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ETHNOGRAPHY/NARRATIVE

# Identity metamorphoses in digital disruption: a relational theory of identity

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## Abstract

Digital technologies have disrupted a variety of organizations; however, Information Systems research has yet to explore in-depth why this may be occurring or the implications of this process for those involved. In this paper we present an exemplary case of digital technology disruption in a newspaper company – an organization in the midst of an identity crisis. On the basis of ethnographic data, we explore the changes that resulted from the introduction of the digital medium, and how this has led to the evolution of the newspaper, as well as the metamorphosis of identities of the company, the company's practitioners, and the consumers of the company's content. Our findings suggest that shifts in the evolutionary trajectory of an organization can be traced to the rate and nature of identity metamorphoses among its key actors. Hence, in order to navigate and adapt to digital disruptions, we argue that an ongoing strategic renegotiation of the identities of all the actors involved is not only possible, but is required for an organization's survival. In doing so, we provide a relational theory of identity. *European Journal of Information Systems* (2016) 25(4), 344–363. doi:10.1057/ejis.2015.19; published online 24 November 2015

**Keywords:** digital artefact; digital newspaper; digital disruption; ethnography; evolution; individual identity; organizational identity

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## Introduction

The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function. F. Scott Fitzgerald

Digital technologies have disrupted a variety of organizations (Andreessen, 2011); however, extant literature has yet to explore in-depth why this may be occurring or the implications of this process for those involved. Consider the case of newspaper companies. From the earliest implementation of various technologies to assist newspaper production and distribution (e.g., printing press, photographic equipment, publishing software, etc.) to the latter shift in the product medium from paper to digital (Christensen, 1997; Ihlström, 2004; Bucy & Affe, 2006; Dennis, 2006; Plesner, 2009; Kaplan & Haenlein, 2010), news companies have undergone continuous technology related disruptions. The latest disruption, which is arguably the most significant to date, is underpinned by the shift in focus from print to digital products (cf. Lin & Salwen, 2006; Napoli, 2011) as more readers switch to reading digital newspapers on various mobile devices (e.g., laptop, tablet, mobile phone). This has resulted in a decline in print product sales: from 2008 to 2014, for instance, *The Guardian* print edition dropped by 48%

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in sales revenue, *The Daily Telegraph* by 40.6%, while *The Independent* decreased by an alarming 72.6% (Greenslade, 2014). The subsequent emergence of numerous and diverse variations of digital news products has generated considerable interest from both practitioners (e.g., Andreessen, 2011; *The Economist*, 2011) and academics (e.g., Christensen, 1997; Schmitz Weiss & David, 2010; Anderson, 2011; Sood & Tellis, 2011). Although the studies imply that each stage of the newspaper product evolution can be traced to a specific disruptive technology, there is a marked lack of explication of why this is happening and exploration of the implications of this phenomenon for both producers and consumers of news. In particular, it is not well understood how digital disruption and the ensuing disruption of products and processes affect and are affected by the disruption of individual and organizational identities.

To address this gap in knowledge, this paper seeks to answer: (1) How and why does technological disruption affect newspaper products and processes of production and consumption? and (2) How do identities of actors become disrupted during these processes and in turn reconstrued as part of organizational change? This is achieved by conducting an ethnographic study that explores in-depth digital disruption in an Australian newspaper company, called MediaNews (a pseudonym). Basing our analysis on long-term ethnographic data, we examine the evolution of the newspaper products, transformation of organizational processes, and the disruption and reconstrual of identities of the company's practitioners and consumers of the company's content. This analysis reveals how technological disruptions led to the evolution of newspaper products, as well as undermined the identities of both producers and consumers of news (cf. Napoli, 2011), propelling the individuals and organization involved into an identity crisis and eventual identity evolution. We then explicate the mechanism underlying the struggle of news organizations to adapt newspaper products to emerging technologies (cf. Schmitz Weiss & David, 2010), and the challenges involved in straddling the dichotomy of the familiar history of print and the unknown potential of digital (cf. Cao & Li, 2006; Dennis, 2006) when reconstruing identities. The paper contributes to the literature on digital disruption by providing new insights into the depth and breadth of media company disruption and ensuing identity crises, and by offering an explanation of how numerous identity metamorphoses of the company, its members, its products, and its consumers led to surviving the disruption and overcoming the crises. By way of concluding, the paper discusses the lessons learned, possible implications for organizations facing similar technological disruptions, and potential avenues for future research.

### **Literature review: technological disruption, evolution of products, identity, and inertia**

This section begins by examining relevant literature around disruption and evolution of products before

moving into identity and inertia. These literature domains provide necessary background for grounding our study and formulating the research questions.

### **Technological disruption**

The coining of the term 'disruptive technologies' (Bower & Christensen, 1995) marked a growing interest of both practitioners (e.g., Bower, 2002; Andreessen, 2011; Bosman, 2012; Manyika, 2013; Lepore, 2014) and academics (e.g., Christensen, 2003; Erwin, 2004; Zeleny, 2009; Schmitz Weiss & David, 2010; Yoo et al, 2010) in the changes that evolving technologies spark within and beyond organizations. Although the interplay between evolving technologies and organizations has been widely documented (e.g., Kurzweil, 2005; Friedman, 2008), it is still ambiguous why a specific technology was or was not disruptive within an organization – the same technology can be considered both 'disruptive' and 'innovative', depending on the time frame and context of the organization under analysis. Hence, no technology can be said to be intrinsically disruptive (cf. Christensen, 1997). However, any technology can be considered so if it (1) displaces an earlier technology, (2) alters an established market or value network, (3) revolutionises an organization's business model, or (4) fosters radical change in organizational structures (cf. Akrich & Latour, 1992; Christensen, 1997; Christensen, 2003; Gassmann, 2006; Zeleny, 2009). Documented examples of such technologies include automobiles, personal computers, email, desktop publishing, digital photography, mobile devices, and others (e.g., Brown & Duguid, 1994; Bower & Christensen, 1995; Kurzweil, 2005; Tripsas, 2009; Anderson, 2011; Bosman, 2012).

Using this perspective, we thus distinguish between disruptive technologies (i.e., those that cause a major structural shift in an organization following a linear developmental trajectory) and innovative technologies (i.e., those that are assimilated into or enhance existing structures without major disruptions). This distinction has also another important dimension – disruptive technologies not only fundamentally alter business models, processes, and organizational structures, they also trigger confusion and disrupt organizational identities. Tripsas (2009) uses the term *identity-challenging technologies* to draw attention to often traumatic and disruptive processes of organizational identity erosion and shifting implicated in technological change.

Literature examining newspaper organizations reveals several key technologies that have been considered disruptive, using the above perspective. Historical disruptive technologies include the printing press (Ihlström, 2004), personal computers (Eriksen, 1997; Eriksen & Ihlström, 2000), publishing software (Schmitz Weiss & David, 2010; Anderson, 2011), ICTs (Plesner, 2009; Anderson, 2011), and the Internet/World Wide Web (Lessig, 2002). More recent technologies that could be considered disruptive include mobile devices (Graham & Smart, 2010; Blodget & Cocotas, 2012), social media and search engines (Kaplan & Haenlein, 2010; Newman & Levy, 2013), content

aggregator apps (Newman & Levy, 2013), and multimedia (Vaughan & Dillon, 2006). Analysis of studies involving these technologies revealed how each technological evolution potentially transformed multiple aspects of newspaper organizations. For instance, Blodget & Cocotas (2012) found an 11% drop in print consumption from 2006 to 2012, and a 400% rise in mobile device use from 2006 to 2011. Within the same time frame, newspaper organizations shifted focus from print to digital as the future of news content distribution (cf. Dennis, 2006; Carr, 2011). Thus, the disruption of digital media ostensibly drove organizations to experiment with alternate products and distribution channels, as evidenced by the evolving plethora of mutated digital newspaper products available at that time (e.g., iPad apps, mobile apps, websites, news feeds, etc.).

### Evolution of products

The evolution of disparate newspaper products is widely documented within prior Information Systems (IS) literature. Longitudinal studies within newspaper companies (Watters & Shepherd, 1997; Åkesson, 2003; Ihlström & Åkesson, 2004; Ihlström & Henfridsson, 2005; Plesner, 2009; Schmitz Weiss & David, 2010; Anderson, 2011) depict the chronological mutations of newspaper products that resulted from technological disruptions. Watters & Shepherd (1997) record one of the first attempts to create a digital newspaper product – the brief, yet significant, existence of the ‘digital broadsheet’ (an exact PDF replica of the print newspaper accessed via a website). Devoid of interactivity enabled by more recent Web 2.0 technologies, this product problematically recreated the linear ‘push mentality’ (cf. Utesheva *et al*, 2012) of the print medium in digital form. As such, it did not embrace the full spectrum of potential affordances of the digital medium, being limited by the misalignment of form and function (Utesheva *et al*, 2012). The long history of stability of the print newspaper form during the 20th century is suggested (cf. Dennis, 2006) to contribute to the observed initial hesitance of newspaper companies to embrace digital. The latter developments in this type of news product were discussed by Åkesson (2003) in her examination of the transformations of an ‘e-paper’. This hybrid product awkwardly combined both print and digital characteristics. Although the ‘e-paper’ was a considerable step forward in newspaper product evolution, it similarly exemplified the difficulties newspaper companies faced in leveraging the potential of digital media in the early 2000s.

