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The process of growing in small firms: Exploring dialectic adjustments to nonroutine disruption

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ABSTRACT

Studies examining small firm growth have suggested that growth is complex due to the multitude of internal and external factors that disrupt it. However, in focusing mainly on external factors and paying less attention to internal factors, the process of growing – or what is happening inside a small firm as it grows – remains undertheorized. Using findings from a real- time case study of a small firm and insights from the dialectical perspective, we develop a theoretical model that illustrates growth as a dynamic process occurring through dialectic adjustments in response to disruptions that cannot be resolved with routine practices. Our findings suggest that these disruptions trigger one of two situations – potentially converging or potentially diverging – in which individuals must adjust by connecting their insights (converging) or breaking connections (diverging). As such, our findings illustrate the variability in growing, compelling small firms to complexify their internal workings through dialectical adjustments in response to ongoing nonroutine disruptions.

KEYWORDS

Dialectic adjustments; growing process; small firm growth; nonroutine disruptions

> Think bigger. Not just for print customers, *but how can we utilize this [scale] for internal purposes and other customers?* Think above and beyond current issues. This should not just be a replacement for Adobe. (Ethel – Observation Data)

Achieving and maintaining growth for a small firm is a challenging task. It requires navigating disruptions (Coad et al., 2013; Tunberg & Anderson, 2020), avoiding vicious cycles of counterproductive outcomes (Es-Sajjade et al., 2021), and scaling processes and products efficiently (Coviello, 2019; Shepherd & Patzelt, 2020). Not surprisingly, a large number of small firms find this task challenging and remain small (Åstebro et al., 2014; Dahl & Sorenson, 2012), while others struggle to maintain steady growth, that is, growth that is not too fast or too slow (Es-Sajjade et al., 2021; Levie & Lichtenstein, 2010). This challenge is echoed by the CEO of Clubhouse, a small firm that created an audio-only app designed to be a virtual conference hall: "Boy, I think we grew way, way too fast . . . What we really want to do is be *on that path of steady, gradual growth*" (Anand, 2021). The question is, how can small firms do this?

Studies examining small firm growth have primarily focused on the firm's readiness for growth through indicators such as financial strength, access to capital, and founder characteristics, as well as potential constraints of growth, such as difficulty recruiting and retaining high-quality talent and limited knowledge resources (Birley & Westhead, 1990, 1994; Jiao et al., 2021; Stampfl et al., 2013). Implied in the extant research is that small firm growth is impacted by a multitude of internal and external factors that either enable or constrain it. How firms navigate these factors to maintain growth is indeed an important topic (Birley & Westhead, 1990; Es-Sajjade et al., 2021; Iborra et al., 2022; Thomas & Douglas, 2022). Birley and Westhead (1990) argue that growth can be understood through how quickly the firm can adapt to different factors in the internal and external environments. More recently, Thomas and Douglas (2022) found that small firms sustain growth through resource configurations when the industry is significantly disrupted (that is, managing internal factors in response to changing external ones).

However, in focusing on how different factors impact small firm growth, the process of growing – or what is happening inside a small firm as it grows – remains undertheorized. While the process of growing in large firms has received more attention (that is, Levie & Lichtenstein, 2010; McKelvie & Wiklund, 2010; Penrose, 1995), these insights may not

be applicable in small, independently-owned firms for at least three reasons. First, small firms must often deal with limited resources to grow and have limited ability to negotiate for external resources that are afforded to larger firms (Sheppard, 2020; Zahra, 2021). Second, small firms are likely to face considerable uncertainties due to their newness and the limited knowledge of the founding team in managing scarce resources (Brinckmann et al., 2011; Zahra, 2021). Third, in focusing on growth rather than on growing, extant studies have provided limited insights into the variabilities within the process itself (McKelvie & Wiklund, 2010; Tsoukas & Chia, 2002; Weick, 1995).

The purpose of this study is to examine the process of growing in a small firm by investigating how individuals inside a firm deal with the growing process as it is happening "on the ground – how plans were translated into action and, by so doing, how they got modified, adapted, and changed" (Tsoukas & Chia, 2002, p. 568). We do this by conducting a real-time case study of Digital 100, an independently owned small tech firm experiencing growth in the aftermath of early failures. To make sense of our findings, we borrow from the dialectical perspective (Raisch et al., 2018) and focus on "the ephemeral, the indefinite and the irregular" (Law, 2004, p. 4) actions within the process of growing in this small firm. The dialectical perspective is particularly beneficial for studying change processes occurring in situ by considering how actors engage tensions and incompatibilities in a ceaseless, push-pull dynamic interplay of frictions (De Keyser et al., 2021) and contributing to a "continuous state of becoming" (Farjoun, 2019, p. 136).

More specifically, according to the dialectical perspective, "tension-based reconfiguration" is not manifested in an isolated phenomenon but instead is "built up across multiple levels and sources, necessitating the researcher to consider the organization studied as an integrated conjoint of social occurrences" (De Keyser et al., 2021, pp. 237–238). Borrowing from the dialectical perspective, we thus study "growing" in a small firm as a dialectical process through which individuals engage dynamic contradictions in cascading spirals of convergence (synthesis) and divergence (antithesis) (Langley & Sloan, 2012; Lewis & Smith, 2022; Raisch et al., 2018). In exploring these dialectical adjustments, we hope to answer recent calls for interpretivist explorations of the process of growing in small firms while embracing the diversity and pluralism of the dialectic activities therein (Es-Sajjade et al., 2021; Leitch et al., 2010).

Our study contributes to the literature on small firm growth in the following ways. First, in contrast to views that focus on the impact of major external disruptions on firm growth (Eggers & Park, 2018; Iborra et al., 2022; Thomas & Douglas, 2022), we demonstrate that minor disruptions are equally important to the process of growing. These include factors such as customer pressures for product changes/accessibility, internal breakdowns due to a lack of resources and procedures, and temporary operational constraints. Our findings indicate that these disruptions stifle process scaling, requiring the small firm to pivot, recombine its activities, and identify new ways to grow. In explicating these disruptions, our findings also suggest that many of them comprise "situations of non-obviousness" (Winograd & Flores, 2008, p. 165) that are nonroutine – they cannot be resolved using current knowledge (Feldman, 2000; Tsoukas & Chia, 2002). The nonroutine nature of these disruptions is critical because, as they are resolved, individuals create new adjustments that contribute to growing the firm from the ground up.

Second, our findings suggest that nonroutine disruptions trigger "specific webs of social relations" (Tsoukas & Chia, 2002, p. 568) that individuals engage with to create necessary adjustments. Using insights from the dialectical perspective, we categorize two such webs: those that require individuals to connect with others and narrow the focus to generate a response (that is, dialectic adjustments to facilitate convergence); and those that require individuals to break connections with others to expand the focus (that is, dialectic adjustments to facilitate divergence) (Raisch et al., 2018). In both situations, disruptions work against individuals' abilities to generate new understanding, leaving them to either succumb to the disruption (inhibiting growth) or dialectically adjust their interactions, thereby translating the disruptions into growing.

Taken together, our findings contribute to the understanding of small firm growth by empirically illustrating its processual nature (growing) and explicating the necessary variability within. The variability exists in a cascading spiral of potentially convergent and divergent situations, each requiring different dialectical adjustments. That is, at times individuals must infuse new variability (antithesis in a potentially converging situation) and at times decrease it (synthesis in a potentially diverging situation) to respond to a nonroutine disruption. Thus, our findings echo Weick's (1995, p. 188) argument that looking at organizations through the activities they engage in ("verbs") allows one to see them "as

ongoing events into which they are thrown, and less likely to think of it as turf to be defended, levels of hierarchy to be ascended, or structures to be upended." In embracing this approach, our study provides much-needed insight into the dynamic nature of the growing process in small firms, explicating the internal dialectic adjustments as the key mechanism through which it occurs.

