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Title: Creativity and Innovation in Technology-Mediated Journalistic Work : Mapping out Enablers and Constraints

Year: 2023

Version: Published version

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Please cite the original version:

Koivula, M., Villi, M., & Sivunen, A. (2023). Creativity and Innovation in Technology-Mediated Journalistic Work : Mapping out Enablers and Constraints. *Digital Journalism*, 11(6), 906-923. <https://doi.org/10.1080/21670811.2020.1788962>



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To cite this article: Minna Koivula , Mikko Villi & Anu Sivunen (2020): Creativity and Innovation in Technology-Mediated Journalistic Work: Mapping out Enablers and Constraints, Digital Journalism, DOI: [10.1080/21670811.2020.1788962](https://doi.org/10.1080/21670811.2020.1788962)

To link to this article: <https://doi.org/10.1080/21670811.2020.1788962>



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Published online: 06 Jul 2020.



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Creativity and Innovation in Technology-Mediated Journalistic Work: Mapping out Enablers and Constraints

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ABSTRACT

This qualitative study examines creativity and innovation in dispersed, journalistic teams. Specifically, we study the factors enabling and constraining creativity and innovation in journalistic work in technology-mediated settings and explore how technology shapes these phenomena in dispersed journalistic teams. The study is motivated by the media industry's heightened need for creativity and innovation as well as the changing nature of working life where an increasing amount of work is done via information and communication technologies. By closely examining two journalistic teams and their idea sharing and development processes, this study finds that successful creative work and innovation in dispersed journalistic teams is characterized by intentional idea sharing and development habits and tangible goals as well as a psychologically safe communication climate. Furthermore, team characteristics, such as geographical dispersion and team history also shape creativity and innovation. The findings indicate that communication technology gives journalists more opportunities for sharing ideas, but it also induces uncertainty into the idea development phase. The study extends existing knowledge on remote, technology-mediated work in media organizations and offers valuable practical implications as the findings can encourage new cultures of experimentation and innovation in media organizations.

KEYWORDS

Creativity; innovation; psychologically safe communication climate; journalistic practices; media work; technology-mediated work

Introduction

Innovation in the media business is much about change and adaptation to a new strategic environment (Küng 2017). In this, media organizations depend largely on the creativity and skills of their employees (Mierzejewska and Hollifield 2006; Malmelin and Virta 2016) as creativity is an essential part of developing innovations (Küng 2017). However, the context for experimentation and innovation, as well as other journalistic work, is changing as work is increasingly done in dispersed teams with the help of communication technology. These technologies allow journalists to work collectively despite geographical and/or temporal dispersion and they have been reported to lend themselves to more knowledge sharing, open discussions as well as lowering

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hierarchies (e.g., Bunce, Wright, and Scott 2018; Gibbs et al. 2015; Hendrickson 2009). Importantly, communication technology has the potential to shape creativity and innovation by changing the practices of idea and information sharing (Razmerita, Kirchner, and Nabeth 2014; Turban, Bolloju, and Liang 2011).

Broadly, innovations have been deemed important for the survival of media organizations (Posetti 2018; Pavlik 2013; Küng 2017, 2011) even though the strategic environment for innovation and creativity has become increasingly difficult. Loss of audiences, the diminishing effectiveness of media business models and the increasing competition with digital giants such as Google and Facebook have all taken a toll on media organizations (Picard 2014). Consequently, technological advancements, changes in platforms, products, and consumption habits are forcing media organizations to be creative and innovative on a wider scale than before. In addition to being creative content-wise, media organizations need professionals who can innovate in areas such as new technologies, content distribution and audience engagement (Küng 2017).

In the light of these developments, studying creativity and innovation in the context of media and journalism seems especially salient. Hence, the aim of this study is to recognize how creative work and innovation is carried out through and shaped by communication technologies in media organizations. The study examines two teams of journalists that go about their daily interaction mainly through communication technologies. By observing team meetings and interviewing journalists, we analyze the factors that enable and constrain creative work and innovation in journalistic teams. We focus specifically on idea sharing and development.

Our study contributes theoretically to the still somewhat small reservoir of research on creative and technology-mediated work in journalism and media organizations. We introduce concepts, such as psychologically safe communication climate (PSCC), from the field of organizational communication to the study of journalistic work, which has not been previously done extensively in journalism studies (cf. Evans 2016). Our approach is novel also compared to previous work on creativity in newsrooms which often adopts a media management perspective (e.g., Malmelin and Virta 2016; Virta and Malmelin 2017; Banks et al. 2002). Importantly, we add to the ongoing discussion on technology-mediated, remote work in journalism (e.g., Bunce, Wright, and Scott 2018), which, at the time of writing, is especially timely due to the COVID-19 pandemic forcing journalists to work from home. Our findings and especially the understanding of the relevance of PSCC in journalistic work can be useful for journalism practitioners as they can assist in generating creativity supporting practices for technology-mediated work, as well as encourage new cultures of experimentation and innovation in media organizations.

