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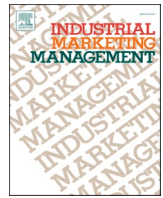
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Anything but Sony! Meshworking, identity multiplicity and the emergence of portable music players

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ABSTRACT

This article explores the temporal processes through which firm identity emerges over time, and how the becoming of a firm's identity orients actors towards specific strategic pathways. Drawing on a historical case study of Sony and its development of consumer music technologies from the Walkman to digital music players (mp3), we present an alternative, processual framing of network relations through the ever-extending tangle of the meshwork. By introducing a meshwork-lens to the question of identity in business networks we emphasise the importance of a dynamic and complex identity multiplicity in shaping the action not only of the firm itself, but also in giving rise to the conditions for others to thrive. In doing so, we advance a processual approach to business networks and address the relatively undertheorized understanding of the temporal dynamics of identity in the IMP literature.

1. Introduction

Identity construction and the question of ‘who we are’ is central to the strategic direction of a firm and its position in the industrial network (Ellis, Rod, Beal, & Lindsay, 2012). The nature and role of firm identity as a ‘collectively held frame’ that enables members of the firm to ‘make sense of the world’ (Huemer, 2013; Weick, 1995) has been a central theme in business network research. Within the IMP literature, the Actor Resource Activity (ARA) framework has placed the firm's identity within a wider business network, which has allowed researchers to explore identity through the interactions between firms (see for example Gadde, Huemer, & Håkansson, 2003), as well as the firm's self-identity (Ellis et al., 2012). Identity has formed a critical element in understanding the interactional role of actors within the business network (Håkansson & Snehota, 1995; Huemer, 2013), where the perceived attractiveness or repulsiveness of a firm as exchange partner shapes opportunities and constraints, and thus the possible direction a firm may take (Håkansson & Snehota, 1995; see also Hald, Cordón, & Vollmann, 2009; Huemer, 2004; Huemer, Becerra, & Lunnan, 2004). Indeed, identity has been argued to impact upon the principles that ‘guide a firm's behavior as well as the way the organization interprets the behavior of others’ (Purchase, Da Silva, & Schepis, 2016, p.156). Moreover, identity is considered a

strong determinant to strategy impacting how it is developed, chosen, and evaluated (Huemer et al., 2004). However, while the ARA framework has helped to establish a relationally distributed—or spatial—understanding of identity, the temporal dynamics through which identity formation happens remain relatively undertheorized (Medlin, 2004).

We propose that emphasizing the ‘fluidly emerging’ nature of networks in their ongoing becoming (Halinen, Medlin, & Törnroos, 2012, p.218) helps extend understanding of the contingent and unfinalisable nature of identity as an ongoing accomplishment that emerges and changes over time (Basque & Langley, 2018; Langley, Smallman, Tsoukas, & Van de Ven, 2013; Schultz, Maguire, Langley, & Tsoukas, 2012). Therefore, identity can be explored not as a fixed quality of the actor and its bonds, but as changing and multi-dimensional (Lowe & Rod, 2018); fluid, flexible, and constantly evolving in relation to others (Laari-Salmela, Mainela, & Puhakka, 2019). This inherently processual view on the temporal dynamics of firm identity begs an ontological shift away from an actor-centric view of ‘network identity’ and ‘identities in networks’ as seen in the dominant ARA framing (Easton & Araujo, 1994; Huemer, 2013; Huemer, Håkansson, & Prenkert, 2009) towards new unbounded ‘temporal frontiers’ (Guercini & Medlin, 2020; see also Andersen, Medlin, & Törnroos, 2020; van Fenema & Keers, 2020) to

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understand how identity ‘becomes’ (Chia, 1999; Laari-Salmela et al., 2019). A temporal perspective, therefore, raises questions about how identity manifests, endures, and fades, as well as how the temporal interplay of past identity and future strategy shapes network interaction and the strategic direction of the firm (Hernes & Schultz, 2020; Langley, Oliver, & Roluileau, 2020). Hence, we ask ‘how does the becoming of firm identity orient actors toward specific strategic pathways?’

To explore our research question, we draw on temporal identity perspectives in the broader organisation studies literature (Basque & Langley, 2018; Schultz & Hernes, 2013, 2020) alongside the conceptual framework of Ingold's (2011) *meshwork*. We argue that emphasizing temporality and entanglement helps us to understand actors and their interactions as ‘meshworks’, that is composite assemblages that extend across space and time (Czarniawska, 2018). Thus, we move beyond conceptions of the firm as having more than one, or multiple identities (Gadde & Håkansson, 2001; Huemer, 2013) to explore identity as a multiplicity (Bencherki & Trolle Elmholdt, 2022). This means that identity can be understood as ‘more than one and less than many’ both ‘clashing and cohering’ (Mol, 2002, p.84) as it expands, shifts, or contracts along the space of multiple possible paths (Cloutier & Langley, 2020; Pentland, Mahringer, Dittrich, Feldman, & Wolf, 2020). Herein, each possible path represents an immanent potential for the ongoing configuration of the firm's identity (Chia & Holt, 2009).

Empirically, we follow the company Sony from the technological development of the Walkman to the portable digital music player (mp3 player) between the period 1978 to 2008. In so doing, we trace ‘the patterning of identity formation along many possible paths’ (Pentland et al., 2020, p.2) as Sony moves from field leader in portable music, to a follower in the era of digital music. By introducing the vocabulary of the meshwork to the IMP field, we draw out the temporo-relational nature of business networks and contribute to the emerging literature on process perspectives within the IMP literature (Laari-Salmela et al., 2019; see also Lowe & Rod, 2018; van Fenema & Keers, 2020). Our analysis illuminates a key duality between ‘one and many’ in identity formation (Pentland et al., 2020) that suggests a need to look beyond the surface of the network to explore the ever-extending tangle of the meshwork. Further, our historical case study of Sony provides empirical credence to the recent turn to process and temporality in the IMP literature (see for example, Araujo & Easton, 2012; Bizzi & Langley, 2012; Lowe & Rod, 2018; van Fenema & Keers, 2020).