Theoretical background

Our exploration of small firm growth was informed by two theoretical perspectives. Research on the microfoundations of firm growth sheds light on what happens inside the firm as it grows (Levie & Lichtenstein, 2010; Penrose, 1995; Sternad & Mödritscher, 2020; Tsoukas & Chia, 2002), and dialectic theory allows us to see how small firm growth is continually constructed and reconstructed through human action rather than as a system-level, organizational dynamic (Hargrave & Van de Ven, 2017; Langley & Sloan, 2012; Raisch et al., 2018). Together, these perspectives provide an appropriate theoretical lens for understanding the nuances of growth in small firms. We review both works of literature below.

The microfoundations of growth in small firms

Exploration of how firms grow has been a foundational topic in the management literature due to its importance for current and future firm success (Kor & Mahoney, 2000; McKelvie & Wiklund, 2010; Penrose, 1995). Firms that capitalize on opportunities coming from the external environment and create value for stakeholders by actively deploying versatile resources tend to experience more significant growth and success (Barroso-Castro et al., 2020; Levie & Lichtenstein, 2010; McKelvie & Wiklund, 2010; Penrose, 1995). Although challenging for all firms, growth can be challenging for small firms, since they must navigate "inevitable trading vicissitudes incurred by any new enterprise" (Coad et al., 2014, p. 626). Indeed, small firms with limited resources (Coen & Maritan, 2011; Haase & Eberl, 2019) and knowledge to combine and recombine those resources (Zahra, 2021) may not just experience multiple growth- stifling disruptions, but unlike large resource-rich firms, may also have difficulty appropriately categorizing and responding to them.

The question of how small firms engage in these disruptions has thus gained some

interest. For example, Thomas and Douglas (2022) argue that small, resource-poor firms must reconfigure their internal resources through ambidexterity, absorptive capacity, and agility to maintain steady growth. Iborra et al. (2022) found that small firms that actively and dynamically deploy strategic consistency are more likely to overcome disruptions. Tunberg and Anderson (2020) point to the complex and dynamic nature of small firm growth and emphasize the importance of founders' sensemaking and sense- giving activities to maintain growth.

These insights point to the dynamic nature of small firm growth, but questions remain about how this growth occurs. Specifically, what is the nature of the different disruptions, and what happens on the ground as individuals work to understand and adjust to them? How do these adjustments affect growth? These questions are important to understand because failure to engage in these disruptions may constrain growth and lead to vicious cycles that promote counterproductive outcomes (Es-Sajjade et al., 2021). We turn to the dialectical perspective in organizational studies to help address these questions.

Dialectical perspective

The dialectical perspective is rooted in the view that reality is socially con- structed, embodying tensions in social relations that individuals must engage with to facilitate virtuous, and avoid vicious, cycles (Hargrave & Van de Ven, 2017; Lewis & Smith, 2022; Putnam, 2015; Schad et al., 2016). In dialectics, contradictions are engaged through a process in which one element – an affirmation – is espoused and then positioned in conflict with an opposing element – the negation (Schad & Bansal, 2018). This conflict "releases the tension between the contradictory elements," giving rise to "a new set of arrangements and practices, the transformation" (Hargrave & Van de Ven, 2017, p. 325).

By recognizing this transformation process, the dialectical approach focuses on how social arrangements – such as organizations – develop, maintain, and change through action (Benson, 1977; Farjoun, 2019). Classic approaches describe the dialectical process as a Hegelian model in which thesis and antithesis develop in confrontation with one another, to be eventually reconciled in a transcendent synthesis (Hargrave & Van de Ven, 2017; Langley & Sloan, 2012; Lewis & Smith, 2022; Putnam, 2015). In this process, the contradictory elements are played out through dialectical adjustments, with individuals espousing one element (that is,

affirmation) in conflict with individuals promoting the opposite element (that is, negation) (Hargrave & Van de Ven, 2017). For example, stability may invite recognition of the need for change. Those who espouse the need for change, then engage praxis, or reasoned analysis of the limitations of current social forms (Benson, 1977), such as stability, to challenge the affirmation. If tensions mount, proponents of the negation will become more animated to engage in praxis, using framing (shaping meanings) or resource mobilization (building networks) to challenge the affirmation and press for change (Hargrave & Van de Ven, 2017; Putnam, 2015).

In sum, the dialectical process represents movement through convergence and divergence stages as organizational situations morph and change (Raisch et al., 2018). Convergence describes movement toward synthesis as actors narrow their focus toward dynamic equilibrium. Divergence describes movement beyond equilibrium by introducing an antithesis that challenges the status quo, requiring actors to expand their focus and consider alternative avenues (Raisch et al., 2018). Contradictions are resolved through the interplay of convergence and divergence, and a new whole – or gestalt – emerges, which neither party could have produced itself. The gestalt maintains until a new affirmation is stated and challenged by a negation when the dialectical process starts again (Hargrave & Van de Ven, 2017). This recycling dialectical process resembles a "spiral" that firms go through to capture the complexity in tensions, facilitating virtuous cycles that inspire learning and discovery of new opportunities (Cuganesan, 2021; Hargrave & Van de Ven, 2017; Raisch et al., 2018).

Applying the microfoundations of small firm growth with the dialectical perspective allows us to unpack what happens inside a small firm in the process of growing. We approach growing from "the perspective of ongoing change" (Tsoukas & Chia, 2002, p. 568) grounded in interactions of individuals inside the firm and their adjustments to disruptions. Central to this approach are dialectic adjustments that individuals make to "build their capacity to understand and cope with complex tensions over time" (Raisch et al., 2018, p. 1508). The dialectical perspective, thus, helps recognize asymmetries and contradictions that contribute to the growing process as they generate new social arrangements from adjustments to how work is done (Cuganesan, 2021; Farjoun, 2017; Langley & Sloan, 2012).

Research methods

Research context

The research took place[1] at a small, independently owned firm named for this study, Digital 100. Digital 100 is a web technology firm that provides advertising, business development, and payment processing solutions for the nonprofit and print industries. The firm consists of five central work units and a sixth independent work unit – the original print store from which the firm grew. Each of these units is not only responsible for a distinct product or service, but also relies on other units for expertise and support, exchanging resources across the organization through carefully structured cross- functional teams. This structure grew to accommodate emergent and ongoing disruptions quicker. More specifically, several early failures led to the development of flexible structures focused on quick engagement with disruptions that prioritized fast and frequent interactions (flexible) within a specific time and place constraints (structure).

At the time of this research, the firm had doubled in size in terms of the number of employees and the range of products it offered. The most significant growth spurt at the time was the development of payment processing products and expansion to cloud services. Consequently, Digital 100 offered a unique context to explore our research question, providing insight into the process of growing that might not be as clear in a different context (Tsoukas & Chia, 2002).

Research methodology

With its focus on "discerning how ordinary people in particular settings make sense of the experience of their everyday lives" (Wolcott, 1994, p. 158) and its affordance of variety (Bass & Milosevic, 2018; Howard-Grenville et al., 2021), an ethnographically-informed case study method enabled us to "get closer to practice" and capture the dynamics of growing as called for by Leitch et al. (2010, p. 252) and McKelvie and Wiklund (2010, p. 276). Aligned with the methodology, our primary data source was observation focusing on "observing others' talk, body

[1]Although the sizes of small firms vary widely based on the industry the firm is in, the US Small Business Administration (SBA) generally defines a small business by firm revenue (ranging from $1 million to over $40 million) and by employment (from 100 to over 1,500 employees) (Hait, 2021). During the research, Digital 100 grew from 80 to approximately 120 employees, with plans to continue growth to mid-size.

language, and manipulation of material artifacts" (Akemu & Abdelnour, 2020, p. 299) to learn how individuals in Digital 100 engage with disruptions and the process of growing. Doing so allowed us to more appropriately understand the complex reality our participants engage with and create practically relevant insights (Jarzabkowski et al., 2015; Pratt & Rafaeli, 2013).