Recent studies show the subsequent evolution of these experimental digital products. The early versions of ‘digital broadsheets’ or ‘e-papers’ were replaced by news websites, mobile apps, news feeds, and others (Ihlström & Henfridsson, 2005; Serm *et al*, 2006; Hood, 2007; Åkesson, 2009; Thurman & Myllylahti, 2009; Graham & Smart, 2010). Unlike the early digital newspapers that remained relatively similar to the paper format, the subsequent iterations of the products were diverse in

form and function (cf. Askehave & Nielsen, 2005; Serm *et al*, 2006). Evolving digital news products increasingly abandoned familiar characteristics of the traditional print newspaper (Watters & Shepherd, 1997; Chyi & Lasorsa, 2006; Li, 2006; Graham & Smart, 2010), diversified, and moved closer to digitally native products in functionality, behaviour, and appearance. In this sense, even the term ‘newspaper’ became an oxymoron when applied to the digital context – what is or can be considered a product of a newspaper company is no longer tied to the affordances and constraints of the print medium. It comes as no surprise that newspaper companies struggled to understand and strategically respond to the disruptions of digital media (Gilbert, 2005; Chyi, 2006; Napoli, 2011) – the past could no longer be relied on for guidance or be a foundation for an emerging identity. Consequently, newspaper organizations were propelled into an identity crisis and struggled to adapt to rapidly evolving digital contexts (cf. Gilbert, 2005; Dennis, 2006).

### Identity and inertia

The divide between the past, present, and future is argued to grow exponentially larger in shorter time periods when viewed in terms of emerging technologies (Kurzweil, 2005; Friedman, 2008; Laszlo, 2008). As such, it is likely that technological disruptions will increase in frequency in the future. Adaptation to disruptions rests on the capacity of the organization to rapidly transcend the familiar/foreign and past/present dichotomies, and to metamorphose into a more evolved and agile form (cf. Gilbert, 2005; Kurzweil, 2005; Laszlo, 2008). Problematically, few newspaper organizations have managed this feat successfully. In order to understand why, we drew from Tripsas (2009), Simpson (2014b), Simpson *et al* (2013), and Stein *et al* (2012), who demonstrate how technological change challenges organizational structures and organizational identity (i.e., internal and external perceptions of an organization). Identity (i.e., how one construes oneself or how a group construes collective identities) acts as a filter for technology selection and adoption: ‘identity serves as a lens that filters a firm’s technical choices. It influences what gets noticed, how it is interpreted, and what action is taken’ (Tripsas, 2009, p. 454).

Distinguishing between internal and external identities of an organization, Tripsas illustrates how identity could hinder an organization’s rapid adaptation to context flux: ‘the continuity of identity provides stability both within the organization and in its projections to outsiders’ (ibid, p. 442). Hence, if an existing internal and/or external identity becomes misaligned with the emerging organizational context, maintaining the stability of the identity could hinder the necessary adaptation of the organization.

Such failure to appropriately reconstrue (Kelly, 1955) (i.e., realign) an identity to changing contexts results in inertia, as ‘the core essence of the organization, identity directs and constrains action ... the routines, procedures, information filters, capabilities, knowledge base, and

beliefs of an organization all reflect its identity' (Tripsas, 2009, p. 454). To clarify, the concept of inertia refers to the resistance of objects to any change in state of motion – in other words, an organization following a linear trajectory will continue on this trajectory until disrupted. In IS (Besson & Rowe, 2012), the concept of inertia has been explored from multiple perspectives, such as negative psychology inertia (Venkatesh et al, 2000), socio-technical inertia (Hanseth et al, 1996), and political inertia (Jaspersen et al, 2005). In this paper we adopt the perspective of inertia as both relational (discussed in further detail later) and identity-related, a view which encompasses these types of inertia. Problematically, identity-related inertia could compromise the long-term survival chances of an organization (Wenger, 1998; Tripsas, 2009), especially since the rate of technological change is indeed exponential (cf. Kurzweil, 2005). Furthermore, the misalignment between the individual identities of the company's practitioners and customers, and the organizational identity, could further hinder the process of adaptation. Therefore, understanding identity is vital to adaptation – failure to reconstrue individual and organizational identities in time may result in identity crises that permeate the organization with counterproductive inertia. Hence, Tripsas (2009) calls for further research into identity within organizations experiencing technological and identity-challenging disruptions: how to manage identity change and whether certain types of identities are easier to change than others.

Individual and organizational identity have also been examined more recently by IS researchers as illustrated by the *European Journal of Information Systems* special issue on identity (Whitley et al, 2014). In the special issue, several important angles are covered such as organizational identity (Tyworth, 2014), individual identity and performativity in virtual worlds (Schultze, 2014), user authentication issues (Roßnagel et al, 2014), and identity with respect to managerial discourse, IT, and identity (co)evolution (Leclercq-Vandelannoitte, 2014). While these studies have explained several important aspects of identity, the impacts of technological disruptions on identity, and the role of identity shifting and transformation within organizational response to disruption remain unexplored.

### Moving forward

From the overview of the relevant literature concerning technological disruptions, evolution of products, identity and inertia, we derived a prominent gap in knowledge: there is a marked lack of explication of why technological disruptions and identity crises are happening within newspaper organizations, how the organizations may overcome these challenges, as well as the implications of this phenomenon for both producers and consumers of news. Taking cues from Anderson's (2011) and Tripsas' (2009) calls for future research, we explore technological disruption within a newspaper organization and the resulting identity metamorphoses by tracing the formation of actors through evolving networks of relations and analysis of

changes in their material manifestations. Hence, to fill the outlined knowledge gap, the study below begins by answering the following research questions: (1) *How and why does technological disruption affect newspaper products and processes of production and consumption?* and (2) *How do identities of actors become disrupted during these processes and in turn reconstrued as part of organizational change?* To answer these questions we conducted an ethnographic study presented below.

### Ethnographic research design

The following section provides an overview of the research design. Due to the complexity of the phenomenon, which necessitated appropriate research depth, we adopted an ethnographic methodology (Atkinson et al, 2007; Locke, 2011) that facilitated the long-term exploration of the transformation of a digital newspaper within a large Australian based media organization. First, we provide an overview of the research approach and then outline the context of the company under analysis. Next, the relevant data collection and data analysis techniques are discussed. The section concludes with a lead into the research findings: through an ethnographic study of the transition of the newspaper from paper-based to digital, we followed the changes in the context, the offerings, and the nature of news, in order to reveal reconstrual of the identities emerging through changing relations among various actors.

### Research approach

To examine technological disruptions within a newspaper organization, we adopted a relational approach. The relational approach is founded on the assumption that something only exists in relation to something else (cf. Kelly, 1955; Latour & Woolgar, 1986; Law, 2004; Latour, 2005; Barad, 2007; Bloom, 2012). In other words, any observed state of an actor at a point in time can be traced to the relations (historical and present) constituting said actor within its context. Nothing can be said to exist independently or without being constituted by other actors (however indirect, counter-intuitive, or difficult to trace). This approach necessitates the rejection of the ontological separation between humans (e.g., consumers, authors) and non-humans (e.g., tangible and intangible artefacts) – the two types of actors are not characterized by their essential properties but are instead viewed as performed through relations (Latour, 2005). For further related illustration, see Appendix A. In other words, both human and non-human actors are viewed in terms of the relations they are engaged in and are produced by (from micro to macro level, depending on the necessary unit of analysis) rather than attempting to define them by seemingly inherent and/or predetermined characteristics (e.g., colour, size, age, etc.).

The selection of the relational approach enabled a deeper insight into the ways in which the news artefacts (e.g., the digital newspaper) and the other actors (e.g., designers, developers, editors, and journalists) were co-constituted and how this ongoing co-constitution

shaped the evolution of the organization. This allowed for us to overcome the separation of the social from the technological and gain a deeper understanding of the relations between digital artefacts and other actors. From this, we were able to provide a meaningful description and analysis of the entire phenomenon.

We adopted an ethnographic research method (Geertz, 1972, 1979; Atkinson *et al*, 2007), as the investigation of actor entanglements *in situ* at MediaNews required observation and extensive data collection and ongoing data analysis, which involved continuous feedback from relevant participants. As ethnography facilitates an in-depth analysis of the relations among actors (Conklin, 1968), we developed a rich understanding of how actors were co-constituted within this organization, how the observed states of actors historically evolved, what was the role of the medium in the evolution of newspaper products, as well as how individual and organizational identities were challenged and reformed. Hence, we found this approach to be an appropriate and insight-rich (yet work-intensive) way to study the evolution of MediaNews as it went through its identity metamorphoses.

