that entrepreneurial identity enactment should be understood as a process that one contingently engages in until other identities might demand attention. Enacting an entrepreneurial identity appears smoother when the individual manages to construct a compelling narrative for oneself and others. We conclude that this can be achieved either by drawing on one's own entrepreneurial skills, practices, and past activities or by projecting it through management activities and forward-looking strategies. Narratives used for entrepreneurial identity enactment draw from the past to construct a present self that has actively moved away from an academic identity. This again ties back to the concept of the narrative self-idendity (Sveningsson & Alvesson, 2003; McAdams, 1993). Simultaneously, one can deploy entrepreneurial skills and jargon to experience the present as an active becoming of an entrepreneurial self. Therefore, enacting the entrepreneurial identity is a temporality-laden practice that evokes a sense of coherence and legitimacy in the present moment. In other words, we argue that narratives not only drive the enactment of an entrepreneurial identity but are also assembled from reconstructions of the past and orientations toward a future self.

5.2 Boundary work as a temporal practice

As one's identity is not a blank page, constructing a new identity and integrating it into who we are, is likely to foreground the struggle of becoming a new version of self. In our study, moments where the struggle was foregrounded we captured as the process of *struggling and juggling*. This struggle is where boundary work becomes most visible, as the individual is forced to actively negotiate where one identity ends and the other begins. Where the previous section discussed the use of temporality as a mechanism through which narratives on identity are constructed, we argue here that the use of temporality most clearly occurs when boundaries of the academic and the entrepreneurial identities are actively negotiated.

We identified the process of 'coming to terms' that seems to be mediated by different microprocesses, denoted as 'unifying dual roles', 'transitioning between salient roles', and 'transitioning between non-salient roles'. These microprocesses show similarities with the outcomes of boundary work, i.e. integration, compartmentalization and re-establishation as conceptualized by Karhunen et al. (2017) and Mäkinen & Esko (2023). However, we contribute to boundary work by claiming that whether roles are unified, held in parallel, or one is foregrounded, depends on how the individual temporally orientates toward their roles. Our findings show that in 'unifying dual roles', the individual uses the past as a continuity. This implies that boundaries between roles are torn down by the construction of a single coherent trajectory rather than two separate ones. When the individual engages in the process of 'transitioning between salient roles', clearer boundaries are achieved due to the individual's narrative. Here, individuals tend to neglect role transitions as gradual and ongoing as they narrate their transitions as explicit turning points in time. From the process of 'transitioning between non-salient roles' we observed that role boundaries are redrawn by making one role temporarily dormant, allowing for it to revive or be recalled in the future. From this we argue that identities can be suppressed, deferred, and reactivated as circumstances change. These processes suggest a relationship between temporality and boundary work. We therefore argue that boundary work should be seen as an ongoing negotiation rather than as a practice with stable outcomes as suggested by Karhunen et al. (2017) and Mäkinen & Esko (2023).

5.3 Role duality as a permanent condition

The narratives of academic entrepreneurs illustrated that some individuals appear to struggle less with role duality than others. We found that individuals manage role duality in different ways, demonstrated by engagement in the process of 'coming to terms'. We agree that this could be explained by the varying degrees of role salience and centrality (Murnieks et al., 2014; Stets & Burke, 2000; Stryker & Serpe, 1994), and extend this notion as our findings show that shifting degrees of role salience and centrality is a continuous process in identity negotiation. Furthermore, from the perspective of liminality, we posit that fluctuating degrees of role salience and centrality align with the claim that academic entrepreneurs remain in a permanent liminal state (Bousfiha & Berglund, 2025), and challenges the implied resolution of the liminal venturing process as conceptualized by Hayter et al. (2021). Our findings suggest that what appears as resolution for the struggle with role duality, is better understood as a temporary configuration of salience. 'Coming to terms' as the temporary resolution of the struggle is actualized through the microprocesses 'unifying dual roles', 'transitioning between salient roles' and 'transitioning between non-salient roles'.