Theoretical Background

Creativity and Innovation in the Field of Media and Journalism

Journalism is inherently creative work. It can serve journalists well to be able to produce novel ideas for stories, gather information in unconventional ways or find fresh avenues to discuss their work with audiences. In this study, creativity is defined as the production of novel and useful ideas (Amabile 1983). It is tightly interwoven with

communication, especially on the group level (Kristensson and Norlander 2003), and thus we approach it from a socioconstructivist perspective, i.e., creativity emerges in interaction between people.

In media management research, creativity has been recognized as a key competitive resource for media organizations in general and news organizations in particular (Küng 2017). As Deuze (2019) describes it, “creativity in this context gets heralded both as a special and unique ability that brings that little bit of extra to a certain way of doing things” (p. 130). Indeed, scholars have found that journalists regard creativity as an essential aspect of their work (Fulton and McIntyre 2013; Malmelin and Nivari-Lindström 2017; Hanusch et al. 2016; Hunter and Nel 2011; Bjornsen, Hovden, and Ottosen 2007) and that creating new practices and processes feels motivating and meaningful if not hindered, for example, by the commercial pressures of the journalistic profession (Malmelin and Nivari-Lindström 2017; Malmelin and Virta 2016). In practice, however, creativity has not been so much about creating new things but rather about refining and developing existing ideas (Nylund 2013; Malmelin and Nivari-Lindström 2017). Overall, the field has tended to approach creativity only in connection to content production rather than widening its scope to other domains of journalistic production (Küng 2017).

Despite the work done within media management research, creativity remains an under-researched area in journalism studies (Malmelin 2015). Witschge, Deuze, and Willemsen (2019) note that creativity in journalism has mostly been studied through the lens of technological innovation. Moreover, studies on the group and organizational levels are scarce (Rosso 2014; Malmelin and Virta 2016) and there is also a significant gap in literature on creative journalistic practices (see e.g., Banks et al. 2002; Mierzejewska and Hollifield 2006; Küng 2017; Hesmondhalgh and Baker 2011; Virta 2018). Adopting views from organizational communication and zooming in on group level activities in journalistic teams (idea sharing and development) allows us to view the phenomenon of creativity from a slightly different angle compared to media management research and thus better contribute to theory on creative work practices in journalistic teams (Rosso 2014).

Furthermore, in an organizational context, innovation can be defined as the implementation of ideas (Amabile 1996), which can transform into revenues, cost savings or new areas of business (Lehtisaari et al. 2018). In the media industry, innovation comes in many different shapes (product innovation, process innovation, position innovation, paradigmatic innovation, genre innovation, social innovation) and can involve different degrees of novelty (Krumsvik et al. 2019). Researchers also argue that true media innovation should be distinguished from routinely produced media products (Dogruel 2014; Westlund and Lewis 2014; Trappel 2015) which excludes daily content production from being counted as innovation. However, innovation in the media industry is often incremental and focused on small improvements in products (Krumsvik et al. 2019). Journalists’ “creative energies”, as Porcu, Hermans, and Broersma (2020) write, are sucked dry by the day-to-day news production that focuses on efficient output and short-term demand. Hence, legacy media organizations’ innovation efforts are often exploitative (short-term, “inside the box”) rather than explorative (long-term, “outside the box”) even though, according to multiple researchers (Porcu 2017; Porcu,

Hermans, and Broersma 2020; Küng 2015; Westlund and Lewis 2014), explorative innovation is what these organizations most desperately need in order to reinvent themselves and survive in the future.

In this study innovation is approached as the implementation of ideas in an organizational context, in which ideas are aimed at developing practices or processes. Ideas for new content are treated as creative work and not innovation as such. However, we wish to also acknowledge that drawing a clear line between creativity and innovation can be difficult in the context of media and journalism (Küng 2017). The two concepts intercept in many ways: Creativity is an essential part of the early stages of the innovation process as it is about producing novel and useful ideas which, in turn, can be turned into innovations (Amabile 1996; Baregheh, Rowley, and Sambrook 2009).

Organizational Communication Meets Journalism: Idea Sharing and PSCC

As the need for creativity and innovation in media organizations increases (Küng 2017; Mierzejewska and Hollifield 2006), the context for doing work is also changing. Overall, an increasing amount of contemporary work is done in collaborative situations as narrow expertise and complex work require employees to cross disciplinary, organizational, and other boundaries to accomplish goals (Edmondson and Lei 2014). This type of work is accommodated in organizations by adopting information and communication technologies (Ellison, Gibbs, and Weber 2015) which allow employees to communicate and work with each other despite geographical and/or temporal dispersion. Teams that work together through technology are termed ‘dispersed teams’ or ‘virtual teams’ and defined as “a group of people who work interdependently with a shared purpose across space, time, and organizational boundaries using technology” (Lipnack and Stamps 2000, 18).