2. Identity in business networks: Spatial and temporal perspectives

The IMP literature on identity can be roughly divided across three main foci. These include network identities (Easton & Araujo, 1994), organizational identities in networks (Huemer et al., 2009)—that both explore network relations—and a more recent temporal focus on identity as becoming (Laari-Salmela et al., 2019). Traditionally for IMP, the point of departure has been the perspective of those with whom the actor interacts, rather than the actor itself (Huemer, 2013). Network identity follows this trajectory to underscore how the firm's identity is related to its position in the network and is contingent on those with which it interacts and enters exchange relations with (Gadde et al., 2003; Huemer, 2013). Hence, identity is defined by the firm's relation to other actors and determined by the activities that bond actors together in a business network (Gadde & Håkansson, 2001; see also Håkansson & Snehota, 1995; Huemer, 2013). Taking this perspective suggests that identity can both enable and constrain firm interactions because ‘every act and counter-act in a relationship is based on an assumed identity by the counterpart’ (Håkansson & Snehota, 1995, p. 33). Therefore ‘network identity’ presents an ‘outward-in’ view where the firm's identity is formed on the basis of its position in the network and in relation to the identities of others, or the firm's ‘identification with other players’ (Huemer, 2004, p. 265).

The ‘identities in networks’ perspective builds on the outside-in view

to capture the combination of internal and external factors at play in the development of a firm's position and identity (Huemer et al., 2009, p.56). Here, emphasis is placed on the identity of the firm as only partly determined by how it connects, or relates to, other actors within a network and rather suggests that a firm's identity develops from ‘the dynamic interplay between managerial ambition and external influence’ (Schepis, Purchase, & Ellis, 2014). This gives room to explore how managers (and firms) continually enact their own position or identity within the network (Ellis et al., 2012), by defending or changing existing positions, or performing a specific identity within accepted norms. The identities in networks perspective therefore adds an ‘inside-out’ view, giving the firm ‘more leverage with respect to its own identity development’ (Huemer, 2013, p.1112). This combined outside/inside view underscores the importance of identity as setting the conditions for which firms are perceived as valuable counterparts, but also impacts the principles for the company's own behavior. Hence, the IMP literature has become concerned with spatial perspectives that explore how an actor interprets their position, as much as how role interpretations are viewed and shared by other actors in the network (Huemer et al., 2009).

Taking identity as constructed ‘concurrently’ between the ‘self-identity of the firm, and its influence in the network (Ellis et al., 2012, p.403), presents an understanding of identity as a fluid, dynamic and discursive process (Ellis, 2016; Ellis & Hopkinson, 2020). For example, Ellis et al. (2012) build on understandings of managers as ‘boundary bricoleurs’ (Ellis & Ybema, 2010) to show how discursive forces shape business networks as actors articulate distinct identities in relation to other network actors. Here, boundaries are said to oscillate (Ellis & Hopkinson, 2020) as individual actors seek to define who is the other (Ellis & Ybema, 2010) and revise identity in relation to counterparts. For example, Purchase et al. (2016) explore the interplay between role (or actor behavior within activities) and network position within the Western Australian Junior Mining Network. The authors reveal how different actor roles, and perceptions of value that could be offered to the network, influenced the construction of identity in terms of ‘what they do’. Actors also used network position to describe themselves relative to others in terms of ‘who we do it with’ to construct identity across individual, organizational and network levels (p.161). Here, the construction of identity becomes dependent on the relational and interaction context, therefore multiple identities and positions affect and are affected in the business network, and the individual actor may seek to utilize these identities to enable or constrain strategizing and positioning abilities (Schepis et al., 2014).

2.1. Temporal perspectives on identity

More recently, scholars have been working to overcome IMP's habitual assignment of a fixed identity to an actor by adopting a ‘strong’ process view on business networks (Lowe & Rod, 2018; van Fenema & Keers, 2020). Here, the question of identity is less about ‘navigating’ one's position in the network in spatial terms through a detached surveying of the landscape (Chia & Holt, 2009). Moreso, it involves understanding how identity ‘becomes’ through the dynamic and paradoxical relationship between the firm's self-identity and its dependence on others (Laari-Salmela et al., 2019). Considering ‘who we are becoming’ as opposed to ‘who we are’ offers a temporal perspective to identity formation that is yet to be fully explored in the IMP literature. However, scholars in the wider organisation studies literature have explored the ways in which temporality, and the interplay of past-present-future, shapes organizational identity. For example, authors have shown how companies leverage stories from their past as a strategic resource into the future (Hatch & Schultz, 2017; Suddaby, Foster, & Trank, 2010); how stories about organizational founders, for instance, are recast to fit present or future organisation identity ambitions (Hatch & Schultz, 2013); and how organizations engage in situated ‘temporal translation’ to bridge these diverse temporalities (Hernes & Schultz, 2020).

In one such study, [Basque and Langley \(2018\)](#) explore the discourse of a cooperative bank in Montreal to categorize four different types of invocation of the founder over the history of the bank. They show how organizational identity is an active selective recasting of both the firm's history and its future. This finding is consistent with other examples from companies such as Lego ([Schultz & Hernes, 2013](#)), Proctor & Gamble ([MacLean, Harvey, Sillince, & Golant, 2018](#)) and Cadbury ([Rowlinson & Hassard, 1993](#)). In these cases, it is acknowledged that actors select from both the past and future in more or less deliberate ways in the construction of their identity. Hence, identity is explored not only as an integral part of organizing ([Foreman & Whetten, 2002](#)) but also as a strategic activity, which may play part of how companies position themselves in relation to other companies ([Ravasi, Tripsas, & Langley, 2020](#); [Schultz & Hernes, 2020](#); [Stanske, Rauch, & Canato, 2020](#)). This suggests that these temporal perspectives in organisation studies share the IMP view that organizational identity is an important aspect of how companies compare themselves to others and justify their existence (inside-out view). However, questions remain about a central theme of IMP inquiry when it comes to the temporality of identity formation: the dynamics of the firm's interactions with others (outside-in view). We, therefore, suggest that re-framing network relations through the lens of the meshwork ([Ingold, 2011](#)) allows us to connect the spatial IMP view with the temporal organizational view and advance a more nuanced understanding of how identity becomes as part of the 'fluid emergence' of business networks ([Halinen et al., 2012](#)).