We argue that the process of 'unifying dual roles' is characterized by both a high degree of readiness to enact a role (salience) and the absence of competition between the academic and the entrepreneurial role identities. Our findings indicate that by engaging in unification, the individual no longer experiences the difference between both roles as relevant, which helps to resolve any battle around salience. Both roles also retain a high degree of salience in the process of 'transitioning between salient roles', in which one's readiness to engage in a role is secured by both roles being experienced as equally accessible and engageable. The nuance compared to unification is that the difference between both roles remains relevant to the individual, and that the individual is able to shift between them depending on what the context demands. On the contrary, the findings indicated an asymmetry of salience in the process of ‘transitioning between non-salient roles’, in which the individual effectively places one role in the background and the other on the foreground for the time being. Even when temporarily abandoning a role, the role identity remains dormant and could be retrieved in the future through changing contexts. Taken together, these three microprocesses represent attributes of role salience and offer different pathways through which individuals come to terms with the role duality struggle without eliminating it. We argue that this shows the continuous aspect of interpreting and reinterpreting the meaning of the role duality.

Furthermore, we posit that the ongoing struggle around role duality can be partly attributed to self-verification. The struggle typically becomes noticeable when two role identities with conflicting logics become active at the same time, or are triggered in close proximity (Stets & Burke, 2000; Stryker & Burke, 2000). Self-verification therefore posits that, when an identity is active, individuals seek to minimize inconsistent behaviors or meanings to act in line with the situated role (Stets & Burke, 2000, pp.232-233). The role duality struggle is enhanced when both nonindependent identities are triggered by the same cues (Stets & Burke, 2009). This was evident in our findings: as academic entrepreneurs operate in the same field in both roles, cues from the environment could trigger the salience of both identities simultaneously, leading to deeper struggle and ongoing identity conflict. Generally, we argue that this is one of the foundational characteristics of academic entrepreneurship, since businesses stemming from academia are based on commercialization opportunities from science.

Lastly, even though our findings do not focus on role centrality, we can speculate how this is affected by the varying degrees of role salience. For instance, ‘going all-in’ on entrepreneurship signifies how an individual increases the importance of the entrepreneurial and anchors it to an event in time to gain the upper hand in the identity negotiation process. When the role one transitions from becomes non-salient, the new entrepreneurial identity can become more central as it mitigates the individual’s experience of liminality and the constant identity negotiation. Also, as role salience depends on narratives, the degree of role centrality is likely affected by events that the individual narrates as definitive. Like role salience, we affirm that role centrality is not a fixed property of an identity but a dynamic outcome of how individuals narrate their roles over time.

5.4 Temporality as an inevitable mechanism

Although we have previously acknowledged the need to thread carefully when presenting causal relationships, we believe our findings indicate a relationship between role duality, identity work, boundary work and the use of temporality among academics who engage in entrepreneurship. We zoom in on these processes and propose a conceptual model of how temporality is involved in identity construction (see Figure 3). This involves a dynamic interaction between processes and conceptualized temporal view.

Our proposed model should be understood as a way of sensitizing the role of temporality in identity construction and negotiation. When an individual with a defined academic role explores an entrepreneurial identity, they construct and negotiate that identity. We describe this as entering an arena with three interconnected macroprocesses: role duality, boundary work, and identity work.

