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The role of frames and cultural toolkits in establishing new connections for social media innovation

ABSTRACT

It has been suggested that social media foster innovative outcomes by facilitating communication with a vast network of new connections. In this paper we argue that forming new social connections on social media is a crucial first step in the innovation process that is not straightforward to achieve. We report on the findings of a qualitative study of 31 owner-managers in the UK who were attempting to make new connections in order to inspire innovation in their firms. The findings suggest that a lack of available social cues on social media creates a sense of uncertainty that can stifle the innovation process. In our case, the respondents addressed these difficulties by using frames as proxies for missing social stimuli. We argue that such framings guide the selection of well-established cultural tools needed to turn mental maps into action. A key implication of our findings is that social media is not necessarily an equitable space for innovation since the process still relies upon established networks and styles of behaviour, which are not readily accessible to all.

KEYWORDS: Social media; innovation; new connections; frames; cultural toolkits.

INTRODUCTION

35

36 The higher the number of social contacts an individual maintains, the more
37 likely she is to generate new ideas (Bjork & Magnusson, 2009) by discovering,
38 combining and expanding upon new information. This is one way that social
39 media promises to bolster innovation. Social media facilitate the expansion of
40 an individual's social network to a previously unimaginable scale (Kane et al.,
41 2014). By extension, individuals who enlarge their social networks using social
42 media are exposed to new ideas and information that were previously
43 inaccessible (Treem & Leonardi, 2012; Leonardi, 2014). To make the most of
44 their social media accounts individuals attempt to expand their networks to
45 include as many new connections as possible (Kane et al., 2014). As people
46 associate with other social media users they can find themselves engaging with
47 different viewpoints, experiences and expertise (Kane et al., 2014). When these
48 new connections bring together previously separate information resources
49 opportunities for the discovery, recombination and expansion of ideas are
50 believed to increase significantly (Mount & Martinez, 2014; Dahlander &
51 Piezunka, 2014).

52

53 There are several recent anecdotal illustrations showing how new connections
54 on social media can fuel innovation. For example, Dr Jeffrey Davis, Head of the
55 Human Health and Performance Directorate for NASA realized in the face of
56 budget cuts that he would need to access ideas and information beyond what
57 was available internally (Knowledge@Wharton, 2013). He used several online
58 platforms to make new connections, which provided many unexpected and
59 helpful insights. Individuals from diverse backgrounds suggested innovative
60 ideas that were taken up by NASA, such as the use of flexible graphite as a
61 solution for preserving food and a new algorithm for predicting solar flares.
62 Illustrations such as these highlight the fundamental role that new connections
63 play in providing novel information that fuels the innovation process.

64

65 Recent studies have suggested that social media can play an increasingly
66 prominent role in such open innovation efforts of firms (Mount & Martinez, 2014;
67 West & Bogers, 2013). Here, the term open innovation refers to the opening up
68 of the innovation process to include ideas that are generated externally (West

69 & Bogers, 2013). Social media have dramatically improved the ability of firms
70 to seek external suggestions, ideas and opinions by forging new connections
71 (Mount & Martinez, 2014; Dahlander & Piezunka, 2014; Leonardi, 2014). The
72 material features of the platforms enable a markedly different way of
73 communicating (Treem & Leonardi, 2012; Leonardi, 2014) leading to claims of
74 a new wave of open innovation for firms (Mount & Martinez, 2014). Interaction
75 with a diverse array of external connections can provide quick, cheap access
76 to a rich source of ideas, expertise and opinions (Mount & Martinez, 2014;
77 Leonardi, 2014). For this reason social media platforms have been thought to
78 provide significant advantages in situations where resources to innovate can
79 be scarce, such as in small and medium sized firms (Harris et al., 2012). We
80 use the term social media innovation hereafter to refer to novel improvements
81 in products or processes that originate from social media connections.

82
83 We argue that social media innovation is not straightforward to achieve.
84 Dahlander and Piezunka (2014) suggest that studies of open innovation often
85 underplay or overlook the challenges of engaging with external connections.
86 The features of social media platforms can complicate the establishment of new
87 connections (Richey et al., 2016). The vast scale of interactions taking place
88 on social media require users to frequently scan the environment in order to
89 make sense of the volume of information being produced (Leonardi, 2014).
90 Further, because new acquaintances are not physically co-present during
91 social media encounters individuals can become uncertain about how to
92 communicate effectively (Richey et al., 2016). Social media communication
93 strips away traditionally available social cues (Richey *et al.*, 2016; French &
94 Read, 2013) making it more challenging to establish mutual understanding.
95 Where a rich array of social cues are available, they support the construction
96 of new relationships and effective communication (Rettie, 2009; Goffman,
97 1959). The innovation process relies on interaction and communication at every
98 stage (Mount & Martinez, 2014), but there has been little focus on the important
99 preliminary step of establishing new social connections for initiating social
100 media innovation. Although social media appear to offer unlimited access to
101 new connections there is currently scant understanding about how these
102 relationships are initiated and developed.

