Communicating with the masses from isolation: What happened when local television journalists worked from home

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Abstract

In response to the COVID-19 crisis, many local TV newsrooms decided to have employees work from home (WFH) or from the field rather than from the newsroom. From a review of research on telework and WFH, we identified possible impacts of WFH on worker effectiveness, conceptualized as including output, individual growth and well-being, and group viability. From interviews with news directors and journalists and observation of remote work, we found that WFH news workers could successfully create a newscast, albeit with some concerns about story quality. However, WFH did not seem to satisfy workers individually or as a group. Lifting restrictions on gatherings might mitigate some of the experienced problems, but we expect to see continued challenges to news worker informal learning.

1. Introduction

Our on-going research project is exploring new technologies that might aid journalists and examining how such emerging technological capabilities might change the work practices of journalism. As a pilot for this study, we investigated how technology enabled journalists to work remotely during the COVID-19 pandemic. In response to the public health crisis, many (though not all) local television newsrooms required staff (i.e., reporters, photographers, producers and managers) to work from home (WFH) or from the field rather than from the newsroom. News sources implemented their own restrictions, e.g., not allowing non-employees such as reporters into a workplace.

This paper reports on a qualitative field study about the implementation of WFH based on interviews with 10 news directors (i.e., the managers of a station's news department) and observations of 8 news workers in one station. We explore how WFH was managed and the impacts it had on work and workers. As a basis for understanding the current situation, we drew on research on the impacts of telecommuting, while noting specific characteristics of newswork and differences between telecommuting and WFH that might affect the outcomes.

Our findings suggest that information technology played an important role in news workers' responses to the challenges of WFH. Under the pressure to adapt to WFH, we observed some news stations undergoing a hastened digital transformation of how they work, developing creative uses of the technologies. However, we also observed social isolation and issues with work-life boundaries having an impact on worker well-being. Finally, the interviews suggest that work from home may be becoming the "new normal" for at least some workers, while still posing challenges.

2. Literature Review

2.1 Working out of the Office by Telecommuting

We start by reviewing research on the impacts of working out of the office, drawing first on research on the impacts of telework or telecommuting, as WFH mandated in the time of COVID has a lot of similarities to the way teleworking has long been performed. By telework we mean situations where an individual worker performs their regular duties from an alternative workplace, e.g., home or perhaps a telework centre. We also include more recent articles that examine WFH during COVID specifically.

Often a teleworker works via information technology, e.g., with a connection to the employer's network and systems, and maintains contact with their manager or fellow workers via electronic media such as email, chat or video conference [1]. We conceptualize technology as an assemblage, that is, a collection of different systems, each individually selected and appropriated to address some particular task [2]. For instance, journalists typically use different applications for word processing, email, calendaring, recording interviews, tracking sources and editing video. Some of these technologies are personally selected, while many others are dictated by the employing organization. As a result, different journalists may use slightly or radically different assemblages while doing more or less the same kind of work. And as technologies change, the assemblage will also change, steadily evolving—for example, email replacing fax, and cell phones replacing landlines [3]—or in rapid jumps, as with the rise of data journalism and the addition of big-data tools.

To organize our review of the impacts of telework on worker effectiveness, we apply Hackman's [4] team effectiveness model, which

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identifies three aspects to consider in assessing the effectiveness of a team: task output, team member growth and fulfillment and team viability (parallel to organizational, individual and group outcomes [5]).

- Task output: client satisfaction, or the degree to which the group's product or service meets the standards of quality, quantity, and timeliness of the people who receive its output
- Team member growth and fulfillment: satisfaction of an individual team member's personal needs, or the degree to which the team experience contributes to the growth and personal well-being of team members, which might include team member future employment opportunities, reputation and learning.
- Team viability: the continued ability to work together or the degree to which the process of carrying out the work enhances the capability of group members to work together in the future.

We note that while Hackman focused on the effectiveness of teams specifically, the first two dimensions of effectiveness apply equally to individual work.

