Cats, Kids, and Video Calls: How Working From Home Affects Media Self-Presentation

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COVID and social distancing have fundamentally altered the use of digital media, especially video communication. This has promoted speculation about "context collapse" and how people maintain a distinct professional persona when working from home (WFH). We assess the effects of this changed media use on self-perceptions. We use personality surveys and interviews to examine video versus offline self-presentation before and during COVID, comparing samples of students with office workers. Personality measures indicate that, compared with offline, participants generally project a more positive self-image when using video, even during the pandemic. Follow-up interviews suggest this arises from performative strategies adopted to address challenges of using video in new contexts. Our participants exploit the Affordances and Control of video to actively appear positive. When WFH, students challenged by having to use video with large unfamiliar Audiences, can avoid social awkwardness by disengaging. Office workers are less likely to disengage, instead relying on preparatory strategies to avoid context collapse. We discuss implications for media theory, design and the future of work.

HCI Keywords: HCI Theory > Social Theory, Personal Systems > Personal Tools, Collaboration Tools > Collaborative Systems

Keywords: Self-presentation, personality, video, media theory, affordances, Audiences, COVID, students, office workers, Working From Home.

1. Introduction

The COVID pandemic and social distancing have induced radical disruptions to work and learning practices. Working from home (WFH) has reduced offline interactions while increasing digital communications, especially video. Pre-COVID, work teams often combined digital communications with various offline interactions, including formal meetings, water-cooler conversations, and impromptu chats (Hinds et al., 2002; Kraut et al., 2002; Nardi et al., 2000; Nardi & Whittaker, 2002; Olson & Olson, 2000). In educational settings, Pre-COVID learning often took place in physical classrooms and small group settings that promoted informal offline interactions (Dearden, 2011; Pashler et al., 2008; Phillips & Soltis, 2015). During COVID, people attempt to replace these heterogeneous forms of offline communication by combining videoconferencing with other digital tools. These changes have promoted speculation about the impacts of this transformed media usage, specifically whether WFH has blurred boundaries between home and work roles. The current study examines how these changes affect people's self-presentations in video and offline communications.

The shift to digital interaction has led many recent popular media articles to speculate about the difficulties of WFH (Dans, 2020; Stieg, 2020; Wen, 2020). These articles identify potential issues surrounding "context collapse" (Marwick & boyd, 2011), as WFH makes it challenging to maintain clear separations between home and work personas. Context collapse was first observed in social media settings, where a mixture of audiences and contexts means that posters can lose sight of their intended audience, leading them to post inappropriate material (Bødker, 2016; Leshed et al., 2014). These challenges of retaining distinct boundaries across settings are exacerbated by the pandemic. People are now forced to appropriate domestic spaces for work while negotiating childcare and dress code, all of which potentially compromises their professional persona. The widespread use of video in home settings means people also have to deal with unexpected intrusions from pets, children, and other household members. WFH also means that video is now being deployed in multiple, potentially confusable, ways. Other articles note additional challenges with video communication, documenting "Zoom fatigue" (Fosslien & Duffy, 2020), resulting from incessant video meetings, as well as distractions arising from constantly seeing one's image while talking (Bailenson, 2021).

This paper explores the challenges of WFH by examining video versus offline self-presentations before and during COVID, for students and office workers. We evaluate changes in students' self-presentation as WFH radically reconfigures interpersonal communications by increasing their reliance on video for formal instruction. WFH students experience video in large impersonal groups through Zoom classes, contrasting with the small intimate online audiences they videoed with pre-COVID. We also examine how self-presentation is influenced by job type by comparing students with office workers working from home during the pandemic. In contrast to students, office workers have greater pre-COVID experience using video in professional settings. However, WFH means that workers now experience video more extensively and for new functions such as work check-ins. For both groups, pandemic social distancing now restricts offline communications to familiar

audiences, primarily involving family or housemates.

Following prior work (Taber & Whittaker, 2018, 2020), we assess self-presentation differences between video and offline communications using a mixed-method approach that combines standardized personality surveys and qualitative probes. We use personality surveys to quantify self-presentation and systematically assess how people present themselves offline compared to using video programs such as Skype, Facetime, and Zoom. Personality is an intuitive psychological construct that allows us to interpret others' behaviors and understand how we present ourselves (John et al., 2008; Soto & John, 2017). We combine personality surveys with follow-up probes that explore exactly how media use affects self-presentation.

Research Questions: We explore the following questions:

- **Media differences:** Do people present themselves differently when interacting offline versus using video, and if so, how can we explain these differences?
- **Effects of WFH:** Are self-presentations affected by WFH, and what strategies do people use to navigate potential context collapse?
- **Occupational differences:** Are there differences between office workers and students in their media self-presentation when WFH?

We hypothesize the following effects of WFH. We expect that radical reconfigurations in media use will elicit challenges in video self-presentation. Prior work suggests that people tend to present themselves more positively over digital media (Chou & Edge, 2012; Jackson & Luchner, 2018; Mehdizadeh, 2010; Uski & Lampinen, 2016; Wang et al., 2016; Waterloo et al., 2018; Yau & Reich, 2019). Furthermore, pre-COVID students mainly use video to interact with intimates such as friends and family. We therefore anticipate that pre-COVID students will project an affirmative self-image over video that emphasizes positive personality traits compared with offline. Following WFH, however, students will encounter challenges adjusting their self-presentation. Their video experiences now include larger groups of unfamiliar people through Zoom lectures, which threatens context collapse (Marwick & boyd, 2011). We anticipate that this new professional context will make it harder to project positive traits, reducing differences between video and offline self-presentations. Despite the new challenges of context collapse, we nevertheless anticipate that office worker's prior experiences with video will lead them to be more successful in projecting a positive professional work persona when WFH.