### Context

The first author conducted the ethnography at MediaNews (a pseudonym) for 12 months (May 2011–May 2012), alternating between full participant and participant–observer roles. Through participation and observation the author was involved in work practices and on-going exposure to the technologies, identities, routines, traditions, and the accumulated knowledge base that constituted the environment within which different newspaper products emerged. The company was selected due to it being a major news and media publishing company going through an identity crisis – an organization that was undergoing dramatic technology-related transformations after a long history of stable print newspaper production. At the time of research, MediaNews owned over fourteen exclusively digital brands and eight major print brands (each of which had a digital offering consisting of a combination of website, tablet, and/or mobile news products). Because of the organizational structure of the company, each brand was treated as an individual sub-company, with different technologies, structures, and strategies adopted to manage their print and digital products. The exposure to multiple and often contradictory methods of dealing with technological disruptions allowed for the first author to isolate an exemplary brand – this brand was the only one observed that managed to adapt to the technological disruptions (i.e., revolutionized the product offering by leveraging digital media, and managed to increase audience engagement with the brand).

The selected brand historically has produced a newspaper product that was offered exclusively as a Sunday print edition. Following the trend of media companies to go digital, it then launched its first digital product in 2006. As of early 2012, the digital offerings had increased to include a full digital newspaper website, a tablet news app,

and a mobile-optimized version of the website. Unlike the remaining brands within MediaNews, the print newspaper and the digital newspaper were not considered to be in direct conflict for revenue or audience engagement. The digital newspaper website became the daily edition, while print remained as a Sunday special. This allowed for the organic emergence of the digital newspaper unhindered by the internal considerations of competition between print and digital products, thereby providing an exemplary case for study. Although we initially examined nine of MediaNews newspapers (print, digital, and hybrid), we chose to focus on one exemplary brand as it provided the most telling illustration of the strategic adaptation of a print newspaper to the emerging digital context. This approach allowed for direct and continuous engagement with the various employees working on the news products (i.e., designers, producers, digital directors, editors, user experience architects, solution architects, project managers, customer support, and testers), analysis of products (i.e., analytics, usability studies, innovation workshops, etc.), access to extant knowledge bases within the organization (i.e., company history, marketing research, product roadmaps, strategy documents, audience profiles, etc.), and participation in meetings, projects, workshops, technology integration activities, as well as other internal routines and traditions.

### Data collection

A wide range of data was collected during the research, including 600+ pages of documentation of participation in project meetings, observation of day-to-day routines, conclusions from four user testing sessions, 12 months of product analytics and revenue figures, as well as constant screening and selection for analysis of user feedback emails on the website and tablet apps (from 15 to 50 emails per day). To supplement the direct observations, the researcher conducted in-depth follow-up interviews with relevant actors (ranging from 1–1.5 h in length), and collected supporting documentation where relevant. To ensure triangulation of data, 24 formal recorded interviews were conducted with participants, who were selected based on their role and insights into the processes of digital newspaper production and/or consumption. The readers interviewed were sourced from outside the company and were of varying age, habits, background, and occupation, in order to reduce bias. The formal interviews lasted approximately one hour and were deliberately semi-structured in order to facilitate discussion and to allow for the conversation to naturally pursue relevant topics of interest. Table 1 gives an overview of the data collected and used in this study.

### Data analysis

Because of the nature of the research, the qualitative data analysis began early on during journal writing in the field, and continued throughout the interviews and the ongoing secondary data collection process. As themes emerged, they were discussed with participants to gain an in-depth understanding of the issues and to avoid

conclusions based on false assumptions. This process provided a richer analysis of the data (Strauss & Corbin, 1998; Ezzy, 2002; Silverman, 2009), as emerging themes and insights were iteratively analysed and discussed with participants during the data collection process, and subsequently formed the basis for the theoretical explanations developed throughout the formal data analysis phase. The supplementary data were transcribed where appropriate, with the interview transcripts proofread by participants before coding. The formal data analysis involved thematic analysis (informed by the grounded data analysis approach) that consisted of multiple iterative coding stages (Swales, 1990). First, the collected data was read and re-read, with open and in vivo codes iteratively created and collated (using the NVivo software). Next, the codes were revised, abstracted, and grouped until prominent common themes emerged (Swales, 1990; Ezzy, 2002; Silverman, 2009). The initial data analysis phase involved over 50 codes that were abstracted to the three major themes presented in the next section. These themes reflect the key changes that occurred within MediaNews, resulting from the disruptions of digital technologies. Although these themes were initially derived from in-depth analysis of one brand within the company, the comparison of the findings with other brands suggested that the themes were common across the organization.

### Findings: metamorphoses within MediaNews

The outlined ethnographic study of the evolution of a newspaper within MediaNews reveals three major themes: disruption of roles, evolution of products, and reconstrual of identities. First, we present how the established print-driven roles of news producers and consumers were disrupted by digital media, and how this altered the relations among these actors and disparate news products. Second, we illustrate how the news offerings (i.e., content and

products) evolved with the shift of core product medium from print to digital. Third, we show how the identities of individuals (involved in the production and consumption of the news products), and the organization as a whole, were continuously destabilized and renegotiated to align with the changing digitally driven context. The findings illustrate how MediaNews evolved in response to the disruptions of digital technologies – not only through changes to its product offerings, but also through the shifts in the roles of all actors involved, and the continuous reconstrual of identities to align with context shifts. Overall, the participants attributed these metamorphoses within the organization to both the internal structures and strategies of MediaNews and the broader changes in the external context:

Over the past 10 years the scene has changed dramatically in that [MediaNews' brands] and other newspapers have jumped into the online market, so it's kind of a crowded digital market in the country ... [Digital] presents challenges and opportunities as newspaper circulations decline ... We've built a fantastic audience in the online environment. (Managing Editor)

### Disruptions of roles

Over the last two decades, MediaNews experienced the first significant disruption since the printing press in the way that news were produced, presented, distributed, and consumed. The shift from a print-driven to a digital, online and mobile (i.e., natively digital, cf. Vodanovich et al, 2010) audience altered the focus of the company from print to digital media. Yet, due to the long entrenchment of MediaNews' culture within established print routines it took MediaNews over 15 years to shift from a primarily print to primarily digital newspaper strategy for

**Table 1** Data collected and analysed

<i>Participant observation</i>	<i>Interviews</i>	<i>Secondary data</i>
Data analysis of subscription numbers, usage, and reader engagement (14 reports)	Designer	Customer/market analysis on past 5 years (2 docs)
Digital newspaper designs (3 docs)	Front-end Developer	Designs (8 docs)
Discussions notes (50 pages)	Managing Editor	Historical reader engagement reports on past 2 years (3 reports)
Email project correspondence (250 emails)	Mobile Producer (mobile sites)	Innovation workshop idea proposals (5 docs)
Feedback from readers regarding tablet apps (120 emails)	Mobile Producer (tablet)	Marketing campaigns (2 presentations)
Innovation workshop outcomes/discussion (20 pages)	Project Manager (mobile sites)	Product cost/revenue analysis doc
Meeting minutes (150 pages)	Project manager (tablet)	Product specification (16 docs)
Observations notes (600 pages)	Readers/Users (8)	Requirements documentation (8 docs)
Requirements collection and project documentation (6 docs)	Senior Experience Architects (2)	Strategy and company documents (5 presentations and 4 docs)
User testing (3 sessions)	Senior Mobile Producer (2)	Supporting product documentation
User testing results (4 docs)	Senior Mobile Producer (tablet)	Trade press articles and tech blogs posts (48)
Wireframes current projects (6 docs)	Senior Producer (2)	Wireframes (8 docs)
	Senior Project Manager	
	Solutions Architect	

their publications (i.e., from the strategy's earliest formulation to product launch), with the transformation continuing to this day. The studied newspaper was offered exclusively via a print medium for nearly a century, before the recent addition of the digital offerings in 2006. In this long print newspaper phase, the roles of journalists and editors became deeply entrenched within the publication cycles and technical constraints of the print medium (e.g., number of pages or issues, tone of voice, use of colour, image sizes, timeliness of content, etc.). Consequently, the internal culture, including shared values and tacit assumptions developed based on routines of news production, such as the culmination of daily activities in the development of an 11:00 pm print broadsheet for daily newspapers. However, the introduction of digital media to the product offerings led to the segmentation of the news products across three channels – web, mobile, and print – creating three different communities of news producers within the organization. As such, the established roles of both producers and products within MediaNews were disrupted and renegotiated to align with this change in the organization's structures.

Although initially these communities were separate and remain so across other brands, MediaNews deliberately combined staff from all three in the selected newspaper brand. This facilitated the formation of a strategic alignment between the previously competing news products by enabling the producers to collaborate rather than compete. This renegotiation of how news were produced was reported by the participants as the first substantial change to the organization since its inception, which threw the company into confusion and inability to articulate what this change meant for the future of news products. MediaNews had numerous iterations of the digital newspaper design, including the selection of the appropriate technologies and rigorous product testing with readers. Each change marked a shift in the roles of producers, consumers, and the products. These changes, sparked by disruptions of digital media, were evident throughout the company, such as the move to a 24/7 news production cycle because the online audience expected constant updates, or the realignment of marketing and sales focus to understand emerging digital markets. Hence, news producers had to acquire new skills and redefine their roles to fit the changing needs of the organization.