2.2. Moving from network to meshwork thinking

Through our theoretical framing, we encourage an ontological shift away from understanding the 'substance of the network' ([Håkansson & Snehota, 1995](#)) to embrace processual approaches that eschew 'firm-centric theorizing' ([van Fenema & Keers, 2020](#)). On the network view, network actors are typically considered as unified entities, or pre-existing variables, that exist as nodes connecting flows of activity, or resource exchange processes, that pass from A to B, and through which change is transmitted ([Easton & Lundgren, 1991](#)). This 'network thinking' encourages us to focus on the relations between elements and how, by way of their connections, pairs of connected elements play an active role in shaping one another ([Ingold, 2011](#), p.70). Such an approach is apparent within spatial views of identity formation where an actor's identity is shaped by the firm itself and by other actors with whom it shares a network. However, the 'oversimplification' of network relations as represented through singular straight lines connecting nodes in the network ([Ingold, 2011](#), p.70) tends to overlook the 'indeterminate cosmos ...' and the 'ultimately incomprehensible, complex dynamic flux' of how organizational life—and network relations—actually happens ([Lowe & Rod, 2018](#), p.162). Therefore, in considering 'identity becoming' we move away from the two-dimensional spatial terms of the network and its connections ([Ingold, 2007](#), p. 75; [Baygi, Introna, & Hultin, 2021](#), p.429) to follow [Ingold \(2011, p. 63\)](#) in proposing that 'behind the conventional image of the network of interacting entities lies a meshwork of interwoven lines' along which life is lived (see also [Ingold, 2009](#)).

Ingold describes the meshwork as 'a web of life' (2011, p. 63) that is constituted in the 'entanglement of lines, not in the connecting of points' ([Ingold, 2007](#), p.81; [Deleuze & Guattari, 1998/2003](#)). In the meshwork, order emerges and underlying patterns—or organisation—become visible as bundles of lines become bound up with other lines. In turn, the coming together or 'knotting' of multiple lines create density and coherence in the meshwork that gives rise to what we may understand conceptually as the firm or organisation ([Czarniawska, 2018](#)). However, unlike nodes in a network, knots 'do not contain the lines along which life is lived' but are 'constituted by them' ([Ingold, 2007](#)). In other words, 'things are their relations' ([Ingold, 2011](#), p. 70 emphasis as original). This means that, as lines flow longitudinally through the meshwork ([Ingold, 2013](#), p. 101) they do not fuse together, but 'join in a confluence

and give rise to specific (trans)formative dynamics' ([Baygi et al., 2021](#)). Hence, the 'dynamic inter-relationships' ([Bizzi & Langley, 2012](#), p.225) of this indivisible meshwork of lines condition the possibilities for future action ([Hultin, Introna, & Mähring, 2020](#); [Introna, 2019](#)). The meshwork therefore sensitizes us to a temporal movement 'along flowing lines of action' to provide a more dynamic understanding of how firms and products evolve in relation to each other over time. This means that the firm, and the relations in which they are embedded—once described as stable unified entities—can be seen as 'living, diverse, pulsating, emergent systems' ([Lowe & Rod, 2018](#), p.163; see also [Baygi et al., 2021](#)).

It is important to note that the lines along which action unfolds are not surveyed and built-in advance, nor straight and regular, intersecting only at points or nodes of power ([Chia & Holt, 2009](#); [Ingold, 2007](#)). Rather, paths are made 'as we go' ([Ingold, 2000](#)), and thus organizations and firms continuously reach out into the unknown to face surprise, uncertainty, and unintended consequences ([Bouty, Gomez, & Chia, 2019](#); see also [MacKay & Chia, 2013](#)). This suggests that the question of 'who we are becoming' is 'continuously clarified through iterative action' rather than through a 'predetermined agenda' ([Chia & Holt, 2009](#), p.159). For example, [Mackay, Chia & Nair \(2021, p. 1352\)](#) show how strategy emerges immanently from a 'nurtured sensitivity to the local environment' as firms engage and respond to their circumstances in ways that seem obvious and common-sensical. This suggests that 'who we are becoming' is seen not so much an agentic doing—determined by the action of managers and how they connect to or are part of other entities ([Gadde & Håkansson, 2001](#))—but as a responsive attunement of the firms' movements to that of the wider environment ([Chia & Holt, 2009](#); [MacKay, Chia, & Nair, 2021](#)). In this sense, meshworking underscores process multiplicity to reveal the interwoven, parallel trails along which life, or in this case identity, could potentially unfold ([Bencherki & Trolle Elmholt, 2022](#); [Ingold, 2007](#); [Pentland et al., 2020](#)).

Herein, we trace the lines of becoming that interweave and tangle together to constitute the 'knot' that we bind conceptually as 'Sony' ([Guercini & Medlin, 2020](#)). Thus, we consider the firm to have no identity of its own that could exist—in its specific form—independently of the other (bundles of) lines that constitute the meshwork ([Ingold, 2011](#)). We continue by adopting the language of the meshwork and its corresponding lines of becoming to explore the becoming of Sony's identity as well as those who are both constituted by and constitute the wider meshwork.

3. Method

Our research question is explored through a longitudinal qualitative case study of Sony Corporation. Longitudinal case studies are common in process research (e.g. [Andersen & Medlin, 2016](#); [Halinen & Törnroos, 2005](#); [La Rocca, Moscatelli, Perna, & Snehota, 2016](#)) as they offer capacity to explore both change over time and multiplicity (see for example, [Bencherki & Trolle Elmholt, 2022](#); [La Rocca & Snehota, 2014](#)). A retrospective research design is used to view Sony's identity formation over a time span of multiple decades ([Bizzi & Langley, 2012](#); see also [Halinen, Törnroos, & Elo, 2013](#); [Knudson & Ruttan, 1989](#)), with primary date boundaries for our study being 1978 and 2008. The sheer size of Sony, as a large conglomerate across multiple industries, requires a further boundary choice. Thus, our study is primarily limited to Sony's music products. This is due to the central role that these products have played in Sony's identity construction since its 1958 re-brand from Tokyo Telecommunications Engineering Corporation to Sony, a word which is derived from the Latin word *Sonus* (sound) ([Morita, 1986](#)). The case study is presented not as a complete chronology of Sony, nor of events of the wider music industry, but a parsed representation of process, limited to the date boundaries. In selecting data sources, we take lead from [Ellis and Hopkinson \(2020\)](#) who include intermediaries such as local producers, as well as consumers as active participants in their

Table 1
Expert interviews, participants, dates and length.