Data collection procedures

Data collection occurred over four months of immersion in the field, consisting, on average, of three to four full workdays each week. During the time in the field, we collected data using key informant interviews, observation and photographs of everyday practices, casual conversations to clarify observations, formal semi-structured interviews, and archival documentation (including archival interviews) of both publicly available resources as well as proprietary documents (Table 1: the overview of data collection). Data collection aimed at understanding the nature of disruptions and how individuals individually and collectively engaged with them to grow the firm ground up. Participants in this research were employees of Digital 100 who interacted with us in meetings, observation, and interviews (Table 2).

Key informant interviews

Data collection commenced with interviews of key informants: individuals who served as major sources of information, who were acquainted with the research goals, and who had been with the organization since its founding (Wolcott, 2008). In Digital 100, key informants were the Director of Development, the Director of Marketing, and the IT Director. Interviews lasted between 50 and 120 min and were conducted one-on-one with participants in a private location (Table 2). All interviews were audio recorded and transcribed by a professional transcriptionist to ensure accuracy. The transcriptionist signed a confidentiality agreement as specified by the relevant Institutional Review Board (IRB). These interviews focused on obtaining richer insight into the firm and its history (supplemented with archival data where possible to minimize recollection bias and rationalization, Howard-Grenville et al., 2021). Example questions included: How did the firm originate? What are the critical points in the firm's history? What is the current strategy/structure, and why? Key informant interviews were an appropriate data source in our study for at least two reasons. First, how our participants constructed past failures and

successes was particularly relevant to their understanding of the growing process. Second, together with archival data, historical accounts provided a context in which to situate current observations (firm's origins and current strategic objectives). These participants also offered guidance about which contexts might be most suitable for observation, were a key source of archival materials and helped us ensure that the findings were representative of their experiences via member checking once the formal data collection was completed.

Table 1. Data collection overview.

Form of data	Key description	Use in the analysis
Key informant interviews	Interviewed Director of Development*, Director of Marketing*, and the IT Director because they were gatekeepers who ensured our access and knowledgable about the focus of the study.	• To establish rapport and gain legitimacy • To understand company history and current strategy/structure • To understand nonroutine disruptions • To confirm emergent insight post initial analysis
Formal semi-structured interviews	Interviews with engineers, content managers, and other employees identified as knowledgeable about nonroutine disruptions through observations and snowballing process.	• To understand interactions in the context of nonroutine disruptions • To understand the nonroutine disruptions • To understand the nature of growth dynamics
Archival Data	Formal and informal reports, news articles, published interviews, and the firm's website; sketches, product and service prototypes; formal and informal organizational videos; and meeting minutes.	• To understand the history of the firm • To identify the nature of nonroutine disruptions • To capture the dynamics of interactions (past and present) • To triangulate evidence
Observational data	Observation of the general context and more targeted formal and informal interactions. We also engaged in casual conversations to clarify observations and collected photographs and videos during observation.	• To unpack the dynamics of interactions in nonroutine disruptions • To contextualize interview data • To understand the nature of real-time growth dynamics

Table 2. Participant and interview information.

Pseudonym	Position	Formal interviews N	Casual conversations N	Archival interview sources N
Mark	Director of marketing[a]	2	4	2
Peter	IT director[a]	1	3	1
John	Director of development[a]	2	6	3
Karen	Client services manager	2	1	0
Irena	Engineer	1	2	0
Gwen	Account manager	1	0	0
Freddie	Account manager	1	0	0
Ann	Social media strategist	2	4	1
Don	Engineer	2	4	1
Rodger	Software developer	2	2	0
Julia	Marketing coordinator	1	0	0
Maria	Project manager	1	0	0
Lena	Database engineer	2	2	0
George	System administrator	0	4	0
Justine	Senior accountant	0	4	0
Randall	Chief technology officer	0	3	0
Steven	CEO[a]	0	1	8
Katie	VP of client services	0	2	0
Ethel	VP of leadership development[a]	0	1	2
Jake	Content engineer	0	2	2
Total		20	45	20

[a]Member of the founding team.

Observation and casual conversations

After the key informant interviews were complete, we began observation of both the general context and more targeted formal and informal interactions (Table 1). Observations were a primary data source because our research question focused on understanding how individuals engage with disruptions that stifle growth. Indeed, as Tsoukas and Chia (2002, p. 571) noted, “only by placing ourselves at the center of an unfolding phenomenon can we hope to know it from within.” For example, we observed formal meetings in which participants discussed product or process-related disruptions (for example, sprint meetings discussed below) while remaining aware of the impromptu meetings during unstructured observations and attending them whenever possible.

During one instance, we observed a meeting where participants dis- cussed how to adapt the current content library to more easily scale across customers (at the time, it was fully customizable, thus disrupting efficient scaling across customers). In a different meeting, we observed interactions about the payment processing problem that prevented the firm

from reaching a broader customer base and the risk of losing current customers. Other interactions we observed were less critical but still important for the growing process (that is, increasing the user-friendliness of the process or solving a glitch in the code).

We also capitalized on opportunities to engage in casual conversations to gain additional insights and clarification. Casual conversation is critical for collecting data about everyday work (Wolcott, 2008). These conversations were led by the first author and inquired into observed behaviors (for example, “can you tell me what just happened?”). Casual conversations also helped clarify the meanings of observed instances (for example, “why was that meeting so tense?”). We further supplemented our observations with photos of relevant interactions, events, the physical setting, and videos of interactions (Howard-Grenville et al., 2021; Ray & Smith, 2012).

Finally, we followed extant guidance (Creswell, 2012; Howard-Grenville et al., 2021) and engaged in memo writing while in the field to ensure that the data collection is both sensitive to the context and sufficiently focused on the central phenomenon. This endeavor resulted in 131 photos, 12 videos, and 79 pages of structured, written notes (Table 1). Memos, casual conversations, and observational data were subsequently used in the analysis.

Semi-structured interviews

As the observation continued, we conducted formal semi-structured inter- views to discuss observations and gain deeper insights into the adjustments to disruptions we observed. The interview protocol was semi- structured to facilitate consistency and allow for deviations when new insights emerged. We interviewed managers and employees whom we identified through observations as most likely affected by disruptions (for example, software developers, content creators, and quality engineers), as well as those identified by participants as knowledgeable about disruptions (the snowball technique, Creswell, 2012).

The interview procedure mimicked the procedure of the key informant inter- views (location, recording, and transcription); however, the protocol differed. The semi-structured interview protocol consisted of three parts. The first part included introductory questions about the participant’s background and role to establish rapport (Creswell, 2012). The second part included core open-ended questions focused on the nature of disruptions and the role of different artifacts participants

use in the interactions that were observed or that a participant referenced as important. Example questions ranged from more general ones to allow emergent insights, such as: “What are the critical steps in your workday?” and “Can you describe to me a situation where you or your team developed a new response”? to more specific ones tied to instances we observed from observations or artifacts and activities other participants described as critical: “Can you tell me about the role this [name of the artifact] plays in your team?” and “Can you tell me why you used the whiteboard in that meeting?.” The third part included a concluding set of questions to ensure complete information was obtained (for example, “Given our discussion today, is there anything I did not ask but is important for me to know to understand Digital 100?”) and to identify other individuals that may provide relevant information (the snowball technique).

Archival data

We utilized the following publicly available sources: formal reports, news articles, published interviews, and the organization’s website to triangulate our data collection efforts further. During the key informant interviews, we obtained proprietary archival material as well, including the informal timeline which detailed disruptions that Digital 100 faced and collected archival inter- views. This allowed us to supplement key informant interviews and minimize the impact of recollection bias and possible rationalizations (Creswell, 2012; Howard-Grenville et al., 2021). In addition, we collected sketches, product prototypes, formal and informal organizational videos, and meeting minutes. This endeavor resulted in 92 pages of archival material and 20 archival inter- views (Table 1 includes the summary of our data collection efforts). To enhance clarity, each data source was specified in the findings section using the following abbreviations: ID, data from an interview source; AD, data from an archival source; OD, data from an observational source; CC, data from casual conversation during observations.