2.1.1 Task output. We first consider task output (or production), meaning the degree to which the teleworkers' product or service meets the standards of quality, quantity, and timeliness of the people who receive their output. Interestingly, our review of the literature on telework did not turn up many discussions regarding problems with production, perhaps because problems with production result in the telework being discontinued. Indeed, teleworking has even been found to be beneficial by limiting interruptions from coworkers and supervisors, which lets the worker focus on actual work [6].

However, literature has noted impacts on the kind of work that can be undertaken in this mode. For instance, limited opportunities to interact face-to-face could hamper the development of an intra-organizational network and so the ability to work on interdependent tasks [7]. Companies may have a free-flowing culture with ad hoc huddles to discuss problems, leaving out a telecommuter [8].

Conversely, a major concern for the manager of teleworkers is the loss of control and the perceived inability to measure performance [8]. The literature has talked about multiple types of performance measurement tools, e.g., to capture screen time, keystrokes or emails. However, the surveillance of these tools often reduces the motivation of the telecommuter and leads to more pressure, thereby negatively affecting performance [9]. An alternative form of measurement is a performance-based approach such as Management by Objectives (MBO), where performance is evaluated by the final task output. Still, reliance on this form of performance measurement may lead to a feeling of loss of control for the manager [8].

2.1.2 Team member growth and fulfillment. Turning to contribution to the growth and personal well-being of workers, the most commonly discussed impact of telecommuting has been the isolation of working from home, either professional or social isolation [7]. Professional isolation means a scenario where the teleworkers feel that they are "out of sight, out of mind" in terms of work (e.g., not being included in informal discussions). A common concern about professional isolation is being overlooked by the manager in terms of getting work opportunities and career progression [8, 10]. For instance, a manager might entrust a project to an employee because they met and discussed it informally [8], which might not happen to a teleworker. Social isolation means that workers feel personally disconnected from coworkers and their supervisor. A survey of Belgian journalists during COVID found many reported social isolation [11], a feeling repeated in many other settings [12]. It has been found that the type of job can moderate feelings of isolation. Jobs that require face-to-face interaction (e.g., through video conferencing) make workers feel less isolated in comparison to the jobs that require minimal or no face-to-face interaction [13].

A second impact of telework is on continued learning by the teleworker. Learning often flows in the network through connection and communication with coworkers and supervisors [7]. In a scenario where the employee has limited opportunity to interact with either informally, there are negative impacts on professional development. Moreover, learning doesn't just happen through one medium: the lack of physical presence reduces one's ability to learn through informal interaction with coworkers. The ability to reach out to the coworker on the next desk is hampered when teleworking [14]. Conversely, managers often feel that it is difficult to mentor remote employees [8].

Third, telework can create issues for work-life balance. Telework is often looked at positively by employees as it can provide autonomy to manage work life [7, 15] and so the ability to more flexibly balance family and work [16]. Specifically, it presents increased opportunities for women who traditionally have faced greater household responsibilities [17]. The literature has found that telecommuting moderately improves family relationships and reduces family conflicts [7, 15]. A possible outcome of the broad shift to WFH is increased acceptance of the blurring of family into work times and spaces [18].

However, the flexibility that comes with telework can also cause frustration because of the difficulties in dividing time between work and family [11, 18, 19] and an inability to know when to stop working [7, 19]. It seems like a paradox, where on one side teleworkers feel less stressed working from home in comparison to working from the office because of their ability to have more control. At the same time, they find it difficult to pull the plug on one task and focus on another [20]. It is like saying: "I have control, but I can't stop working."

2.1.3 Team viability. A final impact of telework is on the capability of group members to continue working together on an on-going basis. Information and resources often flow through relationships, so teleworkers who have minimal chance to interact informally with others, reduce their chance to form strong relationships [8]. Research has noted that face-to-face interaction is important in creating a sense of trust, which leads to strong mutual understanding, leading to better coordination and flow of ideas [8], so these can be hampered when some team members are remote. A limited ability to contribute and interact with other members around projects can also lead to poor team synergy [8] and reduced knowledge sharing and spontaneous coordination [21]. Similarly, managers report feeling that telecommuting leads to loss of team synergy and intra-organizational interpersonal networks [8]. On the other hand, technology has affordances that can support team collaboration, e.g., daily Zoom check-in meetings that help signal the start of the work day and provide some sense of connection to others [21].