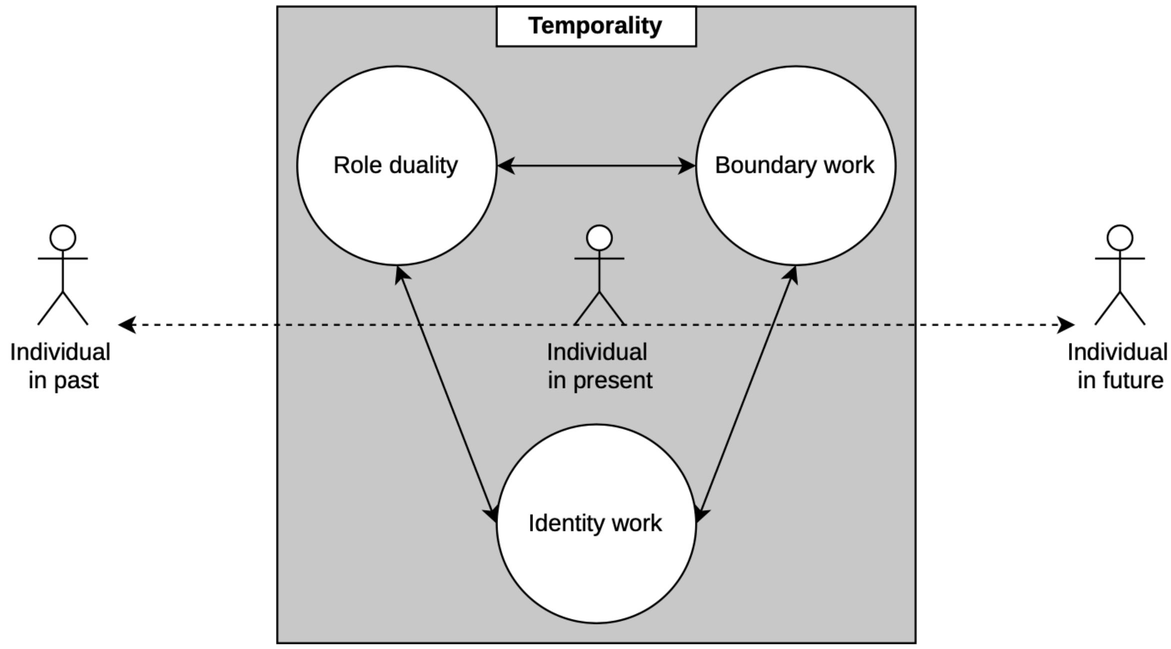

Figure 3 – Our conceptualization of the relationship between role duality, boundary work and identity work. The dotted line refers to thinking forward and thinking back, denoted as the use of temporality. The model visualizes an individual in the present continuously engaged with these processes, while drawing selected interpretations of past events and imaginations of the future into the temporal context of the present (grey square) to construct their identity.

Upon entering, the individual moves unpredictably between these macroprocesses like a pinball, influenced by the use of temporality. The bidirectional dotted arrow indicates that the individual in the present engages in the process of thinking back (past) and forward (future). Our model assumes presentism; the individual engages with past and future through the potentialities in the present.

Our findings indicate that role duality can be understood as a rather stable process in which an individual, to varying degrees, inhabits both an academic and entrepreneurial role identity. From that, we suggest that role duality interacts with the process of boundary work as this process is concerned with the ongoing negotiation of where one role stops and the other role begins. Role duality affects boundary work as having multiple roles provokes a negotiation process that is settled by the determination of where one role ends and the other role begins. In turn, boundary work affects role duality by generating the identity script for how and to what extent each role could be enacted when triggered. A useful metaphor is of a vendor (role duality) and a specialist (boundary work); the vendor presents their range of units to the specialist for categorization; the specialist's demarcations of where one category ends and another begins in turn determine how the vendor classifies and arranges the units. Our study suggests that this interactive negotiation process carries references from one's experienced past and projected future that are applied to the present, which suggests that temporality is an enabler for this interaction to happen. In turn, we argue that the use of temporality explains how, and potentially why, academic entrepreneurs negotiate their identity.

Role duality affects identity work by providing the cognitive and behavioral schemas of the dual roles that need rework. In turn, identity work shapes role duality as cognitive and behavioral schemas are reinterpreted, reconstructed, and potentially made compatible, thereby shaping what the dual roles entail and how they are experienced. Following the same metaphor, the vendor (role duality) outsources units to a factory (identity work); the factory reworks these units and delivers them back to the vendor. As this (re)construction process involves the creation of a cohesive narrative, the same argument of narratives involving temporality applies. As temporality resides in narratives, we argue that the use of temporality conditions the construction process of dual role identities.