Importantly, the introduction of digital news products also destabilized the established passive roles of readers (i.e., having to direct input into the newspaper product) – they became active consumers of and direct contributors to digital news products. In contrast to the print medium, digital news content was no longer offered through a single source, with multiple ways offered through which information could be communicated and accessed (i.e., anywhere, anytime). Hence, as content access was no longer constrained to the print medium and could be sourced through various channels, digital consumers could select a different news product depending on the particular task the user was aiming to accomplish

(e.g., accessing news, finding articles, reading in-depth, research, etc.), despite all of them containing similar content. This dramatically changed not only how the readers accessed news, but also how and why they consumed news content:

It's now about the reader's context ... The relationship between the different platforms depends on their routine ... That's where the iPad is ... probably in bed, or in the laundry room, at the kitchen table, when you don't want to sit in front of the computer. (Senior User Experience Architect)

Furthermore, the readers now could directly contribute to the selection of top news content, as analytics allowed producers to see what stories were most popular, drive users to this content online, and create subsequent content in line with these observed user preferences. These shifts from passive to active reader roles could be traced through the evolution of the newspaper products themselves. The early digital broadsheets resembled traditional print formats, while not taking advantage of the many options that the digital technologies offered and, at times, were more cumbersome to use than their print counterpart. Because of the initial inefficiencies in engaging readers, MediaNews continuously experimented with the most engaging way to present news content online. The subsequent plethora of different news products (most of which were hybrids with similar forms and functions) drove producers to gain expertise in emerging digital technologies, experiment with alternative ways to report stories, and learn how to create paths for users to discover and access featured content online. Over time, the digital newspaper products began to progressively integrate more interactive multimedia (e.g., interactive Flash maps, hyperlinks, videos, comments, polls, etc.). The evolution of news products thereby allowed for readers to change their relationship with news products and assume greater responsibility in finding and contributing to news content (e.g., searching for articles directly via the news site, sending in pictures and opinions, commenting on articles, voting, etc.).

Continuously retreating further from traditional newspaper formats, digital newspapers allowed the readers to search for keywords, simultaneously view multiple stories, access large article archives, consume news regardless of their physical location, and easily change and 'hop' news channels. As such, readers were no longer constrained by the traditional intended journey of a print newspaper and could engage with content in ways unpredicted by designers of the product. Interestingly, this process eventually led to users directly contributing to the evolution of the digital news product (e.g., comments on news articles, integration with social media, product analytics, etc.). In such a way, passive consumers of content evolved to become active prosumers (i.e., they began to actively contribute to production). In response, MediaNews journalists changed their roles to incorporate the curation of user-generated content, such as moderating user comments, creating stories around user opinions, sourcing engaging multimedia content, and responding to feedback

from readers. This simultaneous change in the internal/external complementary roles led to the evolution of the news products as they became more tailored to facilitate these types of exchanges. Hence, the digital newspaper essentially acted as an evolutionary bridge for the past, present, and potential future roles of producers and consumers:

[The digital newspaper] is an interim used to migrate [MediaNews] from print media and traditional publishing norms into a digital world. I don't think there is a digital newspaper per se, because the media and channels that those products are distributed in change the definition based on what that reading experience is. (Digital Director)

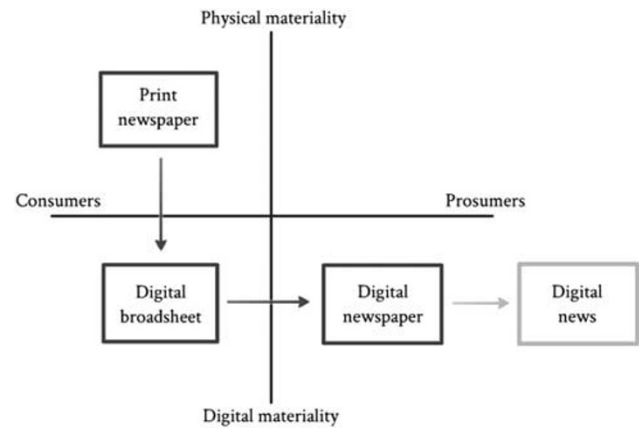
This shift in focus from print to digital created a number of challenges for MediaNews in terms of changing the roles of those involved in news creation and consumption. In addition to retraining of internal staff, creating more technical roles, learning to engage with readers more directly, etc., the changes in products destabilized traditional income sources from print (i.e., advertising). Once the company could track how many readers viewed and clicked on ads, the revenue dropped dramatically as advertisers began paying for actual ad traffic (e.g., banner and pop-ups ad clicks), rather than paying an arbitrary fixed sum for the placement of an untracked ad in a print newspaper. Thus, the role of advertising in sustaining news production was disrupted – MediaNews could no longer gain sufficient revenue to maintain its size or established organizational structures. MediaNews responded, as many news companies have, by restructuring, removing roles deemed redundant, recycling content, and developing a dedicated product strategy targeting the newly segmented audience. Hence, despite the initial hesitance of MediaNews to embrace digital media, we observed major changes in the roles of individuals involved in the production and consumption of news content that resulted from disruptions of digital technologies.

### Evolution of products

If I look at some of the feedback on our tablet devices, 10% of people want the complete replica experience to the paper ... However, I think the number of people who would ask for that will dissipate over the next 5 years, if not quicker. (Digital Director)

In the words of the Digital Director, the news offerings (i.e., news content and products) are being transformed by the changes in available and accepted media, as well as the changing roles of consumers of news (see Figure 1). This transformation was traced through the differences in the products that MediaNews created from the years 2000–2012.

We observed the print offerings to be heavily reliant on both journalistic content and print-technical requirements. The print offerings were based on the quality of written articles, the added material within the newspaper



**Figure 1** The evolution of the digital newspaper.

(e.g., inserts, catalogues, TV guides), the predictability of the format, a presentation allowing for a contained linear reader journey (i.e., from cover to cover), and an established reputation for providing expert opinions of a subject authority. In contrast, we observed the digital offerings to be focused on content variety, immersive and interactive experience, intuitive product design, and a non-linear exploratory reader journey. Thus, the digital offering was distinguished by the quantity and reader-tailored nature of news content, the layout of the content fitting the medium (i.e., different layout for web and mobile), a non-linear user journey, and a shift in reputation to providing up to date innovative multimedia news content rather than written expert opinions.

The key feature is the on-going update. That constant connectivity, that's what websites have and that's why we go to them for news – because we know they are, at best, a couple of minutes old. (Digital Director)

However, the alignment of content and medium was problematic in practice, as the majority of MediaNews journalistic content was still developed for the print format and was then re-used for their digital products. This created confusion among both producers and consumers regarding the difference between traditional 'newspaper content', their 'digital content', and the general information that could be found through other sources (e.g., Google or Wikipedia). To alleviate this ambiguity, different forms of digital media were increasingly leveraged to separate their content from that of print. Although the quality of the content was considered equal between print and digital (by the participants), the digital offerings became increasingly focused on the quantity, relevance and presentation of content rather than the quality of the content itself. As such, from 2005 to 2012, news offerings became more tailored to the medium they were circulated across. For instance, mobile-optimised sites had less content than the same website article, while iPad apps had in-depth analysis unavailable on either website or mobile app. The same article could be rewritten to accommodate



the constraints of the medium (e.g., shorter for mobile, longer for web, added multimedia for tablet, more technical language added for print). This led to the differentiation of products by content, as well as their form and function on top of the basic layer of news content, as explained by a Senior Product Manager:

There's a kind of basic layer of news and basic information that people are looking for and that's regardless of whatever channel you're on, whether that's printed editions, mobile phone, tablet. So fundamentally you've got that basic layer of information and then on top of that you lay things that are specific to the channel that you're using to distribute that content.

However, despite the attempts to revolutionize and add equal value to different product offerings, we observed a range of clear dichotomies within MediaNews regarding print newspaper products vs digital news products, and their producers. The print side was heavily engrained in a rigid journalistic and editorial tradition, while the digital side was more malleable in their approach to news, focusing more on experimentation and innovation. This dichotomy was found in the different views within MediaNews regarding whether news can or should make revenue (vs non-for-profit modes), whether the print tradition should be maintained (vs setting focus on the digital news innovation), and whether content should be tailored to a specific medium (vs separating content and presentation). The conflict between maintaining tradition and adapting to change is yet to be resolved – participants acknowledged the issues in renegotiating their evolving roles and identities in an environment of constant uncertainty. However, the adaptation to and consolidation of the inherent conflicts was reported to be of significant importance for the evolution of newspaper products and the roles of producers and consumers of news. For instance, journalism has been constantly changing and it is through such conflicts and challenges that the news products have evolved to their present form:

Journalism will spread its wings in all sorts of directions, whether it's an aggregator or in the business of creating curated content ... a lot of things will come and go and a lot of things will stick for a while and fade away. (Managing Editor)

Paradoxically, although at the end of 2012 the critical role of digital technology was acknowledged in driving the evolution of both roles and products, digital still continued to be seen a 'poor cousin' to print and was often neglected in priority for marketing and product development:

The newspaper industry hasn't tried very hard to go digital. They've been more or less dragged into it – 'I've got to be there' ... They've got to do it, so they're doing it. (Senior User Experience Architect)

While there remained a reluctance of the print side of MediaNews to adapt to emerging media, overall, digital

products gained traction as the future of the organization. As such, due to the prevalent dichotomies, MediaNews faced challenges in ensuring that their digital offerings added value to and complemented the rest of the brand offerings. In other words, their strategy for products within a specific brand aimed at enhancing the reader's experience and cementing the relevance of MediaNews products within emerging contexts. The main issue in implementing such strategies involved the reconstrual of identities of those involved.