In summary, the literature on telework suggests that teleworking employees can be productive, at least for some kinds of work, but may suffer from difficulties with work-life balance, loss of informal learning and isolation, leading to reduced connections to co-workers and problems coordinating work. Better technology may help mitigate these issues.

2.2 Differences between Telecommuting and WFH during COVID

While the telework literature is quite informative about the possible impacts of remote working, it is important to note several differences between traditional telework settings and the current WFH situation facing journalists, which affect how WFH was experienced [21].

First, in the case of the organizations discussed in the literature, teleworkers were often chosen as eligible for teleworking based on their possession of necessary individual attributes [8]. Looking at the narrative regarding the shortfalls of teleworking and reviewing other literature, it seems discipline is one of the important attributes that decide the success of a teleworker [7, 9, 22]. An individual with attributes of being a self-starter and being organized would also be able to better manage their work and work-life boundary [9, 10]. Finally, satisfaction and the effectiveness of telecommuting also depends on the appropriateness of the type of job for telework. However, with WFH, there was no selection: the situation demanded that all workers work from home. On the other hand, the situation does mean that disparities between local and remote workers will not arise because everyone is remote [21].

Second, in traditional telework settings, employees are typically trained in successful techniques of teleworking before they start [7, 8] and are provided with necessary resources. For instance, the literature mentions that individuals who have an in-home workspace for telework performed better than individuals who were less organized [10]. However, the exigencies of COVID often meant that workers were forced into this mode of working with little preparation either personally or in terms of resources to support work or even a space to work in.

Finally, the literature suggests that telework results in improved performance if it is done in moderation [15, 22, 23]. Research has distinguished between high-intensity and low-intensity telework. High-intensity telework means that work is often performed from home, similar to full-time, while low intensity telework means that a part of work is done from the office, and part from home. A moderate intensity of telework has positive implications on performance, motivation, and family relations of the individuals [7, 15]. On the other hand, high-intensity telework has shown to negatively impact these outcomes. Unfortunately, with COVID-driven WFH, it is usually not possible to select the option of WFH only two days a week. As well, WFH may go hand-in-hand with other restrictions on life, e.g., a lock down, exacerbating negative impacts such as social isolation.

On the positive side, it is important to note that the technology to support telework has improved greatly since the time of many of the studies cited above. Personal computing and networking are much more capable and fully integrated into work and may potentially offset some of the negatives [24].

2.3 Research questions

From the review, we developed four research questions that guided our data collection and analysis.
1. Past research has noted that the type of work affects telework success and news workers have varied kinds of jobs with different demands for

interaction, from in-field story collection to in-office reporting and production. RQ1: How do people in different roles get their work done?

2. Telework has been shown to affect individual work satisfaction and learning. RQ2a: How are news workers experiencing and managing the stress of WFH? We expected that these stresses would be less visible to managers and so perhaps under-appreciated. RQ2b: What actions are managers taking to help workers manage WFH?

3. Telework has been shown to decrease team cohesion. RQ3: What are the impacts on team cohesion? Are there substitutes for informal interaction (e.g., the proverbial watercooler)?

4. RQ4: Overall, what role does technology have in addressing the effects of WFH?

3. Methods

3.1 Research Setting: Local Television News

We start by providing some background on news work and the regular work of news workers to understand the role and limits of technology-support.

3.1.1 Reporters and photographers. The reporter is responsible for developing a story to be part of a newscast. While some stories may be developed over days or even weeks, many are completed in a single day. An initial step is to pitch the story idea to the news director during a daily meeting and get approval to develop the story. The reporter identifies sources for the story, arranges any interviews and asks the questions during an interview. The photographer records footage of the interview and what's called the B-roll, additional video to support the story, e.g., footage of someone doing a job that's being described. It is increasingly common in smaller markets to have one person, a reporter-photographer or multimedia journalist (MMJ), do both jobs.

Reporters write the script for what they will say during the report and what to use from the interviewee, working with the photographer to match recorded video to what the reporter wants to say. It takes some experience to write a script based on what was actually photographed versus what it was hoped could be photographed. The reporter might develop different versions of the story for different newscasts or the story may continue to develop and be updated.