Figure 1: Overview of the social media innovation process

We use Figure 1 to locate the focus of our study in the social media innovation process. This paper focuses specifically on the first box in the figure, which refers to the potential of social media for initiating new social connections that can provide access to novel information and ideas. This paper shows how individuals attempting to make new social media connections are challenged by the lack of available social cues and how they use frames (Goffman, 1974) and cultural tools (Swidler, 1986) to establish a foundation for social media innovation. We present findings from a qualitative study of 31 UK-based owner-managers, who were attempting to access novel insights by extending their social media networks. We offer two major contributions based on our analysis of their accounts. First, we elaborate upon how individuals respond to the uncertainty associated with making new social media connections by experimenting with different frames (Goffman, 1974) which serve as a proxy for conventional social cues. In doing this we contribute to the innovation literature by unpacking the micro-processes that underpin the fundamental step of initiating new social connections on social media. Second, we show that although the innovation process is traditionally associated with new ways of thinking and acting, individuals are better able to navigate the early stages of social media innovation if they draw upon an already existing cultural toolkit (Swidler, 1986) of well-established competencies. We develop these

arguments by drawing on the sociological foundations of new relationships (Goffman, 1959; Swidler, 1986).

LITERATURE REVIEW

Face-to-face relationships and the availability of cues.

For cooperation and intelligible communication to occur between new acquaintances there must first be some level of shared understanding (Goffman, 1981). Co-communicants begin to establish communal understandings in the earliest moments of interaction by making use of commonly understood social cues (Goffman, 1959, 1981). Social cues can include that which is subjectively described, such as tone of voice (Goffman, 1959), gesture (Cornelissen et al., 2014), common stories (Beech et al., 2009) and humour (Robert & Wilbanks, 2012); and that which is objectively described such as architectural lay out, logos, artwork and dress code (Schein, 1991). These cues work together to communicate an unambiguous and consistent meaning to those involved in an encounter (Goffman, 1959). In face-to-face settings social cues are clearly accessible to everyone involved as all share the same space and time. This enables them to “share a joint focus of attention, perceive that they do so, and perceive this perceiving” (Goffman, 1983: 3). As individuals draw on available cues they are able to frame (Goffman, 1974; Werner & Cornelissen, 2014) their situation in specific ways. Frames (Goffman, 1974) are the schemata of interpretation that guide an individual’s thinking and action in relation to a phenomenon. Individuals may frame the same situation differently depending on their various social realities and mental models (Leonardi, 2011). For example, within the same firm, some people may frame social media as a threat whilst others frame it as an opportunity (Koch et al., 2013).

Social media relationships and interactions

The electronically mediated nature of social media platforms creates a markedly different context for establishing new social connections. Social media users do not necessarily share the same space or time making their communications largely asynchronous (Walther, 2007). Communication is achieved via social media posts composed of textual and multimedia content (Kaplan & Haenlein, 2010). Posts make otherwise fleeting communications visible (Leonardi, 2014), not only to those interacting, but to third parties as well (Kane et al., 2014; Treem & Leonardi, 2012). Furthermore, social media also capture information that was previously invisible, such as an individual's network of contacts (Kane et al., 2014) and his/her knowledge and expertise (Leonardi, 2014). As social media users communicating with posts are not in each other's physical presence some of the subtleties of face-to-face communication can be lost (French & Read, 2013). Where social cues are unavailable to support communication, miscommunications and mistakes can occur (Richey et al., 2016) challenging understanding and damaging relationships.

Another fundamental social shift with social media has been its facilitation of many-to-many communications (Kaplan & Haenlein, 2010). Instead of sharing a single focus of attention, as is the norm during face-to-face interaction (Goffman, 1983), users are part of an on-going knowledge conversation in which there are potentially unlimited contributors and posts (Kane *et al.* 2014). Under these circumstances the established roles of seeing, listening and speaking are significantly challenged. Users looking for insights and ideas in such a "conversation" are required to be logged in to their accounts frequently, to keep up with new developments (Leonardi, 2014). Social media platform developers have offered technological solutions to the human difficulties of participating on this massive scale. For example, social media aggregators scan platforms for the use of keywords and alert users if there is a conversation that they need to check. Although these technical tools notify individuals that specific keywords are being used, they do not always assist users to make new connections on social media (Kane et al., 2014; Michelidou et al., 2011). There still remains the more fundamental problem of making new connections in the absence of conventional social cues.

Frames and cultural toolkits

In line with the preceding review, social media can be understood as a dramatically different context for making new connections and sharing novel information. The paucity of social cues and demands of many-to-many communication present significant challenges for those trying to initiate any form of innovation through social media. According to sociologist Ann Swidler (1986), encounters with an unfamiliar situation prompts individuals to assess how well equipped they are to cope with the new context, understand the communications of others, and to be understood (Swidler, 1986). This process begins as the uncertainty related to a new situation stimulates the selection of a frame (Goffman, 1974; Ravishankar, 2015). Frames provide a mechanism for interpreting an unfamiliar context (in this case, social media) but must be accompanied by action if it has to lead to innovation.