Boundary work affects identity work as the construction of identity integrates the properties and limits of each role. The other way around also holds; identity work affects boundary work as the meanings and interpretations of the roles drive the negotiation around where boundaries are drawn. In other words, the factory can receive specific information, like measurements, from the specialist, that conditions the reworking process. The reworked units that the factory returns set the parameters for the specialist's next assessment. In this interaction, identity construction and negotiation come together and are both conditioned by temporality. While boundary work uses past and future events to negotiate limits of identity, identity work requires a cohesive narrative to construct identity. Therefore, we argue that the use of temporality is a foundational process in all forms of identity development.

Our proposed model attempts to show how the use of temporality is an inevitable mechanism in the construction and negotiation of dual identities. Since identity inherently involves stories around the past and the future, the narrative self-identity is woven into the present where identity is continuously constructed and negotiated. Thus, the individual uses temporality to create the internal order of events and make sense of what events are to be included to determine how identity must be constructed, negotiated and enacted in the moment.

5.5 Limitations

We assume the reader is familiar with the common limitations of qualitative research, including generalizability, subjectivity, and time constraints. Here, we outline the specific limitations of our processual approach to facilitate informed engagement with our analysis.

Our sample only consisted of 11 interviews, which may have hampered our ability to make generalized conceptual claims. However, our interviews were extensive and many interviewees addressed similar struggles and processes. We argue that we reached theoretical saturation after our eighth interview, as the following interviews did not contribute to any new identified processes. The relatively small sample could be explained by the difficulties around getting a hold of academic entrepreneurs in combination with time constraints. Also, two more interviews were scheduled and cancelled by the interviewees. Yet, to complement our small sample, we engaged in four workshops and one start-up crawl to gain insights in thought processes involved with the development of a business idea, which is especially useful when studying premature entrepreneurial identity construction.

Furthermore, by seeing identity as an ongoing accomplishment rather than a stable entity, we aimed to show how it is constantly reproduced through action and internal meaning-making. However, a major challenge for processual research is practical relevance. Management researchers and practitioners often want knowledge that provides actionable insights, frameworks, and prescriptive causal relationships. In contrast, process research argues that phenomena are in constant flux, context-dependent, and relationally constituted. As a result, it struggles to provide generalizable insights, since there is always the risk of producing heavily situated accounts that resist translation into other settings. In our study, this is less of a problem. All studied individuals are academic entrepreneurs with backgrounds at Lund University, and we found many similarities across their unique narratives. In terms of situated accounts, we believe that we have sensitized the reader to processes that seem to be universal to academic entrepreneurs negotiating identity. We do not claim objectivity, but urge for further discussions and investigation of the 'use of temporality' in identity construction.

The next problem, however, is more difficult to mitigate: analytical boundaries (also addressed by Langley (1999), see 3.2). If everything is process, flow, and 'becoming', establishing analytical boundaries becomes difficult. It is hard to decide where one process ends and another begins. This is the most consequential limitation of our study. We recognize there may be overlap between our categories and that to explain some processes, narratives must involve others simultaneously. We urge the reader to reflect on this issue throughout the discussion. When highlighting 'becoming' as researchable units, one could accuse us of introducing a substance ontology that we aimed to critique. We tried to be mindful of this, recognizing that identity is ongoing and changing while our interviewees may see it more statically in terms of their roles. We also experienced that process accounts are often descriptive, explaining how something unfolds rather than why. This focus on emergence and open-endedness can make it difficult to identify the mechanisms involved.
Furthermore, there is tension between grounded theory strategy's iterative coding and the narrative approach. Narratives impose coherence with clear beginnings, middles, and endings, often smoothing over the complexity of lived experience. As researchers, we author these narratives, making interpretive choices influenced by theory and storytelling rather than

pure data. We argue that by combining narrative and grounded theory methodology, we can draw out temporality while still getting enough material to make generalizations.

