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Generative Mechanisms of Workarounds, Discontinuance and Reframing: A study of negative disconfirmation with consumerised IT

Abstract

This study investigates the observed behavioural outcomes when users experience negative disconfirmation with consumerised IT artefacts with the aim to identify the generative mechanisms of these outcomes. We analyse blogposts, authored and published by tablet users, where they narrate their experience with an IT artefact. We employ grounded theory method techniques, and through the lens of critical realism and the application of abduction and retroduction, we identify three user accommodating practices following negative disconfirmation, namely discontinuance behaviour, workarounds and reframing, and two generative mechanisms with enduring properties and causal power over them: solution identification and cost/benefits assessment. Our work contributes to the literature of volitional IT use and the consumerisation of IT, by uncovering the mechanisms that pave the way towards observed user behaviours.

Keywords: *tablet, workaround, discontinuance, reframing, critical realism, negative disconfirmation, generative mechanisms, consumerised IT artefacts*

1. Introduction

Negative disconfirmation reflects the dissatisfaction users experience when technology falls short of their expectations (Shih et al., 2017). It may occur as a result of different factors, ranging from the "exaggerated or unrealistic" promises of vendors (Bhattacherjee & Premkumar, 2004, p. 231), to missing IT features and poor design (Griffith, 1999) that discourage or encourage certain behaviours (Azad & King, 2012). To date, research shows that when there are discrepancies between expectations and actual use, users seek to bypass the designed-in behaviour of the technology (Koopman & Hoffman, 2003) in their effort to meet their initial objectives. In doing so, they may adopt the "path of least resistance" (D'Adderio, 2011, p. 215) through diverse practices, which can range from simple modifications and workarounds (Barrett, 2018), to the use of shadow systems (Davison et al., 2019). As beliefs and attitudes change over time, and as a result of more and more hands-on experience with the technology (A. Bhattacherjee & Premkumar, 2004), users may update and even revise their preferred practices to overcome their negative disconfirmation with it. Existing literature has highlighted the importance of understanding the practices that users adopt to overcome obstacles and dissatisfaction with IT (e.g., Bagayogo et al., 2014; Ferneley & Sobreperez, 2006; Sun, 2012). These practices are considered primarily as a constructive response towards a poorly designed system (Barrett, 2018; Choudrie et al., 2016; Ferneley & Sobreperez, 2006) and have been extensively researched thus far within organisational environments, where IT use is mandated on the basis of the organisational agenda and clearly prescribed policies (e.g., Brown et al., 2002; Spierings et al., 2017).

The consumerisation of IT has, however, caused significant changes to how systems and devices are used within workplaces and workspaces. Consumerised IT artefacts, such as laptops, tablets, and phablets, satisfy a wide range of both personal and professional needs,

thus traversing the boundaries between the two. They offer a greater sense of autonomy and flexibility (Niehaves et al., 2012) and lead to increased productivity as strong habitual norms remain uninterrupted as the user switches between the personal and the professional context of use (Gartner, 2006). Most importantly, however, even when used as part of Bring-Your-Own-Device (BYOD) schemes, whereby privately owned devices are used for business purposes, consumerised IT artefacts suggest that IT use is entirely under the user's volitional control, where the entire range of practices following negative disconfirmation is available: one may use or not use the IT, or enact adaptations and modifications to the extent that these do not pose security or ethical risks for the organisation (French et al., 2014).

The practices that users adopt in light of negative disconfirmation within volitional contexts of use are critical for the success of the IT artefact in the long term. When IT use is mandated, these practices allow users to identify a fit among the technology, the task and their workflow (Kim et al., 2016). When IT use is volitional, however, users can freely decide to discontinue the use of the IT artefact if they choose to do so. Thus, these practices become even more important, as they may impede the lasting use of the IT artefact (Wu et al., 2017). In addition, each of these practices may indicate different underlying problems and misalignments with the originally designed IT artefact and may imply different causes. As a result, to fully understand why a user adopts an observed practice (e.g., a workaround instead of a revision), and what gave rise to it within the volitional context of use, we need to understand the underlying mechanism that led the user to adopt that practice over another.

The aim of this study is to address this challenge. Our research question is the following: "what are the generative mechanisms that give rise to the different user practices following negative disconfirmation with consumerised IT artefacts?". To address this, we focus on the case of the tablet and specifically around instances of negative disconfirmation in order to identify and understand what triggers negative disconfirmation on the one hand, and on the other hand, to explore the underlying mechanisms that bring the observed practices forward (Mingers & Standing, 2017). We draw from critical realism, which allows us to identify the generative mechanisms that provide causal explanations for observed phenomena (Avgerou et al., 2019) through abduction and retroduction.

Our empirical material comprise of personal blogposts of iPad users, authored and published between 2010 and 2017. Using grounded theory method techniques, we first focus on the IT features to identify which of these seem to trigger negative disconfirmation. Our findings show that triggers relate to users' efforts to incorporate the new IT artefact into their workflow and adapting their interaction style to new requirements. Our study confirms previous studies as far as workarounds (e.g., Alter, 2014; Barrett, 2018; Choudrie et al., 2016), and discontinued use (e.g., Aggarwal et al., 2015; Turel, 2016) are concerned, in terms of potential behavioural outcomes following disconfirmation. We, however, reveal an additional user practice, that of reframing initial expectations, whereby users update their understanding of the device and appreciate it under a new light.

In what follows, we present a review into relevant theories concerning user behaviour following negative disconfirmation. We then offer our theoretical perspective, where we discuss the importance of understanding the underlying mechanisms in relation to the negative disconfirmation triggers. Next, we present a detailed account of the methods used in this study, and how critical realism contributes towards forming a mechanism-based understanding of user behaviour. Thereafter, we introduce our study's findings and discuss them in relation to existing literature. The paper concludes by proposing directions for future research as well as discussing the study's contributions.

2. Behavioural outcomes following negative disconfirmation

Negative experiences have a stronger influence on users when compared to positive ones; therefore such negative experiences are more likely to lead to changes in beliefs, attitudes and behaviour (Bhattacherjee & Premkumar, 2004). When a technology falls short of expectations, the user, depending on the contextual conditions, may move towards different directions seeking to overcome their disconfirmation. Generally, users may choose to discontinue using the technology (Maier et al., 2015), to modify the technology in some way, to modify the task at hand and their own habits (Lee et al., 2018; Wu et al., 2017), or any combination of these. The literature on each of these behaviours is reviewed in the next paragraphs.

2.1. Discontinuance Behaviour

Discontinuance behaviour denotes the cessation of IT use (Furneaux & Wade, 2011; Li et al., 2011). It can take different forms, such as rejection, regressive discontinuance, quitting, temporary discontinuance, and replacement of the technology (Soliman & Rinta-Kahila, 2019), which differ on the basis of how much exposure and hands-on experience the user had with the technology before deciding to discontinue using it. Soliman and Rinta-Kahila (Soliman & Rinta-Kahila, 2019) discuss that users may reject a technology before they even use it, if they perceive that there are far too many inhibitors in using it (e.g., technology intrusiveness) or too few enablers (e.g., information quality) or both (Cenfetelli, 2004; Cenfetelli & Schwarz, 2011). Contrary to rejection, regressive discontinuance requires that some IT use has taken place, i.e., takes place post-adoption, but the user discontinues IT use during the early stages. Studies show that the primary reason is the misalignment between one's perceived and real IT skills, which brings to the fore the significance of considering user characteristics against system characteristics (Abraham & Hayward, 1984; Aggarwal et al., 2015). This means that the degree of complexity (e.g., Furneaux & Wade, 2011), and the user's perceived and actual self-efficacy (Bandura, 2012) can have a negative impact on IT use.

Moving well into post-adoption, discontinuance may take the form of quitting, which requires further hands-on experience with IT (Soliman & Rinta-Kahila, 2019). Hence, the reasons for abandoning IT differ significantly. In such cases, users will discontinue use on the basis of poor system performance, low institutional support for continuing its use (Pollard, 2003; Recker, 2016), a general perceived poor task-technology fit and/or reliability and breakdowns (Park et al., 2012; Pollard, 2003; E.D. Zamani et al., 2019), all of which can disenchant users (de Graaf et al., 2017; Parthasarathy & Bhattacherjee, 1998). They further lead to low satisfaction (Hand et al., 2009; Lehrer, 2015), especially during critical IT events that impact negatively on user perceptions (Salo & Frank, 2017). Moreover, Lehrer (2015), has highlighted that users may discontinue use because IT may no longer satisfy their evolving needs, while others have highlighted the importance of social influence (H. Kim et al., 2008; Park et al., 2012). In some cases, discontinuance may be temporary, or what is called as 'vacationing' (York & Turcotte, 2015). Oftentimes, users temporarily discontinue the use of an IT, with the intention to come back to it when the conditions change. In such cases, the reasons for temporarily discontinuing use entail that the system may not be available for a period of time, there is lack of institutional support, poor task-technology fit, and increased complexity (Pollard, 2003). When seen as 'vacationing', the reason for the break may be because IT is being intrusive to one's personal life (York & Turcotte, 2015) or a disturbance (Rosenbaum & Wong, 2015). Finally, discontinuance may entail replacing the incumbent IT

with an alternative one. Often, this happens because the alternative technology seems to meet user expectations better and be more compatible both with their workflow and with other used technologies, which can be understood as a relative advantage of the new IT (Bhattacherjee et al., 2012). Equally, the reason for replacing an incumbent IT may be because the user has identified an alternative they wish to explore (Parthasarathy & Bhattacherjee, 1998). In such cases, one's personal innovativeness may be a crucial factor (Bhattacherjee et al., 2012), which may make the new IT particularly attractive (Lehrer, 2015; Xu et al., 2014). Alternatively, the incumbent system may simply be causing dissatisfaction, thus the user decides to switch to an alternative (Xu et al., 2014). Replacing IT as a form of discontinuance behaviour is particularly important when it comes to the use of new technologies; shortly after adoption, users have not yet invested significantly in learning how to use the particular technology, nor have they integrated it into their workflow as much. Therefore switching to something more appealing is easier, less risky and with lower switching costs overall (Polites & Karahanna, 2012).

2.2. Adaptation Behaviour

Users may not be always able to discontinue the use of a certain IT, regardless of the degree of their dissatisfaction. For example, when it comes to the organisational context of IT use, technology is chosen and deployed on the basis of the organisational agenda with respect to performance, productivity and processes. As such, users may not have real control over the situation, and discontinuance may not be an actual option. Within such settings, organisational members may adopt different practices to overcome or cope with negative disconfirmation. In their seminal study, Beaudry and Pinsonneault (2005) show that these practices can be largely understood as adaptation efforts and entail the modification of the task, the modification of the technology, or the modification of one's self. Such adaptation efforts aim at supporting users in minimising the real or perceived negative impacts of the technology, or helping them achieve or maximise any positive ones, depending on what control users have over the situation or what action possibilities are available to them (Beaudry & Pinsonneault, 2005).

Modifying the task entails sufficient control over one's work, i.e., increased autonomy; hence it is quite relevant for consumerised environments. Largely, the underlying reason for enacting modifications at the level of the task is for the purpose of identifying a better task-technology fit and/or minimise the negative consequences of disturbances (Beaudry & Pinsonneault, 2005). In other words, the reason for task adaptation is for achieving improved performance, efficiency and effectiveness (Schmitz et al., 2016). In a subsequent study, Beaudrey and Pinsonneault (2010) found that excitement with IT use may also be a reason for task adaptations and Bagayogo et al. (Bagayogo et al., 2014) have argued that task-level adaptations can result in the enhanced use of IT, with users making use of additional IT features.

Autonomy and having control over one's own work is relevant for modifications at the level of technology, too. Similar to task-level modifications, the overarching reason to modify the technology is to find (a better) task-technology fit, to minimise the consequences of disturbances (Beaudry & Pinsonneault, 2005), and ultimately, to improve one's performance, efficiency and effectiveness (Schmitz et al., 2016). When the user is faced with novel situations, but more importantly for the purposes of our study, with discrepancies, technology adaptations may mean revisions in the way users use technology, by incorporating in their arsenal additional, new or pre-existing IT features and functions (Sun,

2012). Workarounds are a particular type of IT modification (Azad & King, 2012; Ferneley & Sobreperez, 2006). They may or may not be in line with the spirit of the technology-as-designed, and are very prominent in the post-adoption literature (Choudrie et al., 2016). They emerge when users experience obstacles in IT use (D'Adderio, 2011), and can range from kludges and temporary fixes (Koopman & Hoffman, 2003) to elaborate shadow systems, deeply ingrained into everyday practices, used alongside official information systems (Davison et al., 2019). The reasons for enacting workarounds are virtually endless: they are employed in order to accomplish work when IT doesn't allow for it; to overcome local resource constraints; to address system deficiencies; as solutions to hardware and software problems; as well as for more sinister reasons, such as cheating the organisation or sabotaging an IT initiative (Alter, 2014). Excluding the latter, more disturbing reasons, one could argue that the common denominator for workarounds is the underlying hope of making effective use of IT and seeking to satisfy needs (Alter, 2014; Elias et al., 2012).

A final form of adaptation is that of modifying one's self (Beaudry & Pinsonneault, 2005). This type is more prominent when users have little control, i.e., autonomy in their work, and therefore, in light of disturbances and negative disconfirmation, they have few options but to modify their workflows. Such disturbances can be the misfits between work systems (i.e., processes and tasks within the workplace) and IT, and the reasons for modifications at the person self would be to improve one's own workflow (Zhou et al., 2016). They do so by e.g., picking up new skills, which help them learn and thus improve how they execute tasks (Barki et al., 2007), which in turn helps them manage the disturbance (Beaudry & Pinsonneault, 2005) and identify some benefits in IT use (Bravo & Ostos, 2020).