Technologies that facilitate work in dispersed teams can be termed Online Collaborative Software (OCS; see e.g., Bunce, Wright, and Scott 2018) and examples of such technologies include chat-based applications like *Slack* and *Microsoft Teams* and video-conferencing software like *Zoom*, *Google Hangouts* and *Skype*. Slack, specifically, has been widely adopted by media organizations and has recently also drawn the attention of scholars (Bunce, Wright, and Scott 2018; Paul and Sosale 2020; Moran 2020). Previous research has noted that these types of technologies, when used for work purposes, increase knowledge sharing and reduce hierarchies (Gibbs et al. 2015; Hendrickson 2009) as well as facilitate information dissemination and idea generation (Razmerita, Kirchner, and Nabeth 2014; Turban, Bolloju, and Liang 2011). In media organizations, collaborative technologies have increased lateral, egalitarian decision making (Hendrickson 2009) and supported extensive collaboration between geographically dispersed team members (Bunce, Wright, and Scott 2018). In contrast, there are also signs that collaborative technologies have not enhanced journalists’ capacities for collaboration and that editorial, business and IT sectors in media organizations remain secluded from each other (Westlund and Krumsvik 2014; Ess 2014).

To understand how creative work takes place in and is shaped by these virtual spaces, this study is interested in *idea sharing and development practices in dispersed journalistic teams*. Specifically, we introduce the concept of a psychologically safe

communication climate (PSCC) to studying teams of journalists. The concept is well-suited to researching creative work and innovation as idea sharing requires a shared understanding between team members of what type of communication is acceptable in the team. This understanding constructs the team's communication climate (Putnam and Cheney 1985). Thus, PSCC is defined as an atmosphere within a team that is characterized by open, supportive communication, speaking up and risk taking (Gibson and Gibbs 2006). PSCC is derived from Edmondson's (1999) concept of psychological safety which describes a shared belief amongst individuals as to whether it is safe to engage in interpersonal risk-taking in the workplace. In a psychologically safe work environment, employees feel that they will not be rejected or humiliated by colleagues for being themselves or saying what they think. Moreover, the competence and expertise of others are valued and, importantly, experimenting feels safe (Newman, Donohue, and Eva 2017; Edmondson 1999). Behaviorally, psychological safety manifests as open communication, voicing concerns as well as seeking feedback, which are all interpersonally risky behaviors (Pearsall and Ellis 2011; Newman, Donohue, and Eva 2017). Although psychological safety overlaps somewhat with trust, the two concepts are fundamentally different, as psychological safety focuses on how group members perceive a group norm whereas trust in this case is about how one person views another (Newman, Donohue, and Eva 2017).

PSCC has been positively associated with knowledge and information sharing as well as innovative behavior in dispersed teams (Gibson and Gibbs 2006; Kirkman et al. 2013). Gibson and Gibbs (2006) looked at the role of PSCC regarding team innovation processes and distinguished between four different aspects of virtuality that could potentially hamper innovation: geographic dispersion, electronic dependence, dynamic structure, and national diversity. Their results indicate that PSCC can mitigate these negative effects. Previously, PSCC has been researched in relation to innovative performance (Gibson and Gibbs 2006; Boyratz 2019; see also Gu, Wang, and Wang 2013). However, considering that creativity is an essential part of the innovation process and that the two phenomena are inextricably linked, this study applies PSCC to the case of creative work in dispersed teams.

In sum, the theoretical lens of this study consists of perspectives into creative work and innovation in journalism as well as technology-mediated work in dispersed teams. Synthesizing the literature outlined above, this study takes as its starting point the fact that the media industry needs to understand and harness creativity better due to developments mainly in digital technologies that shape both journalistic practices and consumer preferences. We treat creativity as socially constructed and draw from literature on organizational communication and the concept of psychologically safe communication climate (PSCC) to aid us in analyzing how creative work and innovation are conducted through and shaped by technology in journalistic teams. Creative work and innovation are examined through communicative behaviors, specifically idea sharing and development. Thus, our research questions are as follows:

RQ1: What kind of factors enable and constrain idea sharing and development in a dispersed team of journalists in a technology-mediated work setting?

RQ2: How is idea sharing and development shaped by a technology-mediated work setting in dispersed journalistic teams?