Data analysis procedures

We embraced abductive reasoning in our data analysis, thus oscillating between theory and data (Grodal et al., 2021; Mantere & Ketokivi, 2013; Sætre & Van de Ven, 2021). Abductive reasoning is instrumental when the theory development steps from the unusual observation that the existing theory cannot fully explain (Sætre & Van de Ven, 2021),

requiring researchers to "abduct insights from their data (Timmermans & Tavory, 2012) without fully committing to them, to be able to redirect their analytical eye and remain open to surprises" (Grodal et al., 2021, p. 604). We remained reflexive, seeking a new understanding of theory through a continuous dialogue between our understanding and the data (Mantere & Ketokivi, 2013).[2]

Table 3. Routine and nonroutine disruptions in small firms.

	Routine Disruptions	Nonroutine Disruptions
Definition	Breaks or interruptions of organizational activity that are structured with requisite variety for addressing the interruption based on either existing repetition, a known solution, or similar to other known responses	Breaks or interruptions of organizational activity that are unstructured or semi-structured create situations of nonobviousness that require novel responses
Occurrence of the disruption	Expected and/or similar to other disruptions that have occurred	Unexpected and/or nonrepetitive
How the disruption impacts daily work	Through adjustments using existing resources and/or capabilities	Through adjustments that require using existing resources and/or capabilities in new ways or reconfiguring resources/capabilities
How employees understand the disruption	Through rules or classification	Through research and interaction with others
How employees approach the disruption	Through defined steps and procedures	Through collective interpretation
Examples	Delayed payment from a vendor; software inaccessibility; unplanned unavailability of employees	Launch of new technology; product/service failures/updates; environmental/operational hazard; loss of a key employee or investor
Literature	Lillrank (2003); Milosevic et al. (2018); Waller et al. (2004); Winograd and Flores (2008)	

Aligned with extant literature on firm growth, we noted that growth is dynamic due to ongoing disruptions that break the flow of work, requiring individuals to adjust and pivot. However, in categorizing disruptions, we noted that they are relatively minor and ongoing, with some being nonroutine or having nonroutine elements, thus requiring individuals to generate new responses (Table 3). Subsequently, we followed that hunch (Sætre & Van de Ven, 2021)

[2]We recognize that diversity exists in how the findings are presented, with some studies presenting findings descriptively, allowing theoretical concepts to emerge later. In contrast, others integrate theorized contacts within the findings section (Howard-Grenville et al., 2021). Because we utilized theory in our data analysis, we aligned our findings with our data analysis procedures and integrated theoretical constructs into the findings section.

and zoomed our analysis into the nonroutine disruptions to examine the interactions within. In doing so, we uncovered that nonroutine disruptions necessitate productive interactions through which individuals generate new understanding. However, we also observed variability in productive interactions – which we subsequently categorized as potentially con- verging and potentially diverging situations based on the insights from dialectic theory – inviting further study (Mantere & Ketokivi, 2013). Indeed, Grodal et al. (2021, p. 598) emphasize the importance of "unusual incidents" and unexpected variations as critical and encourage their closer examination.

For example, in the initial reading of the data, we recorded that our participants utilized various linguistic and material artifacts to create new connections in some situations, but not in others. At this time, we also recorded the presence of "fun" in formal interactions and, surprisingly, the use of fun to break up interactions as well. As recommended by Grodal et al. (2021), at this stage, we generated preliminary categories, focusing on the most puzzling aspects of our data. We subsequently analyzed the data using MAXQDA software and generated in vivo codes. Examples include "recognizing the disruption," "talking to others," "goofing around," and "whiteboard," among others.

As the analysis progressed, we further categorized our in vivo codes as those that affirm the literature (expected codes) and those that deviate from it (surprising and unusual codes) (Creswell, 2012; Grodal et al., 2021). This step enabled us to establish the trustworthiness of our findings (that is, expected codes, Jarzabkowski, 2020; Tracy, 2010) as well as identify opportunities for theory building (that is, surprising and unusual, Sætre & Van de Ven, 2021). For example, the codes "integrative software" and "whiteboard" were expected as the literature has pointed to the connective nature of artifacts (Aoki, 2020; Jarzabkowski et al., 2015). These theoretical insights provided confidence in our findings and encouraged deeper analysis (Jarzabkowski, 2020). We also uncovered that our participants use artifacts to break up interactions. This was puzzling because disrupting the work is not traditionally considered productive.

In the subsequent stages of analysis, we worked to contextualize our codes within the observations – zooming in and out of the data – thereby situating our findings within the context (Vaughan, 1996). For example, we discovered that engagement with disruption is a multistage process – our participants spent considerable time understanding disruptions before

engaging with them. We also coded variability in how individuals use artifacts (Howard-Grenville et al., 2021). Although our participants used artifacts both to make and break connections, the closer analysis suggested that they use a subset of artifacts to facilitate/materialize connections and a subset to break connections (Table 4). This is where the key insight emerged: individuals used artifacts to synthesize conflicting positions in potentially converging situations and utilized different artifacts to introduce antithesis in potentially diverging situations (Table 5), pointing to the internal variability of the growing process.

Table 4. Dialectic interactions across two situations.

	Potentially Converging Situation	Potentially Diverging Situation
Description of the situation	A situation characterized by multiple disconnected interpretations of the disruption or failure to comprehend the disruption. Ongoing conversations occur in loops – observed lack of regularities and heightened disagreement.	A situation characterized by overlapping interpretations (rigid cognitive frames of reference) risks incomplete consideration of alternatives. Conversations are wedged within a limited scope. Observed lack of urgency and inclination to search for quick agreement.
Potentiality of Response	Potential for response in convergence actualized through dialectic interactions aimed at creating space for a new synthesis	Potential for response in divergence actualized through dialectic interactions aimed at the introduction of antithesis
The mechanisms that facilitate the potentiality of response	Introducing new connections to facilitate synthesis in response	Breaking established connections to facilitate a new round of synthesis
Observed artifacts in use	Whiteboard; integrative software; point cards; drawings of the problem; metaphors; mock-ups	Joking/interweaving games; slide; Nerf guns; foosball table; what if questions; playing devil's advocate

Findings

Nonroutine disruptions were pervasive in Digital 100. During one of the observation instances in the first month, John shared with us a proprietary timeline that listed many disruptions that the firm faced over the last decade, with descriptions of those that led to failure and retrenchment and those that the firm was able to overcome (AD). He then stated, "with more of those [disruptions] it will be a fun challenge to keep going" (John, CC). Mark similarly noted the "ebb and flow of growing" in reflecting on the firm's timeline:

> I remember celebrating . . . our 1,000th client and our 2,000th client, and things like that. So, over the years there's, you know, it hasn't necessarily . . . I guess what stands out in my mind aren't milestones, but *the ebbs and flows of* [growing] where we were building out and ramping up for growth but then [having to] lean out [failures] (Mark, ID).

Table 5. Data structure and examples from the data.