Swidler (1986) introduces the metaphor of a cultural 'toolkit' to illuminate the types of resources that are brought into play following framings. The toolkit is comprised of the skills, habits and styles, available at a broader societal level, but practiced and brought to bear at an individual level, as people interact and address challenges. Cultural tools are conceptualized as existing separately but are drawn together in different assemblages for use in a wide variety of situations (Swidler, 1986). Indeed, one cultural tool may be reused in a number of different circumstances, while another may be left mostly dormant. Taken together, frames and tools comprise the strategies of action used to deal with uncertain circumstances. Thus, the cultural toolkit framework (Swidler, 1986) provides a useful vocabulary to explore the extent to which the challenges of new social situations in general and social media connections in particular may be addressed by a conscious and purposeful drawing together of knowledge, habits, skills, styles and other culturally constituted capacities. The framework underscores the agency of individuals proactively combining and recombining their competencies in order to cope with new situations.

Implications for innovation

226

227 Innovation scholars have suggested that well-established and intimate social
228 settings characterized by effective social norms (Coleman, 1988, 1990) support
229 the innovation process by enabling the value of novel information to be
230 recognized and realized (Rost, 2011). At the same time, individuals also find
231 utility in looking beyond their close relationships, to their less well known
232 acquaintances and new connections for novel information (Dahlander &
233 Piezunka, 2014). Social media offers users the opportunity to traverse vast
234 networks of new connections (Kane et al., 2014) developing their meta-
235 knowledge (Leonardi, 2014) about what others are interested in, who they know
236 and what they know. This information can be observed at an individual level, or
237 can be aggregated together, providing an overview of the mood of a population
238 (Cogburn & Espinoza-Vasquez, 2011) or the preferences of a group of
239 consumers (Mount & Martinez, 2014).

240

241 However, as noted earlier social media offers a comparatively sparse context
242 for the establishment of new connections due to the paucity of available social
243 cues (Richey et al., 2016). When individuals use social media to make new
244 connections within established boundaries (i.e. within the same organization)
245 they are able to fill in some of the perceptual gaps associated with social media
246 by using other shared referents as heuristic guides (Treem & Leonardi, 2012;
247 Huang et al., 2013). This enables them to maintain a sense of social context
248 that aids information sharing (Huang et al., 2013). On the other hand, when
249 users are attempting to communicate and share ideas with an entirely new
250 contact there are often no shared referents available. The social media and
251 innovation literatures tend to overlook or underplay these challenges
252 (Dahlander & Piezunka, 2014; Richey et al., 2016) resulting in a scant
253 understanding of how the new connections supporting social media innovation
254 are achieved. In the next empirical sections of the paper, we describe and
255 analyse how individuals use specific frames (Goffman, 1974) and cultural tools
256 (Swidler, 1986) to overcome the challenges of establishing new connections for
257 social media innovation.

258

METHODS

Our aim was to gather new insights into how individuals were using social media to establish new connections with an ultimate aim to foster innovation. Our methodology was underpinned by an interpretivist philosophy (Walsham, 1993; Mayasandra et al., 2006) in which human action and interaction constitutes social realities (Ravishankar, 2013). In line with this view, we employed qualitative methods that enabled us to gather data about the lived experiences of individuals (Ravishankar et al., 2010) attempting to initiate social media innovation.

We gathered data from the membership of two UK based, government affiliated support agencies that were providing social media seminars. We assumed that the membership of these support agencies represented a 'purposive sample' (Padgett, 1998) that would be experiencing varying degrees of success on social media, and would have been exposed to similar opportunities and resources by virtue of their membership. We contacted the local offices of both agencies, offering consultancy services in exchange for participation in the study. A formal note detailing the offer was circulated by email among local members of both organizations. The firms that took part in the interviews were representative of the variety of industries that made up the wider membership of the support agencies (see Table 1).

Organizational Identifier	Industry Sector	Number of Employees	Number of Interviewees
Org 1	Charity	10	1
Org 2	Charity	10	1
Org 3	Fashion	3	2
Org 4	Fashion	2	1
Org 5	Food and Drink	10	1
Org 6	Food and Drink	3	1
Org 7	Commodity e-Retailer	3	1
Org 8	Design Consultancy	3	2
Org 9	Internet Security	10	1
Org 10	Media Production	9	1
Org 11	Public Relations	2	1
Org 12	Arts and Crafts	5	2

Org 13	Corporate Finance	3	1
Org 14	Charity	6	3
Org 15	Chemical Engineering	3	1
Org 16	Domestic Installations	3	1
Org 17	Electrical Engineering	4	2
Org 18	Engineering	2	2
Org 19	Engineering	3	1
Org 20	Engineering	8	1
Org 21	Film Production	5	2
Org 22	Food and Drink	9	1
Org 23	Food and Drink	5	2
Org 24	Health and Beauty	10	1
Org 25	Health and Fitness	7	1
Org 26	Accountancy	9	2
Org 27	Performing Arts	2	2
Org 28	Property Management	7	1
Org 29	Research and Development	3	1
Org 30	Telecomms	10	1
Org 31	Telecomms	8	2

Table 1: Participating organizations

All the respondents were using the four most popular, free, publically available social media platforms; Facebook, Twitter, LinkedIn and YouTube. They were using social media in order to make new connections, which they hoped would lead to some form of innovation. The main source of data was open-ended interviews. The interviews included questions about how and why the firms were using social media to accomplish innovation. Table 2 is an illustration of some of the innovative outcomes expected by the respondents.