Data and Method

Research Setting: Teams and Their Communication Technologies

This study examines technology-mediated creative work and innovation in journalistic teams and, specifically, aims to outline the factors at play in idea sharing and development in two teams of journalists. The teams under study are both part of a large Finnish media corporation, although there are some differences in their purpose and daily workflow. The first team is a feature journalism team that consists of an editor, a graphic designer, and four journalists. Four of the team members are located physically in the same geographic location while the two remaining members work remotely. The team produces a weekend-style section for its client newspapers once a week. All their stories are published both in print as well as online, however, their focus is very much on print production. The other team is a news journalism team. It consists of a producer and seven journalists and it is more equally dispersed compared to the feature team: The members are located in different newsrooms across Central and Southern Finland, and there is a maximum of two members in the same physical newsroom. The team produces daily national and regional news for its clients and its production is balanced quite equally between print and online.

The corporation owns regional and local newspapers in various parts of Finland to which the teams cater their content to. Considering that both teams are focused on content production rather than research and development, they are a typical example of journalistic teams found in regional/metropolitan newspapers and as such, they illustrate the challenges presented to metropolitan newspapers by their position between national and more local news outlets (see Villi et al. 2020). We wanted to examine creative work and innovation in journalistic teams in regional newspapers with limited resources rather than focusing on R&D teams in well-funded, quite atypical, media organizations (such as *The New York Times* or *The Washington Post* would be in the US context). Moreover, we also wished to account for the increasing amount of journalistic work done through communication technology, which guided us to focus specifically on dispersed teams rather than studying purely local teams. Thus, focusing on two dispersed teams allows us to better analyze the enablers and constraints of creative work and innovation in technology-mediated work as well as discuss how technology shapes creative work and innovation in journalism.

Both studied teams utilize Slack for chat-based communication among team members and Google Hangouts for videoconferencing. Slack's architecture echoes social media and the informal, collaborative norms of digital culture (Bunce, Wright, and Scott 2018). Its dashboard is organized around channels (chatrooms) and inside these channels, users can text, tag each other, share links, documents, photos and so on. In the field of media, Slack's clients have included BuzzFeed, Vox, Medium, The Atlantic, and Slate (e.g., Owen 2015). Moreover, the videoconferencing software Google Hangouts is a part of Google's services for work purposes. Hangouts allows team members to communicate via video, sound, and chat messages, and it can be incorporated into Slack as the teams in this study have done.

The feature team has two weekly meetings via video, on Mondays and Thursdays, and other communications are handled face-to-face or through Slack and telephone.

On Monday, the team reviews what its members are doing for the current week's issue and briefly discuss plans for upcoming weeks. During the week's second meeting, stories are discussed further. These meetings usually take 20–30 minutes. In Slack, the feature team has organized its channels so that every journalist has their own channel where their stories can be discussed publicly. The team also has a channel for general discussion. The news team, on the other hand, has a morning meeting via video every morning on weekdays. Usually 20 to 45 minutes in length, the meeting consists of updates on upcoming stories as well as brainstorming new story ideas. The meetings are usually led by the editor or in his absence, one of the journalists. In Slack, the team utilizes one channel for messaging among team members and several other channels to communicate with their client newspapers.

Data Collection

The data for this study consists of qualitative interviews with journalists and observations of team meetings. All members of the two teams were interviewed in late 2018 which resulted in a total of 14 interviews. Five interviews were conducted face-to-face, one via telephone and eight via Google Hangouts. Six of the interviewees were male and eight of them were female. Their age range was between 35 and 61 years and experience in the field of journalism ranged from five to 35 years. All interviewees had a higher education degree.

The interview guide covered the following topics: work as a journalist, creativity in journalistic work, innovation in journalistic work, and technology-mediated work. Semi-structured interviews were used as the data collection method in order to gather information on the interviewees' views and experiences (Kvale 2007). Semi-structured interviews also allowed us to ask additional questions and gave interviewees a chance to discuss aspects of the research topic they felt were important (Tracy 2013). The interviews ranged from 40 to 100 minutes in length and averaged at 69 minutes. All interviews were recorded and later transcribed to text. The transcriptions total at 263 pages (12-point font in Times New Roman with a line-space of 1.0).

In addition to the interviews, we observed altogether nine team meetings (four in the feature team and five in the news team), which allowed us to capture team members' interactions more accurately. We observed four team meetings in both teams in parallel during a four-week period in November and December 2018. In addition, we observed one news team meeting which was specifically dedicated to brainstorming new story ideas. We took part in eight meetings via video and for one meeting we went to the feature team's office and took part in the videoconference from their newsroom. All videoconferences were recorded with a screen-recording software and a total of 66 pages of field notes were made of the meetings. The news team's meetings averaged 29 minutes (the shortest took 11 minutes, the longest 45; the idea generation meeting lasted 94 minutes) and the feature team's 26 minutes (with the shortest taking 17 minutes and the longest 37 minutes).

Chatlog data was not collected due to access reasons. However, we asked our interviewees to discuss their team's Slack use in the interviews by having them describe the channels they had created and how those channels were used.