A representative example from the data	First level codes	Second level codes	Aggregate themes
You could tell that we were all just … it just all made sense. Like in my head … that is why I said "ok now I can see the nonprofit hub university as something similar to this. We are going to make it our own but I can see it now." Whereas before, we had a hard time visualizing it (Ann, ID).	Shared concepts; commonalities; piecing things together; external reference points; metaphors. Impromptu drawings	Facilitating cognitive connections	Building connections in potentially convergent situations
As the issue became more complex, one of the participants turned and started diagramming the problem on the wall behind him. Drawings helped individuals understand what is going on (OD).			
He does kind of a nonfunctioning webpages … so he basically does an equivalent of a sketch. And you can actually click on parts of it and it will transition to the next step and things like that, but it does not actually do anything … you can't save anything but it gives you kind of a working model that you can click on and try (Don, ID)	Point cards; whiteboards, software; symbols/tools; code systems; mock-ups	Materializing cognitive connections	
People rely on technology to connect (technology as connecting mechanisms). Some is formally imposed (formal integrative software; IMs) some seems spontaneously created to facilitate integration (Google docs, video chats) (OD).			
Nerf gun wars: "They are shooting at us, and we have nothing to defend with. Maybe have the ceremony of giving nerf guns to employees?" (Jake). Create a draft ceremony? 60 percent of employees do not have the company-provided gun. "You don't get to defend yourself" (Ann while laughing) (OD).	Joking/humor; games; slide; game room/spending time in the game room; Nerf guns/wars.	Distancing from the situation	Breaking connection in potentially divergent situations
Fun is an artifact of our cohesiveness and just a … way to make light the frustration [in difficult conversations], but in a … not necessarily positive way, but in a … a more fun … accepting way (Gwen, ID).			
Brainstorming meeting in response to disruption. John says: "we don't care about budget just collect ideas" Interactions open (OD).	Devil's advocate; challenging the interaction; asking questions/ taking a shadow side; inducing conflict (positive).	Introducing doubt	
Katie asks a question, "how to do interaction in the new system?" Author reflection: It seems to be the right question at the right time as it served as a catalyst to a new discussion (OD).			

We noted disruptions across data sources that, although relatively minor, stifle the growing process by inhibiting the firm from meeting customer demands and triggering work inefficiencies that prevent the scaling of products and processes. We also noted that many of these disruptions could not be resolved using current knowledge – that is, disruptions are nonroutine (Table 3). For example, Randall remarked, "my biggest worry is the payment processing issue" (CC). As the firm's customer base grew, completing all transactions in one place was important in terms of the security and user-friendliness of the process. Therefore, resolving the disruption created by issues in the product was critical for growth.

Partially aligned with the extant literature, we learned that these disruptions sustain growth because they push the firm to generate new responses. Indeed, studies have suggested that nonroutine disruptions are far from rare, whereas even routine disruptions have nonroutine elements that require new adjustments (Feldman, 2000; Tsoukas & Chia, 2002). However, our findings suggest that many of these disruptions only fracture the workflow, requiring ongoing adjustments rather than triggering a firm-wide resource reallocation (Table 3). As such, these continuous adjustments may explain the growing process better than a linear transition that occurs only infrequently (Table 6 for insights into the theoretical extensions). For example, Gwen explained the importance of ongoing adjustments to avoid sudden radical shifts:

> To try to be . . . open about what's happening, just so that it's not, you know we can fix the problem while it's going on, rather than waiting for something to break. (Gwen, ID)

And Rodger described it as "piecing together a puzzle:"

> Every software [disruption] is unique, and what's happening and just trying to compare "oh we share that in common" or if this is something that we share nothing in common with. . . It is just trying to find those commonalities, and just . . . piecing together a puzzle is probably the best way to describe it. *You have something you are set out to do, you got to figure out how you can do it*" (Rodger, ID).

To unpack the growing process, we focused on how individuals engage with these disruptions – that is, what is happening on the ground as individuals work to generate a response to the disruption thereby growing the firm from the ground up. Our findings suggest that disruptions are situated within a range of social relations, which we categorized as either potentially converging or potentially diverging using dialectical theory (Table 4). Potentially converging situations are ones of disequilibrium where multiple interpretations of the disruption inhibit productive interactions. However, these situations also embody a potential for convergence

to a novel response that individuals achieve through facilitating and subsequently materializing connections into a response to a nonroutine disruption (Table 6).

In contrast, potentially diverging situations are the ones of equilibrium induced through the rigidity of thought and the inability to move beyond past responses. Here, individuals move beyond equilibrium by breaking connections and creating space for the antithesis to occur, thus enabling a new round of productive interactions necessary to respond to the nonroutine disruption. As such, our findings suggest that growth occurs through a cascading spiral of potentially convergent and divergent situations in response to nonroutine disruptions. See Figure 1 for a visual depiction of dialectical adjustments (connecting and breaking) across two situations and Table 6 for theoretical insights. We present our findings in more detail below.

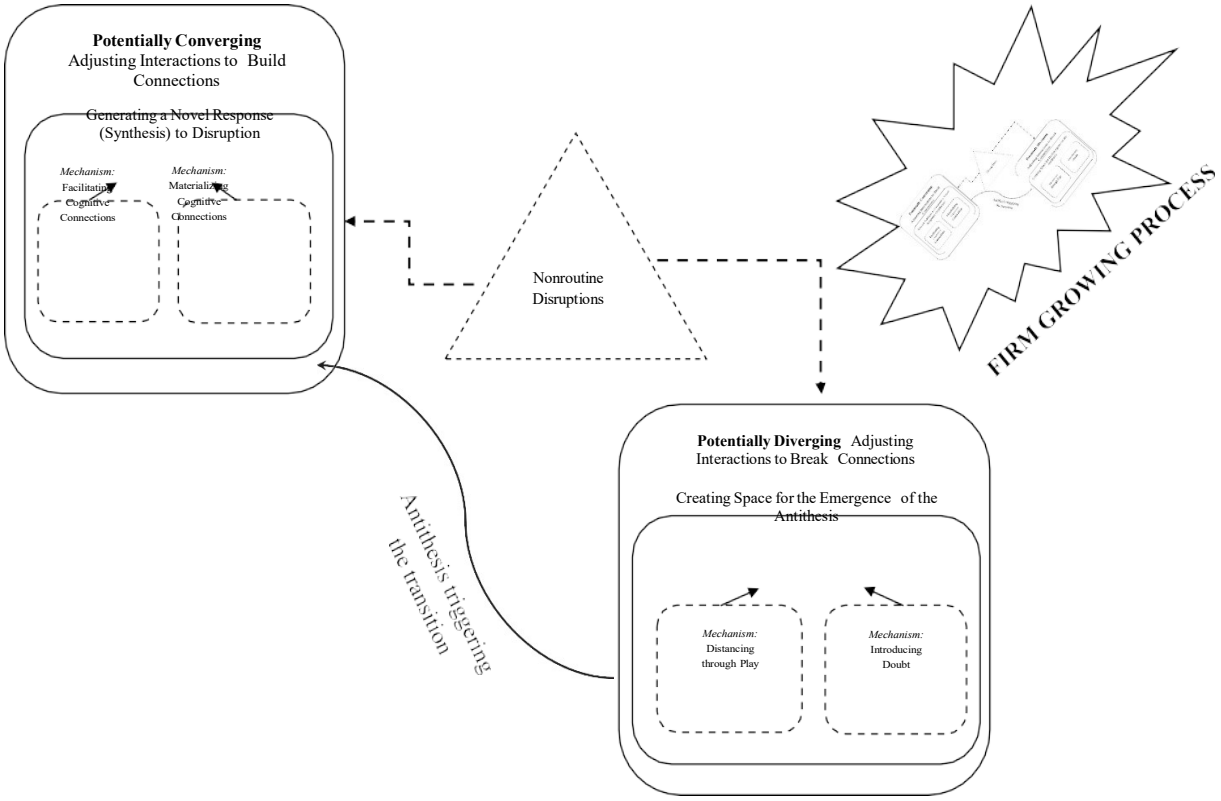

Figure 1. Unpacking small firm growing process: dialectic adjustments in response to nonroutine disruptions.