Contrary to discontinuance behavioural outcomes, the breadth of adaptations, be it workarounds, revisions, or other modifications at task-, technology- or user-level, indicate a willingness to make IT work (Zamani & Pouloudi, 2019; Zamani et al., 2020) and overcome the discrepancies that obstruct the user from completing their tasks; as such they signal continuance rather than discontinuance intentions (Barrett, 2018; Wu et al., 2017) and possibly indicate the user's intention to appropriate the device (Zamani et al., 2020).

2.3. Looking Beyond Discontinuance and Adaptations

Between discontinuance and the variety of behavioural outcomes that suggest adaptation and appropriation, another outcome is possible following negative disconfirmation; that of users reinterpreting the situation. Orlikowski and Gash posit that users hold their personal technological frames, i.e., a set of "assumptions, expectations, and knowledge they use to understand technology" (Orlikowski & Gash, 1994, p. 178). These technological frames encompass perceptions with respect to how a technology is meant to be used now and in the future (Olesen, 2014). As conceptual devices, they can both support and constraint one's interpretations of a certain technology (Orlikowski & Gash, 1994). Most importantly however, technological frames can change over time (e.g., Davidson, 2002). Indeed, one of the critical attributes of technological frames is their temporality.

Among the most prominent reasons for frame shifting may be the access to new information from one's environment, or due to the occurrence of critical events, whereby the individual reassesses the situation in light of new information (El Sawy & Pauchant, 1988). Drawing from technological frames in particular, several studies unpack the changing nature of frames against the background of previous experiences, present interactions and future expectations (e.g., Davidson, 2002; Ovaska et al., 2005). Mutterlein et al. (2019) discuss that one's original frame is influenced by the perceived technical and design newness of the IT

artefact, which subsequently changes through actual interaction. Other potential reasons for updated frames include environmental triggers, such as the launch of new technology, market changes, competition, and regulatory changes (Davidson, 2006). In other words, changes within one's context are reasons for changes in one's frame (Chang, 2008). At group level, frames may change as a result of the collaboration, whereby group members begin focusing on certain features/aspects of IT, and developing a new understanding (Davidson, 2006), as they work through inconsistencies, differing expectations, and disruptions, seeking to identify their underlying reasons (Ovaska et al., 2005).

From a macro-cognitive perspective, as users become exposed to external stimuli from their environment (e.g., narratives from friends, advertising) and from their own experience (e.g., hands-on experience, new problematic episodes), they continuously update their understanding of the IT artefact (Zamani et al., 2019), and revise their frame of reference (Sieck et al., 2007). This suggests that in fact the technological frame is required to change in light of the newly acquired information (Klein et al., 2006). This will lead the user to reinterpret the IT artefact, having enriched their understanding (Moore & Hoffman, 2011), as a result of their original negative disconfirmation. Along these lines, Zamani et al. (2013) show that often, in light of negative disconfirmation, users may minimise the importance and even rationalise the shortcomings of the IT artefact, which leads them in reframing entirely their interpretation of the device and disregard their original disconfirmation.

Table 1 presents an overview of the previously described behavioural outcomes as well as a summary of the reasons for observing each of these. This overview is by no means exhaustive, as this would be beyond the scope of our study. The literature on post-adoption behaviour is certainly rich, and others before us have done a wonderful job in documenting it in detail. Soliman and Rinta-Kahila (2019), for example, have systematically analysed the literature within the discontinuance stream. Similarly, Alter has developed an exhaustive theory on workarounds, consolidating much of the fragmented knowledge (Alter, 2014). What this overview, however, highlights is that despite the richness of the literature on the variety and the diversity of the behavioural outcomes observed in light of negative disconfirmation, we don't know enough about the causal processes that bring them into the fore, especially when all such outcomes seem available and possible to users. This is particularly relevant to volitional contexts of use and highly consumerised environments, where users use their own private IT devices for both personal and professional purposes (Junglas et al., 2019). The volitional context of use is discussed next as it serves as the theoretical framing for our study.

Table 1. Overview of Behavioural Outcomes

Discontinuance (Soliman & Rinta-Kahila, 2019)		Adaptive behaviour (Beaudry & Pinsonneault, 2005)		Reframing	
Types	**Reasons**	**Types**	**Reasons**	**Types**	**Reasons**
Regressive	Misalignment between users' perceived and real IT skills and actual IT skills (Aggarwal et al., 2015).	Task-level Modifications	Sufficient control over work (autonomy): better task-technology fit and/or minimise the negative consequences of disturbances (Beaudry & Pinsonneault, 2005); improved performance, increased efficiency and effectiveness (Schmitz et al., 2016).	Repositioning	Hands on experience is reason for re-evaluating priorities and/or evaluating the benefits of IT use (Zamani et al., 2013, 2019).
Quitting	Poor system performance and low real/perceived reliability (Pollard, 2003); low institutional support (Pollard, 2003; Recker, 2016); poor task–technology fit (Pollard, 2003); disenchantment (de Graaf et al., 2017; Parthasarathy & Bhattacherjee, 1998); dissatisfaction (Hand et al., 2009; Lehrer, 2015); breakdowns (Park et al., 2012; Zamani et al., 2013, 2019); changing user needs (Lehrer, 2015); social influence (Kim et al., 2008; Park et al., 2012).	Technology-level modifications	Sufficient control over work (autonomy): same reasons as for task-level modifications (task-technology fit, handling disturbances (Beaudry & Pinsonneault, 2005), improving performance, increasing efficiency and effectiveness (Schmitz et al., 2016)). Workarounds in particular: accomplish work when IT doesn't allow for it; overcome local resource constraints; address system deficiencies; solutions to HW/SW problems etc. (Alter, 2014), to make effective use of IT, satisfy needs (Elias et al., 2012), and make (IT) work.	Technological Frames	Exposure to the IT artefact leads to changes in technological frames (cognitive and emotional resonance) (Mutterlein et al., 2019); environmental triggers e.g., launch of new technology, market changes, competition, regulatory changes etc. (Davidson, 2006); changes in context (Chang, 2008); while working through inconsistencies, differing expectations, disruptions, (Ovaska et al., 2005).
Temporary	Unavailability of the system, lack of institutional support, poor task-technology fit, and complexity (Pollard, 2003); IT seen as a disturbance (Rosenbaum & Wong, 2015); or distraction (York & Turcotte, 2015).	Self-level modifications	Little control over work (little/no autonomy): the reason for such modification is to manage disturbances (Beaudry & Pinsonneault, 2005) by e.g., picking up new skills (learning) (Barki et al., 2007); misfit between work system and IT (Zhou et al., 2016); dissatisfaction with current IT use and the reason to adapt oneself is because there are expected benefits (Bravo & Ostos, 2020).	Frame shifting	New information becomes available; critical events occur; the situation gets reassessed/reinterpreted in light of the new information and/or the new events occurring (El Sawy & Pauchant, 1988).
Replacement of IT	New IT offers a relative advantage (Bhattacherjee et al., 2012); the user seeks to explore alternatives (Parthasarathy & Bhattacherjee, 1998); alternatives may be more attractive (Lehrer, 2015; Xu et al., 2014); the incumbent leads to dissatisfaction (Xu et al., 2014).				

3. The Framing of Our Study

In our study, we focus on the volitional context of use. We understand voluntariness as the realisable voluntariness and as defined by Tsai et al. to be "the freedom (both facilitated and inhibited) in the technological environment and the social environment for the individual not to use the technology" (Tsai et al., 2017, p. 152). This definition allows us to capture and analyse behavioural outcomes that exist along a spectrum between continuance and discontinuance, and where users have agency and are able to exercise it.

The framing of this study against the realisable voluntariness is particularly important and interesting, within the wider context of consumerised devices. Over the recent years, there is increasing attention, particularly by the industry, with regards to consumerised IT devices and Bring-Your-Own-Device schemes (BYOD) (Dang-Pham et al., 2019). Such highly consumerised environments entail that users use their privately owned devices (e.g., tablets, phablets, laptops) for professional use scenarios, thus traversing the personal and the professional spheres, with IT artefacts being used for diverse IT scenarios. In such contexts, when user expectations are negatively disconfirmed, i.e., when technology seems to fall short, users are able to discontinue the use of their own personal device, but also adapt it as they see fit, modify and augment it, or use it in tandem with other devices they may have at their disposal. Naturally, within organisational settings, for cybersecurity and data protection purposes, some restrictions may still be imposed, such as an agreement to remotely wipe sensitive data from lost devices (Gregory et al., 2018). In any case, there still is a wide range of behavioural outcomes available to the user, since the use of such consumerised devices is not mandated by the organisational agenda. We approach these behavioural outcomes as accommodating practices because we consider them as the users' attempts to overcome their negative disconfirmation and overcome the obstacles experienced during their interaction with IT.

The research question we address is the following: "what are the generative mechanisms that give rise to the different accommodating practices following negative disconfirmation with consumerised IT artefacts?".

To study these underlying mechanisms in depth, we propose the use of critical realism. Critical realism has been increasingly used in recent years within the information systems discipline for offering mechanism-based causal explanations (Williams & Wynn, 2018) that are pegged to the contextual conditions of the phenomena by "[t]heorising by analogy" (Avgerou et al., 2019, p. 264). Critical realism assumes that the world exists independently from our knowledge of it and that we can only enjoy a partial observation of the world (Aaltonen & Tempini, 2014). In this sense, it brings together positivism and interpretivism (Strong & Volkoff, 2010), by putting forward the notion of structures and entities that exist independently from the observer but which can only be understood through a subjective lens that has been developed based on our sociocultural perceptions (Mingers, 2004b).

This suggests that critical realism distinguishes between the *real, the actual and the empirical* domains of a phenomenon (figure 1). The real encompasses the persistent causal generative mechanisms that make things happen. Such generative mechanisms can take the form of ideas, motivations, social and organisational structures, among others, which may or may not be observable (Mingers & Standing, 2017). Whether these generative mechanisms will lead to a change depends largely on contextual conditions and the change they will produce is often unpredictable (Williams & Wynn, 2018). However, the researcher is able to identify the causal explanations as to why things happen (Volkoff & Strong, 2013) by drawing from antecedent knowledge such as theories, facts, and other observations (Williams & Wynn,

2018). The actual domain then encompasses the temporary or ephemeral events that are generated as a result of the real mechanisms and the empirical domain denotes the subset of the actual events which we as researchers are able to observe (Mingers & Standing, 2017). In other words, the actual domain consists of those events that could potentially occur, whereas the empirical domain consist only of those events that need to both occur and be observable (Mingers et al., 2013).

Generative mechanisms surface through retroductive reasoning (Aaltonen & Tempini, 2014; Mingers, 2004b). Retroductive reasoning begins by examining an observed event, in our study the three accommodating practices (workarounds, discontinuance and reframing), and seeks to theorise on the generative mechanisms that cause these events (Mingers, 2004a). While there may be a number of generative mechanisms that potentially have an impact and can causally explain an event or an outcome, it is generally advisable to focus only on those mechanisms that relate to the underlying contextual conditions (Henfridsson & Bygstad, 2013).

What is significant to underline with regards to generative mechanisms is that they do not possess a deterministic power over events (Volkoff & Strong, 2013). While these generative mechanisms exist within the domain of the real, whether they will be activated and whether they will lead to a certain outcome or another depends on the contextual conditions that exist at the given moment. It is possible that a generative mechanism will lead to one outcome under the influence of certain conditions, but to a different outcome under the influence of different conditions. In other words, generative mechanisms are contextual, and they may interact and even counteract each other (Blom & Morén, 2011). As such, while generative mechanisms' causal power is not always exercised, but is dependent on the conditions that activate them, and therefore, their causality is contingent to these conditions (Bygstad et al., 2016), i.e., the contextual conditions (Henfridsson & Bygstad, 2013).

Against this background, the user accommodating practices that stem from negative disconfirmation are the observed events that comprise the empirical domain as seen through the lens of critical realism, and as documented by the researcher. These empirical events are what we observe as behavioural outcomes when certain features and functions of the IT artefact trigger negative disconfirmation. Users may hold different interpretations about these outcomes, but in light of our research question and focus on negative disconfirmation and our antecedent knowledge, they will be interpreted as the users' efforts to overcome the discrepancy between expectations and reality. Within this context, our objective is to identify the generative mechanisms that result to a certain behaviour over others and how the underlying contextual conditions influence the activation of these mechanisms.

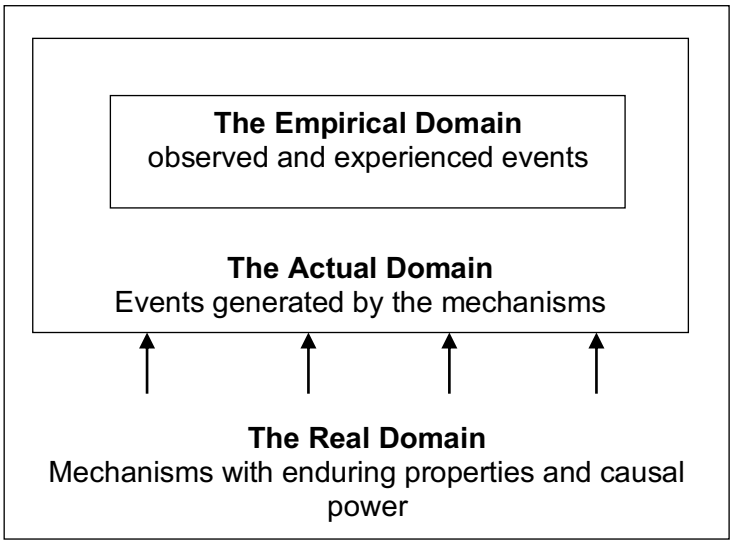

Figure 1. The three domains of the real (adapted from Iannacci & Resca, 2016; Mingers, 2004b)

4. Method

From the initial stages of our research, we begun immersing ourselves into online forums, blogs and discussion boards to develop an understanding around how users interact with the IT artefact we wanted to investigate, i.e., the iPad tablet. We chose to centre our attention around the iPad because we considered it to be the exemplar, having popularised the genre of the tablet in the consumer market and because, despite its many iterations and generations, it appeared to offer a somewhat consistent experience (Zamani et al., 2019), making it easier to understand user practices.