Organizational identifier	Industry	Illustrative quote	Innovation expectations
Org 21	Film production	"We are constantly looking for ideas that will spark a new project. That impetus can come from anything, so seeing what people are sharing on social media is very useful"	Idea generation
Org 28	Property Management	"I look at what other managers are doing on social media and	Recombinant innovation

		sometimes I'll hash those things together."	
Org 12	Arts & Crafts	"I love the idea of a mash-up, taking ideas from really different places to create new designs. Social media is literally global so those sources of inspiration can be so different!"	Recombinant innovation
Org 30	Telecomms	"I enjoy getting in to it with other techie types about how to make stuff better. I hope that one day something innovative will come of it!"	Innovative collaborations
Org 6	Food & Drink	"I've developed a great social media community that adds so much value to my business. Always someone with a new idea or perspective."	Idea generation

Table 2: Examples of anticipated social media innovation outcomes

The main group of respondents were the owner-managers, but other employees involved in social media implementation were also interviewed where available. The interviews lasted between 30 and 90 minutes. They were recorded and transcribed with the permission of the respondents.

The data was analysed (around 500 pages of interview transcripts) in multiple rounds of coding, summarized in Table 3. Initially, each interview transcript was read and summarized in order to establish the key themes underpinning them. The respondents shared accounts about (a) how they developed an understanding of social media use and (b) how they engaged in new interactions on social media. The data was organized according to these two meta-themes and a first round of coding was undertaken in which each coding

unit was a complete sentence or series of complete sentences that constituted a single semantic unit. During the first round of coding, interpretive codes were assigned to the data. Once this process was complete any codes that reflected the same idea were combined until a stable set of interpretive codes had been established.

The respondents shared many examples about how communication on social media was distinctly different from their face-to-face encounters with new acquaintances. They found it difficult to establish a dialogue on social media because the people they directed their posts to did not always respond immediately, or at all (*conversation*). They felt that this was in part because they were not in the physical presence of those they were contacting,

Interpretive codes	Abstract categories	Associated theoretical concepts
Communicating <ul style="list-style-type: none"> <i>Conversation</i> <i>Seeing</i> <i>Listening</i> <i>Relationships</i> 	CHALLENGES CREATING UNCERTAINTY	The nature of social encounters (Goffman, 1959, 1979)
Sense-making tools <ul style="list-style-type: none"> <i>Metaphors</i> <i>Ideas and beliefs</i> 		
Practical tools <ul style="list-style-type: none"> <i>Observation and imitation</i> <i>Leverage connections</i> <i>Social feedback</i> 	ADDRESSING CHALLENGES	Cultural toolkits (Swidler, 1986)

Table 3: Summary of the coding process

therefore eye contact and a shared focus of attention could not be established (*seeing*). They found that it was normal on social media for users to split their attention and dip in and out of different conversations. Thus, they never felt that they had anyone's full attention. They also found it difficult to keep up with and

be part of the larger conversations going on, because of the scale involved (*listening*). They found that during the fleeting interactions they were part of it was difficult to build a sense of rapport or trust in the same way that they might do during a face-to-face meeting (*relationships*).

Since their usual means of communicating was less effective the respondents were uncertain about how to make new connections on social media. In the wake of this uncertainty they framed social media using a range of *metaphors*, *ideas* and *beliefs* that enabled them to understand, approach and come to terms with it. In turning the frames into action the respondents drew on combinations of *practical tools*. These included *observation and imitation* of other social media users' behaviour, *leveraging connections* they had with larger organisations and collecting informal *social feedback* regarding the posts they were making.

In the analysis that follows, we draw upon Goffman's work on frames and the nature of social encounters (1959, 1979) and Swidler's (1986) cultural toolkit framework to interpret respondents' accounts. Using Goffman's vocabulary we highlight how the respondents became uncertain during their social media use. Their uncertainty prompted them to draw upon three different social media frames (Goffman, 1983) which are considered in detail in the analysis section. We use Swidler's (1986) cultural toolkit framework to show how respondents turned frames into strategies of action using a variety of cultural tools. The theoretical and practical implications of this pattern of behaviour are expounded in the discussion section.

ANALYSIS

All the respondents were interested in using social media platforms to foster innovation. They were particularly keen to initiate conversations that could lead to the discovery, recombination and expansion of new ideas. They hoped that social media would start the process by providing a simple, unobtrusive means of connecting with new people.

Social media should be a more natural way of linking to new people, less forced than Googling somebody and trying to make a completely unsolicited approach. It facilitates new conversations. It's then about applying that, furthering it and making good, hopefully generating some opportunities on both sides. (Owner manager, design agency, Org 8).

The respondents expected social media to 'facilitate' the type of interactions they typically expected when meeting a new person. Those initial, 'getting to know' you conversations could then potentially be taken further and become a catalyst for innovation. The respondents had all initially been convinced that social media connections could develop in this way. As a result they hoped to increase their social media connections to include as many new people as possible.

However, as they began using social media to reach out and initiate contact they ran into significant difficulties. Many of these related to the perceptual gaps created by social media. Not being in the physical presence of other social media users, it was difficult to understand who they were communicating with. They struggled to know what level they should pitch their conversation at, what the other person was interested in and whether it was relevant to have a conversation at all. They tried a number of different tactics, such as initiating interest groups and responding to hash tags on popular subjects. Still, most of them were unable to initiate conversations that could lead to some form of innovation. When they reflected upon their experiences, they felt that in comparison to building relationships in face-to-face settings social media exchanges did not include enough social cues to enable them to develop a sense of who they were communicating with.