### Reconstrual of identities

The roles and identities of actors involved (internal and external, human and non-human) have changed during the evolution of print and digital offerings. Evidence from the field shows that *all* the actors involved in the production and consumption of news have undergone identity crises and identity reconstrual in adaptation to technological disruptions experienced by MediaNews. For instance, the traditionally passive 'consumer' identity of readers morphed into a more active 'prosumer' identity (see Figure 1). This emerging prosumer (Ritzer & Jurgenson, 2010) identity was founded on users driving the evolution of news products by posting content, commenting, clicking on links, rating, and sharing content through social media. In the words of a reader:

I influence the newspaper two fold. I have direct influence on the newspaper company via the channels that they created, such as feedback mechanisms in the web portal or Twitter accounts. And the second is that I rely on search optimization. So when I click on an article, I assume that I'm doing my little bit to help the news company realize what they should be publishing.

As such, the identities of the editors (and MediaNews as a company) were destabilized from their previous identity as 'authority' of news. Instead, they had to renegotiate their identity to align to their emerging collaborative and curator-based roles. In other words, the identities of journalists and editors were reconstrued from 'authority' to 'curator' of news content at the same time as their audience reconstrued their identity from 'consumer' to 'prosumer'. Furthermore, the identity of news products changed from being a 'push medium' for the presentation of authoritative 'truths', instead becoming an active 'platform for debate' that enabled the negotiation of 'truths' by the masses. The organization's identity (both internal and external) was subsequently disrupted, as the established print-based identity no longer aligned with those of producers, consumers, or products.

As technology was related to offerings, content, producers and readers, it was reported as the core of this identity misalignment: the inability of the company to rapidly renegotiate its established print-based identity constrained the initial attempts to adapt print products to emerging digital technologies. Despite this, increasing pressure from digitally adapted individuals within the organization

drove MediaNews to hesitantly explore the potential of the technologies that disrupted the organization. Due to these early efforts, MediaNews was widely recognized for launching the first iPad news app in their Australian home market. This recognition marked a shift in the external identity of the organization from 'traditional' to 'modern'/'cutting-edge'. Following this reconstrual of the external organizational identity, increasing numbers of individuals within MediaNews began to actively redefine their print-based identities and quickly embraced the identities that aligned with emerging digital technologies. As part of this process, multiple roles and identities emerged within the company that were not heavily ingrained in one side of the print/digital past/present dichotomy over another and, instead, attempted to *converge* the past of print with the potential of digital. These individuals were reported as champions in driving the reconstrual of the internal identity of the organization, so that it aligned with the emerging external identity, as well as assisting the metamorphoses of other individuals and digital news products they created:

I've been able to greatly influence the direction we've taken, things that we're doing. Of course that's in collaboration with the rest of the team ... I've talked [with] product managers or product owners within the mastheads themselves. You know, to try to take all those bits and pieces and put them into the final framework of what we are delivering. (Mobile Producer)

Thus, the reconstrual of the internal identity of the organization was reported to be heavily influenced by individuals (in all levels of the organizational structure) involved in news product creation, as well as the shifts in the identities of the products themselves. Project managers, user experience (UX) architects, developers, testers, business analysts and digital directors, all reported that they influenced and changed the news product offering, while at the same time it changed their expectations, biases, role, and identity within the organization (see Figure 2).

In support of these claims, we observed how new technologies and changed expectations led to a new design of the digital newspaper, as well as the shifts in roles and identities that resulted from or were required to facilitate this process. For instance, the product manager and digital director created a strategy for a new digital news product. Relevant editors then provided basic product requirements (functional). Analysts, designers, developers, testers, and UX architects negotiated the technology selection, non-functional requirements, and major design decisions. Post build, testing, and product release, journalists, editors, and readers gave continuous feedback based on their on-going engagement with the digital product. Analysis of this feedback, in conjunction with data from product analytics and marketing research, formed the foundation for subsequent product updates. This process was cyclical. Each iteration illustrated the changes in those involved and these changes could then be traced to future

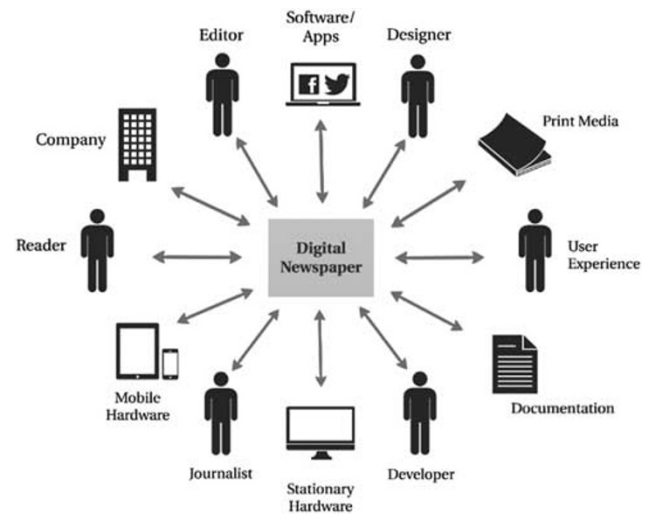


Figure 2 Multi-directional engagement in the digital newspaper.

instantiations of the product. Hence, the continuous iterations of the product design were observed to transform both the product and the actors involved in its production and consumption.

The reconstrual of the established print-based identities of individual actors (see Table 2) was evident from changes in types of feedback, expectations, and nature of engagement with the product. The most prominent changes were the gradual relinquishing of authority on product design decisions by the editors, increasing reliance on technologists for product strategy decisions by managers and directors, increasing dependence on social media and product analytics for content creation by journalists, and shifts in expectations and demands of users in regard to the available functionality and content refresh rate of news products. The identity of the news product itself altered based on the nature of user engagement (e.g., mobile site for intermittent 'snacking' on content vs iPad for leisurely reading vs website for in-depth reading and research) and major design decisions (e.g., addition of photo galleries, social media widgets, weather, voting, comments, truncation of content, 24/7 breaking news updates, etc.). Both the nature of engagement and product design were heavily shaped by the selection of the medium and reflected the changes to it. As such, the news product identity changed from being a 'source of truth' (an identity which characterized the print newspaper) to a 'bridge between print and digital' (the digital broadsheet/e-paper) to a community 'platform for debate' (the news website).

As the identities of the individuals and products changed, they became misaligned with the established internal identity of MediaNews. This caused considerable initial friction within the organization, as editors and directors were reluctant to embrace digital while those creating the products were eager to leverage its potential. Predictable organizational inertia was observed during this phase, as

Table 2 Changing identities of actors at MediaNews

	<i>Previous identities</i>	<i>Emerging identities</i>	<i>Description</i>
News product	Print newspaper, condensed summary of news content	Digital news aggregator, variety of news content	The identities of news products changed through their transformation across media from being a condensed summary of news, to providing a platform for multiple sources to be collated
Content	Linear and narrative, presented as 'truth' grounded in newspaper authority	Pastiche, negotiated from multiplicity of sources/ perspectives	The identity of the content changed from being the 'truth' presented in a linear style, to being a pastiche of perspectives (i.e., versions of realities, with no ultimate 'truth')
Readers	Passive consumers	Engaged prosumers	The identities of readers changed from passive consumers of content to engaged prosumers that directly and indirectly contribute to formation of news products
Producers	Segregated/ specialized role, authority of news	Integrated/malleable role, collaborators in creation of news	The identities of producers changed from specialised roles (e.g., journalist, editor, technician, etc.) to being malleable and interchangeable (i.e., journalist is also a developer, etc.). Changed from being the authority of news to facilitators of debate and information processors/collators.
Media	Static, rigid, limited form	Dynamic, shifting multiplicity of forms	The identities of media changed from being a static record of events (i.e., print) to being a dynamic and shifting platform for content creation
Company	'News' company, authority over content	'Media' company, facilitator of debate	The identity of the company changed from 'authority of news' to 'facilitator of debate', as well as from a 'news' company to a 'media' company

the company was propelled into an identity crisis and a state of inaction. However, as more individuals within the company reconstrued their identity to align with digital, and the organization began creating a variety of profitable digital products, the internal identity was gradually reshaped. At the organizational level, the reconstrual of MediaNews' internal identity was observed in the move away from pure news production, and an increasing focus on developing a diverse digital offering that extended beyond even digital news and into other purely digital products, such as specialized product websites and aggregator apps. This in turn significantly altered the roles of individuals, organizational structures, product offerings, and target markets. As its digital offerings grew, MediaNews overcame its initial identity-related inertia, appropriately realigning its internal and external identities to fit with the disruptive digital context. Essentially, MediaNews metamorphosed from a 'newspaper' to a 'media' organization:

There is more emphasis on the digital side of things as opposed to newspapers, and I think that MediaNews probably sees themselves as not a newspaper company anymore, but more of a technology company, alongside Google and Apple. (Designer)

Table 2 illustrates the reconstrual of key identities.