The photographer and reporter and sometimes an editor edit the recorded video to match the script and add any needed voice-overs, using one of a number of editing programs, such as Adobe Premiere, Avid or Final Cut. For this purpose, a station will usually have a number of editing stations, computers with editing software, as well as recording booths for recording the voice-overs. Finished stories (in the form of large high-resolution video files) are stored on a server to be available for broadcast.

Reporters often appear live on camera during the broadcast to introduce their stories or they may record an introduction to be played (a "look live"). If the reporter is in the field, the live video can be transmitted to the station in several ways, e.g., by satellite, a dedicated microwave transmitter or via multiple cell phone connections used simultaneously to increase bandwidth, e.g., LiveU or Dejero.

3.1.2 Producers. Without producers, there can be no television newscasts. Producers decide which stories to include in their shows, in what order and with which presentation techniques. Producers write all of the scripts for the anchors to read during the broadcast. In many newsrooms, for stories not already covered by reporters and their photographer partners, producers are also the video editors and the graphic designers of the majority of newscast content. The producer's daily work culminates in the actual live broadcast, during which the producer coordinates directors, sound engineers, graphics editors, video feeds, camera operators, anchors, reporters, news wires and more in order to broadcast the day's information to the audience.

3.1.3 Managers. Traditionally, the role of the local television newsroom manager (the news director) includes editorial decision-making, hiring and firing responsibilities and budgetary distribution in terms of both money and time. Today, that role has expanded to include multiplatform editorial decisions across television, web, social media and streaming channels, related marketing responsibilities and many new human-resource obligations [25]. Of particular significance to this study, an important managerial responsibility in many newsrooms is overseeing the work of less experienced staff and providing feedback, mentoring and on-the-job training.

During WFH, all of this work had to adapt to the need to work from out of the office via technology support. News work has several characteristics that make it particularly challenging to support, even in traditional circumstances. Chief among those is that journalists work on strict deadlines, having to finish a story in time for the nightly broadcast or print run. Web publishing can be more flexible, but it does not remove the time-sensitive nature of the work, which has famously shifted to a 24-hour rolling deadline [26]. A consequence of the deadline pressure is a lack of time to devote to learning new technologies and new ways of working. News work is stressful also because the news being covered can be personally harrowing (e.g., fires, crashes and shootings).

Economic factors are also important in understanding how work is done. Dwindling staff in newsrooms of all types are not directly the effects of substitution of labor. The majority of journalists work for for-profit companies, leading to long-standing and on-going tensions between journalistic values and business interests [27]. In recent years, ownership of US newspapers and television stations has become increasingly concentrated, leading to greater focus on the cost of operations. The impact is borne out in research that shows a drop in public-affairs stories in local TV news in favor of fires, crashes and shootings [28] in opposition to journalists' professional desire to cover stories people need to know.

A final important factor is that journalists typically learn a lot on the job from managers and co-workers, through explicit mentoring, informal interaction and legitimate peripheral participation. A graduate from journalism school may not be skilled in every task to be performed or tool to be used when they start their job, especially as new tasks emerge alongside technological innovations.

3.2 Data Elicitation

Our study draws on 2 sources of data. The first source is semi-structured qualitative interviews with a purposive sample of 10 news directors (i.e., newsroom managers) from local television stations across the United States. Five of the news directors work in large-market stations and the other five in medium-market stations, defined as stations located in the Top 30 (large) and 31-90 (medium) 2021 Nielsen-ranked markets. All interviews were conducted via Zoom and lasted between 25 and 42 minutes with an average length of 34.5 minutes. The investigator who led the data collection is a former local television news producer coming into this study with years of newsroom experience, shared professional language and workplace cultural understanding.

News directors were asked questions about their experience managing their newsroom during the COVID pandemic. They were asked what they felt was lost or gained during this arrangement of remote work, what they learned from this experience, if they believed that remote work was to be the "new normal" for local television newsrooms in the United States, if they believe that their newsroom is "doing" good journalism, their thoughts on journalism innovation, and what they believe was the biggest challenge facing their newsroom today.