Expert	Position/Expertise	Interview date	Length of interview (Hours: minutes:seconds)
Professor Karl Brandenburg	Creator of the mp3 file format, member of Secure Digital Media Initiative.	27th May 2013	1:00:41
Hank Barry	CEO, Napster (peer-to-peer music trading software).	9th July 2013	00:38:47
John Chowning	Creator of digital frequency modulation (FM) synthesis.	26th February 2015	1:01:42
Thomas Dolby	Grammy Award-winning synthesiser artist, founder of multiple multimedia companies.	26th February 2015	00:35:35
Julie Gordon	Copywriter for Apple's iMac and iPod campaigns, creator of "Rip. Mix. Burn." Headline.	2nd August 2015	00:59:26
Ken Hertz	Artist lawyer representing clients such as Alanis Morissette during this time. A member and attendee of the Secure Digital Music Initiative.	3rd August 2013	00:41:16
Andy Hill	IBM employee, and later founder of Multimedia Archive and Retrieval System (MARS).	12th August 2013	1:00:38
Jeff Levy	University student prosecuted for copyright infringement due to online file sharing by the U.S. government.	25th July 2015	1:03:25
Joanne and Tom Marino	Co-founders of online digital music news website www.webnoize.com , along with related yearly Webnoize conference.	9th July 2013	2:05:42
Phil Morle	CTO, Kazaa (peer-to-peer music trading software).	23rd August 2013	00:52:49
Jeff Patterson	Co-founder of the Internet Underground Music Archive (IUMA), recognised as one of the first websites to download music on the internet and top 10 website worldwide for traffic during the mid-1990s.	25th June 2013	1:24:02
Jon Potter	Founder of Digital Music Alliance (DiMA), a Washington-based political advocacy and lobbyist group for digital media entrepreneurs.	17th July 2013	00:59:04
Kelli Richards	A&R at various major labels, PatroNet co-founder (the music distribution and fan interaction software created by high-profile Todd Rundgren in the early 1990s).	9th July 2013	00:24:23
Jon Rubinstein	Vice president of engineering at Apple Computer. Recognised as critical to the creation of Apple products between 1997 and 2006, including the iMac, the iPod, and the iPhone. Leader of the initial iPod project, then subsequently head of iPod at Apple when it was established as a separate division in 2004. Left Apple in 2006, became CEO of Palm in 2008 until it was purchased by HP in 2010. Current board member of Amazon.com , Qualcomm.	9th July 2013	00:21:12
Cary Sherman	Current chairman and CEO of the Recording Industry Association of America (RIAA), previously President of RIAA 2001–2011.	17th July 2013	1:12:13
Zak Zalon	President Radio Free Virgin, Virgin Digital.	29th July 2013	00:27:03

description of supply chains. This means that our data includes Sony's own descriptions of their identity, as well as accounts of Sony from 'others' including press, competitors, and consumers.

3.1. Data collection and analysis

Data collection began with the construction of an event history narrative (see [La Rocca et al., 2016](#); [Poole, Van de Ven, Dooley, & Holmes, 2000](#)) covering the becoming of Sony's identity between 1978 and 2008. The first author collected 3454 articles organized by year using a range of publications including Billboard, Byte, specialist mp3 news websites including Wired.com, and MiniDisc.org. With the aim of providing a 'many-sided view' ([Halinen & Törnroos, 2005](#), p.1286), the initial focus of the event history narrative was to present a broad mapping of the music industry and of music technology events between 1978 and 2008. Consistent with other process studies (for example, [Andersen & Medlin, 2016](#)), this data was then triangulated with primary interviews to increase coverage and accuracy ([Pattison & Woodside, 2007](#)). Here, purposive expert sampling ([Miles, Huberman, & Saldana, 1994](#)) was employed to select and conduct 16 interviews with key protagonists cited in document sources (See [Table 1](#)). For each interview the specific document that referenced the protagonist was used for the initial questioning, before extending to wider questions about the achievement of innovation in the category of mp3 players. The combined result of these two stages of data collection is a 538-page event chronology that traces the evolution of mp3 technology over time.

A second stage of data collection involved a Sony specific *LexisNexis* database search of the period 1978–2008, resulting in the identification of a further 1221 newspaper articles that related to the development of Sony and digital music technology. The search query included "Sony" "Innovation", "Walkman" "Compact Disc" and "Sony portable music player". This stage also included analysis of Sony's annual reports

(available as a publicly traded company), and six reference books about Sony or written by employees who were central to Sony. These books included: 'Sony: The Quiet Life' ([Nathan, 1999](#)), 'Made in Japan' written by Sony founder Akio Morita ([Morita, 1986](#)), and 'Digital Dreams: The Work of the Sony Design Centre' ([Kunkel, 1999](#)). With both the wider event descriptions derived from interview data and newspaper articles, as well as Sony specific coverage from company reports and (auto)biographical texts, it was possible to map Sony as the focal bundle (of lines) in our study. We also draw on perspectives on Sony from others that in weaving their own line(s) contributed to the ongoing tangle of the meshwork ([Ingold, 2007](#)).

Following the two-stage temporal mapping of Sony's history—with a focus on first accurately describing events as sequence ([Abbott, 1990](#); [Halinen et al., 2013](#))—we then moved towards theory laden flow-mapping to help explain events ([Halinen et al., 2012](#)) through the lens of meshwork ([Ingold, 2011](#)). Our analysis was abductive ([Dubois & Gadde, 2002, 2014](#); see also [Aaboen, Dubois, & Lind, 2012](#)), guided by process ontology and methods ([Andersen et al., 2020](#); [Halinen et al., 2012](#); [Medlin, 2022](#); [Poole et al., 2000](#)), and that which would be classified as having a lens of instrumental use of theory ([Ojansivu, Medlin, Andersen, & Kim, 2022](#)). Rather than follow prescribed schematic steps, our abduction was iterative and immersed, with members of the research team moving between theory and case data simultaneously, meeting monthly as a team over 12 months to discuss and write lines of inquiry which emerged alongside our own researcher becoming ([Brown, 2021](#)) and would represent our 'clear development of thinking' ([Ojansivu et al., 2022](#), p. 54). This abductive process meant the research team 'lived in the data and theory' with the aim to reduce the large volume of data in stage one, to move beyond 'describing everything', as rich description ([Dubois & Gadde, 2014](#)), but instead to identify events as descriptions for both theory and the case.