Data Analysis

Interview data were analyzed by utilizing Tracy's (2013) iterative approach, in which the analysis alternates between emergent readings of the data and the use of existing models, explanations, and theories. This approach is similar to what Srivastava and Hopwood (2009) describe when they write about iteration: It is not a mechanical task but rather a reflexive process where the researcher visits and revisits the data and connects them to emerging insights and refines her analysis. In this study, previous research on creative work and innovation in newsrooms as well as research on technology-mediated work provided a reference point for the analysis.

In the first round of coding, interview transcripts were read through and coded with the qualitative analysis software Atlas.ti. In primary-cycle coding, codes were created to present what was present in the data (Tracy 2013). This initial coding revealed the importance of communication climate which we took into account in the following rounds. In the following cycles, the descriptive codes were fractured and combined further, and families were created in order to form more analytical, second-level categories (Tracy 2013). Observation data was treated in a similar fashion. All recordings and field notes were reviewed, and specific attention was paid to idea generation and sharing (e.g., presenting ideas, reacting to ideas, developing ideas) as well as the teams' communication climate (e.g., open, informal communication, giving and receiving feedback, asking for help, sharing information, voicing concerns). The bulk of the analysis was done by the first author; however, the results were discussed, and unclear cases solved among all authors.

All interviewees were promised anonymity and thus, in the following section they are given codes to indicate which team they belong to (F for feature; N for news). Our analysis yielded three main categories each holding two subcategories. The main categories are *habits and goals in idea sharing and development*, *the importance of a psychologically safe communication climate* and *team characteristics*.

Findings

Habits and Goals in Idea Sharing and Development

Habits and goals that relate to idea sharing and development in dispersed journalistic teams were a key factor in shaping the studied teams' creative work. This category holds two subcategories: *time and space for idea sharing and development* and *tangible goals as drivers of new ideas*.

Time and Space for Idea Sharing and Development

There was a notable difference in how the teams in this study dedicated time and space for idea sharing and development. The feature team did not have a clear, dedicated time for ideation, whereas the news team devoted time for idea sharing and development in their meetings every morning as well as held separate meetings for ideation. These habits were formed and upheld by both team leaders as well as team members.

Both teams' morning meetings provide examples of how idea sharing and development were prioritized or neglected. In the feature team, the morning meetings functioned as roundups, taking place twice a week, where the editor went over the current week's stories and journalists updated the editor and each other on their ongoing and upcoming projects. The meetings were formal and highly structured in nature and did not prioritize idea sharing or development. The editor often postponed idea sharing and development into the future where a face-to-face discussion would be possible, which illustrates how technology shapes these processes. The following excerpt is from a morning meeting that took place in Hangouts. The editor delays ideation until a journalist working remotely returns to the physical office.

Feature team editor (F1): Do you want to come up with a news story for next week?

Journalist (F2): We could try to think of it together ...

F1: Let's think ...

F2: We can try to think about this together.

F1: There's plenty of time to do this next week. –

F2: Do you have anything on the list that could be worked on?

F1: Yeah, there's a lot, don't worry about it, let's think about it when you come back to town. We'll think of an easy topic, a quick one, I mean. It seems that the story on [story topic] is not going to be ready so we need to think of something to replace it.

While the feature team did not have a dedicated time or space for ideation, the news team put in effort to come up with and discuss new ideas in every morning meeting. The habit had been instigated by the news team producer and was successfully upheld by the journalists even in the producer's absence. In the team's editorial meetings on weekday mornings, the producer (N5) would let everyone first discuss their current work and then ask if there's "anything on the radar or under it we need to react to." This often resulted in lengthy discussions about daily politics or just anecdotes from the journalists' lives. In the interview, the producer described his style of leading the meetings: "Some people can't stay silent longer than two seconds and others wait until the end to summarize things. That requires some structure [in the meetings] so that everyone gets to voice their thoughts."

Additionally, the news team set aside time for specific idea sharing and development meetings that would take place separately from the morning meetings. During our observation period, the team held one such meeting. Before it, the producer divided the journalists into pairs and tasked them with creating ideas for a story series. These ideas were discussed and developed further in the meeting. The producer again talked of his role: "Brainstorming has proved to be surprisingly efficient for us, specifically because its free-form. During it, I try to act as one of the team members and not steer the conversation one way or another." In sum, the news team was more successful in dedicating time and space for idea sharing and development than the feature team.