Interviews were recorded and initially transcribed using Zoom's built-in, auto-generated transcription service. A research assistant and one of the co-authors then reviewed each Zoom transcript against its audio recording and corrected the transcripts for any names or industry terminology that Zoom misinterpreted.

Second, to add to the managers' perceptions of WFH, we also observed remote work at a single station. Because of COVID, all data collection was completed remotely using Zoom. The case study included weekly attendance at morning and afternoon newsroom meetings along with observations and informal interviews. The morning meetings lasted between 30 and 60 minutes. The afternoon meetings, as is commonly the case, were much shorter, lasting between 10 and 30 minutes. Observation took place across five days in December of 2020 and January of 2021 for a total of 3 hours of meetings.

Following each meeting, the PI opened a Zoom room to observe an individual worker for an average of an hour per worker (8 hours total). Of the 8 journalists observed and interviewed, 4 were reporters, 3 producers and 1 a manager who is also the station's chief investigator. Reporters were asked questions about their WFH routine (e.g., What have you already done since the morning meeting?) as well as their coworker interactions (e.g., What's different about working with a photojournalist from home?). Producers were asked about their WFH routine (e.g., Describe your workday for me).

Meetings and news work were not recorded for two reasons: traditional newsroom case studies do not commonly involve recording observations with video cameras and the investigator was not provided Zoom recording privileges. Instead, the investigator observed each meeting, typing notes in Word. Screen captures were made of attendance rosters and story assignments for the day.

3.3 Analysis

The interviews and observations datasets were subject to both deductive and inductive coding cycles. Transcripts and observation notes were uploaded into the qualitative research software, Nvivo. For the deductive approach, the primary researcher developed codes out of the theoretical concepts from the literature review. Those codes included managerial control, surveillance, social isolation, professional opportunities, water cooler, mentorship, productivity, deadlines, work-life balance, and work relationships. These codes were applied in the first analytical cycle to the data sets in Nvivo. A second cycle allowed for highlighted passages to be combined into the themes presented in the following Findings section.

For the inductive approach, the primary researcher identified new codes that emerged during both coding cycles. Those codes included the digital

innovation and creative management topics that will be discussed in the Discussion and Conclusion section.

4. Findings

We found a lot of commonality across interviews, which was expected. Work practices are largely similar across stations, as stations in smaller markets tend to copy innovations from larger stations. In this section, we describe impacts on work and workers prompted by WFH, again organized in the three-part framework.

4.1 Task output

We first consider task output, i.e., how the work products were created. As noted above, for reporters and photographers who primarily worked in the field, technology was already available to complete stories without coming into the newsroom. Stations already possessed the necessary equipment, e.g., cameras to record and upload video, and these were just sent home with the reporters or photographers. Reporters are accustomed to having to scramble to get a story and there was a sense that learning to work under the constraints of COVID was just another challenge.

Video-conferencing played a central role in adapting to remote work. The daily editorial meetings moved from in-person in the newsroom to via Zoom. Similarly, video conferencing replaced in-person attendance at press conferences and even interviews. As one respondent commented: "Interview subjects have adapted to what we're doing right here, which is, you know, conducting interviews over Zoom as you would conduct them in person." Indeed, remote interviews were found to have benefits, e.g., some conferencing systems can automatically generate a transcript of the call or the recorded video can be uploaded to a transcription service. Respondents also noted that the shift to remote interviewing eliminated the time spent driving to interview in person, allowing that time to be used more productively, and made it possible to interview people beyond those in the local area. As one said: "You can get a Zoom with anybody, anytime, anywhere. Boom. There's your, you know, there's your interview and it's, you know, I don't hear 'no' anymore to anything. ... if I say, hey, I really want to get this great interview and they're like, Yeah, I got it. Zoom. Boom. Done. … you can talk to anybody, anywhere, and it's just, it's so great."

The available technology also sufficed for other tasks. Video editing for a story can be done on a laptop rather than at the station and the video uploaded to the station for broadcast, assuming the reporter has a sufficiently powerful laptop and sufficiently speedy internet service. Editing can even be done in the field and the video uploaded remotely, e.g., using the Wifi network at a Starbucks.