The results of this analysis are presented as two vignettes or 'phases'

that describe the evolution of Sony's identity over time:

- 1978–1989 describes the evolution of Sony's identity through the creation of the Walkman and the purchase of CBS records.
- 1992–2008 describes Sony's changing identity through the creation of the MiniDisc and MS Walkman.

In contrast to temporal bracketing and its bounded time phases, the meshwork lens helps us to see events from the past as unfinalized, as they actively re-emerge from the past to press into and shape present events (Introna, 2019). By doing so, we analyze how faded pathways that might otherwise be relegated to the past—in terms of the creation of the Walkman—travel forward and press into the future, as lines extend and tangle forth in the meshwork (Ingold, 2011).

4. Findings: Exploring the multiplicity of Sony's identity

Sony emerged along a confluence of lines that included the coming together of its founders, Masaru Ibuka and Akio Morita in 1946 in Tokyo. From the outset, the founders expressed an identity for Sony as a place for technological exploration, with a 'philosophical statement' in their first ever prospectus:

"If it were possible to establish conditions where persons could become united with a form spirit of teamwork and exercise to their hearts' desire their technological capacity ... then such an organization could bring untold pleasure and untold benefits" (Morita, 1986, p. 82).

Following the introduction of Sony's first ever product—the electric rice cooker—and guided by intuition for what technology made possible, Sony's small team designed and released a range of electronic products for not-yet popular consumer uses. Early products such as transistor radios and stereo tape players gave Sony a foothold in the industry, but Sony did not emerge as a dominant player until it released the Sony Walkman in 1978. While the early years marked Sony as a consumer electronics company working across a range of product categories, the release of the Sony Walkman changed its trajectory.

4.1. Always lead, never follow (1978–1989)

The Walkman was a landmark achievement for Sony, selling over 50 million units over its life span. The Walkman emerged from the tangling together of technologies from Sony's previous designs, including components and system layout of a previous product, the TCM 600B personal dictation recorder. Hence, the technologies involved in making The Walkman *"were not new, but merely assembled in a new way"* (Sony Corporate History, 2007). The Walkman was, therefore, not seen as a technological achievement (Morita expressed that designing the headphones was the hardest component), but instead, was described by Sony as an achievement of intuition:

"I refer to my hunch that the portable stereo player, the Walkman, would be a successful and popular product despite a lot of skepticism within my own company. I was so certain of this that I said, 'If we don't sell one hundred thousand pieces by the end of this year, I will resign my chairman-ship of the company'." (Morita, 1986, p. 196–197).

Despite Morita's optimism, within the first month only 3000 Walkman units were sold and internally at Sony *"doubts about the product surfaced"* (Sony Corporate History, 2007). However, Morita continued to believe in the device, and 'have courage'. Soon demand began to materialize; Sony sold 550,000 Walkman units in 1980, increasing to over 1.5 million in 1981, and the personal cassette player became an important category across the consumer electronics industry. The Walkman had become Sony's great achievement of innovation; indeed Morita used the Walkman's success to reify the identity of Sony as a company orientated around innovation and spontaneous intuition: *"creativity... requires human thought, spontaneous intuition, and a lot of courage, and we had plenty of that in our early days, and still do"* (Morita, 1986, p. 83).

4.1.1. A succession of successes

Sony's internally expressed identity as 'always lead never follow' gave impetus and direction to launch the Walkman. This identity has been cast by Sony as the central tenet to Walkman's later success, even more so than the technology itself, which Sony has emphasized was unsophisticated and available to competitors:

"I do not believe that any amount of market research could have told us that the Sony Walkman would be successful, not to say a sensational hit that would spawn many imitators. And yet this small item has literally changed the music-listening habits of millions of people all around the world" (Morita, 1986, p. 82).

Establishing the Walkman as *'more than a fad'* (Pollack, 1981) strengthened Sony's position as a firm with whom many wanted to collaborate. The skepticism about Sony's chances of success shifted as they became a thought-leader and innovator within the field of portable music.

August 1982 saw the debut of the Compact Disc (Verna, 1994) and a joining together of Phillips and Sony through collaboration. Sony's knotting together with Phillips gave rise to an agreed upon CD technical standard (known as the Redbook Standard). Being able to develop a partnership—and avoid a battle of standards—was in itself a measure of Sony's established and recognised authority as an innovator. Sony was by now an important partner for the music industry making its own proprietary technology; and with the cassette and CD leading consumer technologies, the advancing tip of Sony's line(s) continued to tangle forth to join with music studios, where Sony's PCM digital recorders helped record labels re-master their previous analogue music catalogues in digital format for release on CD. This adjustment to its contextual conditions marked a change in the status of Sony; it was not only considered an important innovator revolutionising portable music, but was also beginning to initiate similar shifts in broader music industry. The speed at which the CD format was embraced by the industry created an 'avalanche' that was 'set to explode' in popularity (e.g. Verna, 1994) which quickly manifest, with the CD becoming the most profitable format in the recording industry's history (Knopper 2009). Invoking the past success of the Walkman, Sony quickly released a portable CD player, known as 'Discman' to once again revolutionise portable music with their new proprietary CD format.

4.1.2. Intensifying the knot of Sony

By the mid to late 1980s, Sony was continuing to pursue new innovations but were cautious not to repeat mistakes of their past, for example, losing the competition for market dominance with their 'Betamax' format due to relationships with content providers (see Cusumano, Mylonadis, & Rosenbloom, 1992). In 1987, Sony stunned the business press with the purchase of CBS records, at that time the world's biggest record label, for \$2 billion dollars (Richter & Knoedelseder Jr., 1987), and then in 1989 the purchase of Columbia Pictures for \$3.4 billion (Fabrikant 1989). However, the impetus to pursue these purchases reflected a conflux of events including the success of the CD and Redbook Standard, as well as the failure of Betamax. In turn, a belief arose that making Sony a content owner would moderate the influence of distributors and other studios offering Sony greater authority in the exploration of technology (Rose, 2003). The move was described as Sony's ultimate strategy to maximise the value of the technology they created (Sony Corporate History, 2007). The President and CEO of Sony, Norio Ohga, at the time of the CBS purchase reiterated the importance of controlling both software (music and movie content) and hardware as *'two wheels of the same cart'* (Boyer, 1988). Thus, Sony became both a consumer electronics company, as well as a major music label that owned a significant catalog of music. No other consumer electronics company had implemented this strategy, and once more, Sony could say they 'always lead and never follow'.