If you're not out there on social media you are potentially missing out on new opportunities, but I think there are other stronger ways of networking and building relationships. We have to build close personal relationships with new partners; they trust us implicitly. They want us to think like one of them. Do social media allow that depth of interaction? It seems to me that it's very difficult to have a genuine interaction on there when you

393 *can't get a sense of who you're dealing with. (Founder, research and*
394 *development firm, Org 29)*

395

396 Respondents referred to the absence of the other party as a major barrier,
397 particularly when a relationship was first initiated on a social media platform.
398 They talked about feeling less able to use their intuition about their new
399 connections if they couldn't see and interact with them in person. Many
400 respondents were frustrated that social media inhibited their ability to interact
401 as they would in a normal face-to-face setting. They felt that this problem limited
402 the opportunities for finding new innovation partners on social media.

403

404 *We haven't had much of a response so far and we want to talk about*
405 *what the rules of engagement are – how do you start a conversation on*
406 *social media? How do you get people interested? How do they notice*
407 *you? It's a different ball game and one that I can't seem to figure out.*
408 *(Owner Manager, charity, Org 14)*

409

410 Their perception that there were different 'rules of engagement' that they did
411 not grasp created a sense of uncertainty about how and why to use social
412 media. They were uncertain about how to replicate in a social media setting the
413 social conventions they normally followed. In managing this uncertainty
414 respondents drew on three different, but easily accessible frames of reference.

415

416 *Framing social media*

417

418 The respondents framed their efforts on social media in three ways by using
419 metaphors that acted as their interpretive schemata. These three initial
420 framings guided their subsequent strategies of action, influencing the types of
421 tools they used and the kinds of people they asked for help. Interestingly, the
422 frames they used were not fixed; they evolved with the accumulation of
423 additional experiences and incorporation of others' opinions.

424

425 In the first frame, social media was perceived by some respondents as a
426 *competitive game*. Those employing this frame used competitive language and

frequently compared their performance in establishing connections to their competitors.

I have a barometer of how well I'm doing on social media because I look at another business that's like mine. The owner has an advantage on me in terms of his staff and his location. But I'm absolutely wiping the floor with him as far as likes and followers are concerned. I get to see what he's doing and he gets to see what I'm doing and I'm way ahead of him. It's down to the effort I put in to social media. (Founder, food and drinks brand, Org 5)

The framing of social media as a competitive game led respondents to pay attention to the features of the platforms that reflected this metaphor (the numbers of followers and likes) and to focus on the quantity of new connections rather than the quality of their interactions. They talked about actively pitting themselves against those they saw as competitors. They indicated that competition required intensive effort, including work on social media out of office hours. They were focused on trying to accumulate the most followers, trying to be the first to comment on topical conversations in their industries and trying to create content that others would like and share. They hoped that such proactive efforts would create an impression that they were at the forefront of their industries and that this would attract the attention of potential collaborators. Their intensive efforts to compete and stay ahead of others on social media can be seen as a proactive approach to establishing new connections and fostering innovation, in which creating an impression of leading the pack is anticipated to lead to innovative opportunities.

The second frame used by the respondents was particularly apparent in the accounts of those who felt slightly unenthusiastic about social media use. Although they were aware that social media could give them access to new opportunities for innovation they felt the platforms held little personal appeal for them. They dealt with this dichotomy by framing social media as a *box ticking exercise*.

461 *Initially we were aware of it, but reluctant to use it because we knew how*
462 *much time it would take. It was a box that needed ticking because new*
463 *potential partners expected us to know about it, but we're not of a*
464 *generation that wants to be constantly connected all the time so we did*
465 *the bare minimum. (Owner-manager, design agency, Org 8)*
466

467 These respondents who framed social media as a box ticking exercise talked
468 about other preferred ways of meeting new innovation partners. There was an
469 apparent tension in their accounts because they also recognized that it was
470 possible to innovate using social media and they did not want to miss out. They
471 used the box ticking frame as a way of dealing with the cognitive dissonance
472 they associated with social media use. The metaphor suggests that they were
473 following what they perceived to be the rules for developing new connections.
474 They picked up these so-called rules as they observed and imitated the social
475 media use of others. By jumping on the 'social media bandwagon' and following
476 others they could access already existing templates and therefore regarded
477 social media to be less effortful. Rather than attempting to formulate original
478 and independent approaches to using the platforms they simply replicated what
479 appeared to be popular practice. Thus, by taking what can be understood as a
480 bandwagon approach to innovation they felt they were not missing out on the
481 inherent opportunities of social media.

482
483 The third frame used by the respondents could be termed the *informal frame*.
484 Although their ultimate goal was to make connections that would trigger
485 innovation they understood social media to be a space where socialization
486 would lead to business opportunities. When describing their approach they
487 drew upon imagery that conjured a sense of an informal place where people
488 were motivated to have fun and socialize.