While immersing ourselves into the online world of iPad users, or what can be considered as the entrée phase of an online research according to Kozinets (2002), we realised that there existed an abundance of blogs, where iPad users were walking their readership through their decision-making process when the iPad seemed to fall short of their expectations, sharing more or less successful practices they had developed to overcome the trials and tribulations of their interaction with the device. Across many of the blogs, iPad users were writing about their experience of interacting with the tablet and of developing accommodating practices, while providing rich information with regards to the context of use and the conditions that were relevant for the formulation of the said practices. For example, they were proffering information about their personal workflows while working from home; interacting with the table while commuting; using the tablet during a meeting and sharing the screen with a colleague; using the tablet in the operation room or during a trial; and so on. In doing so, they were immersing us into their everyday life, by describing not only the obstacles in their interaction, but also a glimpse into their home office; their everyday journey to work; their colleagues' and clients' reactions. In this sense, the authors of these posts were offering us a window into the "many elements of their overall lifeworld" (Kozinets, 2018, p. 385) through their blogposts. In other words, our immersion and engagement with these blogs led us into solidifying and finalising our research question, and finally motivated us to use netnographic techniques as the principles underpinning our study.

As a result, we opted to use these blogposts as our data source on the basis of being "documents of life" (Hookway & Snee, 2017, p. 381), i.e., a more authentic representation of the actual lived experience in comparison to other data sources (Hookway, 2008b). This is

because they allow for "tight union between everyday experience and [its] record", which makes them less exposed to a retrospective reconstruction that often occurs with other data collection instruments (Hookway, 2008a, p. 95). Additionally, they are produced entirely free from the influence of the researcher (Benzon, 2019) and are exceptionally rich in contextual information as shown by similar studies (e.g., Mikkonen et al., 2011; Nelson & Otnes, 2005; Panteli et al., 2011). However, despite them being used here as a primary source of data, blogposts, and any other data drawn from the online world, such as posts in forums, discussion boards and the likes, should be understood as secondary data, as they are not created for any specific research but are pre-existing.

Thus, our design for this online research using blogposts are our primary source of data entails an adapted version of netnography, which we combined with Grounded Theory techniques, for the purposes of data analysis (Charmaz, 2006). iPad users who blog about their iPad experience can be considered either as an 'online community' (if focused on a single blogging platform) or as a 'community online' (Bowler, 2010) (transcending different 'sites' (Kozinets, 2018)) by virtue of sharing similar characteristics, forming around the particular manufacturer (Muniz & O'Guinn, 2001), and as evidenced through the numerous dedicated forums, blogs, and discussion boards[1]. However, our study is focused at the individual level, and therefore our study may be considered an adapted individual-level netnographic study (Hsu et al., 2009; Martin & Woodside, 2011; Woodside et al., 2007).

4.1. Data Collection

We collected our empirical material through iPad users' personal blogs following purposive sampling (Hsu et al., 2009; Martin & Woodside, 2011; Woodside et al., 2007) through an online search between May 2011 and July 2017. The aim was to find blogposts where iPad users were narrating their experience with the tablet, with a clear indication of negative disconfirmation in the narrative as well as descriptions of their accommodating practices, coupled with rich contextual information. This contextual information ranged from descriptions of events leading up to the purchase of the tablet (e.g., queuing outside of an Apple store, reading other bloggers' blogposts and making an informed decision regarding their imminent purchase) and rich descriptions of their workflows (e.g., what the task at hand was and how they have been trying to achieve it by using the tablet), to descriptions of other people's behaviours and responses (e.g., how their colleagues, clients, and family members may have been responded to their purchase and/or their use of the tablet for work-related purposes). To do this, we often had to access and complement our understanding by reading additional blogposts from the blogger's blog. In all cases, we always read the 'about me' entry or its equivalent, and a few more blogposts to understand the background and the personal circumstances of the blogger, as these were not always readily available through the 'about me' entry.

We did not control for the duration of ownership of an iPad: the blog authors may have been in their initial days of using the iPad or having already adopted and appropriated the device within their workflows. This was a conscious choice because our purpose was to specifically identify and examine the generative mechanisms and the resulting user practices across the spectrum of behavioural outcomes. Controlling for either the initial or later stages could

[1] For example: http://www.ipadforums.net/forums/, https://www.avforums.com/forums/ipad-forum.430/, https://forums.imore.com/ipad/, https://community.freetrade.io/t/ipad-tablet-app/

have potentially excluded narratives of those with less or more experience, and potentially valuable insights in relation to the generative mechanisms. As such, the selection criteria for the inclusion of a blogpost in the pool were the following: first, each blogpost had to contain a rich description of one's interaction with the iPad, contextual information as well as information on experiences, influences etc. Second, the blogpost had to describe at least one episode of negative disconfirmation. Third, the blogpost had to contain information on the behavioural outcome of the negative disconfirmation.

The initial pool of blogposts was generated through a Google search using "experience" AND "iPad" AND "blog" as the main keywords. As we begun familiarising ourselves with the empirical material and the terms used by the authors, we then filtered further our search by adding "disappointed", "poor", "bad" and variations of these terms into our keywords. We then focused on the main blogging platforms (wordpress, medium, tumblr), using their keyword search and hashtag functions (e.g., #iPad, #experience, #disappointed), so as to identify additional posts. From this pool, we excluded all blogposts that could be considered as affiliated with Apple Inc. in any way.

All in all, we identified 151 relevant blogposts. During the familiarisation stage of the analysis (Table 2), 15 of these blogposts were excluded because they did not satisfy our inclusion criteria. This resulted in a final pool of 136 blog posts, authored by 86 unique English-speaking tablet users. The complete list of blog posts with demographic data of the bloggers can be found in the Appendix (Table 6). The average word count for the blogposts is 1,412 words (754 excluding words with 3 or less characters), with a maximum wordcount of 5,428. The majority of our bloggers are male from English speaking countries, and mainly USA, Canada and the UK. Most of them have upper level managerial positions or are freelancers.

4.2. Data Analysis

We began our analysis with a preliminary examination of the data, during which time we began developing memos, i.e., analytical summaries, with respect to important themes (see Table 2 for an overview of our data analysis process).

Table 2. Process of Data Analysis

Stage	Aim	Method
1. Familiarisation	Identify major themes underlying the study	Review of the empirical material, memoing.
2. Analytical	Exploration into similarities and differences across the different accommodating practices	*Initial coding*: analysis of material line-by-line, and coding around known and newly emerging concepts. *Focused coding:* grouping of initial codes, identifying variants and dimensions of codes, selecting those with the strongest analytical power, while moving across blogposts. *Theoretical Coding:* abstraction from focused codes identifying core categories, organised by the framing of our study, i.e., Critical Realism (cf. Section 3) Findings are shown in Table 3 and the analytical summary is presented in Table 7.

3. Review of coding scheme	Ensure that the evolving coding scheme is exhaustive and reflects the topic	Two authors reviewed the codes and themes, making sure they reflect accurately the topic of research, that there are no overlaps between codes, and that all relevant material has been coded into a code.
4. Abduction	Identification of plausible theories explaining behavioural outcomes following negative disconfirmation	Revisiting of existing literature on behavioural outcomes following negative disconfirmation. The outcome of this review informed our understanding on Behavioural Outcomes during IT events (Section 2), the interpretation of our findings (Section 5) and our Discussion (Section 6), and formed the basis for the stage of Retroduction and Contextualisation.
5. Retroduction and Contextualisation	Identification of generative mechanisms that function as causal explanations	Comparison of plausible theories in light of the identified contextual conditions (Opportunity to Experiment and Self-Efficacy). We compared the contextual conditions of the bloggers to the boundary conditions of the identified plausible theories, to identify the generative mechanisms with more explanatory power. We report on those generative mechanisms that get activated Section 5.3.3). To keep with the spirit of Critical Realism, we offer a discussion on alternative generative mechanisms that seem plausible, which however, in light of the bloggers' contextual conditions hold less or no explanatory value (Section 5.3.4). The outcome of this stage was informed by Table 3 and Table 7, and informed the interpretation of our findings (Section 5) and our Discussion (Section 6).
6. Reporting	Developing chains of evidence and Presentation of Findings	Selection of quotes (Table 4, Table 5), revisiting the literature, developing findings and final write-up.
Note: while this table presents the different stages of our analysis as sequential, in reality the process we followed was iterative with feedback loops, particularly between stages 2-5.		

The data themselves were carefully analysed, following the approach to Constructivist Grounded Theory coding espoused by Charmaz (2006): initial coding, focused coding and theoretical coding. We chose this technique because it allowed us to use existing relevant concepts as a springboard for inductive theorising while remaining open to unexpected and emerging concepts. In other words, it allowed us to use pre-existing concepts from the literature as the sensitising device. Technological frames (Orlikowski & Gash, 1994) and the data/frame theory (Klein et al., 2007) were used as sensitising theoretical devices, both for

data collection but also for analysis, and helped us query our material with respect to how users perceive the iPad, what were their expectations, what could be possible sources of influence, how did users attempt to overcome their negative disconfirmation, and many others. At the stage of initial coding, we analysed our material line by line by studying the literature against our memos and through the frequent discussion between two of the authors to identify key themes. An example of this stage can be found in Figure 2.

"You can absorb text quickly and well, for example, but writing is a chore. In my experience, at least with the Apple keyboard – the Logitech one is supposed to be better for typing but is also heavier – this view is accurate. (…) There's a reason the words you're reading right now were written using the iMac in the office, not the iPad Pro." Coded as the initial code "typing intensive tasks" (B90).

Figure 2. an example of Initial Coding

At the stage of focused coding, we synthesised initial codes into focused codes. In addition, we organised and extracted vignettes from across all the blogposts that represented important themes, and reflected assumptions and expectations (Orlikowski & Gash, 1994), as well as their impact on the observed behavioural outcomes, i.e., the accommodating practices. After analysing each blogpost, we moved on developing comparisons across blogposts, in order to identify common themes cutting across users. These common themes were then examined again in order to identify similarities and differences across users and across negative disconfirmation triggers. These themes were shared amongst authors in order to validate our interpretations.

At the end of the coding procedure, we developed the study's chains of evidence by examining our codes in relation to the empirical material across blogposts and within blogposts. This resulted in Table 3. As shown, through our analysis, we identified two types of negative disconfirmation triggers (translating and migrating) and three user accommodating practices (discontinuing, workaround, reframing), which will be discussed further on in our data analysis.

Table 3. Categories, Focused Codes and Initial Codes

Category	Focused Codes	Initial Codes
Negative Disconfirmation Triggers	Translating	Application translation Flash support Directory structure File formats User accounts
	Migrating	Typing intensive tasks New gestures Form factor Multitasking
Accommodating Practice	Reframing	Breaking habit Finding a Fit
	Discontinuing	Abandoning Deferring
	Workaround	Using third-party apps Using external devices

It should be noted that the analysis of blogposts presented several challenges, as it is particularly dependent on language, the latter being integral for qualitative studies. Since

blogposts are a type of one's personal diary, language tends to be rather informal, and enriched with terms that are used more often in speech than writing. In addition, it is often the case that blog authors use terms which are common among a particular group of people, or within a specific context (i.e., slang terms), while, equally often, in order to develop an argument, they rely on metaphors which are culture-dependent (e.g., "drank the Kool-Aid", "looked a bit Essex"). Therefore, in these cases, the analysis comprised an additional level where we tried to extract the original meaning, the spirit of the blogpost and the tone of the writing, by going through additional posts within the same blog and consulting with native speakers.

Since we approach our research question through the lens of Critical Realism, a significant part of the data analysis was devoted to the stage of retroduction and contextualisation and requires further discussion. Retroduction is the stage where we contrasted the potential generative mechanisms that could be triggering, and thus explaining, the observable behavioural outcomes (discontinuance, workaround, reframe). To do this, we drew heavily from the existing literature and compared the contextual conditions of the bloggers to the boundary conditions of existing theories, which could plausibly explain the behavioural outcomes of discontinuance, workarounds, reframing, and had been identified during the retrodiction stage. These theories ranged from theories within the post-adoption literature, as for example Beaudry's and Pinsonneault's coping model (Beaudry & Pinsonneault, 2005), Alter's theory of workarounds (Alter, 2014), seminal literature on discontinuance behaviour (Aggarwal et al., 2015; Pollard, 2003), to organisation studies (Davidson, 2002, 2006) and consumer studies (Belk & Tumbat, 2005). By comparing and contrasting the contextual conditions to the theories' boundary conditions, and using "counterfactual thinking in order to isolate the most basic properties that give rise to" the identified behavioural outcomes" (Vega & Chiasson, 2019, p. 250), we were able to eliminate those generative mechanisms with less explanatory value, and identify those with the greatest one. In other words, during this stage, the two authors discussed alternative interpretations and rival explanations, and arrived to those generative mechanisms that were consistent across the empirical material (Bygstad, 2010).

5. Findings

Our findings reveal that there are two types of negative disconfirmation triggers and three user accommodating practices. The critical realism approach allows us to link these triggers to the observed accommodating practices. The latter are events that exist in the empirical domain, by theorising around the generative mechanisms that exist in the real domain, drawing on the contextual factors documented by the users and deemed relevant based on our antecedent knowledge.