When interviews were done via Zoom, reporters did not necessarily have to go into the field at all. Reporters were provided with lighting and backdrops to equip a home studio from which they could introduce their stories using cameras with connectivity that could transmit live to the station for immediate broadcast. They could even just use a phone to record video. News anchors can similarly present from home vs. from the newsroom.

While the stories were successfully created and the news program broadcast, respondents noted some concerns about impacts on the quality of the stories. For instance, restrictions on personal contact meant no face-to-face interviews in some cases; these were carried out instead while standing at a safe distance or by teleconferencing. While these sufficed to get the story, respondents suggested that a remote interview might limit what the reporter can ask, and by diminishing the dynamics of the interview and development of rapport, limit what they can get from the interview. As one noted: "some of the stories don't turn out as interesting as they should. It's very easy nowadays to do a one person interview story because that's all, you know, you spend all day trying to get somebody on Skype and you got that"

Similarly, not having a reporter at a news conference meant that there was no opportunity to ask questions formally or informally vs. watching the broadcast. A news director said: "Our city government is meeting virtually now ... it is not a very exciting way to do it. It's kind of easier for us to watch it on YouTube, but to talk to people afterwards, it's not." There was also a sense among respondents that not being out in the community reduced creativity. As one respondent said: "We don't stumble on stories like we used to. You know, you're at home, you're not driving back and forth to work, you're not out in the community where you get somebody's idea or somebody approaches you to get a better story… Being isolated keeps us from communicating with our fellow citizens and, therefore, I think our stories are not as interesting."

When interviews were conducted via Zoom, the photographer's role was greatly diminished, which also affected the quality of the storytelling. Photographers (at least those in a non-unionized station) can ask questions in an interview, but they cannot make that contribution if they are not included in a Zoom call. In a traditional setting, they also think about visuals they can add to the story based on what they can record (i.e., the B-roll). But if interviews are held at a distance, they might be able to get only building exteriors, which are not visually compelling.

While reporters and photographers always worked in the field to a large extent and so were prepared to continue to do so, stations unexpectedly found that producers could also work from home using a laptop and Internet connection, i.e., writing the show or editing video or graphics. As one respondent noted: "What we were surprised to find out was that we could move producers to work remotely. I thought that was going to be the biggest challenge and in some days it was. However, it wasn't insurmountable. It wasn't even really that hard."

As the pandemic emerged, staff needed to quickly figure out new ways to do things. One creative use of the technology was described: creating Zoom accounts for the different feeds that would be referred to in the control room, allowing the producer to connect to them over Zoom. Another station used Discord for the same purpose. As a result, respondents found that it was even possible to produce a newscast remotely (indeed, the Democratic National Convention broadcast was directed from home, though with a lot more technology than a laptop). Someone has to be in the station control room to implement directions about which source to show (called "boothing the show") but that person could be on a call with the producer rather than sitting next to them. As one said: "They came up with this technology of boothing with this iPad. It's a Zoom call they do for their newscast. They log into the Zoom to booth the show, so they're timing it there, they're talking to the talent, they're doing all that. And that's really incredible technology". Of course, there were still technology issues to work around. For instance, a producer might identify a network feed they wanted to use in the show, but rather than simply downloading it to the server to include, they would have to ask someone at the station to retrieve it.

4.2 Team member growth and fulfillment

While the story around task output was mostly positive, remote working was not perceived by study respondents as satisfying their personal needs. Losses include the opportunity for informal one-on-one interaction both for work and for personal reasons (e.g., a walk with a colleague between shows or time in a bar after work). The latter provided enculturation as well as emotional support in coping with the stresses of the job, which were of course exacerbated by the pandemic [11]. News directors noted: "People felt very isolated and it was difficult to figure out how to help them through that." Another commented: "These [the reporters] are kids in many cases that are just out of college who have no friends in this town and all their friends were here." In other words, while professional isolation may be less of an issue when everyone is remote, social isolation continues to be a pressing problem.