### Discussion and conclusions

The ethnographic study of the metamorphoses within MediaNews revealed that emerging digital technologies

caused major disruptions, which altered its established organizational trajectory. The disruptions led to the destabilization and misalignment of the previous identities of all human (e.g., journalists, readers, editors, developers, etc.) and non-human (e.g., newspaper products, media, company, etc.) actors involved, forcing the renegotiation and reconstrual of their identities. With respect to validity of knowledge claims beyond the original context, we provide a 'Type ET Generalizability' (Lee & Baskerville, 2003) which generalizes from description to theory (ibid). This is further elaborated upon regarding interpretive field studies (cf. Walsham, 1995) by Klein & Myers (1999), as the principle of abstraction and generalization. Our findings illustrate (for a detailed summary of findings, see Appendix B) how a brand within the organization leveraged digital media in order to adapt to the technological disruptions of the late 20th and early 21st centuries. In other words, we have shown how a digital newspaper emerged and transformed in practice through a mutually constituting evolutionary process (surrounding identity metamorphoses) that involved the organization, the products, the producers, and the consumers of news. The observed iterative and cyclical transformations can be explained by focusing on the relational dynamics of actors within their environment. The transformations emerged from ongoing reconfigurations of relations among the actors (i.e., digital media, producers, consumers, content, company strategy, etc.) that recreated the actors themselves and, in turn, reconstructed relations over time.

While many of the aforementioned studies concerning newspaper organizations tend to view product evolution as a one way process that is limited to a specific artefact (e.g., a newspaper product), here we have shown that the evolution of a product has wider implications – it is not bound to any materially instantiated object, is context dependant, and is part of the co-evolution of all the actors involved. In other words, product evolution is co-created, as changes to the product evolve the very things that triggered to the product evolution. As such, our paper offers three key contributions founded on the relational theory of identity presented, as well as several implications stemming from these contributions.

First, this paper contributes to theoretical discussions concerning identity change, and, specifically, the relationship between identity change and strategy when facing technological disruption (e.g., Tripsas, 2009). From the position that identity is “the theory members of an organization have about who they are” and strategy is ‘a theory of actions that the firm should take or can take’ (Reger, 1998, p. 103)’ (Tripsas, 2009, p. 456), our study illustrates that the two are inextricably linked. As such, in the context of organizations experiencing technological disruptions, strategy may be better conceptualized in terms of affordances (Gibson, 1977) rather than its typical conceptualization as a set of goals that advance an established organizational trajectory. In other words, the most suitable strategy for an organization experiencing an identity crisis may be the one that facilitates the process of complementary identity reconstrual of all actors involved to those that align with the affordances and constraints of the source of disruption, rather than forcing an arbitrary vision (e.g., attempts to reaffirm the existing organizational identity). In the case of MediaNews, the brand that adapted best to technological disruptions was the one that aligned product strategy to leverage the affordances and constraints of emerging digital media, and facilitated identity reconstrual of individuals involved through shifts in their roles and organizational structures. Hence, we suggest that identity metamorphosis is vital in navigating and adapting to technological disruptions.

Second, this paper contributes a relational view of identity and the respective inertia, which moves beyond unidimensional views of either concept. While we recognize that much of what has been presented in this paper is related to work in other disciplines, our study offers a relational view beyond said literature. To explain our findings (i.e., the trajectory of transformations, disruptions, adaptations, persistence, crises, and, ultimately, reconstruction) we propose a concept of inertia as a relational phenomenon that emerges and becomes visible differently – as psychological, socio-cognitive, socio-technical and political – depending on the observers’ viewpoint. While IS researchers adopted various views of inertia to explain different IS phenomena (e.g., negative psychology inertia to explain computer anxiety, Venkatesh *et al*, 2000; socio-technical inertia to theorize information infrastructure, Hanseth *et al*, 1996; or political

inertia to explain vested interest and alliances in technology adoption, Jasperson *et al*, 2005), our findings suggest that none these distinct views of inertia is sufficient on its own. Similarly, the identity related inertia as defined by Tripsas (2009) enables only one aspect of technological disruption and identity crises to be explained. Inertia as a relational phenomenon results from intra-actively entangled actors (Barad, 2007) – producers, journalists, designers, managers, norms and values, media technologies, newspaper products, readers, user experience architects, testers, developers, directors, editors, routines and structures, within broader networks of media industry. Through their continuous intra-acting, the actors acquire and re-affirm their identities which implicates inertia as a relational effect.

Third, our paper contributes a view that can be used to adapt and overcome organizational inertia (Tripsas, 2009), as an organization must rapidly reconstrue its internal and external identities, the identities of its products, and help facilitate the process of complementary identity reconstrual for all actors involved. Interestingly, the case of MediaNews also supports Simpson's (2014a, b) position that actions within a given context may be the result of what actors *want to be* (i.e., preferred self) rather than simply what they *already are* (i.e., established identity). For instance, our study illustrates how a group of individuals within MediaNews helped realign the internal organizational identity from print-based to digital by acting *as if* the organization was already primarily digital. In terms of identity, their actions were based on what they wanted themselves and the organization to be, rather than what it was or had been. Thus, even if an organization experiences inertia in response to disruptions, it may be possible for it to overcome this obstacle through the cumulative actions of individuals realigning their established identities to those they prefer (i.e., this process may help reconstrue the internal identity that causes inertia in the first place). As such, this study provides an alternate perspective on what makes an organization better prepared to adapt to technological disruptions. An interesting avenue for future research may be to explore the implications of focusing on realigning internal processes and structures to those that enact a preferred identity, rather than focusing on maintaining processes or attaining outcomes that align with the current identity.

Consequently, this paper contributes to discussions on whether some identities are better than others, or whether some identity changes are easier to manage (Tripsas, 2009). We noted a trend within the data that suggests that *process* based identities (rather than outcome, characteristic, or definition based identities) are easier to reconstrue (cf. Kelly, 1955; Fransella, 2003) regardless of organizational context (for further discussion on the problematic nature of non-process based identities, see Appendix A). For instance, there have been calls for research (Tripsas, 2009) into the trade-offs of having broader or less broad identities. Adopting an ostensibly outcome and/or characteristic based perspective, Tripsas (2009) states: ‘one might expect that newspaper organizations that conceived of themselves

more broadly as media companies reacted more effectively to the Internet than those that viewed themselves as newspaper firms' (p. 456). However, our study illustrates that the actors involved did not arbitrarily choose a preferred identity following disruptions. The seemingly characteristic based digital identity emerged only *after* the reconstrual took place and its formation was heavily shaped by this process. As such, we suggest that identity can be further conceptualised not as an object that can be directly measured or altered, but rather as the manifestation at a point in time of complex underlying processes. Such processes, when examined as part of their broader context, can be explicated and strategically altered to change the subsequently manifesting identity.

In other words, the actors leading the organization's identity change were the ones that embraced the processes involved in leveraging digital media, which led to the formation of their digital based identity (rather than them striving towards a preselected or arbitrary 'hard coded' identity). These actors shifted their roles and activities from those that aligned with print based identities to those that aligned with digital, and only after this did they identify with being 'digital product person' within a 'media company'. Conversely, the identities that were the hardest to change were of those actors who clung to the characteristics and outcomes of being a 'newspaper company' or an 'authority', and refused to change processes if the change conflicted with their established identity.

Hence, the focus on processes, rather than characteristics or outcomes, is vital for overcoming or avoiding organizational inertia and facilitating organizational transformation. This perspective contributes an alternative to prior literature that (1) concerns newspaper products and organizations, (2) uses identity as a lens to explain empirical observations in context, and (3) attempts to explicate various forms of organizational inertia. The value of the perspective lies in problematising static or outcome based approaches, as well as providing a working alternative. We also suggest that future research acknowledges that outcome based identities are increasingly becoming problematic due to the exponential rate of technological change (Kurzweil, 2005), as well as the quantity and configurability of technologies (Simpson *et al*, 2013). If the predictions manifest, there are at least three major implications that can be derived from this: (1) the rate of technological disruption is also increasing at an exponential rate, (2) choice and potential affordances are increasing at an exponential rate, and (3) the lag time between 'state-of-the-art' and common use is exponentially *decreasing*. As such, any potential way to overcome the resulting metamorphosis-related challenges would be of substantial value to both theory and practice.

For instance, there are obvious challenges for managers that need to 'explicitly direct a potentially hazardous identity-change process' (Tripsas, 2009, p. 455). Given the above, both organizations and individuals could face escalating challenges in adaptation if they continue to construe their identities based on static characteristics,

roles, technologies, industries, authorities, and the like. These will only continue to change faster than organizations and individuals can reconstrue identities based on these characteristics or outcomes. Therefore, we suggest that managers and other individuals within the organization strive to form identities around processes. Although never explicitly stated, there is strong evidence to suggest that MediaNews reconstrued its identity from outcome based (i.e., 'producing newspaper products') to a more process-based identity (i.e., the process of 'providing relevant information to readers on time') in order to adapt to the disruptions of digital. As such, notions of 'hazardous identity-change' could become redundant for managers who focus on developing process-based identities. Any change would be viewed as a natural part of the process of an organization's or individual's becoming, rather than being treated as a threat. To enable this, managers could benefit from shifting their own identities from 'director' to 'one who coaches'. Countless examples of this 'identity coaching' can be found in Personal Construct Psychology (see Kelly, 1955; Fransella, 2003), which may further inform managers in similar situations as those at MediaNews.