The emergence of nonroutine disruptions and initial engagement

Nonroutine disruptions occurred with some frequency in Digital 100. For example, during one observation instance, we observed a situation involving a customer request for a product modification that the team struggled to respond to (OD). In a different observation instance, we recorded participants' discussion of new product development in response to expanding customer demand (OD).[3] We also observed both customers and employees frequently pointing to inconsistencies in the procedures, which disrupted the growing process.[4] Don, for example, described a disruption his team was working on. The disruption came from nonprofit customers demanding a more comprehensive contact management system to better interact with their donors. Andrew and his team worked to identify ways to build the new features:

> We are working on a kind of contact management system. So . . . think of it like an address book. But it also must include a lot of things that tie into an address book besides just having it be a list of names, addresses, phone numbers, and contact info. There must also be a history of when this person has donated, like having seen the history of that, or you could add notes about "I called this person on Thursday" or "I have lunch with them on Friday." Having all that history stuff on that contact record. So that is an example of like they told us we want the area to manage contacts well then, this other kind has an additional feature they want that to exist. (Don, ID)

This was not fully surprising, as Sternad and Mödritscher (2020) pointed out that customer pressures/questions trigger adjustments necessary for growth. However, less evident in the extant literature is how firms respond to these disruptions, particularly small firms, and how they do so when disruptions cannot be resolved using current knowledge (that is, are nonroutine or have nonroutine elements – Table 3). Indeed, Rodger explained that:

> With those [disruptions], we're unsure of what exactly it is, to begin with, let alone how to solve it. So, the first thing is actually understanding it 'cause it is terrible when people try to solve the problem that they don't understand. (Roger, ID)

Our findings suggest that engagement with these disruptions is dynamic and initially unstructured as individuals alternated between cognitively processing the disruption, categorizing it, and building some preliminary understanding. Indeed, studies have suggested

[3]The redesign of the new-age payment processing tool was triggered by a customer's question and further conceptualized during one of the company-wide brainstorming sessions.
[4]Many of the customers that Digital 100 serves are technologically savvy. They occasionally join meetings and interact directly with Digital 100 engineers and programmers.

that work disruptions trigger deliberative processes (Weick, 1979) as people try to bring the disruptions into existence based on their past expertise and situational contingencies (Kudesia, 2019). Here, bringing disruptions into existence occurred through "thumbing through all these [cognitive] files to get some framework to wrap [their] head around at least some part of it . . . and build on later" (Freddie, ID); impromptu "consultations in the hallways, game room, or kitchen" (OD); and "searching through the relevant literature" (Ann, ID).

Structural response to nonroutine disruptions

As the firm grew and expanded its product offerings and developed its customer base, the frequency of nonroutine disruptions increased. Archival data indicated that unstructured responses to disruptions often resulted in failures and retrenchment (AD, multiple ID). Consequently, the firm embraced a more structured approach to dealing with the disruptions proactively and collectively. This approach included impromptu get-togethers (the firm built and actively reinforced a "going over and asking" culture referenced by multiple participants and frequently observed) and formal "sprint" meetings. Don explained that because these disruptions occurred frequently:

> We have these meetings intentionally for that purpose of how did everything go, did anyone get stuck, or did anyone have any trouble, or complaints, or concerns, *so that is built-in in our processes to have those meetings to make sure everything is* . . . everyone is happy with how things are working and to constantly adjust. (Don, ID)

Lena similarly explained, "[everything] you build is going to be changing over time" because of new disruptions, and a flexible approach is needed to address them:

> So, I could sit down today and write specifications for a certain product, and it is going to take me a year to make it. . .A year later comes as soon as you are going to say, "*No . . . things have changed now, we need this different, this different, this different*," and you just ended up doing a bunch of work that wasn't necessary anymore. (Lena, ID).

Both impromptu and more structured sprint meetings had the same purpose – facilitating collective engagement with the nonroutine disruptions and antici- pating them whenever possible. However, we observed that some interactions were more productive because they resulted in a new understanding that moved the firm forward, but also variable in that they embodied different situational dynamics (Table 6). More specifically, a subset of productive

interactions embodied disequilibrium initially created by multiple interpreta- tions and chasms that inhibit productive interactions. For example, Freddie explained that in these situations:

> there is . . . just this vast . . . chasm of knowledge that, you know like no one knows all of it at any given time. And we always have to bounce ideas, or how does this function, because there's just so much to know. And . . . [as the] ideas were thrown out, *and [one] sparks and like*, oh yeah, you're absolutely right. You're totally on track. (Freddie, ID)

We termed these situations as potentially converging due to the ever-present potential to generate a new response through synthesis – dialectic adjustments that embody connecting dispersed insights. Other situations were characterized by equilibrium created by the rigidity of thought and grip of past practices. For example, Karen described a situation where nothing was accomplished due to rigidity:

> So for instance, when we were concepting this nonprofit hub university, this like paid subscription, that took a lot of planning and I feel sometimes we would go into meetings (a) we all have an assignment and now we are all going to go out and do that assignment, or (b) just feeling like we will progress with an idea but then I do not know if we [actually] got anything accomplished. (Karen, ID)

We termed these situations as potentially diverging due to the potential for the introduction of the antithesis – necessary for subsequent convergence into a new response to the nonroutine disruption. We explicate dialectic adjustments across two situations next.

Dialectic adjustments in potentially converging situations: Achieving synthesis through connecting

As illustrated earlier, initial engagement with nonroutine disruptions was relatively unstructured and primarily local. For example, Rodger explained the autonomy they have to choose tools and decide how to engage with their work and how to approach disruptions:

> It allows us to do [the work] what we are most comfortable in but also may lead to differences in how others engage . . . So the program that I am writing code in is different from the program the person sitting next to me is writing code in. (Rodger, ID)

Consequently, when team members meet to discuss the disruption, they often do so with conflicting interpretations. These conflicting interpretations fracture interactions, creating a sense of ambiguity and tension (a disequilibrium, Raisch et al., 2018). Mark noted that in these situations, "immediately we'll start to throw in ideas and concepts a little bit . . . throwing out ideas tryin' to kinda figure out the, creatively how we're going to engage" (Mark, ID). As such,

conflicting interpretations occur in terms of how individuals understand the disruption and how they understand each other, resulting in imperfectly opposing views. Indeed, Tsoukas and Chia (2002) pointed to the dynamism in interactions, manifested in the interplay of the actual and perceived tension among conflicting interpretations. Partially aligning with extant literature, thus, our findings suggest that these conflicting interpretations exist in an ambiguous "web of overlapping opposites" (Raisch et al., 2018, p. 1513) that necessitate active effort to be resolved.

To facilitate productive interactions in potentially converging situations, thus, individuals must dialectically adjust their interactions (with each other and with their thoughts and descriptions. Our findings suggest that they do so by facilitating new connections through shared concepts (that is, iTunes) and materializing connections through tools (that is, prototypes). New connections create conditions for the emergence of synthesis necessary for convergence into a novel response (Tables 4 and 6). We present our findings on these mechanisms below.

Facilitating cognitive connections

Individuals construct common references in potentially converging situations that allow them to envision how different pieces can come together in response to the disruption. We had an opportunity to observe one such interaction and subsequently inquire into what happened. The nonroutine disruption observed involved the diminishing utility of the online content library for clients due to expansive growth (CC). In dealing with this disruption, our participants struggled to redesign the online library to remain relevant for each client and be sufficiently scalable to accommodate future growth (OD). We observed participants struggling with conflicting interactions and being unable to engage in productive interactions (OD). Ann later described it as ideas that did not stick (Ann, ID).

However, as Ann explained later, everything "clicked" once Jake mentioned iTunes:

> [Jake] said, "Well, I have been looking at iTunes." And so, we pulled it up and were looking at it, and . . . *I just remember John being just like, "That's it! Why didn't we think of this? We are going to use that structure*." It was easy for us to envision because we talked about all these things, so . . . you could tell *it just clicked for all of us*. (Ann, ID)

As this instance illustrates, participants used iTunes as a metaphor to narrow the focus

and facilitate converging interpretations toward a dynamic equilibrium (Table 6). More specifically, iTunes, as a common reference point, enabled participants to form cognitive connections necessary for synthesis to occur.