In what follows, we first discuss the triggers of negative disconfirmation identified, we then focus on the observed accommodating practices, and finally discuss and analyse the generative mechanisms which emerged as pertinent during our study.

5.1. Triggers of Negative Disconfirmation: Translating and Migrating

Our analysis shows that there are two main triggers of negative disconfirmation. These triggers relate to the technical features of the iPad, such as the lack of Flash support and the lack of a directory structure, as well as physical characteristics, such as its form factor.

We have classified triggers as either 'translating' or as 'migrating'. We consider 'translating' triggers to originate and reside externally to the user as it is governed by the manufacturer's

and designers' choices; thus, such triggers are beyond the user's control. On the other hand, we consider 'migrating' triggers as those related to the user's migration from one platform to another, whereby a degree of exposure is required until the user becomes accustomed or familiar with the new interaction modalities. In other words, it denotes those triggers that relate to unlearning previous habits and learning new ones.

'Translating' stems from the designers' choices with respect to the inclusion or exclusion of features and functions. These are integral for developing a narrative on how the IT artefact is meant to be used, for which scenarios and under what conditions, where some actions are supported and others are restricted (Griffith, 1999; Xenakis & Arnellos, 2012; Yoo, 2010). As a result, they are able to influence the user interaction and the possibility or impossibility of use scenarios.

Through the analysis of our empirical material, we observe a conflict between the designers' intentions and their interpretation by the user. When the iPad was first introduced into the market, the narrative that accompanied it suggested that the device could allow for new user scenarios, without lacking any capabilities. Following the adoption of the iPad, the user is required to move their workflow to a new device, expecting that technical characteristics (e.g., file format handling, directory structure) and plug-ins (e.g., Flash) will be available and operate much like as in their other devices. Yet, even though the iPad introduces a new way of working and interacting, the accompanying narrative put forth by its design doesn't always match user expectations. As a result, negative disconfirmation is triggered on the basis of what is missing, rather than what is included. Table 4. illustrates representative vignettes for the identified themes within the 'translating' trigger.

Table 4. Examples of vignettes for the trigger of 'Translating'

Themes within the 'translating' trigger	Representative vignettes
Application translation	"Most of my iPhone apps (even many of my favorite ones in all the world) suck on the iPad. Especially when pixel doubled. I get that the graphics would have to be pixel doubled, but text too? Is that really necessary? It's the text-based apps that are totally unusable on an iPad." (B103) "my biggest complaints about the iPad Pro: the ridiculous waste of space on the Home screen, and the fact that many apps – even some of Apple's own – are not yet properly optimized for it." (B13)
Lack of Flash support	"I know Flash is a nuisance, and I would love to see a web of standards-compliant sites using HTML5 to deliver dynamic content, but I also live in the real world, and when sites like the BBC's weather page don't work properly on the iPad, it's a bloody nuisance." (B87) "When I was going iPad only, I basically just deferred any long emails until I got home (which was generally okay) and deferred playing Flash-based Facebook games until I had a Flash-capable device." (B47)
Lack of directory structure	"Nevermind that there isn't a camera, there isn't a file system to download pictures off the Internet that could be used to resize." (B1) "As I think about what the first things that came to my mind when using the iPad the most common thought was "how the heck do you store a PDF file on it to view later?" That was one of my biggest initial frustrations with the iPad (knowing what I hoped to do with it initially). (...) The second frustration was the lack of a directory structure." (B38)
Lack of support for different file formats	"I did hope that the iPad would show my work well. It does, but since I primarily shoot in RAW format I have to convert everything to jpg files for the ipad to display them." (B37) "To be honest, I did illegally download a bunch of movies. But, in my defense, these were all movies I already owned on DVD. The problem is that ripping a DVD you legally owned and then converting it just takes hours or days." (B52)

Missing controllers	"There's also no mute toggle alongside the volume controls. This is something I use quite a bit on my iPhone 6S, and frankly I'm a little shocked that Apple didn't include it here. The only way to mute the device is via settings on the device or by holding down the volume button until mute is activated." (B21) "The only minor quibble I have is that the Touch ID setup process has been designed for iPhones and later ported to the iPad. You can tell by looking at the walkthrough process itself – it has no mention of unlocking the iPad in landscape mode (which can't be done on an iPhone)." (B18)

'Migrating' addresses the necessity of moving one's workflow to a new device. The general expectation is that, while migrating from one device to another, iPad users will be able to easily adapt or directly transfer to the iPad their well-established IT habits and routines. Against this backdrop, it appears that, while users had envisaged the use of the iPad within particular contexts and in particular ways, they did not expect how the actual interaction could potentially unfold and were unpleasantly surprised.

Besides a new way of working with IT, the iPad introduced an altogether new mode of interaction, too. Even though this mode of interaction seems similar to other touch-focused devices, with which many users are familiar, migration is not as straightforward. The new modalities as well as the industrial design of the device don't always facilitate migration. Attempting to migrate, users notice the lack of multi-tasking and typing-intensive tasks (e.g., long emails, document formatting) becomes challenging, both of which don't allow for proper 'work'. The use of the on-screen keyboard feels too taxing and time consuming. Similarly, the weight, shape and texture of the device seem to prohibit some users from using it within their envisaged use scenarios (for example, bed-time reading). It becomes even more challenging when the migration relates to an entirely different OS (Android, Windows etc.), as the user needs to unlearn previous interaction modes, 'rework' their muscle memory and get accustomed to the new interaction modalities. The relationship between migration and (un)learning can be best seen through the element of the new gestures required to operate the device. Namely, when migration relates to moving from e.g., an Android or Windows-powered device to the iPad, past IT habits need to be unlearned and a new set of gestures need to be adopted. As a result, efforts to migrate trigger negative disconfirmation. Table 5 presents a number of examples from our empirical material in relation to the different themes relevant to the migrating trigger.

Ultimately, the triggers that belong to the 'migrating' category suggest that migration from one device to the iPad is challenging in light of unlearning habits that have been forming for years, in order to learn how to interact afresh with this new device. In contrast, those that are categorised under 'translating' signify that negative disconfirmation doesn't follow from users' habitual norms, but because some typical patterns of interaction have been restricted by the IT artefact's designers.

Table 5. Examples of vignettes for the trigger of 'Migrating'

Themes within the 'migrating' trigger	Representative vignettes
Typing intensive tasks	"I'm not going to do html markup on the iPad. Getting to all the characters needed for that is slow and annoying." (B126) "On the whole, iPad has been a terrific consumption tool, but not a very good input tool. I've tried to use it to record notes during patient interviews, both by typing and with a stylus, and neither is satisfactory. By both methods, I lack the speed and accuracy to capture the information I need." (B111)

New gestures	"The only awkward thing that I have encountered so far is my desire to reach for a mouse in order to highlight some text. Of course, there is no mouse for the iPad, but my muscle memory has me reaching for a mouse again and again." (B73) "I'd also like to swipe between open browser windows on the iPad, instead of having to tap an icon on the browser bar to see all available open windows." (B2) "One other thing that I had to adjust when working on my iPad was my mind-set about iOS. If you are used to OS X then you have to unlearn some of your long-time habits, and you must also try to judge iOS on its own terms rather than constantly comparing it to OS X. That is easier said than done if you've been working on a Mac using OS X for years and then suddenly you start working in iOS." (B132)
Form factor	"In short, the combination of the surprisingly heavy weight and the glare on the screen make using it for any length of time a constant battle for comfort -- the result is a surprisingly bad user experience despite all the hype to the contrary. I am annoyed and uncomfortable whenever I use the thing for more than 5 or 10 minutes." (B11) "The downside to those premium materials is that there's a fair amount of heft to cope with. (…) in contrast the dedicated ereader felt far more manageable, though also much less solid. I was also a little afraid of dosing off and having the iPad drop on my face and break my nose." (B88)
Lack of multitasking	"I don't think I'm asking too much for wanting to browse the web while having Twitter and Spotify running in the background, something I can happily do on Android." (B88) "How does the iPad compare? Not well! Multitasking and running multiple apps concurrently has never been its strong points." (B27)

5.2. User Accommodating Practices

We identified three main accommodating practices, namely workarounds, discontinuance and reframing. iPad users opt for one of these practices depending on the contextual conditions and the activated generative mechanisms. We first present the aforementioned accommodating practices, and we then provide a description of the relevant generative mechanisms and the relevant contextual conditions.

5.2.1. Developing workarounds

Workarounds are favoured when the users believe that there are hardware and/or software-based solutions that can help them overcome negative disconfirmation by addressing directly the iPad's perceived shortcomings. When the IT falls short of user expectations, users attempt to identify the trigger of their negative disconfirmation and then consider the possible ways of moving forward towards overcoming it. The nature and the complexity of the workaround are influenced by the trigger itself, the actual available solutions, and user perceptions with respect to whether the situation can be improved through their mediation. As a result, while working around their negative disconfirmation, users may seek and try out hardware-based or software-based solutions. Software-based workarounds typically involve turning to third-party applications, whether offline or cloud-based. For example, the lack of a directory structure led users to look for workarounds that can mimic one:

> *"DropBox: A life-saver and a great replacement for the lack of universal file storage on the iOS platform." (B109)*

Hardware-based workarounds reflect turning to technology enablers, such as external keyboards and adaptors, for handling typically typing-intensive tasks and connectivity issues, respectively:

> *"But one snag remained — the on-screen keyboard, which I found ok for short messages and notes, but a real pain for long-form typing (…). So of course I looked round for a bluetooth keyboard — and remembered that I had a neat little Apple one,*

which works fine with the iPad but means that I wound up lugging two devices around and wondering if it would have made more sense to bring a MacBook Air instead." (B138)

Based on the above discussion, we see these workarounds as user attempts to overcome initial negative disconfirmation. As such, they are more than mere patches (Alter, 2014), because users seek to extend the capabilities of the IT artefact through any available technological tool (Spierings et al., 2017), so as to improve their own efficiency and realise their envisaged use scenarios.

5.2.2. Discontinuing the use of the iPad

When the user is unable to identify a possible solution to overcome their negative disconfirmation, they are more likely to discontinue the use of the iPad altogether on the basis of two elements. First, they don't seem able to satisfy their needs by using the device as designed and second, they can exercise their agency and use some other device instead:

"I remember a scene in Boston Legal where Shirley Schmidt, one of the partners in the law firm, brings an associate into her office. "You're a very good lawyer," she tells the associate, cutting off her thanks. "But … not good enough: we're letting you go." And that, ultimately, is how I feel about the iPad Pro. It's a very good device, just – for my needs – not good enough. I'm letting it go." (B15)

Our findings suggest that discontinued use is not binary, but instead it exists along a spectrum. Users may be unwilling to use the tablet for completing one particular task among many. Therefore, they may choose to defer the said task for later when another, more suitable or preferable device is available:

"When I was going iPad only, I basically just deferred any long emails until I got home (which was generally okay) and deferred playing Flash-based Facebook games until I had a Flash-capable device." (B47)

Equally, it may entail the iPad's complete abandonment, and the regression to previous ways of completing tasks:

"I gave up and borrowed laptops (one per continent) to do all of my posts, including when I was covering our keynotes at TNW Conference. (…) However, in the near future at least, I will haul my laptop on any trip I go on where I'll be blogging" (B1)

The difference between deferring and abandoning lies in that the latter denotes pure and complete rejection of the device. In this case, negative disconfirmation with the iPad for a particular task spills over to all other aspects of user interaction and leaves no room for using the device for other tasks. This is not the case with deferring, where users discontinue the use of the iPad solely for the particular task but not for others.

5.2.3. Reframing expectations

The third accommodating practice entails the re-evaluation of one's initial expectations in light of the actual interaction and any additional information newly received from their wider awareness (e.g., other people's experiences). We refer to this practice as reframing. On the basis of this additional information, we observe some users changing their attitudes towards the iPad, and despite their previously experienced negative disconfirmation, they are keen in further exploring potential use scenarios and further integrating it into their workflows. In

other words, reframing denotes in a way, a change in perceptions, and it does require that the user has the opportunity to experiment with the device so as to experience merits in its use and in time, finding a fit for it within their everyday workflow:

> *"It probably sounds like I've been terribly disappointed with my iPad experience, but in fact I'm gradually finding more and more ways to integrate it into my life. The mistake, perhaps, was in immediately trying to find how I could directly replace my usual workday tools with the new tablet." (B88)*

Reframing further entails that users develop a new understanding with respect to the role of the iPad, and interestingly enough they adapt themselves and their perceptions without seeking to improve the underlying triggers for their initial negative disconfirmation. As a result, they defend or minimize the importance of any inconsistencies between their expectations and the tablet's functionality, and overcome their initial negative disconfirmation by adjusting their IT habits. For example, one of the most prominent features that trigger negative disconfirmation is the lack of real multitasking. When it comes to non-critical tasks and when users have ample time for experimentation, they move to break long established habits and interpret the lack of multitasking as a feature that assists them with being more focused on the task at hand:

> *"The one thing I thought would be a negative in the beginning, turned out to be a positive. I'm referring to the iPad's lack of ability to multi-task. (…) Once you get used it that, you realize how efficient you are with the lack of distraction." (B91)*

5.3. Generative Mechanisms

When it comes to consumerised IT devices, the aforementioned three user accommodating practices are equally likely, to the extent that users are able to exercise their agency and adopt them. To identify the generative mechanisms with enduring properties and causal power over them, we turn to critical realism and specifically to Bygstad et al. (2016) who note that one needs to identify the potential relationships between events (triggers) and outcomes (accommodating practices), and then provide logical and analytical support (retroduction) for the existence of powers and tendencies (i.e., the mechanisms) by assessing the explanatory power of against the empirical evidence and possibly alternative explanations. On the basis of this approach, we identified two generative mechanisms: solution identification and cost/benefits assessment (Figure 3). We recognise that other generative mechanisms may indeed exist within the domain of the real that allow us to observe the practices of workarounds, discontinuance and reframing in the empirical domain. Yet, we consider these to be the most relevant ones to the contextual conditions at play in our study, those by the bloggers in our case pool and identified by use (i.e., the negative disconfirmation triggers of migrating and translating). These are discussed next.