Finally, the study revealed that the evolution of actors and identities through shifts in patterns of relations was inevitable, which contributes to discussions regarding technological and human agencies (e.g., Leonardi, 2010). This can be explained through the relational perspective, as this perspective posits that nothing can be removed from the broader network of relations that constitute the universe (Kelly, 1955; Law, 2004; Latour, 2005; Barad, 2007; Bloom, 2012). As such, any advancement or mutation in one part of the network will eventually affect the rest of the network, leading to disruptions, adaptation, and evolution. It is not a matter of *if*, rather a matter of *when*. Furthermore, if we adopt the view that nothing exists in isolation, the findings presented in this study have broader implications for other organizations. Digital technologies similar to those that disrupted MediaNews will inevitably cause other major disruptions to established information creation and sharing practices globally, as well as the organizations and individuals involved. Essentially, we argue that the phenomenon cannot be isolated to the newspaper industry alone and the lessons learned may be applicable to the film, music, magazine, book, journal, and academic industries. Viewed thus, the case of MediaNews serves as a cautionary tale for both organizations and individuals that base their identities on characteristics and/or outcomes, as these prevent rapid adaptation to technological disruptions by generating diversely manifesting forms of relational inertia.

### Implications for future research

The adoption of an ethnographic research approach revealed that tracing patterns of relations was more useful during analysis of complex emergent phenomena, rather than attempting to establish and base the analysis on the states of actors at a particular point in time. As the actors

were shown to constantly change through ongoing cyclical relations that constitute them, the attempts to analyse the disruptions without looking at their evolution was akin to trying to create an atlas of clouds – the actors shift states and material manifestations continuously, and it is only through understanding how and why these shifts occur that the phenomenon can be understood and the implications of the isolated patterns extrapolated. Consequently, the study has implications for future research, as it provides an application of a perspective that could be used to drive the development of theories that deal with technological disruptions to a multitude of actors (e.g., individuals, companies, industries, fields, etc.) and a direction for organizations to develop strategies to manage this process of change. Further research that explores the co-evolution of human and technological actors not presented here would be welcomed. Specifically, research on the interplay of technological disruption, identity, and inertia in other contexts could be used to generate deeper insights into the processes and implications of identity and actor metamorphoses in other contexts.

Much management and organizational research is concerned with governing technological change, and views identity change as something that employees must be led through. For example, Tripsas (2009) states ‘explicit efforts to shift identity in order to accommodate identity-challenging technology are difficult to accomplish, implying the need for systemic, major reorientations’. However, given the nature of identity change presented in this paper, we are forced to question whether this is necessary or even possible. Hence, further research is required that aims to explore extant fundamental assumptions about the nature of identity renegotiation in order to create a more solid foundation for theorizing and theory building in this area. In order to do this, some authors have suggested explicating and aligning assumptions about lowest level of the topic in question all the way to core assumptions about the universe (Simpson, 2014a). Future research could use this approach to examine extant identity studies in order to determine the extent to which the authors’ assumptions are aligned.

Furthermore, as forced identity change is problematic in practice, we could benefit from future research that focuses on how to create a culture of adaptation rather than of governance. In other words, how can managers better renegotiate organizational structures and processes to align with the constantly evolving actors, rather forcing the actors to be, think, work, and behave a certain way to

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fit existing processes? How can we better *coach* rather than *instruct* individuals through the process of adapting to change? Indeed, it may be possible that process / flow-based perspectives are the root for such inquiries into innovation and evolution. Future research could examine whether there are differences between individuals and organizations that focus on outcomes vs those that focus on processes, with respect to innovative vs disruptive technologies. Future studies could also examine whether there are various types of process-based identities, and, if so, whether some are easier to reconstrue than others. We could equally benefit from exploration of other potential causes of organizational inertia, both within organizations undergoing disruptions and those following a steady trajectory. Finally, to understand and better adapt to future technological disruptions, further research into the nature of digital technologies, their mechanisms, and the rate of their emergence, could prove highly valuable.

Finally, while we touched upon the emancipatory potential of Web 2.0, a more thorough investigation of this potential would be highly beneficial, particularly for the critical community. As MediaNews observed their readers increasingly creating and consuming news stories through unofficial channels, such as the Web 2.0 enabled social news site Reddit, this case serves as a cautionary tale for other organizations that similarly rely on official channels for content distribution and moderation. Future research into the effects of the emancipatory potential of Web 2.0 could provide key insights into how and why such platforms are disrupting established content consumption practices, and how communities like Reddit develop and refine content through mass peer-reviewing of news, personal stories, and even academic discussions. Furthermore, Web 3.0 (semantic web) and Web 4.0 (ubiquitous web), which have both been around for quite some time, could possibly be compounding the effect, and much could be problematized and theorized regarding the non-static and evolving *location* of agency.

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## Appendix A

### Identity: it is not 'this' or 'that', it is both

It is important to note that as identities are conceptualized as recognizable patterns of relations, they are viewed as both assigned and enacted. In other words, a specific material manifestation may have multiple identities, depending on the relations that constitute it. In this view an identity (similarly to the concept of genre) is a product



of all the relations involved and is a recognizable pattern of matter (i.e., form) that may be different from the perspective of each actor (i.e., identity of a newspaper may be different for consumers or producers, and the evolution of the product is through the continuous renegotiation of identity). In other words, there are multiple simultaneous identities for the same pattern of material manifestations, and these identities constitute the subsequent form the manifestation takes.

While we have shown that both human and non-human actors have the ability to change each other, that this process is inevitable, and the thing being changed is identity (i.e., material manifestation of convergence of relations), there are many dichotomous perspectives (cf. Gal & Kjærgaard, 2009) associated with the conceptualization of identity in extant literature (e.g., identity as inherent/emerging, static/dynamic, etc.). Our study of the metamorphoses of actors within MediaNews illustrates why the concept of identity does not necessarily have to be 'either/or' with regard to these dichotomies, but rather it is always *both* at the *same time*. Table A1 illustrates prevalent identity related dichotomies along with the

associated illustrative observations and elaboration as to why it is both.

Thus, as illustrated above, an identity can be conceptualised as a recognizable pattern of material manifestations of actors (where the term actor refers to a convergence of ongoing, iterative relations). As such, an identity is a way to recognise and draw an analytical boundary around an actor. Depending on the level of abstraction, the actor (and their identity) will shift. For instance, a string of molecules may have a specific identity, while a newspaper that the molecules are part of has another, and a company that produces the newspaper may have its own. The identity of one does not negate the identities of the others. Indeed, they are part of the same whole. Furthermore, the same pattern of matter may have multiple identities at the same time and these identities inevitably shift through ongoing relations. An actor and their identity may appear static if the patterns of relations that constitute them are iterative and relatively unchanging, however, this is an illusion as relations are never static or unchanging (Latour, 2005; Bloom, 2012) but always fluid and ongoing. Relations thus can be viewed as the *mechanism* through

**Table A1 Identity dichotomies**

Dichotomy	Example	Why it is both
Assigned vs Enacted	<ul style="list-style-type: none"> <li>● Identity of newspaper as created and attributed by readers/ producers/ media</li> <li>● Identity of newspaper enacted by material manifestation of artefact within a specific medium</li> </ul>	As an identity is a recognizable pattern of material manifestation of relations, it is both assigned and enacted at the same time. It is assigned as it is negotiated by actors using it as a recognition device (same as genre), and enacted through the materialization process itself
Static vs Dynamic	<ul style="list-style-type: none"> <li>● Identity of newspaper as stable (specific edition does not change, so neither does the identity of that particular artefact)</li> <li>● Identity of newspaper as dynamic (ongoing evolution through changes to form across editions/media)</li> </ul>	An identity is stable in so far as a particular materialization at a particular point in time (if we could freeze and examine it) does not change. However, it is also dynamic as it changes through the ongoing process of (re)materialization of the actor – the changes to the materialization are reflected in the changes to identity
Inherent vs Emerging	<ul style="list-style-type: none"> <li>● Identity of newspaper inherent to the form the artefact takes (i.e., identity cannot be separated from artefact)</li> <li>● Identity of newspaper emerges through changes to form (identity is not fixed and evolves through ongoing differing materializations of artefact)</li> </ul>	An identity is inherent as it unique to the particular materialization and the form it takes (one cannot separate an identity from form). However, it is also emergent as the relations that result in a specific materialization are not a one-off and are constantly driving the materialization (and identity) to change and emerge through these relations
Determinate vs Indeterminate	<ul style="list-style-type: none"> <li>● Identity of newspaper as determined by the matter that it is composed of and relations between different matter in a specific instance (i.e., matter dictates identity)</li> <li>● Identity of newspaper as indeterminate (i.e., relations between matter that constitute subsequent materializations/identities are not predetermined)</li> </ul>	An identity is determinate as it is dependent on the form the actor takes (i.e., a specific materialization of an actor cannot have an identity of a completely different pattern of materialization). However, it is also indeterminate, as the shifting relations that constitute the materializations of the form the actor takes cannot be predicted just by looking at previous forms. In other words, subsequent materializations are not predetermined – they emerge through relations
Singular vs Plural	<ul style="list-style-type: none"> <li>● Identity of newspaper as singular, such as 'provider of news' (i.e., a single identity negotiated between multiple actors)</li> <li>● Identity of newspaper as plural (i.e., a newspaper being an aggregator, product, authority, platform, search engine, archive, etc., at the same time)</li> </ul>	An identity is singular in so far as any materialization has a collectively negotiated identity (i.e., its material form). However, at the same time, this shared identity (e.g., 'newspaper') is a composite of a variety of other identities (e.g., 'authority' or 'archive'). The convergence of the multiplicities of identities is what makes the actor