As Sony's identity shifted and expanded along the space of multiple possible paths, for example, buying CBS and partnering with Phillips, its lines moved sinuously in a more or less consistent direction (Ingold,

2015), occasionally fading from view, or joining with other lines to create new knots. Such movement along lines intensifies the knot of Sony to cohere Sony's identity as accomplished leader be that as a record label, a software company, or a consumer electronics company. However, 'two wheels one cart' indicated the beginning of an identity shift, and the following of an errant path that would move Sony in a different direction to 'always lead, never follow'. Here, the temporal flowing lines of the meshwork offered up new possibilities for action (Baygi et al., 2021) as the tightly bound density of lines knotted together to amplify Sony's 'always lead never follow' identity, and simultaneously forge new and different ways of going on (Ingold, 2015).

4.2. Anything but Sony (1992–2008)

Sony's 'always lead, never follow' identity moved beyond the discursive construction of Sony's leadership. The business press described the purchase of CBS as a sound investment that offered Sony a unique advantage (Richter & Knoedelseder Jr., 1987). Yet the acquisition of CBS records created tensions and immediate reservations in respect to how the two sides of Sony would engage each other.

"Yes, it is somewhat inconsistent ... on the other hand, since they have spent a lot of money on this company, they're not going to do something to screw it up. Because we are so close, maybe we can find a common solution. I can use them to talk to the hardware people and they can use me to talk to the software people." (Walter Yetnikoff CEO of CBS Records, Boyer, 1988).

At the time of the purchase, the threat of a new speculative technology in digital audio tape was worrying the music industry, and this technology's lead creator was Sony. Yet, Sony now faced a problem: they were both creating technology that made it easy for consumers to copy music with potential to undermine copyright, whilst also purchasing a record label for \$2 billion that owned a large catalog of music.

4.2.1. Reinventing the Walkman

Sony's 'common solution' was the MiniDisc as a bold attempt at inventing the 'future of tape' (Sony, 1994) by recasting the Walkman and enacting their 'always lead, never follow' strategy (see for example Nunziata, 1991; Nunziata, 1992a, 1992b). However, MiniDisc with its digital cassette style discs, followed the trajectory of the CD and Discman pursuing innovation through the development of new proprietary technologies, rather than the bricolage of the Walkman. In so doing, Sony created a product that in 1995 was described in the press as a 'failure' (Baker, 1995; Gillen, Christman, & Verna, 1994) and by 2001 was considered redundant (Condliffe, 2013). Despite its aspirations to 'always lead never follow', Sony had created a product that *'the world just wasn't interested in'* (Faulkner, 2012).

Prior to the release of the Minidisc, imitating Sony was a successful innovation strategy for competitors, with firms (or knots) such as AIWA, Toshiba, and Panasonic launching imitation cassette players soon after the launch of the Walkman. There were so many competing versions of the tiny cassette players bearing names such as the Walkie, the Solo, the Sportster, the Sportmate and the Hip Pocket Stereo that Hiro Kato, Vice President for Consumer Audio Marketing for the Sony Consumer Products Company 'stopped counting' (Pollack, 1981). This wave of imitators eventually revealed the strength of Sony's identity with competitors and rivals freely admitting to reporters their fondness for Sony products: *'if money is no object, go for Sony'* one suggested, and others suggested they were *'using a Sony when not promoting another brand at work'* (White, 1985). Sony's persisting influence as an innovator travelled further still, to shape the development of substitute products and accelerate the advancement of innovation within other firms, such as Apple:

'We always assumed that [Sony] were going to kick [Apple's] butt. And we had a tremendous sense of urgency, very fast pace which is why ... we came out with so many different versions and ... and just keep iterating on all of them, so it was really important' (Jon Rubenstein, VP Engineering, Apple Computer, interview 9th July 2013).

Sony's identity as leader and innovator was reified by the continual

invocation of its successes, as the Walkman, Discman, and the anticipation of what might follow, actively shaped the activities not just of Sony, but also of others.

4.2.2. Forging the conditions for others to thrive

At the time of the MiniDisc's release, the history of the Walkman and Sony's successes began to forge the conditions in which others could thrive, as competitors began to adopt Sony's historical innovation processes and create digital music players that assembled existing technologies in new ways. Now no longer imitating Sony in the development of proprietary technologies, competitors instead invoked Sony's past successes. In March 1998 Korean firm SeaHan launched the first portable digital music player calling their player the 'MPMan'. The MPMan not only paid an indirect tribute to Sony by referencing a Sony-shaped hole in the market, but they also challenged the identity of Sony as industry leader. SeaHan were not alone in their pursuit of rival players. Within a few months a range of similar portable music players emerged from a variety of companies, and the Diamond Rio dominated the early market (Sullivan, 1999). The recognition by others of Sony's innovation spurred on competitors' activities that would once again challenge the status of Sony by offering a swathe of alternative products.

Sony responded in 1999 by releasing their own portable digital music player, the MS Walkman. Again, invoking past success, the MS Walkman launch event was used to commemorate the original release of the Sony cassette Walkman, re-casting Sony's 'always lead, never follow' identity. However, the MS Walkman could only play Sony's new restrictive and proprietary format, ATRAC3, which was largely designed in conjunction with their own record label (Sony Music, previously CBS Records). Sony's contextual conditions placed it in pursuit of a technology *'designed to satisfy lawyers obsessed with protecting the copyrights of the record labels—including Sony's own label—at the expense of simplicity and convenience for consumers'* (Mossberg, 2000; Rose, 2003), leaving them with a device that was laborious to use and frustrating for users. As a reflection of their declining commitment to Sony products one user posted in an online review, *'STAY AWAY FROM THE SONY DEVICES, GET A RIO, GET AN IJAM, ANYTHING BUT SONY'* (Menta, 2000, emphasis in original).

While Sony had historically been able to set the direction for innovation, it was no longer viewed as the primary source of innovation by competitors and the competition for market dominance remained open two years later:

"...Sony that haven't had a hit yet. They haven't found the recipe. No one has found the recipe yet for digital music" (Steve Jobs, iPod launch keynote, Jobs, 2001).