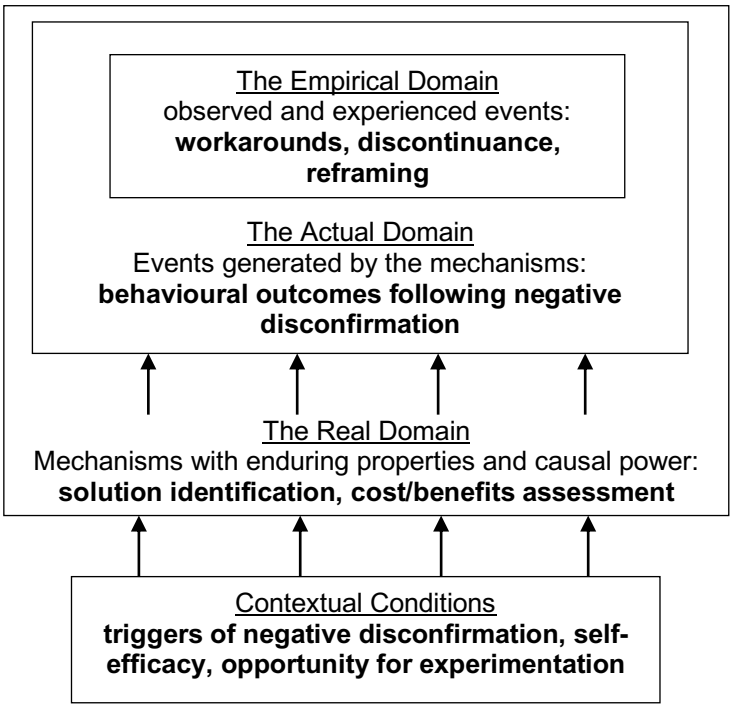

Figure 3. The three domains of the real (adapted from Iannacci & Resca, 2016; Mingers, 2004b) in the case of negative disconfirmation with tablet use.

5.3.1. Solution Identification

The malleability of the technology itself allows users to develop workarounds by employing software-based and hardware-based solutions to address the technology's perceived shortcomings (Elbanna, 2006; Schmitz et al., 2016). However, in order to take advantage of the malleability of the technology, it is necessary that there exists a solution that can address the negative disconfirmation trigger. For example, in the case of the missing directory structure, we observe users employing external accessories (e.g., camera connection kit) so as to transfer files to the device, as well as using third party applications that mimic a file structure (e.g., Dropbox). In contrast, negative disconfirmation due to the tablet's form factor cannot be tackled because it is not possible to change it through some intervention.

At the same time, it is important to underline that IT competence is crucial for IT use (Hsieh et al., 2011; Koo et al., 2015), as it largely suggests how well and to what extent the user will be able to take advantage of the malleability of the technology. Therefore, we posit that the existence of a potential solution is not enough on its own to generate workarounds. Instead, users need to also be able to enact the identified solution, which suggests that they have the resources to do so. These resources may refer to knowledge, experience and IT skills (Marcolin et al., 2000), but also monetary resources to acquire the potentially required accessories and applications that will help them meet their objectives. For example, users may need time to get accustomed to the new gestures and form factor, or equally they may need to be knowledgeable enough to understand which application can serve them best towards addressing their needs, and be able and willing to pay for it:

> *"After buying a USB-C to Lightning (because we need yet more cable standards) cable that was not MFI-certified and being told by the iPad that is was no bueno, I had to fork over $25 for the Apple cable." (B29)*

We refer to this mechanism as solution identification. By being able to identify and implement solutions, users can adjust and modify the function of the iPad to their own requirements, by creatively combining and recombining existing or new IT and non IT artefacts:

> *"What we found was that a simple xray cassette sterile bag, ubiquitous in the OR, holds an iPad comfortably. Once the iPad is inserted into the plastic bag by the circulating nurse, the top can be cut off, folded back and clamped with a hemostat (see image) allowing the iPad to be safely brought into the sterile field."* (B120)

5.3.2. Cost/Benefits Assessment

A second generative mechanism is that of cost/benefits assessment. Cost/benefits assessment draws from existing research on consumption values in relation to perceived benefits and associated trade-offs (Turel et al., 2010). When users are confronted with negative disconfirmation, they evaluate their options on the basis of the costs and the risks associated with the use of the device in relation to the potential benefits. As such, this mechanism allows users to move between discontinuance and reframing, or equally to identify an attainable solution and enact it, i.e., develop a workaround on the basis of fitting the technology to the task at hand, for the purposes of attaining the benefits stemming out of doing so (Alter, 2014; Gebauer & Ginsburg, 2006; Klopping & McKinney, 2004).

To begin with, when users are confronted with negative disconfirmation and consider that a solution is not possible, i.e., when they appear unwilling or unable to develop a workaround, they most often seem focused on the negatives of their interaction and experience. This is not surprising, as research has shown that negative experiences usually have a greater impact than positive ones (Bhattacherjee, 2001). Indeed, considering this in line with research on consumption values, perceived costs hold greater explanatory power over benefits when it comes to the adoption and use of new IT (Kim et al., 2007).

The term perceived costs is used here in its wider sense. They do not necessarily concern monetary costs or tasks that are time-sensitive. Instead, they may relate to a matter of personal significance to the user. For example, there are users who attempted to use the tablet for reading and watching movies while in bed, or as their primary and sole work device. When faced with negative disconfirmation in these circumstances, users opted for discontinuing the use of the tablet for the said tasks.

> *"Right now, my plan is to finish Open, but I will probably never try reading another book on the iPad again: destroying one of my greatest pleasures with constant discomfort seems like a ridiculous thing to do to myself again."* (B11)

In this case, the user clearly enjoys reading but doing so on the iPad is frustrating. He sees no benefit in using the tablet (cost/benefit assessment), at least for reading; instead, he sees great risks and specifically the danger of the tablet having a negative impact on his reading habits. When such great risks exist without any visible benefits, users move to discontinuance, because when perceived risks and costs outweigh the benefits, users are generally less willing to use a technology or an IT artefact (Schmidthuber et al., 2020). In other cases, perceived costs have to do with the tablet's inability to handle multiple accounts and the resulting lack of privacy:

> *"Problem is, there's still no way to turn the iPad into a proper, multi-user, family tablet. (…) One email inbox, one calendar view, one set of Safari bookmarks: if you're living in a commune then perhaps that's okay, but for everybody else it leaves the choice of*

either opening up your messages and schedule to anybody curious enough to stab at the icon." (B89)

However, personal costs are weighted against perceived benefits. When the perceived benefits exceed the costs, then instead of discontinuing the use of the tablet, the user proceeds with reframing their initial expectations, as we've seen in multiple cases with the lack of multitasking:

"I don't think I'm asking too much for wanting to browse the web while having Twitter and Spotify running in the background, something I can happily do on Android.(…) It probably sounds like I've been terribly disappointed with my iPad experience, but in fact I'm gradually finding more and more ways to integrate it into my life. The mistake, perhaps, was in immediately trying to find how I could directly replace my usual workday tools with the new tablet. (…) It's a device that's encouraging me to have more downtime, reading longer articles rather than hopping frenetically from topic to topic." (B88)

In this case, the user has identified the lack of multitasking as a significant flaw that impedes his everyday workflow. However, over time, he was able to explore further the device and identify benefits in its use. In doing so, he re-evaluated the device as a whole and considers it now as one that allows him to have a break from his everyday routine.

This is in line with existing research that shows that users may update their expectations over time and in line with more recent experiences and future goals (e.g., Davidson, 2002; Ovaska et al., 2005). Remaining engaged with the iPad allows users to interact further with it, and in doing so, investigate its potential to support them in their everyday tasks, identify new ways of working and quite possibly revise the way they interact with the particular IT artefact (Sun, 2012). This in turn offers the opportunity to identify additional or novel use scenarios, and thereby find a fit for the tablet.

The cost/benefits assessment mechanism is relevant for the enactment of workarounds, too. Our analysis suggests that, following the activation of the solution identification mechanism, a workaround will be enacted only when the user expects to attain some benefits, tangible or intangible that outweigh the costs, which relate with performing the said workaround. For example, one of the most popular workarounds we observed was that of using multiple applications for the purpose of overcoming barriers or replicating one's workflows from the PC or the laptop on the tablet (solution identification mechanism). Following the enactment of the said workaround, users proceed with evaluating how the new workflow compares, i.e., whether the costs of e.g., purchasing and using a menagerie of applications, provides them with benefits that outweighs them. The benefits may be, for example, using the tablet as the primary computer, or simply offering an enjoyable experience:

"All of the apps I've mentioned are universal, so I can just as easily perform updates or publish new posts from my iPhone. (…) Making changes to my site was one of the only reasons I had for returning to my Mac. Not only is this no longer necessary, but I find using my iPad for this task quicker, easier to maintain, and just a far more enjoyable experience." (B121)

In contrast, when costs outweigh the benefits, even when a solution is attainable and has been identified (solution identification mechanism activated), the user will not develop workarounds but will move towards other behavioural outcomes:

"Of course, perhaps if I had purchased a keyboard, a lot of my typing woes may have decreased, although I imagine that autocorrect would still be a pain. That said, I personally do not like the idea of a keyboard for the iPad – the whole point in my mind is that it is a self-contained device that shouldn't require external equipment (though obviously Apple doesn't agree). Also, add the extra weight and bulk of the keyboard, and you're getting into netbook size territory." (B1)

5.3.3. Contextual Conditions: Opportunity to Experiment and Self-Efficacy

Whether the two aforementioned generative mechanisms get activated or not is contingent on the underlying contextual conditions (Henfridsson & Bygstad, 2013).

The first contextual condition we identified as pertinent is that of the real or perceived self-efficacy of the user. With regards to the solution identification mechanism, we note that solutions must not only exist but also be attainable (Alter, 2014), as illustrated in the case of working around how to sterilise the iPad for its use in the OR (B120). The user's perceived or real self-efficacy in this sense is a crucial contextual condition that allows this generative mechanism to lead to workarounds rather than other practices. While to a great extent, the inability to develop a workaround may relate to the absence of a solution, it is quite probable that users may simply not know what solutions exist or how these can be implemented.

Self-efficacy can be described as one's "judgments of their capabilities to organize and execute courses of action required to attain designated types of performance. It (self-efficacy) is concerned not with the skills one has but with judgments of what one can do with whatever skills one possesses."(Bandura, 1986, p. 391). Within the context of IT use, it has been shown to be tightly linked to IT competence (Bassellier et al., 2001; Shih, 2006), to the extent that it is considered as "an individual's own perceptions of their IT competence" (Meredith et al., 2020, p. 6). In line with social cognitive theory (Bandura, 2012), if self-efficacy is high, we expect users to be more inclined to engage further with the technology in order to 'make it work' and therefore identify workarounds. In such instances, users tend to believe in themselves and abilities, and therefore are more likely to persevere (Bandura, 2012). In contrast, Aggarwal et al. (2015) discuss that when users perceive themselves as less able to use IT effectively, they are likely to discontinue its use. It should be highlighted that self-efficacy captures one's perceived IT competence when it comes to IT use rather than the real, actual IT competence, and there may be a stark difference between the two. However, for the purposes of triggering the solution identification mechanism, our study shows that what is necessary is that the user perseveres through what may be considered adversity and, occasionally, despite all odds. This was particularly the case for those bloggers who had never used Apple products before but were confident in their abilities (e.g., B77).

The second contextual condition if that of the opportunity to experiment. This condition suggests that the user needs to have a meaningful experience with the iPad as a necessary requirement for identifying and appreciating the potential benefits of using it. A meaningful experience can take many forms depending on the context of use. Yet, we consider that the most universal interpretation relates to the dimension of time due to its affective attribute on the human experience (Johnsen et al., 2019). Having the opportunity to experiment with the technology entails that the user is able to engage with its features and identify new action possibilities (Lassila & Brancheau, 1999), and therefore identify solutions to their negative disconfirmation and develop workarounds. In other words, for our study, it suggests that users can properly familiarise themselves with the iPad, and therefore explore whether solutions exist, whether these are attainable, and whether there are any benefits that would outweigh the costs of enacting the said solutions. Considering this in line within the context

of consumerised IT, opportunity to experiment suggests that tasks are not time-sensitive, so they can allow the user to experiment and explore ways for tackling them should a negative disconfirmation trigger arise. However, even within a highly consumerised work context, this may not always be realistic or possible (Dang-Pham et al., 2019; Gregory et al., 2018). In the case, for example, of a blogger who was travelling light while live-covering a conference, this opportunity did not exist, and the attainable solution (i.e., using an external keyboard) was judged as not good enough because it would defeat the very purpose of the tablet (B1). In such cases, the user may discontinue the use of the tablet for one or all tasks.

Nonetheless, the opportunity to experiment allows users to learn how to use the device, and eventually unlearn and break free from previous IT habits and possibly exaggerated expectations, in their attempt to find a fit between the device, the task and their workflows. This in turn leads to improved performance, especially within the context of BYOD (Doargajudhur & Dell, 2019), which has been the underlying, core driver of such schemes (Gartner, 2006). This was particularly obvious in our study with regards to the lack of multitasking, whereby users, after having the opportunity to experiment with the tablet and unlearn deeply entrenched habits, they reframed their understanding and adapted to the new interaction paradigm (B91).