In terms of theoretical limitations, the application of RIT at first glance may seem inconsistent with a processual perspective on identity, as one might argue that every role is in a constant flux and that conceptualizations of identities also are bound to change. However, we argue that this is trivial, given that our findings indicated that academics have an advanced understanding of what it means to be an academic. This suggests that changing perceptions likely occur slowly and can therefore be seen as a relatively stable process. That being said, one's conceptions of what it means to be an entrepreneur might change dramatically by venturing into entrepreneurship, and might create new perspectives on one's academic roles. We argue that this is also of small concern as we study identity construction both as an activity in the present and recollections of the past; whether their interpretations remain the same over time is not of interest for our study. Wagenschwanz (2021) mentioned that it might be problematic that separation between role enactment and role identification had not always been made (p.68). This problem does not seem that apparent in our findings, as people described their inner workings in relation to the external events of what they were doing, which made us get insight into their thoughts about the activities they were doing. We constructed names of roles that seemed to align with how the interviews proclaimed themselves to be, including the boundaries of the roles.

Temporality is another puzzle that is extraordinarily complex. Capturing the actor's experience of time involved the interplay of memory, anticipation, and engagement with the present. Participants interpreted their past experiences in light of their current context. This created accounts that may reflect post-hoc rationalizations more than lived experience. To mitigate this, we interviewed people at different career stages and guided them to draw on the past, present, and future to ensure we captured lived experiences. Additionally, these rationalizations might be interesting as they construct identity in the moment through temporal accounts.

Lastly, we had to choose an order for the presentation of our findings. This order would either reinforce or challenge our perspective if not addressed appropriately. The order in which we presented the processes we found, are arguably in a somewhat linear way, but this was done to support the reader. Also, we have been transparent: we rejected linearity, acknowledged that individuals switch unpredictably between processes, and urged the reader to be mindful that the order of presentation should not be taken to establish a causal relationship between the processes.

6 Conclusion

Our study contributes to the field of process research in management studies by outlining the changing dynamics of identity. As processes inherently involve relationships, our main contribution highlights the role of temporality in identity construction. With our conceptual model we aim to contribute in the field of process studies in management research, however given the cross-disciplinary topic of identity, we suggest that other disciplines and fields such as sociology and social psychology, that seek to understand identity, could benefit from the conceptualizations of our study.

Our study aimed to answer the research question: *how do academic entrepreneurs use temporality to construct and negotiate role identities? Additionally, which processes interact with role identity construction and negotiation?* By outlining various aspects of temporality in the construction of role identities and identifying processes involved in the maintenance, construction, and negation of dual roles, we have provided a dynamic perspective on professional identities among academic entrepreneurs. We humbly suggest that this could be of societal importance, as technology advances and the academic entrepreneur is expected to become increasingly common in technical domains. With this in mind, we have shown that inhabiting dual roles, as an academic and an entrepreneur, involves an ongoing identity struggle. Institutional support for academic entrepreneurs can then become crucial to achieve innovations that benefit society. Universities and employers of PhDs must recognize the identity tensions these individuals face; failing to do so risks losing skilled academic entrepreneurs to early dropout, ultimately undermining the innovation capacity that society increasingly depends on.

We present a conceptual model of how processes involved in identity construction might be related to and interact with the individuals' use of temporality. Further studies could investigate whether our conceptualization would hold in a quantitative context. Also, it might be fitting to address the value for organizations of our study. In general, we highlight messy processes, dynamic interactions and how stage models might be too simplistic to address the complexities that actually explain organizational phenomena. As organizations are composed of its members that all have different roles, the changing and the becoming of being for these individuals may be important for organizations to understand, when making strategic projects or designing organizational changes.