489
490 *I was very informal in my approach to it at first. I didn't take it particularly*
491 *seriously. I treated it like a beach where I was dipping my toe in the*
492 *water. I would go in gradually and just have fun with it. (Founder-*
493 *manager, food & drinks brand, Org 6)*
494

Many of the respondents using this frame were influenced by their own personal social media accounts wherein they interacted with friends and family and the content of most conversations typically had a familiar tone. They presumed that informality was the accepted social norm for interacting and building new connections on social media. Even though they were representing their business they did not want to appear to overtly push a work related agenda in their social media posts. Those who made use of this frame tried to make new connections by adopting a more casual style of communication. They were not deliberately trying to force new innovative partnerships to occur. As new social media connections were made they remained alert to emergent opportunities but did not go out of their way looking for new business. In this sense they were taking an emergent approach to innovation, by waiting for innovative circumstances to arise through socialization.

Overall, the three frames were suggestive of three distinct approaches to establishing new connections and fostering innovation (i.e. proactive, bandwagon and emergent approaches). The respondents used these frames to facilitate a comprehensible interpretation of social media grounded in everyday language. However, extant theory suggests that the mental effort of framing alone is not sufficient to accomplish innovative outcomes. Individuals also need to act upon their multiple framings. Goffman (1974:340) calls attention to the necessity for socially constructed evidence (i.e. the various social media frames in our case) to be fully mentally applied to a context if innovative outcomes are to be achieved. In acting out the already invoked social media frames our respondents turned to their wider experience, or what Swidler (1986) refers to as cultural tools. According to Swidler (1986) these toolkits, made up of skills, habits and styles, equip individuals to form diverse strategies of action in everyday life. Figure 2 illustrates the relationship between two respondent frames (*informal* and *competitive game*) and their manifestation as action via specific tools.

Figure 2: The formation of social media strategies of action

Creating strategies of action

Guided by their evolving understanding of social media, the respondents drew on a wide variety of tools to aid them in achieving their innovative goals. In many instances, they found that they had practical competencies that were useful for attracting and interacting with new social media connections. They talked about how these familiar skills helped them when they were unable to introduce themselves as they would in a face-to-face setting.

Most people I know are quite conscious of linking up to new businesses on social media because you just don't know who it is on the other end! My background is in marketing. I enjoy setting up a brand, coming up with the ideas, writing copy and doing the designs. So that's been useful for our social media work. I think we come across as a good business to be linked to thanks to our creative content. (Founder, Drinks brand, Org 5)

544

545 Many respondents were concerned with creating a good first impression. The
546 manager in the above quote focused on the impression created by the aesthetic
547 appearance of his profile page and posts. He felt he was able to really appeal
548 to new connections by using his creative flair to present a well-considered style.
549 He explained that by using the skills he had established as a creative marketer
550 he was trying to compensate for the difficulties inherent in communicating with
551 others who were not physically present. Similarly, other respondents crafted
552 strategies drawing on their current skillsets.

553

554 *We needed to think about how to stand out and gain people's trust. I was*
555 *looking at a lot of the waffle and jargon that other people were posting to*
556 *make them look like experts. We decided to use plain, straight-talking*
557 *English for our posts. That's how our profiles read. I'd attended a short*
558 *course when the 'Plain English' campaign was around years ago, and I*
559 *always thought it was the best way to communicate. (Founder, Design*
560 *agency, Org 8)*

561

562 Drawing on a style of communication that he had long been familiar with, this
563 manager felt able to tackle the difficulties of establishing trust on social media.
564 Despite the lack of flair associated with using simplified English, he felt that this
565 style of post gave the impression that he had nothing to hide. Many respondents
566 noted that they used styles of communication they were most familiar with and
567 hoped that this would create a good impression and compensate for missing
568 information.

569

570 In other instances, respondents drew on their long established social
571 connections in the offline world for gaining insights into interacting and building
572 relationships on social media.

573

574 *I have a friend who works for a large multi-national. He gets me their*
575 *annual marketing report. There's a big section in there on social media.*
576 *I always take on board suggestions from that report; I take them*

577 *seriously and try them out to see what works for me. (Founder, Drinks*
578 *brand, Org 7)*

579

580 This manager needed to access technical knowledge that he didn't possess
581 himself. He achieved this by turning to a friend who he trusted and whom he
582 had gathered intelligence from on previous occasions. Some respondents
583 explained that their connections to larger organizations helped them. They felt
584 their difficulties in establishing new innovative relationships were caused by a
585 lack of legitimacy linked to their small size. When they connected with large
586 organizations on social media, they began to get noticed by others.

587

588 *Forming partnerships with a major university and a Royal Society makes*
589 *a huge difference. We've connected with them on social media as well*
590 *and now rather than being a lone entity that no one's heard of people*
591 *seem more willing to connect, they see me as being more established.*
592 *I've now got access to a huge group of people on social media to*
593 *collaborate with. (Founder, Chemistry Lab, Org 15)*

594

595 This respondent's partnerships with the University and the Royal Society were
596 already established, but he had not previously articulated his connection with
597 them on his social media account. Once he did this, he received a much more
598 positive response when initiating new contacts. He was also able to access and
599 traverse the established networks of his partners, opening a much broader
600 network of potential partners to communicate with.

601

602 In order to alleviate their uncertainty about how to approach social media use
603 and build new connections some respondents sought advice from those they
604 considered to be experts.