In closing our discussion on the contextual conditions, we note that the *negative disconfirmation triggers* themselves should be understood as being contextual conditions, as well. While they differ from those of self-efficacy and opportunity to experiment, in the sense that they in fact are responsible for the user's negative disconfirmation, they, too, form part of the use context within which the user needs to interact with the IT artefact.

5.3.4. Alternative Generative Mechanisms

Critical Realism suggests that, in order to theorise and ensure that the proposed generative mechanisms have a causal power and greater explanatory value than alternative, possibly equally plausible, mechanisms, one needs to go through retroduction, or what Bygstad (2010) calls validation. Retroduction suggests that the different generative mechanisms are assessed against each other and in relation to the available empirical evidence, and the final generative mechanism is chosen on the basis of being the one "that best explains the events observed" (Bygstad et al., 2016, p. 89). This needs to happen on the basis of the empirical material and prior literature, while recognising, however, that numerous other generative mechanisms may well exist within the domain of the real, which may not be relevant for the particular study due to the emerging contextual conditions (Henfridsson & Bygstad, 2013; Mingers, 2004b; Williams & Wynn, 2018).

We therefore considered alternative generative mechanisms, which could plausibly explain tablet users' commitment in developing workarounds over discontinuance and reframing, and, relatedly, differentiating between reframing and discontinuance. Among them, we considered brand commitment because the iPad belongs to the family of Apple products. Apple products are known to have dedicated users (Muniz & O'Guinn, 2001), whose commitment often brings to mind cult characteristics (Belk & Tumbat, 2005). One could, therefore, argue that an iPad user could be committed to 'make it work' and even re-evaluate their initial expectations, so that the device could be seen in a more positive light, and overcome negative disconfirmation. Indeed, some tablet users in our blog pool do exhibit some of these characteristics:

> *"I'm also among an elite 50,000 who bought the very first Macintosh in 1984. I sold a life insurance policy and used the cash value to pay for it." (B101)*

However, in the aggregate, the majority of them are not. Instead, the pool contains Microsoft-focused users, as well as others who switch comfortably between operating systems and manufacturers:

> *"I soon found out that I wasn't alone in the world of Microsoft-focused iPad users" (B77)*

> *"[W]e've got a fleet of 6 PC desktops of various vintages and three Windows laptops", B34, "I proclaimed I was content with my BlackBerry Curve and saw no need for the first iPhone. Three iPhones later, I said the same of the iPhone 4, lured by recent Android devices with impressive hardware specs." (B83).*

As such, controlling for contextual conditions suggests that brand commitment, although plausible, holds less explanatory power compared to solution identification.

In turn, juxtaposing brand commitment to cost/benefits assessment, we initially expected that, at least the committed Apple users would be more likely to move towards reframing rather than discontinuance following negative disconfirmation. However, and specifically for this group of users it appears that, not only does brand commitment not seem to hold greater explanatory value compared to the cost/benefits assessment, but that cost/benefits assessment for them becomes quite specific:

> *"But adding this to my existing roster of iPhone 6s, iPad Air 2, MacBook Air 11 and MacBook Pro 17 is a step too far – even for me! (…) And that, ultimately, is how I feel about the iPad Pro. It's a very good device, just – for my needs – not good enough. I'm letting it go." (B15)*

> *"I'm a longtime Apple user — since 1978, in fact, when I had an Apple II. I was even, briefly a Lisa user. (…) For me, the iPad turns out to belong to the category "nice to have but not essential". It's beautifully made, but overpriced (esp in UK) and heavy. (…) well, you can see that the Pad is no competition for the Touch." (B124)*

While for other tablet users, the underlying contextual conditions may relate to opportunities to experience and experiment with the device, and identify ways to find a fit between the device and their workflows, for dedicated Apple users the challenge of a cost/benefits assessment is to identify a fit for the tablet within their portfolio of all their other Apple products. This further enhances the explanatory power of the generative mechanism of cost/benefits assessment and diminishes that of brand commitment.

6. Discussion

In this paper, we have adopted the lens of critical realism to investigate the behavioural outcomes that stem out of negative disconfirmation with the iPad. Specifically, we put forward two generative mechanisms, namely solution identification, and cost/benefits assessment as having a causal power over the behavioural outcomes adopted by users in light of their negative disconfirmation. In addition, we discuss the necessary contextual conditions that activate these generative mechanisms, and show how and why these are necessary. Figure 4 summarises our findings in relation to the three aforementioned user accommodating practices of workarounds, discontinuance and reframing in light of the identified contextual conditions. In the following sections, we elaborate further on each of these practices, discuss the implications stemming from our study on post adoption research and highlight its limitations.

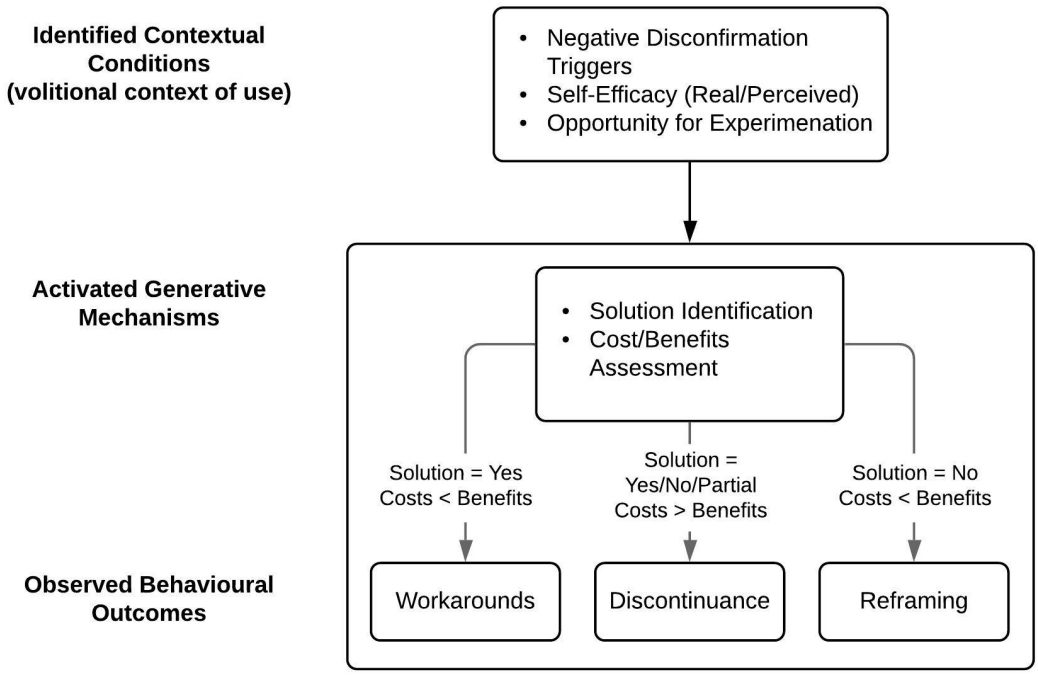

Figure 4. User accommodating practices following negative disconfirmation from a Critical Realism Perspective

6.1. Theoretical Implications

The main contribution of our study is the synthesis of the underlying contextual conditions, the activated generative mechanisms and the observed behavioural outcomes in the case of negative disconfirmation in volitional IT use. In doing so, we bring together insights from existing literature on post adoption behaviour and further extend them through a comprehensive study of behavioural outcomes stemming from negative disconfirmation. Building on previous studies, we uncover a wide breadth of user accommodating practices and their generative mechanisms, firmly positioned within the volitional context of use with highly consumerised devices.

Our work responds to recent calls for further research into how individual users adapt their behaviour, including task and IT adaptations, by focusing on the triggers that make such adaptations relevant and necessary (Schmitz et al., 2016). This study makes a significant contribution to post-adoption research by moving away for the usual, strictly organisational context, and identifies a set of behavioural outcomes that are directly relevant for highly consumerised environments. In this context, the use of IT is not mandated by the organisation, and users can freely modify or discontinue the use of the device as they see fit. In this sense, understanding what leads to discontinuance or, equally, what drives continuance behaviour, is critical both for the long term use of the IT artefact, as well as because volitional IT use has been increasing over the recent years, and has recently peaked as a result of BYOD schemes and the consumerisation of IT (Doargajudhur & Dell, 2019; French et al., 2014). Along these lines, we approached post adoption behaviour holistically: we identified the triggers of negative disconfirmation, the behavioural outcomes and the

mechanisms that lead to these outcomes, as well as the conditions that activate these mechanisms.

Within the volitional context of use, users resort to workarounds in order to counteract or overcome the technology's perceived shortcomings and eventually meet their personal objectives. Put simply, they employ workarounds in order to meet their objectives (e.g., Alter, 2014; Barrett, 2018; Choudrie et al., 2016). As such, our study shows that, the reasons for enacting workarounds within a volitional context of use are to those identified by studies positioned within organisational contexts (e.g., Azad & King, 2012; Barrett, 2018; Choudrie et al., 2016); they stem from the realisation that the technology at hand does not fit the user's workflow and everyday needs (Alter, 2014; Davison et al., 2019) due to factors such as poor design (Gasser, 1986), which lead to lower satisfaction levels (Laumer et al., 2017). Therefore, Like previous studies (Alvarez, 2008; Boudreau & Robey, 2005; e.g., Lapointe & Rivard, 2005; Laumer et al., 2017), we do not consider the observed workarounds as acts of resistance. Resistance entails a stronger focus on the observed behaviour and the existence of top-down pressures or some kind of an external power structure, imposing a certain type of behaviour. In other words, resistance entails a conflict of intentions (Markus, 1983), which does not exist within volitional contexts of use, as for example within consumerised environments.

Another behavioural outcome that we have identified is that of discontinued use. Our findings let us contrast discontinued use in a volitional setting with that of previous research in organisational contexts. Discontinuance, in one or another form, has been the topic of many studies, primarily, however, within the organisational context where IT investments have a real and significant impact on the performance and profitability of the organisation (Strong & Volkoff, 2010), and where discontinued use is typically interpreted as failure of IT (Jasperson et al., 2005). It has often been seen as the rejection of the technology as a result of misalignment of material and social interactions, where technology-as-designed doesn't seem to fulfil its purpose (Leonardi, 2009). Users may reject the technology from the start because e.g., they may fear a loss of status and power within the organisation (e.g., Beaudry & Pinsonneault, 2005; Hekkala & Urquhart, 2013; Lapointe & Rivard, 2005).

Yet, these reasons do not always apply within a voluntary setting, where use is not mandated (Brown et al., 2002). With hedonic systems, online social networking applications and the like, we see that users may use them for a while, and then discontinue their use due to fatigue, guilt and other negative feelings (e.g., Maier et al., 2015; Soliman & Rinta-Kahila, 2019; Turel, 2016). Discontinuance stems from a mismatch between initial expectations and actual experience, and research suggests that user perceptions regarding the impact of IT use on concepts such as aesthetics and immersion may lead to discontinued use (e.g., Chen & Granitz, 2012; Mick & Fournier, 1998). Our study highlights additional attributes, such as privacy for example, where the inability of having multiple user accounts is considered a significant flaw.

An important conclusion of our research is that, discontinuance, as a behavioural outcome, should not be treated as a binary outcome. Following negative disconfirmation, the user may use another device instead of the tablet for one or more tasks, or reject the tablet entirely for any and all tasks. In this sense, continuance and discontinuance are task-dependent and may co-exist, where there are degrees of discontinuance. Turel (2015) has indicated something similar with regards to Facebook discontinuance and suggested that discontinuance may exist along a continuum, whereby continuance and discontinuance behaviours are neither opposites nor mutually exclusive, existing along a continuum.

We therefore highlight the need for investigating accommodating practices following a task-based approach, rather than a behavioural outcomes approach or one that places the

emphasis on the IT artefact, in contrast to most post-adoption studies. This will allow us to explore a wider breadth of possible user behaviours, all stemming from the negative disconfirmation with the same task, which will in turn allow us to identify more accurately the underlying generative mechanisms.

Our use of grounded theory method techniques allowed us to reveal the reframing (initial) expectations as an additional accommodating practice. Following negative disconfirmation, and while taking stock of its triggers, some users re-assess their beliefs about the iPad and re-examine its potential to support their envisaged use scenarios. This is reminiscent of existing literature on technological frames and sensemaking (Orlikowski & Gash, 1994; Weick et al., 2005). User expectations about technology depend upon users' assumptions and knowledge about this technology (Orlikowski & Gash, 1994), and are shaped by user mental models (Davidson, 2006), as formed by past experiences, the experiences of others and other cues (Sonenshein, 2007). Expectations in turn shape subsequent behaviour (Mesgari & Okoli, 2019; Weick et al., 2005). At the same time, interpretations and understanding change over time (e.g., Davidson, 2002) as a result of present interactions and future aspirations (e.g., Davidson, 2002; Ovaska et al., 2005). Jasperson et al. (2005) discuss that there is an element of reflection following post use, where the user attempts to make sense of the technology by considering pre-existing cognitions and possibly modifying their initial intentions.

Two generative mechanisms leading to these three user accommodating practices have been identified in our work. We identified the solution identification mechanism and the cost/benefits assessment mechanism, and we posit that these two interact with each other. Drawing from social cognitive theory (Bandura, 2012), how much a user will be able or willing to experiment with an IT artefact, when given the opportunity to do so, will depend on how comfortable they are with the technology and/or how much they know regarding its use (Lippert & Forman, 2005). Along these lines, the solution identification mechanism will get activated when a solution is attainable (self-efficacy) and/or when the user is able to experiment with trying out different solutions (opportunity to experiment). However, the outcome will be a workaround only on the basis of a cost/benefits assessment. Here, the user assesses the perceived costs and risks of using the tablet for a specific task. Costs may range from quite personal, such as disruption of an intimate experience, to quite universal, such as a sense of loss of privacy, monetary or time costs etc. These perceived costs are then compared to the benefits that the user identifies in the continued use of the device through the workaround identified. Where the costs exceed the benefits, the user is more likely to move towards discontinued use. Comparatively, when a solution is not attainable, because it does not exist or because self-efficacy is low, and where benefits exceed the costs, the user moves on to reframing, i.e., revising their initial interpretation of the device.