Tangible Goals as Drivers of New Ideas

The two teams also set different types of goals for their creative work. The news team, with its relatively young age, had a goal mandated by the newspapers it produced

content for. At first, the team was tasked with producing stories that would garner national attention and as many citations from other news outlets as possible. In our interviews, news team journalists described how this goal forced them to approach topics with a new mindset and choose issues to cover that would get them closer to that fixed number of citations from other outlets. Some of the journalists felt the goal spurred their creative thinking whereas others thought it limited their ability to cover interesting topics. A news team journalist (N4) described her feelings: “The citing goal was really limiting – but now that they’ve lifted it, I feel like it brings a lot of creativity into this job.” Indeed, the news team’s goal was later modified, and the team started to approach topics with a human-interest mindset, i.e., journalists wrote about societal phenomena but always started their stories with an interesting individual story. Importantly, whichever the goal (number of citations from other media or starting with an actual person’s story), the team had a tangible goal for their creative work.

In the feature team, the goal for creative work was more ambiguous. Many of the feature team journalists described how being part of their team imposed upon them the requirement of “hypercreativity.” This discourse was the most evident among the two newest members of the team who had only been part of the team for three weeks at the time of the interviews. They described how the publication’s reputation as an innovative feature-style weekend section published in many newspapers forced them to think of story topics differently compared to their previous jobs in hard news. In short, the feature team only had the goal of being more creative than other outlets, but it had not set any standards to measure its success.

The Importance of a Psychologically Safe Communication Climate

Equally important to habits and goals is the existence of a psychologically safe communication climate. This main level category includes two subcategories which relate to the nature of communication in the teams and the technologies they use: *open communication as a precursor for both idea sharing and development*, and *technology as a source of uncertainty in the form of fear of misunderstandings*.

Open Communication

According to our interviewees, a psychologically safe communication climate was in place in both the news and feature team. In the interviews, PSCC manifested as descriptions of the journalists being able to “be themselves,” “be somewhat crazy” and not having to fear being humiliated or embarrassed by their coworkers. In the following examples, feature and news team journalists describe the communication climate in their team.

It supports [creativity]... that... no one is embarrassed. Like there is no idea that is so bad that you couldn’t talk about it. Like being open is in every way beneficial for creativity... like you have approval for it. You have the approval to be crazy. [F3]

I think we have quite a creative, and like... like we don’t say ‘that’s not a good idea’, like we can quite nicely find ideas and [ask others] what do you think – I think we can quite nicely do it as a team and then the stories just kind of start to write themselves in our discussions. [N2]

The members of the feature team who were located in the same physical newsroom described how their face-to-face discussions over lunch or coffee often took flight and produced ideas that eventually made it into the final publication. The feature team journalists attributed this to the permissiveness of their communication climate: It allowed them to talk about things outside their current tasks and find topics “from the sidetracks” as one journalist (F2) put it – even if this occurred mostly in face-to-face settings and only rarely in their morning meetings.

Open communication was integral in the news team’s creative process also. The team had developed similar habits on Slack as one would find in a physical newsroom: Journalists usually said ‘good morning’ on the team’s internal channel as they arrived at work and ‘goodbye’ as they left for the day. The bulk of communications was handled through Slack and only emergencies were handled through phone. Other things than work drizzled often to the conversations between team members: someone’s car had broken down, the other had to pick up the kids earlier than usual. Here, technology gave the team members a chance to discuss their lives with others and offered a channel through which PSCC could be bolstered. In the following excerpt a news team journalist describes the team’s communication climate:

Yes, I think that type of talk that isn’t related to story topics ... undoubtedly it has an effect [on creativity]. If it were strictly just work or going through work stuff then it wouldn’t [support creativity], but now it kind of makes the creative process possible when you can sometimes talk freely. [N6]

Overall, open communication in both teams functioned as a precursor for both idea sharing and development. In both teams, many story ideas stemmed from journalists’ personal experiences which they were able to share to the team because they felt safe expressing their thoughts. This feeling of security also somewhat carried over into the development process where ideas were discussed further. In the news team specifically, presenting ideas that were outside one’s expertise was done regularly, and according to our interviewees this was made possible by the lack of fear of embarrassment. One of the journalists (N3) told us that it was easy to present an idea that was not about her beat because “there’s always someone who knows something deeper about the topic.” Illustrative of this tendency to lean on others’ expertise is also the news team producer’s (N5) description of teamwork: “I don’t think anyone here has to solve problems on their own – that dynamic makes creativity easier.”

Technology as a Source of Uncertainty

PSCC manifested a bit differently in the two teams when it came to giving feedback and developing work practices. In relation to feedback, most journalists in the feature team spoke about technology creating a barrier for creative work and innovation in the form of fear of misunderstandings. While meeting each other physically only twice a year, the feature team journalists felt that it was easy to be misunderstood while giving feedback through Slack. The team’s Slack workspace was built around public feedback as each journalist had a channel for their stories where others could contribute to ideas. In the next quote, a feature team journalist describes her feelings about giving feedback.