605

606 *I was getting nowhere so I approached some of my programmers for*
607 *advice. Now I'm making a real effort to generate conversations on social*
608 *media and to do that you really have to join in quite frequently or you*
609 *miss out on things. I commute in every morning, it takes about an hour*
610 *on the train, and I take that hour to read and decide what I'm going to*

611 *tweet about. I try and get through my three tweets in that hour. (Founder-*
612 *owner, Internet security firm, Org 9)*

613
614 Having been advised of a new rule to follow (make posts often) the respondent
615 formed a new habit (posting three tweets on his daily commute) that girded his
616 efforts to find innovation opportunities on social media. His approach helped
617 him to generate ideas about new things to talk about and it made use of some
618 otherwise 'dead time' where he would be doing little else.

619
620 In summary, the above accounts show how respondents drew upon three
621 contrasting frames and a diverse set of practical tools to establish new
622 connections on social media. Drawing on this analysis, we discuss below the
623 potential of frames and cultural toolkits to establish new connections on social
624 media.

625 626 DISCUSSION

627
628 The analysis above unpacks the social processes underpinning the first stage
629 of social media innovation. Our specific focus on the attempts of individuals to
630 initiate new connections highlight the tremendous cognitive and practical efforts
631 required to achieve innovative outcomes via social media. When the usual
632 social cues associated with making new connections were found to be
633 ineffective on social media our respondents experienced a sense of uncertainty
634 about how to carry on. This uncertainty prompted them to frame social media
635 in what appeared to be three distinct approaches (i.e., proactive, bandwagon
636 and emergent) to making new connections and to innovation. In converting
637 frames into action, they drew upon what Swidler (1986) refers to as diverse
638 cultural toolkits of skills, habits and styles. The process is summarized in the
639 first box of Figure 3 below. In unpacking this important initial step we argue that
640 social media innovation is a complex cognitive achievement that relies upon
641 extensive psychological and social resources at each and every stage.

Figure 3: The impact of social media new connections on social media innovation

Uncertainty and frames

The uncertainty experienced by the individuals in this study related to the paucity of recognizable social cues on social media. Goffman (1979) dismissed interactions mediated by technology as being “merely attenuated” and “situation-like” (Goffman, 1979; Rettie, 2009; Richey et al., 2016). His assertion was that interactions that rely upon technology do not provide sufficiently rich social cues to constitute a full social interaction. Indeed, the literature suggests that innovation requires such a complete social setting, rich in social cues (Rost, 2011) in order for collaboration and understanding to be achieved. These assertions make our respondents’ reaction to the uncertainty they experienced particularly interesting. Rather than withdrawing from the socially unfamiliar and sparse environment of social media, they invoked different frames in their ultimate quest for innovative outcomes. This persistence may be partly attributed to prevailing social norms. The widespread proliferation of social media platforms may somewhat compel today’s firms to stay active on social media (Michelidou et al., 2011). Evidently, frames play an important part in this process. In our case, framings and the associated mental simulations preceded

664 action and provided proxies for the social cues that would normally be used to
665 establish a strong context for interaction.

666
667 The frames for social media were invoked using everyday language that related
668 to three possible approaches to developing new connections and to innovation:
669 the proactive approach, the bandwagon approach and the emergent approach.
670 An important function of the frames was to create a perceptual link between
671 social media and these different ideas about innovation. While the lack of social
672 context initially hindered the launch of a potential innovation activity, frames
673 reignited the process since they were suggestive of ways of acting. In doing
674 this the frames effectively filled the void in contextual information left by missing
675 social cues. These findings indicate the important role frames play in reducing
676 the uncertainty associated with the initial stages of social media innovation.
677 Frames can serve as proxies for missing information, suggesting particular
678 approaches to innovation in the mind of individuals. By providing a mental
679 approximation of context they increase the individual's capacity for action.

680 681 Social media strategies of action

682
683 In acting upon framings of social media innovation, our respondents turned to
684 their established cultural toolkits (Swidler, 1986) of skills, habits and styles. In
685 this sense, frames and tools are mutually interdependent and may constitute
686 the fundamental components of social media strategies of action as depicted
687 in Figure 2 earlier. Rather than attempting to learn how to use new tools for this
688 unfamiliar activity (Molinsky, 2013) there was a clear tendency on the part of
689 our respondents to turn to lines of action well-established in their offline world.
690 Swidler (1986) suggests that individuals prefer making use of their practised
691 tools in all situations since the cost of learning entirely new styles of behaviour
692 is often perceived to be too steep. The use of familiar tools by our respondents
693 counterbalanced their feelings of uncertainty about social media innovation.
694 This grounding of actions in entrenched toolkits can be understood as an
695 attempt to make the unfamiliar, familiar. The tendency to turn to established
696 courses of action may seem counter-intuitive, given that the innovation process
697 is traditionally associated with attempts to break with convention (Mount &

Martinez, 2014; Leonardi, 2014). While later stages of the social media innovation process may still rely upon integrating novel ways of thinking and acting (Mount & Martinez, 2014), our findings suggest that the initial step of making new connections appears to depend upon established styles and behaviours.