Table B1 Summary of findings

	<i>Evolving products</i>	<i>Disrupting roles</i>	<i>Disrupting and reconstruing identities</i>
Print newspaper	<ul style="list-style-type: none"> <li>● Defined by print format and printing technology</li> <li>● Heavily dependent on journalistic content and printing technology requirements</li> <li>● Reputation built on articles' quality, journalists' standing and expert knowledge and opinions; reputation linked to authority of the newspaper and presentation of 'truth'</li> <li>● Content dependent on static and rigid print format, that enables linear and narrative style</li> </ul>	<ul style="list-style-type: none"> <li>● Journalists', editors', and producers' roles were well defined, engrained in print medium and stable</li> <li>● Journalists' roles were determined by distinct expertise and knowledge as well as public expectations of informed opinions</li> <li>● Producers' roles were specialized and segregated in relation to print technology</li> <li>● Consumers' roles were largely passive defined in relation to print format and a particular reading experience</li> </ul>	<ul style="list-style-type: none"> <li>● The identity of the newspaper was inseparable from the print medium and printing technology and persisted for centuries</li> <li>● The identity of MediaNews was built in relation to the print newspaper and entrenched in print technology tradition in terms of both the internal identity (expressed in values, assumptions, processes and routines) and the external identity perceived by consumers and the industry</li> <li>● Individual identities of editors, journalists, and producers were also established in relation to printing technology and the print newspaper, drawing from and contributing to MediaNews identity</li> <li>● The identity of traditional consumer was derived through relation with the print newspaper reflecting largely passive and linear reading experience</li> </ul>
Digital broadsheet	<ul style="list-style-type: none"> <li>● Content was developed for print newspaper format (journalistic style, lengths, presentation) and used for the broadsheet product</li> <li>● Content and medium were not aligned (content retained the print newspaper format and look while being electronically presented and accessed)</li> </ul>	<ul style="list-style-type: none"> <li>● Traditional roles of editors, journalists and producers tend to persist while emerging digital technologies were bringing confusion</li> <li>● The roles of journalists and producers were threatened by new technologies, decline in circulation of print newspapers and changes in the industry</li> <li>● Roles of consumers began to change due to electronic format and digital access</li> </ul>	<ul style="list-style-type: none"> <li>● The identity of the digital broadsheet (e-paper) was seen as something ambivalent – a 'bridge between print and digital'</li> <li>● MediaNews retained its traditional print based identity (showing identity inertia) while trying to respond to the challenges of emerging digital media and adapt its print products</li> </ul>
Digital newspaper	<ul style="list-style-type: none"> <li>● New media transforming the notion of news and newspaper products</li> <li>● Reputation built on innovative multimedia presentation, relevance, quantity and ongoing updates of content (news and stories)</li> <li>● Digital content emerges as distinct from traditional newspaper content</li> <li>● Alignment of content and medium led to differentiation and segmentation of offerings across different channels: web, tablet, and mobile products in addition to print newspaper</li> <li>● As a radical technological transformation of a print newspaper a 'digital newspaper' is seen as a stage in the evolution towards digital news</li> </ul>	<ul style="list-style-type: none"> <li>● Traditional roles were disrupted and many made redundant (due to decline of print circulation and income from advertising) while new roles and responsibilities of journalists, editors and producers emerged with new digital offerings</li> <li>● The emerging new ways of news production (including 24/7 production cycle) transformed producers' roles requiring new skills, innovation and experimentation</li> <li>● Journalists' roles were disrupted, morphing into aggregators, curators of user-generated content, moderators of users' comments, creators of stories around user opinions, etc.</li> <li>● The roles of producers were not sharply differentiated and could be overlapping and malleable</li> </ul>	<ul style="list-style-type: none"> <li>● The identity of the digital newspaper emerged out of the identity-challenging digital media; however, the very identity of the digital newspaper was seen as shifting towards the identities of digital news products; part of continuing identity reconstrual is the transition from presenting authoritative 'truths' to providing an active platform for variety of news content and debate</li> <li>● The identity of passive consumers transformed into the identity of active 'prosumers' who contributed directly to the evolution of digital news products (by clicking on links, commenting, rating and sharing content via social media)</li> <li>● The traditional identity of MediaNews lost currency in the online market and was also internally misaligned with the identity of digital products and ongoing transformation of individual roles and identities</li> </ul>

Table B1: (Continued)

Evolving products	Disrupting roles	Disrupting and reconstructing identities
Digital news	<ul style="list-style-type: none"> <li>● Digital news emerging as a generic product adapted to different platforms reflecting different nature of user engagement</li> <li>● Increasingly reader-tailored news content</li> </ul>	<ul style="list-style-type: none"> <li>● The conflict between the traditional MediaNews identity and the identity of digital news products compounded with the emerging expectations of consumers led to the identity crisis, that in turn propelled the identity reconstruction</li> <li>● Internal reconstruction was an iterative process instigated by individuals involved in new digital product creation and by the shifts in the identities of the products themselves; part of that was editors' and journalists' identity reconstruction from that of 'authorities' to 'curators' of news content and facilitators of debates</li> <li>● MediaNews overcame its identity-related inertia and metamorphosed into a media company with its new identity both internally and externally aligned</li> <li>● Internal discourse and strategy in MediaNews focused primarily on digital media strengthening the company's new media identity</li> </ul>
<ul style="list-style-type: none"> <li>● Through immersive and interactive experiences consumers' roles radically transformed from passive readers to active contributors</li> </ul>	<ul style="list-style-type: none"> <li>● New more fluid and consumer-focused roles of editors, journalists and producers as part of the creation of new digital news products and readers demands and expectations</li> </ul>	

which identities change. It is through this ongoing process that actors simultaneously emerge and evolve in practice (i.e., through their ongoing co-constitution).

All actors, in this sense, have equal agency as they are continuously co-constituted. The difference between this relational view of agency and other interpretations within extant literature (for an overview see Leonardi, 2013), is that the agency is not a 'thing' and does not vary between actors (cf. Latour, 2005). Rather, the variations are in the patterns of relations and the material manifestations that are at the convergence of these relations. For instance, a print and digital newspaper may have different ways to present content and may cause readers to consume content in different ways, but *both* make the reader *do something*. Hence, they both have agency. Same thing can be said for readers making the newspaper artefact do something (e.g., wrap a parcel or search for archived articles). Similarly, affordances can be viewed as the relations themselves. In other words, affordances are not the material manifestations of actors – they are part of the mechanism that shapes the manifestation. Hence, agency and affordances can be traced through material manifestations of relations (e.g., 'features' of a newspaper) but are *not* the materializations in and of themselves at a point in time. Rather, both become visible only through tracing material manifestations of patterns of relations and understanding how and why these patterns emerge and evolve over time.

## Appendix B

### Summary of findings

Reflecting the trajectory of MediaNews transformation, the summary of the findings in Table B1 provides an overview of the observed processes and changes in actors over time, illustrating how the evolution of media triggered the disruption and metamorphosis of roles and reconstruction of identities within MediaNews. These findings provide novel insights into how digital newspapers emerge and transform in practice, as well as the implications for the actors involved. They also allow us to discuss potential reasons as to why this process is occurring and draw lessons regarding organizational responses to the ongoing challenges of technological disruption. As the findings demonstrate, technological disruption and the emergence of digital newspaper offerings cannot be separated from transformations of processes, roles, and identities of the company, and its products, members, and consumers. Moreover, these transformations were observed to be not linearly causal for all actors involved, as some literature on organizational change seems to suggest. Rather, the changes were observed to be distributed, temporally misaligned, iterative, and mutually constituting.

Such relational dynamics, summarized in Table B1, were used to trace the evolutionary trajectory of the company. Ultimately, digital media disruptions presented a challenge for the MediaNews company and an initial impetus for adapting the print newspaper to digital, and,

subsequently, the ensuing transformations of the nature of products, the production processes, the roles and identities of products, producers, and consumers. It is important to note that the trajectory and its complex dynamics are not predictable and could have emerged differently in other contexts (in terms of specifics of manifestation). However, the evidence from MediaNews transformation dynamics can be generalised to other organisations and contexts. Importantly, this case provides insights into the metamorphosis of the roles and identities of company's products, its practitioners and consumers, and the identities of the company itself, which could be used to inform change management processes in similar situations. The case also provides key insights and lessons in overcoming

the struggle and adaptation to digital disruption for individuals involved.



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