On-the-job learning was particularly impacted. Because of shifts in responsibilities and working conditions even before COVID, news directors have less time to do editorial work themselves. They could, however, do "drive-by editing", i.e., looking over a reporter's shoulder as they edited a story and giving advice, or reviewing a story and giving feedback. As one commented, when people worked in the newsroom: "I may hear somebody, always keep my door open and I may hear someone talking about something and I want to chime in on how we should cover it." However, when the work is performed at home, the opportunity for informal mentoring does not exist, which news directors found upsetting. To provide training, a reporter and news director would have to intentionally set up a time for a discussion, which is difficult to fit in given the time pressure, though some reported setting up periodic group critiques and feedback sessions and one person mentioned giving training over Zoom. But the new medium took some adaptation: as one person commented, "It's hard to be critical in a nice way over the phone or over the Internet."

4.3 Team viability

As noted, the work of developing a TV newscast has mostly pooled dependencies. Each pair of reporter and photographer usually develop their story separately from others, coordinating instead with the producer. As a result, group cohesion is less of a concern than it might be in a team with strong reciprocal interdependencies. Nevertheless, respondents suggested that WFH has impacted group cohesion. For instance, to minimize chances of spreading an infection, one station had the same pairs of reporter and photographer work together long-term, but this structure eliminated (or greatly reduced) interaction with other staff. Furthermore, the lockdowns imposed by COVID reduced opportunities for informal interaction (e.g., the bar after work) that were useful in maintaining group morale.

Even though the work has mostly pooled dependencies, WFH still hindered group functioning on a day-to-day basis. Reporters could mostly work independently, but still needed to know the story they were covering and how it related to others. The distributed nature of the work led to problems with communication, e.g., not being able to easily coordinate who will do something or letting one group know what the others have done. One commented: "I think that the people who are in the

field are really starting to struggle because of that, they don't have a big picture of what's going on."

As a result, keeping track of assignments with distributed workers took extra effort. One respondent described the station's approach: "I have one EP [executive producer] who basically spent a whole day on Slack with the people working from home to figure out who's doing which assignments and so the people working from home, say, it's great. You know, I really like this. And I'm thinking, Well, it's because, you know, poor [Maria] over here in the corner, who's an EP, isn't really looking up from her computer because she's constantly updating people at home." The need for explicit interaction around work assignments particularly impacted the team's adaptability, as could be seen when managing work on breaking news stories. When everyone was physically co-present, the news director could walk into the newsroom to ask who was covering what aspects of the story and to avoid, for instance, redundant coverage of the story on different news programs. Making these decisions took more effort with remote workers and in the worst case, led to duplication of effort, e.g., multiple reporters going after the same sources.

Technology only partly compensated for direct interaction in supporting coordination. Even before COVID, newsrooms had already implemented systems like Slack or Teams for communication among co-workers or for asking quick questions. Use of these systems was reported to increase during WFH. For instance, one news director reported an attempt to replicate the face-to-face experience: "The producers, on their own, what they did was they decided to have a Zoom meeting open all day and they talked as if they would naturally in newsroom across desks via Zoom throughout the day."

These conversations would not include reporters though, who are not able to stay on Zoom while doing their work. Managers also noted that different generations of workers have different comfort with technology and different preferences, some preferring Slack and others wanting to use email or text. There was an expectation that workers be adaptable and meet senior colleagues where they want to be. News directors could dictate use of technology, but that depends on their realization that they need to do it. With all of these different channels, a final problem was maintaining awareness without overloading people. For instance, different shows or shifts might have their own Slack channels for communication, but then find it necessary to read each other's channels to be aware of the stories an earlier show had covered and how.

5. Discussion and Conclusion

In summary, technology has improved to the point where it is in fact feasible for reporters and photographers to report on a story entirely remotely and even for producers to create and produce a newscast from home, though the latter with some technological challenges. As they scrambled to adapt to the needs of the situation, news workers were able to come up with creative ways to get the work done. We observed some interesting adaptations of the technology, such as connection to the studio control room via Zoom (notably with in-person directors, audio technicians, and camera operators for studios without robotic cameras). In other words, the COVID pandemic acted in some cases as a prod towards digital transformation of the work [29].

A key theoretical question is, what factors in local TV news made WFH as successful as it was, that is, for what other kinds of work might WFH be equally successful? As noted, the work of TV journalism has primarily pooled dependencies, with the producer in a central role, coordinating the work of the reporters and interfacing to other members of the production team. It may be that the limited interdependencies was one of the reasons that the shift to WFH worked as well as it did. Work that is more tightly coupled would presumably be harder to carry out in a distributed mode. It is also important that reporters were used to working from the field and had the training and equipment to do so, though it was a shift to not come to the newsroom at all. That familiarity might be uncommon in other professions.