Implications for social media innovation

Social media have been regarded as providing favourable circumstances for innovation, particularly by overcoming some of the difficulties usually associated with making new connections and sharing novel information (Leonardi, 2014, 2015; Mount & Martinez, 2015). It has been suggested that those that have traditionally struggled to access sufficient resources to innovate, such as small and medium sized firms can particularly benefit from these technologies (Harris et al., 2012). However, our findings imply that social media is not necessarily an egalitarian space for innovation. From our respondents' perspective, although it was theoretically possible to develop different approaches to innovation using social media, in practice, access to a pre-existing, broader cultural toolkit was required to turn their initial framings into action. As we can tell from our data, these toolkits seemed to simultaneously enable a sense of competence and familiarity as well as restrict the set of available actions. This experience of our respondents suggest that social positions and experiences may have a bigger say in the types of tools that are familiar and accessible (Anthias, 2008; Swidler, 1986). In other words, cultural tools are developed in everyday settings that social media cannot entirely circumvent. We would therefore argue that social media appears to reproduce social structures (Martinez Dy et al., 2016) in that those with access to the broadest and the most sophisticated cultural toolkits are most likely to succeed at social media innovation. Inevitably, before attempting to make radical jumps in their social media use, individuals may spend considerable time working with what they can access and know well (Swidler, 1986; Anthias, 2008).

We would therefore argue that the ability of individuals to draw upon a rich array of frames and cultural tools is an important antecedent of social media innovation. This is because social media innovation is likely to involve the initiation of new connections without the guidance of a full set of traditional social cues. Previous studies have suggested that it is possible to develop a sense of virtual co-presence (Huang et al., 2013) but these studies have focused on communication *within* organizations. When using social media to tune into the outside world uncertainty related to the absence of traditional social cues (Goffman, 1959) was the major difficulty mentioned by our respondents. Put differently, a sense of social context is necessary but likely to be missing from the earliest stages of the innovation process due to the unavailability of rich social cues. Our analysis suggests that in these early stages frames can be used as proxies for missing social cues and thus may help better manage the uncertainty. In this sense, they provide an approximation of context to guide interactions with new connections during the initiation of the social media innovation process.

Engagement with new connections has been recognized as increasingly important to firms attempting to undertake open innovation activities (West & Bogers, 2013). The process of forging these new connections involves two distinct groups. The first group are the internal contributors, or those collaborating within the firm to initiate the innovation process. The second group are external parties that the firm would like to involve in their innovative efforts. Some attention has been given to motivating external parties to participate in the early stages of innovation (Dahlander & Piezunka, 2014). We contribute to this strand of the innovation literature by unpacking the psychological micro-processes underpinning the initiation of new social media connections. Dahlander and Piezunka (2014) point out that much of the research in this domain ignores or underplays the challenges of engaging with a broad array of external contributors. Our study highlights the complex cognitive work required to overcome the uncertainty associated with establishing new connections in the initial stages of social media innovation. Additional work is needed to provide a fuller picture of the role framings and interpretations have on the open innovation process. For example, we have unpacked the role of frames at an

individual level, but further research is needed to establish whether frames can be used to create a shared context for innovation between those internal and external to a firm.

CONCLUDING REMARKS

In this paper, we have argued that forming new social connections is a crucial first step in the social media innovation process. There have been several positive claims about the role of social media in facilitating new connections and fostering innovation (Mount & Martinez, 2014; Leonardi, 2014). While our study does not contradict these claims, it shows that the initiation of new connections on social media is not always straightforward. The process involves complex cognitive effort as frames (Goffman, 1974) are used in lieu of missing social cues. While frames help to overcome the uncertainty inherent in the early stages of social media innovation they do not address the challenge of accessing other types of resource characterized herein as cultural tools (Swidler, 1986) that are necessary to turn framings in to action. Cultural tools are not accessed via social media, but are nested in existing social structures. Thus, those who are unable to access appropriate cultural tools may be less able to act upon their intentions to innovate using social media.

This study places emphasis on the role of uncertainty in triggering the creative use of frames and cultural tools. It is, of course, very likely that individuals will become more familiar with social media over time. Our study has not captured whether such a process of familiarization could reduce uncertainty about social media technologies and thus reduce the creative use of frames and tools. However, we would argue that the mediated nature of social media platforms makes uncertainty an intrinsic feature of making new connections on social media. While we anticipate that making social media connections to achieve innovation will always involve a degree of uncertainty, more research is needed to nuance this argument.

We also demonstrate how frames can be used as proxies for social cues in order to help approximate a context for social media innovation. We

acknowledge that the scope of our analysis is limited to the perceptions of individuals and the role of frames in initiating the social media innovation process. In other words, the empirical material presented here relates to an early step and does not relate to the later stages of the innovation process that may rely even more heavily on communication and social cues. However, we would argue that without this vital first step the social media innovation process may not get started at all. Future research could focus on the potential and relevance of frames in the later stages of social media innovation. For example, it is worth investigating how co-communicants can work towards establishing a shared sense of social context using frames and tools.

Finally, this study also provides some useful practical insights for managers attempting to use social media to extend their social networks. By highlighting the challenges inherent in establishing new useful connections on social media, managers can prepare themselves by assessing their own 'cultural toolkits'. The vocabulary offered in this paper offers a useful metaphor for managers as they attempt to use frames and cultural tools as proxies for traditional social cues available during face-to-face encounters.

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