Materializing cognitive connections

We observed individuals use tools to materialize cognitive connections as well, further narrowing the perceptual field necessary for synthesis. For example, we observed participants use point cards in dealing with a difficult problem (OD). Each card carried a point value. When called for, participants simultaneously placed a card on the table to signify their view of the complexity: if an individual believed the problem was more complex, they assigned it a higher value card (CC). When the understanding of the complexity considerably differed, the differences created ambiguity with multiple interpretations and ideas. The point cards provided a common reference point along which new connections could emerge (that is, "why is this problem more complex than previously considered?") (OD).

Similarly, we observed that most walls in the organization were whiteboards that individuals actively used to engage with nonroutine disruptions to materialize cognitive connections necessary for convergence (Table 6). The walls enabled individuals to draw out their thoughts and form new connections. During one observation instance, we recorded that a participant stood up and started sketching the problem. Specifically:

> As the issue became more complex, one of the participants turned and started diagramming the problem on the wall behind him. Drawings helped them understand what is going on. There was a distinct "aha" moment once the drawing was complete – as if everyone was able to visualize the issue and "come to the table." (OD).

Participants relied on a movable whiteboard in a different observation instance to materialize cognitive connections. Participants would refer to the white- board and write additional notes while erasing others. During one observation instance, the first author recorded:

> There is a *whiteboard* with all the issues listed in the middle of the space. All team members sit in front of it. (Mark) is standing in front of the whiteboard, running the meeting. He later told me (casual conversation) that they came up with this simple whiteboard because a formal web program was too complex and did not serve the team well (reflection: seemed to be overly rigid). (OD)

Thus, our findings illustrate that individuals use concepts and tools to dialectically adjust

their interactions, forming necessary connections and facilitating synthesis into a new response. However, once established, these connections may lead to the rigidity (that is, equilibrium state: "this is how we have always done it"). We discover that individuals introduce antithesis to break connections when rigidity ensues. We discuss these findings next.

Dialectic processes in potentially diverging situations: Introducing antithesis through breaking connections

Interestingly we observed that individual engagement with the disruption does not always lead to conflicting interpretations. Indeed, in many instances, we observed a level of rigidity in interactions mired in a shared understanding of the problem (OD). On the surface, this seemed like a desirable situation given that shared understanding may result in a quicker response (that is, no need for extensive deliberation – Haase & Eberl, 2019; Luger et al., 2018). However, we often observed deliberate efforts to break the shared understanding, thus increasing the disequilibrium.

For example, one of the most striking observations during our data collection was when Ethel kept pushing back, inviting others to think bigger and better for Adobe applications (the quote at the beginning of the paper, OD). When we inquired about this observation, many of our participants remarked that "good" responses often result in complacency and, ultimately failure (CC, also indicated in AD describing past failures). John was particularly vocal about this, reminding us of the past failures he shared with us. He explained that many failures stemmed from repeatedly doing the same when new situations required new responses (CC). For example, one of the most significant failures the firm experienced resulted in trying to replicate the early success with customers in the print industry. Peter noted:

> Once there was a viable concept there (the web processing), we started ramping up sales. For a while there we thought we were gonna try and chase, you know, 10, 20, 50 different industries with that same concept, but after a while we figured out that t wasn't . . . gonna be a wise approach. (Peter, ID)

Indeed, Tsoukas and Chia (2002) argue that although some consistency is necessary for action to occur, carefully imposed interruptions expand the visual field periphery, thus enhancing cognitive processing. For example, during a discussion of a particularly difficult disruption, one of the participants invited others to "talk philosophically about it"

thereby expanding the cognitive evaluation of the disruption beyond what seemed obvious (OD). To this end, we observed that individuals dialectically adjust their interactions in these situations by distancing themselves from the situation through play and breaking connections by introducing doubt.

Distancing from the situation through play

Play is an integral part of Digital 100 – many participants referenced the culture of play as critical in their ability to bounce back post failures (AD, CC). From its origins to today, the emphasis was on working hard through play (Steven, ID) – with play permeating every aspect of the company, starting with spaces devoted to play, ceremonies, and competitions (OD). For example, the firm has a playroom where employees can go and relax/play foosball or do yoga. In addition, the company organizes both formal and informal competitions such as a putt-putt classic tournament where each team built a putt-putt golf course around their area (AD). In the next stage, four people from four different teams were drawn to form a team to compete (AD). The awards were given to the best golf course and the team that won the competition. Indeed, Don explained:

> Having fun while still doing a good job is what makes [Digital 100] work so well. Like the slide, it seemed goofy to me whenever I heard about it . . . like why a slide in an office?" But every time I go down that slide, I cannot help but smile. It is a little thing, and it is a goofy thing, but it does make it fun. (Don, ID)

We frequently observed participants utilizing play to break the established connections by distancing each other from the rigid situation (Table 6). During one observation of a particularly strained sprint meeting, two partici- pants, Jake and Jorge, joined the meeting via Google Chat. As the meeting progressed, participants seemed mired in shared understanding, not engaging in productive interactions. The rigidity was overpowering, and participants' frustration level was evident (OD). Seemingly, out of nowhere, Jorge started dancing on camera, goofing off, and using virtual tools to make fun of the conversation (he put a virtual crown on his head and called the discussion to order) (OD). In response, Lena and Ann began making physical crowns out of paper. The play introduced disequilibrium by distancing participants from the situation. Within minutes, the team returned to the table, taking a fresh approach to the disruption and examining alternative avenues for response.

In a different instance, on her way to the interview, the first author got stuck in the middle of

a nerf war. The open space was a battlefield, and safe passage was impossible (OD). When spotted, Irena explained to the researcher that the [name] of the team triggered an impromptu nerf war (CC). They had been working on a particularly difficult disruption for one of their biggest nonprofit clients. The nerf war infused disequilibrium into the situation, thereby breaking the grip of rigidity. When asked about observed nerf wars, Mark explained that they became institutionalized over time to disrupt the rigidity. He explained:

> Well, that started with some of our programmers. And now it seems like . . . especially over in our area, everyone is armed, everyone's packing. And then there's been a bit of an arms race. So, people are buying better and more elaborate weaponry now so. It's gotten to a thing where we, we do a welcome kit for our employees. (Mark, ID)

Breaking connections by introducing doubt

During several observations of what we classified as situations with potential for divergence, the first author recorded: participants frequently use "what if" statements, such as "what if the complete opposite is true?" as well as proposing "tak[ing] a shadow side" (John, CC)—looking at disruption from the exact opposite perspective (OD). Indeed, one of the most frequent observations included introducing doubt to induce disequilibrium. For example, during one observation instance, we recorded: "Rather than just talking or making statements, everything is framed as a question (reflection: as if to introduce doubt)" (OD). In a different instance, we recorded Randall trying to complexify the situation by inviting others to the interaction: "Let's beta test it first, soup it up." George described one such interaction further:

> We basically went through here is what we think it should do and then [online payment creators] said no it cannot do that because of this and this, and then they said what if it did this? And we said no it cannot do that because of this . . . we just figured out all the limitations of each side. (George, ID)

As we looked at the literature – particularly in terms of interactions in complex situations such as those induced by the growing process., we uncovered that Shotter and Tsoukas (2011, p. 344) suggest that questions are important because they "work not by giving people some new information . . . but by giving them a specific orientation toward something they already know, a new way of relating themselves to it, of seeing it in a certain light." Indeed, we observed that through questions, individuals introduce doubt, thereby breaking established cognitive connections and reorienting individuals toward new ways of seeing. For

example, during one observational instance, the first author recorded:

> Katie is asking a lot of questions, trying to solicit more information. Both Gwen and Freddie do not have an issue with pushing back [to Katie -the VP]. (OD)

Participants were adjusting their interactions, breaking connections, and forming new ones by asking questions (Katie) and pushing back (Gwen and Freddie) (Table 6). Introducing doubt and pushing back required others to either provide additional facts to defend their positions or open space for more productive interactions. Karen described it as a conflict to disrupt stagnation:

> You don't have to agree with everybody . . . *if you agree, you are just going to become stagnant*. We want to . . . not conflict per se, but you know, talk about things . . . *we need to have a conversation* about how do we get to what we need to do. And you are not always going to agree with [everything].