For the reframing behavioural outcome, the opportunity to experiment is critical for the activation of the cost/benefits assessment mechanism, as with the case of workarounds. However, for reframing in particular, it has an even more critical role to play because it is what differentiates it from discontinuance behaviour. When solutions are not attainable, the only option is to either accept that the device cannot satisfy one's need, and possibly discontinue its use, or try to identify some fit among their workflows, the task and the IT artefact (Kim et al., 2016). Previous research suggests that, in instances of low satisfaction and possibly negative disconfirmation, hope plays a critical role towards continued use, supporting explorative behaviour and motivating the user to keep on using the IT artefact (Ding, 2019). We therefore posit that users in this case hope to identify such a fit through their experimentation with the device, possibly also in an effort to justify its acquisition. This motivation is clearly most relevant in the volitional context of use, as the use bears the cost

of acquisition in its entirety. Yet, the prerequisite contextual condition is that of time that can provide the necessary room for this kind of experimentation and exploration. This is further supported by discussions on the utility of technologies, where research suggests that utility is not fixed, but rather emerges through structuration episodes when and as pursued by individual users (Schmitz et al., 2016).

Finally, we show that solution identification as a generative mechanism gets activated and gains its causal power over user accommodating practices under the premise that the user is able to enact the identified solution. This result provides a response to previous calls for research for a comprehensive investigation into behavioural outcomes from the perspective of user competence and self-efficacy (Koo et al., 2015). Equally, we shed light into previous, speculative discussions, on the relationship between autonomy and explorative behaviour. Ahuja and Thatcher (2005) have argued that autonomy implies to an extent accountability, and therefore, this may result to users being less willing to experiment with solutions when self-efficacy is low. In our study, we have shown that there is indeed a link between autonomy, experimentation and self-efficacy. Within consumerised environments, whereby autonomy is high (Doargajudhur & Dell, 2019; Niehaves et al., 2012), the contextual condition of self-efficacy will activate the mechanism of opportunities for experimentation and give way to more or less sophisticated workarounds.

6.2. Practical Implications

At a practical level, our study can inform the design process of IT artefacts and applications. We have adopted a feature-based approach (Griffith, 1999) and identified specific technological features and functions that appear to fall short of user expectations and triggering negative disconfirmation (Table 4, Table 5). Specifically, we started off our analysis by identifying the IT features that seem to give rise to critical incidents. In this respect, as these are responsible for the critical incidents our user write about, they can undoubtedly be of value for IT product designers (Salo & Frank, 2017). In addition, rather than focusing solely on those features that may lead to enhanced or more constructive use of the IT, we have focused specifically on those that hinder interaction. We therefore posit that our findings are of benefit to IT designers towards grasping what users need, what they do, and how they go about restoring a connection between the two when technology fails their expectations, and especially when they are moving their workflows onto new IT artefacts. In this respect, we join our voice with that of other researchers and call for more attention to be paid into what hinders interaction and migration, so that, rather than obstructing the occurrence of workarounds, practitioners can draw inspiration and develop innovative solutions for what users actually need (Davison et al., 2019).

Further, we offer insights into the context of use, delineating the critical contextual conditions that are pertinent for the three different behavioural outcomes. The design of IT artefacts, such as the tablet, poses a series of challenges for IT designers as such devices are required to be used within ever diverse and changing contexts (Doargajudhur & Dell, 2019). In addition, within voluntary settings in particular, their use is not mandated, nor prescribed by the organisational agenda. As a result, satisfaction and continued use are subject to individual perceptions and the fulfilment of personal use scenarios and goals. Against this background, aspects of real or perceived self-efficacy and the opportunities for experimentation with the device are rendered critical contextual factors (Wong et al., 2019), that must be taken into account in an attempt to facilitate and support the user's engagement with the device.

Last but not least, we consider our findings to be of particular interest for highly consumerised environments. With the advent of BYOD schemes, privately owned devices are used for professional purposes, and these include laptops and smartphones, but increasingly tablets, as well. Such blended personal/professional use has been further accentuated in the recent pandemic. Our findings, therefore, can help practitioners and organisations understand how best to support organisational members towards developing more useful workarounds, as for example, by offering them greater opportunities to experiment with their tablets for task completion. Equally, our findings, especially along the lines of self-efficacy is of distinct importance for organisations where IT support may or may not account for the technical support of employees who take advantage of such BYOD schemes, as their formal inclusion can help them feel more confident in their everyday activities (Hovav & Putri, 2016).

6.3. Limitations

Our study exhibits the same limitations with other netnographic studies. Specifically, bloggers may prefer to focus and report events and occurrences that are seen as most important to them, while paying little or no attention to others that may fall firmly within the researcher's interests. However, our objective in this study was to identify user perceptions and how the iPad's features and functions impact on them, rather than imposing our own preconceptions regarding its weak and strong points. In addition, blogging typically allows for "impression management" (Hookway, 2008a, p. 93), where bloggers construct an online identity depending on how they want to be viewed rather than who and how they actually are. Yet, this can occur in any research scenario, as the researcher cannot ensure that participants don't distort reality, and it is more pertinent in studies where features, such as demographics play a crucial role.

Another limitation has to do with the profile of the bloggers. As shown through our casebook (Table 6), our material derives from solely English speakers, mostly male and mostly holding some type of a managerial position. We expect that this kind of profile impacts on our findings, and especially those that relate to user accommodating practices, where aspects of self-efficacy, time, effort and investment seem to be quite critical. Having said that, among the initial aims of our study was to explore whether any patterns could emerge with regards to the user accommodating practices in relation to the blog authors' profiles, i.e., in relation to e.g., gender or independent professionals versus full-time employees. However, we did not identify such patterns. We consider that future studies should address this through more in-depth intensive studies, as there can be valuable, both theoretical and practical, insights from understanding accommodating practices on the basis of differing individual or working conditions.

Finally, we highlight that our data is solely restricted to the posts of the bloggers and doesn't capture the more interactional nature of the platforms, as for example questions and comments to the original blogpost, which often help with initiating a discussion between the blogger and their audience. Future studies may consider focusing on the social and interactional nature of blogs and forums in order to explore whether and how perceptions and practices may shift over time and on the basis of interactions between posters.

7. Conclusions

In this paper, we propose an alternative approach to understanding behavioural outcomes, and specifically accommodating practices following negative disconfirmation. We have

adopted the lens of critical realism and have focused on consumerised devices, and specifically on iPads, to identify triggers of negative disconfirmation, behavioural outcomes and the generative mechanisms that bring them together. Through our study, we emphasise the applicability and the usefulness of the critical realism lens of theorising as a way to identify not only the breadth of user accommodating practices, but also their underlying generative mechanisms. As shown, critical realism allowed us to understand, not only what are the accommodating practices adopted by users when technology falls short, but also the mechanisms that influence the adoption of one accommodating practice over another and the contextual conditions that activate these specific mechanisms. In addition, it has helped us appreciate the importance of pursuing further research on accommodating practices following a task-based approach, rather than on the basis of behavioural outcomes.

We consider that research within the context of consumerised IT devices is of increasing relevance, particularly when their use becomes intensified, as for example during and post the lockdown due to the Covid-19 pandemic, or e.g., when they are entangled in working-from-home arrangements. On the one hand, consumerised IT devices draw attention to how the boundaries between the personal and professional spheres may become permeable (Polyviou et al., 2019; Prasopoulou et al., 2006), often extending the work day and creating conflict between work and private life (Golden, 2013). On the other hand, they are often shared within the household, where there is the occasional competition among family members for access ("*Everyone in the family is waiting for their turn at the iPad."* B34). It thus warrants further research, focusing on the implications of consumerized IT devices on work-life balance, when boundaries not only become permeable but can be viewed as collapsed.

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Appendix

Table 6. Casebook of study

Bn	An	Pseudonym	Country	Gender	Profession	Model	Post date	Access date	Word count (all chars)	Word count (words > 3 chars)
1	1	Dale Cooper	China	Male	Marketing & Business Develop. Executive	iPad 1	04/05/2010	23/05/2013	1004	540
2	2	Tamara Preston	USA	female	Executive Editor, Online & Data Analytics	iPad 2	22/06/2011	24/08/2012	726	396
3	"	"	"	"	"	"	02/06/2011	23/05/2013	1677	884
4	3	Albert Rosenfield	USA	Male	journalist, commentator	iPad 1	2010	23/05/2013	1546	868
5	4	Chester Desmond	Spain	Male	Social / Open Business evangelist and 2.0 practitioner	iPad Pro	09/09/2016	15/06/2017	2189	1145
6	"	"	"	"	"	iPad 2	10/05/2011	15/06/2017	3027	1650
7	5	Sam Stanley	USA	Male	UX Developer	new iPad	25/03/2012	24/08/2012	746	428
8	6	Phillip Jeffries	USA	Male	Lead designer	iPad Mini	23/12/2012	15/06/2017	1704	930
9	"	"	"	"	"	"	18/03/2012	15/06/2017	1450	771
10	7	Roger Hardy	UK	Male	Operations director	new iPad	23/03/2012	25/08/2012	866	470
11	8	Gordon Cole	USA	Male	Professor of Management Science	iPad 1	21/04/2010	13/05/2011	1350	698
12	9	Dennis Bryson	UK	Male	Technology writer	iPad Pro	12/11/2015	15/06/2017	1397	717
13	"	"	"	"	"	"	13/11/2015	15/06/2017	1720	896
14	"	"	"	"	"	"	16/11/2015	22/06/2017	1619	817
15	"	"	"	"	"	"	18/11/2015	15/06/2017	1505	779
16	10	Harry S. Truman	USA	Male	technology analyst	iPad Air	25/11/2013	22/06/2017	1362	754
17	11	Andy Brennan	Italy	Male	Editor-in-Chief	iPad Air 2	04/02/2015	22/06/2017	5186	2724
18	12	Bobby Briggs	USA	Male	Senior Graphic Design Instructor	iPad Pro	12/11/2015	22/06/2017	1961	1071
19	"	"	"	"	"	"	23/11/2015	22/06/2017	4052	2195
20	13	Chad Broxford	USA	Male	Entrepreneur	iPad Mini	06/11/2012	22/06/2017	831	430
21	14	Jesse Holcomb	USA	Male	Principal Analyst Consumer Market	iPad Pro	17/11/2015	22/06/2017	3015	1622
22	15	Cappy Broxford	USA	Male	freelance writer	iPad Pro	23/11/2015	22/06/2017	1861	989
23	16	Peter Deming	Australia	Male	Music & Audio Editor	iPad 2	20/03/2014	22/06/2017	2172	1191
24	17	David Lynch	UK	Male	writer	iPad Pro	28/01/2016	22/06/2017	1351	743
25	18	Sarah Palmer	USA	female	doctor	iPad Mini	22/01/2013	22/06/2017	904	466
26	19	Richard Horne	USA	Male	product development leader	iPad Pro	30/04/2016	22/06/2017	5428	3120
27	20	Johnny Horne	USA	Male	CMO	iPad Pro	17/05/2016	22/06/2017	1269	684
28	21	Andrew Packard	USA	Male	public school district communications	iPad Air 2	26/11/2014	22/06/2017	798	477

29	22	Pete Martell	USA	Male	IT project manager	iPad 2	08/05/2011	13/05/2011	732	391
30	23	Garland Briggs	USA	Male	N/A	iPad 1	26/05/2010	13/05/2011	526	236
31	"	"	"	"	"	"	09/04/2010	13/05/2011	1262	607
32	"	"	"	"	"	"	09/04/2010	13/05/2011	1287	621
33	24	Steven Burnett	USA	Male	iPhone developer and web developer	iPad 1	30/05/2010	23/08/2012	622	339
34	25	Big Ed Hurley	USA	Male	Chief Technology Officer	iPad 1	06/05/2010	13/05/2011	829	412
35	26	James Hurley	USA	Male	filmmaker, photographer, and writer	iPad 2	10/02/2012	22/06/2017	1447	795
36	27	Hank Jennings	USA	Male	lawyer	iPad 2	01/08/2012	23/08/2012	982	576
37	28	Leo Johnson	UK	Male	N/A	iPad Mini	19/11/2012	22/06/2017	1975	1013
38	"	"	"	"	"	iPad Pro	11/09/2015	15/06/2017	1609	856
39	29	Jacques Renault	USA	Male	HR professional, lawyer	iPad 1	04/05/2010	13/05/2011	1759	1009
40	30	Bernard Renault	USA	Male	Venture Partner	iPad 1	08/06/2010	13/05/2011	757	411
41	31	Jean Renault	USA	Male	Editor in Chief	iPad 1	20/09/2010	23/05/2013	1807	998
42	32	Jean-Michel Renault	USA	Male	N/A	new iPad	30/03/2012	23/05/2013	1093	582
43	33	Blackie O'Reilly	USA	Male	Software engineer	new iPad	27/03/2012	23/05/2013	2119	1064
44	"	"	"	"	"	"	28/03/2012	23/05/2013	1960	1080
45	34	Lawrence Jacoby	Netherlands	Male	CEO	iPad 1	24/08/2010	13/05/2011	1567	838
46	35	Mike Nelson	USA	Male	Musician, High School Music Teacher	iPad 1	06/10/2010	25/09/2012	883	456
47	"	"	"	"	"	"	06/10/2010	25/09/2012	715	380
48	"	"	"	"	"	"	19/07/2010	25/09/2012	413	193
49	36	Maddy Ferguson	USA	female	Teacher	iPad 2	25/03/2011	23/08/2012	826	444
50	37	Harold Smith	Netherlands	Male	UX consultant	iPad 1	10/01/2010	13/05/2011	668	374
51	38	Donna Hayward	USA	female	Writer	iPad Mini	02/04/2015	15/06/2017	1446	827
52	39	Emory Battis	Finland	Male	Senior UX and concept designer	iPad 1	13/08/2010	13/05/2011	1924	1122
53	40	Tommy Hill	UK	male	N/A	iPad 1	22/08/2012	24/08/2012	1211	585
54	41	Dwayne Milford	Albania	Male	IT specialist	iPad 1	14/02/2011	13/05/2011	1195	682
55	42	Harriet Hayward	USA	female	litigator	iPad Pro	21/03/2016	15/06/2017	3153	1664
56	"	"	"	"	"	new iPad	27/03/2012	23/06/2017	511	297
57	43	Dougie Milford	USA	Male	Editor in Chief	new iPad	23/03/2012	25/08/2012	2244	1131
58	"	"	"	"	"	iPad 2	16/03/2011	25/08/2012	1836	947
59	44	Carl Rodd	UK	Male	Chartered accountant	iPad 1	06/05/2010	13/05/2011	487	266
60	"	"	"	"	"	"	12/06/2010	13/05/2011	400	235