In light of the apparent success of WFH, many of the news directors interviewed (similar to many other managers) were considering continuing this mode of work even when the public-health needs abate. However, given the number of technicians who would need to remain in-studio, we suspect that producers will likely follow this procedure only during COVID waves. There are also unanswered questions about the impact of remote producers on the visual quality of the newscast and whether it will be acceptable to viewers in the long run. Respondents were notably more confident about continued WFH for reporters saying: "I don't know if our reporters are going to come back." "There may really be no reason for the MMJs to travel into the station, do whatever little thing they're doing there and travel back out."

There are clear advantages to employees in this mode of work, e.g., not having to commute. The organizations also benefit, e.g., in the savings of a physically smaller and less expensive newsroom. However, there are costs that seem to not be visible to the managers. For instance, employees faced numerous technical challenges, such as the data

speeds needed to transfer large files, as well as bearing the costs of acquiring technology (laptop, Internet, phone) shifted in some cases from the employer to the employee. There is also a cost to workers in the lack of individual support, leading to feelings of isolation, lack of enculturation and missed opportunities for teaching and learning. Work-life balance also was impacted, both by WFH and by the stresses of the pandemic.

If WFH is to be "the new normal", it is important to identify ways to mitigate the negative outcomes. As the threat of COVID starts to recede, it seems likely that reporters will begin socializing in person again, which could address emotional support and possibly enculturation. Enculturation might also be supported by establishing "virtual watercooler" sessions that enable informal interaction even in the absence of face-to-face encounters. However, providing opportunities for informal learning or hands-on mentoring seems harder to address when people are working in a distributed fashion rather than in a shared workspace. Technology might provide a partial solution. For instance, a system like Twitch would enable a newcomer to watch someone else working as a kind of peripheral participation or for a manager to look over a worker's shoulder as they perform a task. We wonder though if workers will be willing to spend time on such activities given the pressures of their own jobs. It might be workable if such a broadcast could be running in the background, enabling someone to pay partial attention and then tune in or ask questions when they saw something interesting.

A final concern with continued WFH is that responsibility for different kinds of work may shift in unexpected ways. One respondent noted in particular the potential impact of changes on producers as the central node in the workflow, saying: "With every so-called efficiency that we come up with due to technology, what really happens is you put that job, whatever it's come down to, onto the producer." For instance, the effort noted above to keep up-to-date on what work reporters were doing became extra work for an executive producer. It is notable that all of the news directors interviewed commented on the difficulties in hiring and retaining producers. Longer-term, Willocks [29] forecasts shifts in the mix of full-time and contract employees as it becomes easier to bring someone in for a short period. The economics of the news industry push towards reducing costs and many stations already rely on part-time contract employees. WFH could accelerate this trend.

In summary, the contribution of this paper is to synthesize past research on the impacts of telework and to show how these shift in the case of WFH. The

study shows that technology and creative adaptation was sufficient to allow television journalists (reporters, photographers and producers) to successfully create a news broadcast from home. However, we also find that concerns raised about the impacts of telework on social isolation, opportunities for informal learning, and on team coordination still apply to WFH, despite advances in technology. Continued use of WFH will require further adaptations to address these issues.

Like all studies, the work presented here has limitations that might be addressed in future work. The main limitation is the scope of the data collection. As the situation was emergent, we conducted a short-term study. This limitation could be addressed by broader data collection, e.g., a survey that followed up some of the themes of this paper, such as employee satisfaction with remote work. Future work could also address themes found in prior work that were not emphasized by our respondents, such as the role of team work and team synergy and how it was harmed or maintained, the role of personal characteristics or situations in successfully coping with WFH or the impacts on work-life balance. Finally, given our findings regarding the negative impacts of WFH on enculturation and training, it will be interesting to see how circumstances of WFH affected workers who joined news organizations during COVID and how they are successful in the longer term.

6. Acknowledgements

7. References

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