I'm very eager to comment [on stories, but] it's also scary [on Slack] because you're not personally there but you just write. – I don't want to say 'this is shit', if the other person can't see that I'm laughing at the same time. – In the [physical] newsroom you can just say stuff, harshly even, but then they can see your tone, expression, like ... You can kind of be combative there but you don't want to do that in Slack. [F2]

This hesitancy to give feedback transferred over to developing work practices and discussing group norms in the feature team. Three out of the six journalists in the team talked of how they thought their expertise in other areas of journalism than writing was not utilized because tasks were strictly assigned according to positions. The three journalists discussing this issue felt they could contribute to the visual layout of the publication, but group norms did not allow them to do so. A journalist (F6) talked about this by taking us through his work history and describing how in his previous positions "the journalistic process continued so much further [than writing, and] into layout, visuals, and publishing." In his current role, however, he felt he was limited to information gathering, interviewing, and writing. None of the journalists brought up these issues for public discussion in the team, which could indicate that even if the team appeared safe for risk-taking, that safety only applied to content production rather than developing practices.

In the news team, on the other hand, journalists reported having been able to successfully develop their editorial practices. As the team was first starting out, the producer noticed that stories were being published without proper proofreading and editing. He discussed the issue with the journalists and together they came up with guidelines to improve editing practices. Similarly, the journalists told us that they had been able to develop the responsibilities of the evening shift. Previously, the journalists doing the shift did not have clear directions on the tasks that would need to be done. Later, however, guidelines were developed by the team members most often doing evening shifts.

In sum, the feature team engaged in creative work as its members presented novel ideas which led to journalistic content – even if this was done mostly face-to-face rather than via technology. However, they did not develop their editorial practices or discuss group norms. The news team's actions, on the other hand, in developing working practices could be counted as (incremental) innovation as the team was able to apply their ideas in an organizational context and make their production process smoother.

The Impact of Team Characteristics

The third main level category pertains to team characteristics that shape idea sharing and development. The category holds two subcategories: *geographical dispersion* and *team histories*.

Geographical Dispersion

The teams' geographical dispersion shaped idea sharing and development in both teams. The feature team was unequally dispersed with four team members (editor, graphic designer, and two journalists) located physically in the same newsroom, and two members working remotely. This type of unequal dispersion made it possible for

a local clique to form inside the team where the local members ate lunch and had coffee breaks together. With the help of PSCC, the local members of the feature team discussed story ideas and fine-tuned them into more developed story topics on breaks during the workday. The editor (F1), for example, described how their ideas took flight in informal conversations over coffee but “it never gets that crazy in Slack.” Another journalist (F4) told us that ideation never “reaches the same levels” through technology as it did in face-to-face situations.

The two remote workers in the feature team experienced ideation through technology rather differently. They were positive about the opportunities technology afforded them but both thought those opportunities went unused in the team’s daily communication. One of them described how using communication technology “brings about a certain type of heaviness” (F5) into the daily communication process which she thought stemmed from the fact that the remote team members were not fully acquainted with the members of the localized part of the team. Interestingly, those feature team members who were located in the same newsroom felt their closest colleagues were the ones they shared an office with whereas the remote workers identified more with the virtual team.

In the news team, all journalists apart from one identified the members of the dispersed team as their closest colleagues rather than the people they shared an office with. There was a maximum of two team members located in the same physical newsroom which forced team members to actively collaborate through technology. However, with the help of PSCC and strong habits and tangible goals in idea sharing and development, the news team was able to overcome the challenges that dispersion could have induced.

Team Histories

Finally, team histories also played a role in idea sharing and development. At the time of data collection, the news team was barely two years old. It was still trying to develop its signature way of doing journalism as evidenced by the team’s efforts to develop their editorial practices and adjust their goals for creative work. In short, the news team did not have a history to lean on which made it quite agile in its work. The feature team, on the other hand, had over 20 years of history, a recognizable brand and the newspapers’ expectations that had been formed and cemented over time. Developing the team’s editorial processes proved difficult: Even if journalists in the team noticed things worth developing, such as handing out tasks, they had not been able to raise these issues to discussion and make changes. Moreover, the feature team’s goal of “hypercreativity” stemmed from its long history as the publication was known for its original approaches to topics. This made it more difficult for the team to develop editorial practices.

Discussion

This article has examined the enablers and constraints of creative work and innovation in dispersed journalistic teams in a technology-mediated work setting through a theoretical lens that combines creativity and innovation research in media (e.g., Fulton and

McIntyre 2013; Malmelin and Virta 2016; Malmelin and Nivari-Lindström 2017; Nylund 2013) as well as research on dispersed teams and the role of a psychologically safe communication climate (Gibson and Gibbs 2006; Edmondson 1999). Regarding the study's first research question, our findings suggest that factors enabling and constraining creativity and innovation in technology-mediated journalistic work relate to habits and goals in idea sharing and development, the building of a psychologically safe communication climate and specific team characteristics such as geographical dispersion and team history. Concerning our second research question, we studied how technology shapes creative work and innovation in dispersed journalistic teams and found that while providing more avenues for sharing information as well as anecdotes, for example, from the journalists' personal lives, technology also induced uncertainty into the idea development phase. This uncertainty could be alleviated with PSCC.