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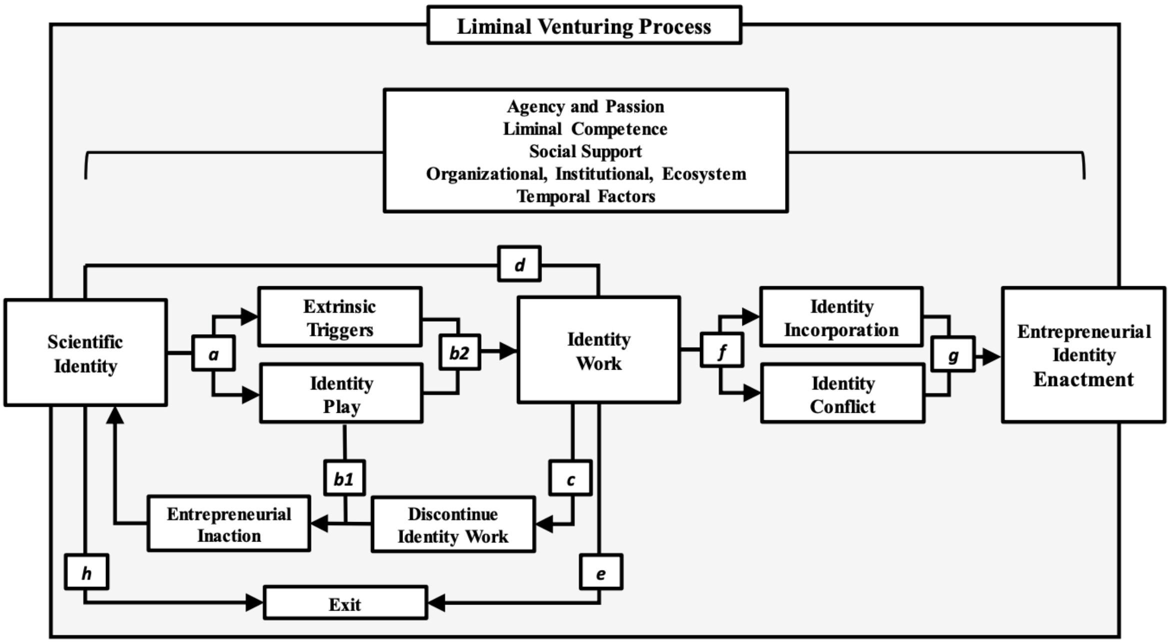
Appendices

Appendix 1 - Liminal venturing process



(Hayter et al., 2021, p.1471)

The conceptualization by Hayter et al. (2021) is rather complex and include five moderating factors:

1) *Agency and passion*, incorporating the intensity of the entrepreneurial motivation, and the passion which is seen as a way to proxy the centrality of the entrepreneurial identity (Murnieks et al., 2014; 2020).

2) *Liminal competence*, comprising the skills and personal narratives that are needed to enact the new identity, explained by the capacity to construct a coherent entrepreneurial narrative as an important condition before engaging in entrepreneurial activity (Meek & Wood, 2016; Pratt et al., 2006; Rasmussen et al., 2011, as cited in Hayter et al., 2021, pp.1475-1476).

3) *Social support,* referring to validation from others, e.g. mentors, role models and peers (Ashfort & Schinoff, 2016; Conroy & O'leary-Kelly, 2014; Thornborrow & Brown, 2009; Rasmussen et al., 2015, as cited in Hayter et al., 2021 pp.1476-1477).

4) *Organizational, institutional, and ecosystem support*, involving socialization tactics, incubators, tenure criteria, entrepreneurial education, and regional ecosystems. These systems

are believed to involve socialization, and identity is considered co-constructed in social settings, implying that both over- and undersocialization can hinder identity development (Thornborrow & Brown, 2009; Ibarra & Obodaru, 2016, as cited in Hayter et al., 2021, pp.1477-1478).

5) *Temporal factors*, referring to how time mediates everything and explains why scientists traditionally engage with entrepreneurship later in their careers than non-scientists (Haeussler & Colyvas, 2011; Clarysse et al., 2011, as cited in Hayter et al., 2021, pp.1478).