Dialectally adjusting interactions through breaking the connections and distancing from the situation creates space for the introduction of the antithesis that creates disequilibrium necessary for the firm to generate a response to the growth-stifling disruption (see Figure 1). In elaborating on how this process occurs, our findings unpack the growing process, illustrating how individuals actively put together and break apart their interactions. In doing so, our findings illustrate what is happening inside the small firm as part of the growing process – elucidating the necessary and dynamic variability embedded within ongoing dialectic adjustments to nonroutine disruptions. We situate and discuss our findings in the context of the theory below.

Discussion

The topic of growth has long been of interest to management scholars because it signals the current and future success of the firm (McKelvie & Wiklund, 2010; Penrose, 1995). However, growth rarely occurs along a smooth trajectory. The process is rather messy, episodic, and permeated with the ebb and flow movements (Tunberg & Anderson, 2020; Wright & Stigliani, 2013). This is particularly true for small firms that often have fewer product options, slack resources, and the experience to utilize their resources (Es-Sajjade et al., 2021; Thomas & Douglas, 2022; Tunberg & Anderson, 2020; Zahra, 2021). Consequently, firms must be adaptive, actively examining broader ranges of alternatives and pivoting as internal (such as

operational inefficiencies and bottlenecks) or external (such as customer demands) disruptions manifest to continue growing (Sapienza et al., 2004; Tunberg & Anderson, 2020).

However, studies have only recently begun to unpack the process of growing in small firms, pointing to its complex and disruptive nature (Es-Sajjade et al., 2021; Tunberg & Anderson, 2020). Rather than a linear depiction of growth resulting from major external disruptions, our theoretical model paints a very different picture – one of growing as an ongoing and variable process manifesting in continuous adjustments in response to minor, nonroutine disruptions. The process is ongoing due to the prevalence of disruptions that firms cannot resolve using routine practices. The process is further variable due to the dialectic adjustments necessary for the firm to productively respond. In explicating these internal dynamics of the growing process, our findings contribute to the extant literature in the following ways.

First, in contrast to recent studies prioritizing major external disruptions, in looking inside the process of growing, we uncover the role of relatively minor disruptions. These disruptions break the ongoing flow of work by rendering past responses insufficient, requiring firms to pivot, adjust, and in doing so, build a new path forward. Our findings further suggest that these disruptions, although relatively minor, may include nonroutine elements that require new responses. Indeed, routine responses may not just fail to address the disruption, but may magnify it, resulting in retrenchment. This is particularly prominent in small firms that frequently lack well-established routines and knowledge structures to engage disruptions that may be more routine in larger firms (Eggers & Park, 2018; Zahra, 2021). As such, small firms must grapple with uncertainty and contradictions embedded within the nonroutine (Milosevic et al., 2018) to generate responses necessary for growth.

Second, our findings suggest that productive interactions are essential to a firm's ability to generate a new response. Interactions are productive when they generate new understanding so individuals inside the organization can translate disruptions into growth. We borrow insights from dialectical theory to conceptualize productive interactions through potentially converging and potentially diverging situations, each embodying different dialectical adjustments (Langley & Sloan, 2012; Lewis & Smith, 2022; Raisch et al., 2018). In potentially converging situations, individuals face disequilibrium fueled by contradictory interpretations of the disruption, thus battling confusion and ambiguity. Although initially stifling, these situations embody the potential

for convergence achieved through the introduction of a common artifact with shared symbolic meaning that individuals use to form new connections (such as metaphors and integrative tools), thereby translating the disruptions into growth.

Conversely, in potentially diverging situations, individuals face rigidity fueled by similar interpretations, rooted in past responses, that prevent them from considering alternatives. However, although initially stifling, these situations embody a potential for divergence, occurring when individuals use artifacts to break past connections by either distancing themselves from the situation through play or questioning past connections thereby introducing doubt. In doing so, they infuse the antithesis necessary for a divergence to occur, facilitating a new round of productive interactions. In illustrating the nuances of two situations, our findings suggest that individuals in small firms must engage with nonroutine disruptions mindfully, recombining their activities and pivoting toward new growth avenues.

Our overarching contribution is an empirical illustration of the process of growing in a small firm that is dynamic and in flux, occurring as individuals dialectically adjust their interactions in response to relatively minor nonroutine disruptions. This process is not straightforward or predetermined along successive stages as suggested by previous literature. Rather, it includes a level of variability, requiring an ongoing interplay of "process, conflict, contradiction, disequilibria, disruption, oppositions, and synthesis" (Farjoun, 2019, p. 134). Indeed, the process of growing in a small firm evolves along a cascading spiral of potentially converging and potentially diverging situations, embodying unique adjustments within.

Limitations and future directions

In embracing a phenomenological epistemology, we recognize that the researcher is not a detached observer but intertwined within organizational practices to prioritize the participants' experiences (Hadjimichael & Tsoukas, 2019). As such, we often struggled with tradeoffs between theoretical precision and parsimony and presenting the richness of our participants' experiences. In evaluating the tradeoff, we decided to provide richer detail, thus, to some extent, sacrificing precision in discussing our findings. We hope future studies build on the insights gained in the study to examine the dialectic adjustments that occur inside the firm as it grows using qualitative or quantitative methods. For example, a multiple case study would allow the comparison of dialectic adjustments across contexts, thus providing a more general

understanding of the growing process across small firms. Alternatively, an experimental study that evaluates how individuals interact differently in potentially diverging and potentially converging situations can help uncover the cognitive processes that underlie these adjustments.

In addition, Digital 100 is a thriving and dynamic firm. The firm originated in the aftermath of a major technological disruption and continues to grow through carefully navigating new nonroutine disruptions. Although this allowed us to zoom into the growing process, it also limited the transferability of our findings. Examining how firms grow in other industries as well as examining the impact of routine disruptions may provide additional insights. Further, our study points to the variable nature of the growing process accomplished through dialectic adjustments. However, in doing so, we do not consider the limits to growth and how other strategic decisions may impact the process. Penrose (1995) suggests that firms cannot continue growing ad infinitum due to constraints such as managerial attention span and willingness to act. Future research should consider the growing limits and how firms navigate them.

Finally, we recognize that artifacts individuals use in interactions may carry varying meanings across contexts. For example, in our study, humor and play were important artifacts individuals used to break the grip of past responses and induce disequilibrium in their interactions. Rawski, O'Leary-Kelly, and Breaux-Soignet (2022) suggest that play may also have negative impacts. They write (2021, p. 11): "When a play frame contains an interaction, participants agree the action is lighthearted, humorous, and entertaining, yet the same activity outside the play frame can be taken more seriously (Goffman, 1974; Coates, 2007)" (citation in original text). Implied in this is that play is locally constructed and carries different symbolic meanings based on the nature of the interaction (that is, familiarity among participants). Therefore, we hope future research will examine the symbolic nature of different artifacts, considering the boundaries of their appropriateness, and how they are used in the growing process.

Conclusion

Despite the importance of growth for small firms, the process of growing – or what happens inside a small firm as it grows – remains elusive. Part of the reason is the general lack of insight into how this process occurs and the interactions of individuals therein to support or stifle growth. Our study addresses this theoretical gap by analyzing the growing

process as it occurs through productive interactions in response to ongoing nonroutine disruptions. In zooming into this process, we discover the presence of both potentially converging and potentially diverging situations that individuals must mindfully engage in to respond to the disruption. Our overarching contribution is the theoretical model that unpacks the variability of the growing process in small firms, considering the dialectic adjustments through which individuals engage and the role of nonroutine disruptions in it.

Disclosure statement

No potential conflict of interest was reported by the authors.

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