The two teams in this study approached ideation rather differently. While the news team dedicated time and space for ideation via technology and set tangible goals for creative work, the feature team relied more on informal face-to-face discussions and had more abstract goals for creativity. It could be argued that of the two teams in this study, the news team was the more creativity-oriented due to intentional idea sharing and development habits and tangible goals. Intentional idea sharing and development habits are about reserving time and space for ideation, actively seeking ideas in team meetings, making sure ideation includes all team members as well as setting concrete goals for creative work and innovation. The team leader is in a key position in instigating these habits, even if over time habits are also embraced and enacted by journalists. This finding describes how creativity in journalism is not fundamentally about the specific genre of journalism (e.g., "feature journalism is more creative than news journalism") but rather about other aspects, such as communication practices and team structure (cf. Fulton and McIntyre 2013; Deuze 2019)

Our findings illustrate how communication technology's role in creative work and innovation in journalistic teams is not one-dimensional but rather full of tensions. On one hand, technology is the fundamental facilitator of all communication in dispersed teams and thus also a requisite for creativity and innovation. Communication technology is needed to make creativity visible in dispersed teams as creativity manifests in interaction between team members (Amabile 1983). On the other hand, technology also induces uncertainty into creative work and innovation. This could be detected specifically in the journalists' somewhat reserved attitudes towards giving feedback and developing practices and processes when using communication technologies, which further highlights the important role of PSCC in technology-mediated journalistic work. The findings also mirror previous research in that while communication technologies provide avenues for collaboration in newsrooms, the technologies alone do not guarantee that teamwork takes place (Westlund and Krumsvik 2014; Ess 2014).

Our findings in relation to the role of PSCC for creative work and especially innovation are also in line with previous research (e.g., Gibson and Gibbs 2006). The results highlight the importance of PSCC for journalistic work specifically: PSCC enables journalists to share ideas and thoughts as well as discuss their private lives with coworkers, which allows them, in turn, to source story ideas from their personal experiences (cf. Nylund 2013). Furthermore, PSCC allows journalists to innovate new

ways of working. In our study, these processes could be detected in the news team but not in the feature team. This leads us to argue that PSCC can function on different levels in journalistic teams: It might only apply to content-related work or it might have a more profound role and enable journalists to innovate editorial practices through challenging group norms. This finding is specific to journalistic teams and warrants more examination in the future.

It should also be noted that the concept of enablers and constraints is not straightforwardly black and white. Factors that enable creativity and innovation through technology can also constrain it. For example, team dispersion can make creative work more laborious if viewed negatively but, in some cases, may also cause the team to be more mindful of including everyone in the creative process. Hence, it might serve dispersed journalistic teams well to take note of their team's characteristics (dispersion and history) and consciously work to alleviate the challenges they pose by engaging in intentional idea sharing and development practices as well as building a psychologically safe communication climate to ensure the best possible results for their creative endeavors.

Overall, our findings support what previous research on media innovation has found: Innovation in regional and metropolitan legacy media newsrooms is still more about exploitative, incremental innovation and less about explorative, "outside the box", innovation (Krumsvik et al. 2019; Malmelin and Nivari-Lindström 2017; Porcu 2017). The findings portray how change is notoriously hard to achieve in legacy media newsrooms (Villi et al. 2020; Ekdale et al. 2015; Ess 2014). However, our findings also point to a possible remedy: Building a strong PSCC could help media organizations in achieving a fertile environment for an innovative learning culture (ILC) that triggers and fosters much needed explorative innovation (Porcu 2017; Porcu, Hermans, and Broersma 2020). Supported by strong PSCC and ILC, legacy media newsrooms could be better equipped to ensure their long-term survival. However, other resources, such as time and funding, are also needed to make explorative innovation happen.

To conclude, we would encourage future research to examine how PSCC is formed and managed in newsrooms and journalistic teams. This type of research could prove valuable when developing communication processes and work practices in newsrooms in the future. When writing this, amid the COVID-19 pandemic, such processes and practices seem more important than ever, particularly in the context of technology-mediated work. Moreover, since the teams studied here are focused on content production, it might make for a compelling case for researchers to focus on R&D teams in media organizations and possibly consider the implications of PSCC for intrapreneurial units.

Acknowledgements

The authors wish to thank the anonymous reviewers and the editorial team for their feedback on earlier versions of the manuscript, as well as Jonna Leppäkumpu for her help in data collection.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Media Industry Research Foundation of Finland.

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