Appendix 2 - Data structuring process

Initial codes	Second-order codes	Aggregated process
● ‘The academic’ (engineer, scientist, researcher, clinician) ● ‘The entrepreneur’ (CEO, Founder, R&D) ● Perception of traits associated with each role identity	The academic entrepreneur	**Role identity**
● Sense that academic achievements stays in academia ● Frustration with bureaucracy	Being pushed from academia	**Exploring an entrepreneurial identity**
● Loss of stable position as the moment that forces a new path	Being laid off	
● Encounters with role models combining research and industry ● Validation by role models ● Early exposure to entrepreneurship ● Curiosity about new possible, roles and selves ● Going with the flow	Being inspired	
● Learning entrepreneurship through coursework ● Sales ● Cold calling ● Communicating business idea ● Problem-solving ● Learning and open exploration	Skills, practices and activities	
● Role duality experienced as time-consuming forcing prioritization of roles. ● Overwork and exhaustion ● Wanting to spend more time with friends and family ● Pressure from multiple directions simultaneously	Time constraint	**Struggling and juggling**
● Investor pressure misaligned with researcher’s pace and standards ● Overly academic colleagues “holding back” the business ● Desire to do science while still being an entrepreneur	Cognitive and value tensions between roles Testing identity; exploring boundaries	
● Concerns about credibility, by having dual roles ● Role insecurity ● Concerns of capabilities to become an entrepreneur	Liminality	
● Entrepreneurship as convenience rather than active choice	Risk aversion and comfort zone tensions	
● Logic synthesis; roles are seen as similar or identical ● Responsibilities that exist in both roles	Unifying dual roles	**Coming to terms**
● Security and comfort ● Roles seen as distinct but reinforcing. ● Academic roles as enhancer for entrepreneurial credibility	Transitioning between salient roles	
● Identity suppressed, focus on one role, ● Transition- Tied to specific events that serves as boundaries for role	Transitioning between non-salient roles	
● Framing the venture as life-work/legacy. ● Identifying as a specific kind of CEO ● Embracing radical responsibility ● Learning the lingo ● Matrix analogy	Performative entrepreneurship Language Metaphors	**Enacting the entrepreneurial identity**

NB: Some second-order codes were integrated in the analysis of the text without specific headers, in contrast to other identified concepts that were carved out more clearly and that appeared to reflect important microprocesses that interact with macroprocesses. Though this distinction is subjective, it is analytically useful for this open-ended exploration. In addition, the temporality aspect was analysed by applying a temporal analysis on the entire process, drawing on synthetic strategies which is why it is not provided in the findings, without a table. Lastly, this overview presents examples of our codes. Codes related to temporal processes are omitted here, but were drawn on when conducting the temporal analysis. Other examples of initial codes that never amounted to any second order and third order themes are also omitted.

Appendix 3 - Interview questions

Start of interview:

- Tell us about your academic career and/or your entrepreneurial career. What do you do now and what have you done before?
    - When did your interest in your topic start?
    - In what field of research did you start your career?
    - What made you pursue a PhD/academic career?

Personal identity

- What are your current hobbies?
- What does your social life look like in general?
- How would you describe yourself as a kid?
- Is there a phrase/quote/ethos you live by?
- What would your ideal dream day look like? (not limited by money or location)
- Who was your role model growing up? Did you have any?

'Researcher' identity:

- What does being a researcher mean to you?
- What drove you forward as a researcher?
- Why was research a career worth pursuing for you?
- Why is research important to you?
- Have you learned something that you use in your daily life, what?
- What academics do you look up to? Why?

Entrepreneurship:

- What did you learn from starting a business?
- What type of entrepreneurial work do you do (managing, innovating, sales, marketing, accounting)?
- Did you have any help founding the company?
- What role did the university/LU Ventures play?
- Why did you pursue entrepreneurship?
- Are you more of a researcher/PhD then a founder?

- Do you have any entrepreneurial role models or people you look up to/inspire you?

‘Entrepreneur’ identity:

- How did you move from research to entrepreneurship?
- What traits should an entrepreneur have?
- How would you describe the context for you becoming an entrepreneur? What motivated you/what scared you/what influenced you?
- How do you refer to yourself in a professional context?
- Why are you suitable as an entrepreneur?

Practices:

- What does the start of your work day look like?
- How would you describe both the similarities and differences between doing research and entrepreneurship?
- Did you bring some practices from your academic life to your way of doing business?
- How has being an entrepreneur changed the way you do research?

Processes:

- What changed when you decided to pursue a PhD after your master?
- What changed when you started to become an entrepreneur?
- How do you view research now compared to when you started?
- Would you say finding a use for the research is stronger, now when you are an entrepreneur?

End of interview:

- What are you most proud of from your career?
- How do you balance the dual roles of entrepreneur and researcher?