In 2001, Apple entered the portable music player market releasing the iPod. It quickly established dominance within the new product category, and then slowly expanded the category to become larger than CDs by sales and volume, accomplishing what Sony had set out to do. By 2004, the iPod was being compared to Sony's previous success: *"the no-brainer description of the iPod is 'the Walkman of the 21st century'"* (Levy, 2004). With the emerging success of iPod, by 2004 Sony had abandoned their own proprietary format. Despite *'invent[ing] the whole consumer electronics marketplace'* and their *'staggering'* innovations (Jobs, 1999), Sony was no longer considered *'the place that made the coolest stuff'* (Jobs, 1995). While Sony continued being both a record label, a software company, and a consumer electronics company, their 'always lead, never follow' identity had been subsumed within the meshwork. Sony's adherence to proprietary technologies opened the way for other firms to follow the lines of their past successes and appropriate Sony's leader identity. As a result, the iPod emerged as market leader allowing Apple to fill a void in the market:

"We always thought that Sony was going to blow us out of the water, I mean it shocked me year after year after year that Sony didn't deliver something that blew us away. Because by all rights they should have" (Jon Rubenstein, VP Engineering, Apple Computer, interview 9th July 2013).

Apple's successful innovation resulted in Apple appropriating Sony's

trajectory, displacing the identity of Sony as innovator, as the intensity of its knot faded to become a laggard.

5. Discussion and concluding remarks

This article began with an ambition to explore how the temporal dynamics of identity orients actors towards different strategic pathways? To do so, we utilized the lens of the meshwork (Ingold, 2011) to explore the case of Sony and the technological development within consumer music technology. Our analysis shows how the temporal dynamics of identity in the case of Sony highlights a duality of ‘one and many’ (Bencherki & Trolle Elmholt, 2022; Pentland et al., 2020), which we theorise as ‘identity multiplicity’. Following Pentland et al. (2020) identity multiplicity can be understood as both one thing—a knot in Ingoldian terminology—and at the same time the many possible paths, or ‘lines’ along which identity unfolds. We show how when lines extend in what appears to be a consistent direction, they are never perfectly straight (Ingold, 2015). Hence, while there may be many potential (and sometimes contradictory) lines that a firm can move along—for example in terms of Sony’s identity (always lead never follow) and their strategy (develop proprietary technologies)—these lines are ultimately cohered through ‘who they are becoming’ amid the dynamic inter-relations of the wider meshwork. In this sense, we propose that identity multiplicity is not a case of being endless or multiple identities, but of becoming ‘more than one and less than many’ (Mol, 2002, p. 82). Paraphrasing Mol, this means that the multiple possible lines along which a firm’s identity might unfold are not fragmented but instead remain connected, and hang together, ‘drawing together and establishing difference at the same time’ (Mol, 2002, p. 83 emphasis as original). This is particularly evident as Sony negotiates their becoming ‘two wheels of the same cart’ an identity that both clashes and coheres, as conflicting interests of the technological innovator and music company are unified in Sony’s becoming. Identity multiplicity therefore suggests that a firm’s actualised identity can be seen as only one of many possible paths the firm could follow. Hence, the emergence of identity involves negotiating a tension between the ‘one’ path that is actualised, and the ‘many’ possible paths that identity could develop along (Pentland et al., 2020).

We suggest that identity multiplicity helps us to not only understand how firms negotiate their own becoming, but also allows us to address the question of how the becoming of identity constitutes the conditions of possibility for action in the wider meshwork (Baygi et al., 2021) and thus orients actors towards specific ways of going on. We show in ‘Always lead never follow’ how Sony clarifies and reifies its identity through iterative action and adjustment rather than through predetermined, or carefully crafted plans (Chia & Holt, 2009; MacKay et al., 2021), for example as Morita’s commitment to spontaneous intuition, rather than market research pays off with the Walkman and its successors. However, we also show in ‘Anything but Sony’ how Sony continuously forges ‘the conditions for their own and other’ firms’ becoming (Ingold, 2007, p.3). This is because Sony exemplifies how, through a process of meshworking, a firm’s identity both shapes and is shaped by the heterogeneous contextual conditions in which it finds itself. For example, as differential lines of becoming knot together (see Fig. 1, page 25), the clashing interests of Sony’s proprietary formats and the availability of other already existing technologies, tangles together with the successive innovations of the Walkman and Discman to cohere others in the meshwork to move and act in specific ways. Thus, we see how Sony’s identity of ‘always lead never follow’ accelerates the innovative practices of competitors such as SeaHan and Apple, shaping the ever-extending tangle of the meshwork and treading the ground to open possible directions of travel that others can join with (Chia & Holt, 2009). Therefore, the evolution of SeaHan’s Mp3Man can be explained as emerging from the ground that Sony lays, as Sony ‘finds its way’ (Chia & Holt, 2009) by doing what seems practically possible in response to the conditions it finds itself in (Hultin et al., 2020; MacKay et al., 2021). This suggests that Sony’s becoming

partially gives rise to SeaHan, which only exists in its present form as an entanglement and knotting together of the differential lines of technologies, individuals, firms, and influences including Sony that constitute the meshwork. Hence, the identity of a firm can be said to be shaped in ways that go beyond discursive framing of managers talk (Ellis & Ybema, 2010) to incorporate the temporal dynamics of human and more-than-human actors (e.g. the technology), which may evolve in unanticipated ways (Lowe & Rod, 2018). We, therefore, argue that identity trails beyond the traditional confines of the bounded network actor to not only shape the becoming of the origin firm (Sony) but also the becoming of other firms, that both constitute and are constituted by the meshwork.

Our analysis, and illustration of meshworking (Fig. 1) shows how the firm is always a bundle of many lines of becoming that knot together in the flow of time to bring coherence to the wider meshwork (Czarniawska, 2018; Ingold, 2007). We show how this becoming of identity and its multiplicity—as historical dense narratives press into the present (Basque & Langley, 2018)—holds the potential to shape the emergence of a firm’s strategic orientation (MacKay et al., 2021), while simultaneously laying the ground for others to emerge in specific ways. In the case of Sony, identity multiplicity can therefore explain how Apple was able to appropriate Sony’s identity as leader and innovator through its entanglement with a specific and historically contingent line of Sony’s becoming. We propose that several contributions to both theory and practice emanate from this analysis.