61	"	"	"	"	"	"	01/02/2010	13/05/2011	332	178
62	45	Malcolm Sloan	USA	Male	Science fiction writer	iPad 2	30/05/2011	24/08/2012	2102	1076
63	"	"	"	"	"	"	31/05/2011	24/08/2012	923	501
64	"	"	"	"	"	"	01/06/2011	24/08/2012	1187	632
65	"	"	"	"	"	"	02/06/2011	24/08/2012	1056	582
66	"	"	"	"	"	"	03/06/2011	24/08/2012	994	481
67	"	"	"	"	"	"	26/05/2012	24/08/2012	1680	878
68	"	"	"	"	"	"	28/01/2017	23/06/2017	590	305
69	"	"	"	"	"	"	04/01/2012	23/06/2017	1008	547
70	"	"	"	"	"	"	04/08/2011	23/06/2017	1381	742
71	"	"	"	"	"	"	04/07/2011	23/06/2017	781	412
72	"	"	"	"	"	"	24/05/2011	24/08/2012	310	154
73	"	"	"	"	"	"	11/05/2011	24/08/2012	603	315
74	"	"	"	"	"	"	28/01/2010	24/08/2012	132	79
75	"	"	"	"	"	"	31/01/2011	24/08/2012	234	121
76	"	"	"	"	"	"	25/05/2011	24/08/2012	760	394
77	46	Thomas Eckhardt	UK	Male	IT architect	iPad 1	10/10/2010	13/05/2011	1822	970
78	47	Windom Earle	UK	Male	Executive Editor	iPad 1	23/04/2010	13/05/2011	2027	1132
79	"	"	"	"	"	iPad 2	04/04/2011	13/05/2011	834	484
80	48	John Justice Wheeler	USA	Male	Visit. Professor	iPad 1	17/06/2010	13/05/2011	1300	657
81	49	Gersten Hayward	USA	female	Internet Marketer	iPad 1	11/05/2010	13/05/2011	1165	634
82	50	Mike Todd	Canada	Male	Chief Technology Officer	iPad 2	26/03/2011	13/05/2011	743	403
83	51	Bob Hayward	USA	Male	twitter designer	iPad 2	20/03/2011	13/05/2011	5186	2724
84	52	Pierre Tremond	UK	Male	digital marketing	new iPad	NA	24/08/2012	970	498
85	"	"	"	"	"	iPad 2	NA	24/08/2012	665	332
86	53	Douglas Jones	Canada	Male	freelance web designer, developer	iPad 1	04/10/2010	15/06/2017	994	587
87	54	Sonny Jim Jones	USA	Male	analyst	iPad 1	05/06/2010	23/06/2017	723	377
88	55	Bradley Mitchum	USA	Male	strategic communications manager	iPad 2	12/07/2012	13/05/2011	1247	650
89	56	Rodney Mitchum	USA	Male	attorney	iPad Air	04/11/2013	24/06/2017	2569	1360
90	57	Duncan Todd	USA	Male	Principal Analyst	iPad Pro	12/05/2017	24/06/2017	1814	971
91	58	Ike Stadtler	USA	Male	musician	iPad 2	22/06/2013	24/06/2017	462	226
92	59	Sam Colby	USA	Male	technology writer/blogger	iPad 1	04/04/2010	24/06/2017	2882	1497
93	60	Don Harrison	USA	Male	FAA Designated Pilot Examiner	ipad air 2	10/11/2014	24/06/2017	1531	795
94	61	Dave Macklay	Canada	Male	Full Stack Engineer	iPad Pro	06/05/2016	15/06/2017	1173	690

95	62	Mike Boyd	USA	Male	Business Development and Marketing Coordinator	iPad 2	27/04/2011	15/06/2017	632	352
96	63	Sylvia Horne	Canada	female	Ghost writer, consultant	iPad 1	15/05/2010	24/08/2012	1132	611
97	64	Frank Silva	USA	Male	PhD candidate, Software Architect and Developer	iPad 2	06/04/2011	13/05/2011	1940	1103
98	65	Phillip Michael Gerard	USA	Male	teenage student	iPad 2	06/04/2011	24/06/2017	1397	774
99	66	Michael J. Anderson	USA	Male	MD-PhD student	iPad 2	23/10/2011	24/06/2017	1172	655
100	67	Ronnie Rocket	USA	Male	Pastor	iPad 1	10/06/2010	25/08/2012	497	253
101	"	"	"	"	"	iPad 1	NA	25/08/2012	530	268
102	"	"	"	"	"	iPad 1	12/05/2010	25/08/2012	840	427
103	"	"	"	"	"	iPad Mini	19/03/2013	28/06/2017	337	163
104	"	"	"	"	"	iPad 1	22/06/2011	28/06/2017	299	159
105	"	"	"	"	"	iPad Pro	08/09/2016	28/06/2017	459	233
106	68	Audrey Horne	Australia	Female	Digital strategist	iPad 1	30/07/2010	13/05/2011	580	303
107	69	Miguel Ferrer	USA	Male	Editor	iPad 2	05/12/2011	25/08/2012	2334	1223
108	70	Michael Ontkean	USA	Male	surgeon	iPad 2	09/05/2011	15/06/2017	1459	888
109	71	Josie Packard	USA	Female	Freelance journalist and blogger	iPad 1	22/07/2010	23/05/2013	973	510
110	"	"	"	"	"	iPad 1	15/09/2010	23/05/2013	918	489
111	72	Harry Goaz	UK	Male	independent consultant	iPad 2	10/04/2012	25/08/2012	1164	596
112	73	James Stewart	USA	Male	technology entrepreneur	iPad 1	23/04/2010	25/08/2012	1177	624
113	74	Warren Frost	USA	Male	user experience professional	iPad 1	25/07/2010	23/08/2012	4449	2253
114	75	Benjamin Horne	USA	Male	Senior Software Engineer	iPad 1	12/04/2010	25/08/2012	504	261
115	76	Catherine Martell	USA	Female	writer, Web content development, fashion blogger	iPad 2	20/03/2011	23/05/2013	1451	787
116	77	Everett McGill	USA	Male	Naval architect	iPad 2	18/03/2011	23/05/2013	2125	1161
117	78	Walter Olkewicz	UK	Male	user experience designer and information architect	iPad 1	08/04/2010	13/05/2011	683	379
118	79	Janek Pulaski	USA	Male	Minister	iPad 1	16/10/2010	13/05/2011	1013	609
119	80	Russ Tamblyn	UK	Male	Independent Design Professional	new iPad	09/04/2012	23/05/2013	1243	667
120	81	Gary Hershberger	USA	Male	technology analyst and online community manager	iPad Air 2	08/06/2015	15/06/2017	2811	1398
121	82	David Warner	USA	Male	Amateur photographer / iPhoneographer	iPad Pro	16/04/2017	15/06/2017	1010	564
122	83	Mark Frost	USA	Male	COO	iPad 1	04/04/2010	13/05/2011	513	287

123	84	Robert Engels	USA	Male	IT professional	new iPad	01/07/2012	25/08/2012	4409	2237
124	85	Angelo Badalamenti	USA	Male	Academic, author, columnist	iPad 2	NA	24/08/2012	3779	2004
125	"	"	"	"	"	"	27/11/2012	03/07/2017	386	223
126	"	"	"	"	"	"	03/11/2010	03/07/2017	420	210
127	86	Andrew Packard	UK	Male	writer	iPad Pro	27/06/2017	03/07/2017	1428	741
128	"	"	"	"	"	"	12/06/2017	03/07/2017	1553	912
129	"	"	"	"	"	"	23/02/2017	03/07/2017	1796	989
130	"	"	"	"	"	"	27/01/2017	03/07/2017	1512	786
131	"	"	"	"	"	"	26/11/2016	03/07/2017	636	311
132	"	"	"	"	"	"	13/11/2016	03/07/2017	1036	512
133	"	"	"	"	"	"	12/11/2016	03/07/2017	1696	971
134	"	"	"	"	"	"	09/11/2016	03/07/2017	682	367
135	"	"	"	"	"	"	08/11/2016	03/07/2017	2289	1163
136	"	"	"	"	"	"	01/11/2016	03/07/2017	1679	899
Notes: Bn: blog ID, An: unique author ID, N/A: Not Available. All names replaced with pseudonyms for anonymity purposes.										

Table 7. Memoing on categories, focused and initial codes

Category	Focused Codes	Initial Codes	Analytical summary (Memos)
Negative disconfirmation Triggers	Translating	Application translation Flash support Directory structure File formats User accounts	The user is required to move from an older device to a new one, here the iPad. In doing this, they expect that technical characteristics (file format handling, directory structure) as well as plug in (Flash) will be available regardless. As many applications developed for other OS and devices (e.g., Android OS and iPhone) become available for the iPad device ('translated' or 'interpreted'), they further expect that on the one hand, the iPad application will have the same features and functions like its other versions, and on the other hand, that it will be taking full advantage of the iPad's features and capabilities. However, the iPad is a new device that seeks to introduce a new way of working, possibly proposing new use cases. Within this context, the narrative crafted by its designers (how it should be used, when and why, and what it denotes as a device) doesn't always fit with the user expectations. One could argue that the translation of functions, features, plug ins and applications for the iPad paradigm, is misaligned with user expectations, triggering negative disconfirmation. What appears to be central for the subtriggers and common across and within the translating theme is that these are things that are considered as 'missing' rather than something new users need to get familiar with and accustomed to.
	Migrating	Typing intensive tasks New gestures	While migrating from one device to another, iPad users expect that their general IT habits will be easily and directly converted for the new IT interaction model. However, this is not as straightforward and can trigger negative disconfirmation. The iPad introduces an interaction model which is quite similar to that of the iPhone and other touch-focused OS with which many users are familiar. Therefore, migration seems easy. Attempting to migrate, users suggest that by and large, typing

		Form factor Multitasking	intensive tasks (e.g., long emails, document formatting) is challenging, and that it doesn't allow for proper 'work'. Especially when this migration relates to an entirely different OS (Android, Windows etc.), it is even more challenging because the user needs to 'rework' their muscle memory and get accustomed to the new interaction modalities. Many users envisaged using the iPad within particular contexts in particular ways. Many did not expect how the actual interaction could potentially unfold when migrating from other devices (eg kindle) and other artefacts (e.g. books) requires that users, and were unpleasantly surprised due to the industrial product design of the device. In this case, the common characteristic is not that of the 'missing feature'. It appears here that these subtriggers are things that users can get used to.
Accommodating Practice	Reframing	Breaking habit Finding a Fit	Reframing suggests that users change their perception with respect to the iPad; while initially they may have been negatively disconfirmed, identifying some benefits in their iPad use, leads them to view the iPad in a new frame. When migrating to a new device, such as the iPad that introduces new modalities and patterns, it seems that the most important thing is to forget how IT interaction with other devices has been taking place and allow time to one self to retrain their fingers and themselves – in effect changing their IT habits. Most users are quite eager to find a use case that can be best served by the iPad rather than any other device. What is interesting is that, even following negative disconfirmed, many users are able to identify one that can be benefited by the iPad.
	Discontinuance	Abandoning Deferring	Discontinuance surfaces when the initial negative disconfirmation cannot be tackled; users prefer to use some other (IT) artefact instead to achieve their objectives. Users opt to abandon the iPad when it comes to critical tasks. The criticality doesn't have to do necessarily with time-related issues (time sensitive tasks) but it spills over into tasks that are important for the particular users (e.g. the joy of reading books, termed as one of his 'greatest pleasures'). If the task is not particularly critical (i.e. it can be postponed for later), users choose to defer the completion of the task for later, when another – more capable – device becomes available.
	Workaround	Using third-party apps Using external devices	When possible, users resort to software- and hardware-based solutions, in order to use the device. The lack of a directory/folder structure suggests that users are unable to upload freely files on the iPad, but they have to resort to other solutions that imitate this paradigm in some way. Similarly, when users need to achieve some specific functionality, they turn to third party apps which combined can satisfy their needs. Here the important issue is that these are solutions, sophisticated or not, for limitations stemming from the OS. The similarity between external devices and third-party applications is that both entail the limitations in the software in some way. The difference lies with the chosen/available solution: here we see users requiring to use external devices, such as sticks, keyboards, dongles and cables that augment the iPad both in function but also in form.