5.1. Theoretical contributions

First, we introduce an alternative, temporal framing of network interactions via the meshwork (Ingold, 2011) that cross-fertilizes perspectives in organisation studies on temporal dynamics of identity formation with the spatial or network dynamics that are central to the IMP literature. A traditional IMP reading of network interactions might consider the success of Sony’s innovation as defining Sony’s position in the network, as Sony becomes increasingly attractive as an exchange partner (Gadde & Håkansson, 2001), while managers as ‘boundary bricoleurs’ discursively marked the boundaries between Sony and others in the network (Ellis & Ybema, 2010; see also Ellis, 2016). This suggests that managers exert at least some control over their identity development, while remaining under the influence of others (Gadde & Håkansson, 2001; Huemer, 2013). Shifting the emphasis from the spatial relations of the network to the temporal relations of the meshwork, on the other hand, presents an alternative description where the boundaries between actors are less easily determined (Guercini & Medlin, 2020).

Instead of focusing on how established actors are connected in a network, the meshwork—as a boundless and ever extending tangle and knotting of lines of becoming (Ingold, 2011)—decenters the focal actor as causal agent to foreground an inherent multiplicity in identity (re) formation (Ingold, 2000; Mol, 2002; Pentland et al., 2020). A decentering of the focal agent means that we can move away from entitive views of identity and strategy as mutually influencing or constraining one another, or as separate answers to the questions of ‘who we are’ and ‘what we do’. Instead, identity and strategy become things that organizations ‘do’. In other words, identity and strategy can be understood as inherently entangled processes of becoming where ‘what we do’ is ‘who we are becoming’ (Langley et al., 2020; Sandberg & Tsoukas, 2011). Taking a meshwork approach therefore builds on a becoming orientation in the IMP literature (Laari-Salmela et al., 2019; see also Lowe & Rod, 2018; van Fenema & Keers, 2020) to show identity as contingent on the ongoing entanglement of action that might otherwise be seen as going on inside, outside and among formal organizations (Czarniawska, 2018). In other words, the meshwork extends the identities-in-networks view to present a means of understanding identity as a process that flows beyond the bounded rational actor and gives ways to an ongoing and emergent becoming.

Second, our study adds empirical credence to recent work on process

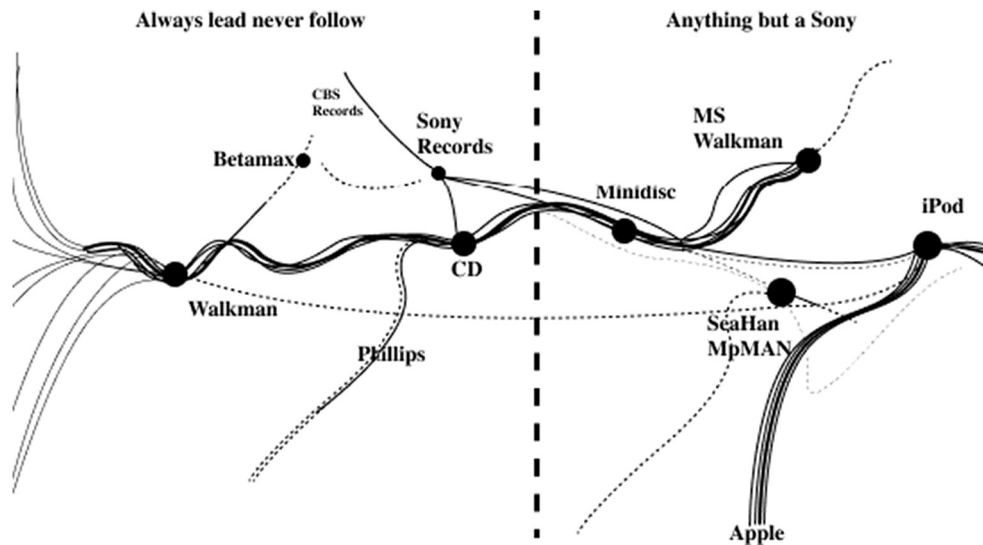


Fig. 1. The entanglement of Sony's identity through the meshwork.

studies within IMP literature that has proposed exploring new frontiers and alternative metaphors (Guercini & Medlin, 2020) for understanding identity as in continuous flux (Lowe & Rod, 2018). Through the case of Sony, we provide empirical support to processual perspectives on how identity happens. Finally, by generating an account of how identity happens through the conceptual framing of the meshwork we respond to recent calls to extend the work of Ingold within the context of management (Baygi et al., 2021). In turn, we offer identity multiplicity as a way to diverge from IMP's 'unconscious adherence' to substance metaphysics (Lowe & Rod, 2018, p.158) and move towards a processual understanding of identity and networks in simultaneous becoming, as a process of meshworking. Such meshwork thinking may be useful in future studies to support the development of temporal accounts of the dynamic inter-relations and emergence of phenomena that might otherwise be seen as happening between actors, resources and activities. There also remains potential to further explore the temporal interplay between identity and strategy, and to advance understanding of the role of materiality, such as technology in the process of meshworking.

5.2. Managerial implications

Our study also has practical implications. First, business reinvention in response to competition or disruptive threat are common managerial concerns. For disruption, both the locus of threat, as well as response is commonly perceived as technological. However, based on our study, we identify that historical firm identity can be both an enabler or disabler of certain future firm strategies, and which might override the performance of a given technological choice or pathway. Thus, managers should view available strategic pathways not as unbounded responses to new technological opportunities, but instead perceive historical identity, both of the firm as well as others, as active determinants of future performance. This places value, for the firm and competitors alike, on learning and attunement to the contextual conditions and historically contingent nature of possible pathways that emerge in the doing of strategy. In the words of Chia and Holt (2009) this might involve 'listening with receptive ears' to their surroundings and engaging with an 'ambulatory way of knowing' (see also, Ingold, 2011). For example, where it is common for organizations to research new technologies, we suggest that paying attention to the history of those competitors it calls aspirational has the potential to open up new directions and create strategic advantage. Much like Apple's awareness of and appreciation for Sony's history, this attentiveness offers firms the potential to feel their way towards new pathways or deviations that emerge in the meshwork

that might be missed by incumbents themselves.

Further, for managers attempting innovation, our study reveals the use of historical identity as an active wayfinding tool through the ambiguous terrain of creating new products. In the case of Sony, their own historical evidence of success from their 'always lead never follow' identity, led them to adopt this identity for product design decisions for the mp3 player. Our study highlights this was an important source of their failure in the case of mp3, where innovation was achieved by Apple with less resources, and less proprietary ideas than Sony.

Declaration of Competing Interest

None.

Data availability

Data will be made available on request.

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