These are important questions to address; if self-presentation is changed by enforced use of video when WFH, this has practical implications for how and when we use video. It should also lead us to adjust our expectations about online communication when WFH and suggest ways to redesign video tools.

2. Related Work

Here we review self-presentation, context collapse, and how personality psychology and affordance theory can contribute to how we understand these concepts. We also review

how different aspects of media influence communication.

2.1. Self-Presentation

Self-presentation is a complex construct. We define it here as how people present themselves in order to influence how others see them (Leary & Kowalski, 1990). One well-established account of self-presentation is provided by Goffman, who describes a dramaturgical approach. This views interaction as a performance, where an actor performs some sort of self for an audience (Goffman, 1982). In this perspective, the actor may not always present themselves entirely consistently. Instead, the actor reveals or hides different aspects of themself in response to their audience's expectations, which Goffman calls impression management. The performance is an act of self-presentation because it is intended to convey something to the audience about the person performing. Goffman notes that the awareness of this fact often leads performers to become "merchants of morality", concerned with presenting the impression of a moral and upstanding idealized persona when it may be too difficult to present an impression authentically. In other words, an authentically moral person naturally gives off impressions of such, while others may simply perform that impression. Goffman also characterizes two performance spaces, the front stage, where audience directed impression management happens, and the backstage, which the actor does not intend the audience to see.

While this performative perspective works well for in-person self-presentation, where the audience is co-present, social media's asynchronous nature may necessitate a new metaphor. Hogan therefore describes self-presentation on social media as an exhibit instead of a performance (2010), distinguishing between the audience (who one interacts with in real-time) and artifacts (saved performances that a chosen audience view at their convenience). Artifacts in an exhibit are curated before being consumed by an audience, just as a person proactively chooses which photos to post on their social media profile. Likewise, one can control the audience who sees these photos. The dramaturgical perspective also argues that there are multiple realizations of the self, as people present different facets of themselves flexibly depending on the situation or the self-presentation they want to convey. Such performances are subject to warranting, so that online dating profiles make it possible for people to fib about hard-to-validate attributes so as to appear more desirable (Hancock et al., 2007), an example of an idealized presentation.

Another perspective on the multifaceted nature of online self-presentation comes from Baym, who notes another critical attribute. Digital identities are distinct from one's embodied self, yet still represent facets of the person (2015). For example, one might have a self-presentation of an effortlessly cool consumer of coffee on Instagram, while maintaining this as entirely separate from one's professional self-presentation on LinkedIn. Both might be true of the person, but they become separated, "disembodied" identities. Said media presentations are disembodied because they are separate from the physical bodies (as in Hogan's actor/artifact distinction), made up only of the information that the presenter chooses to share. This shared information forms the entirety of the identity, meaning that simple cues such as photographs (Baym & Ledbetter, 2009), types of information included

on a profile (Acquisti & Grossklags, 2005), and social group membership (boyd, 2006) can be artfully curated to convey something particular about a disembodied identity. Ironically, such a paucity of cues can also mean that it becomes more difficult to convincingly present an entirely inauthentic self, as the audience looks to unintended, as well as intended, signals when interpreting identity (N. Ellison et al., 2006).

These performative perspectives are important because they help speak to context collapse, a self-presentational issue on social network sites, arising when people are unclear about their exact audience (boyd & Ellison, 2007; Marwick & boyd, 2011). Context collapse occurs when multiple contexts intersect, and performances begin to mix across audiences. For example, if a worker brought their child to work, their typical "office worker" performance would begin to collapse into their "parent" performance, potentially altering how their co-workers or their child understand them. If we accept that self-presentations are performances tailored to specific audiences and contexts, how can one person maintain separate performances for every potential online audience? One approach is to present a bland, vanilla self that is acceptable to the broadest possible audience (Hogan, 2010; Pitcan et al., 2018). Another might be targeting specific presentations to media that have restricted audiences (Taber & Whittaker, 2018), or by maintaining separate accounts on one media where each account has its own specific audience (Taber & Whittaker, 2020). While these perspectives help us understand self-presentation, it can be challenging to measure self-presentations using only these theories. To help us quantify self-presentation, we look to personality theory.

2.2. Personality

Another common framework for analyzing and measuring self-presentation is personality theory. Here, we review personality psychology (and specifically the Big Five (John et al., 2008; Soto & John, 2017)). In trait-based personality psychology, traits are considered relatively stable predictors of behavior. For example, if someone is extraverted, they are likely to behave in an outgoing and gregarious manner across different situations. We see traits and self-presentation theories as working together. Self-presentation theories are helpful because they create a conceptual lens to understand how a situation might constrain and influence people's behavior. Traits are helpful because they allow for the quantification of stable behaviors.

Personality theorists generally use the "Big Five" taxonomy, using the acronym OCEAN (John et al., 2008; John & Srivastava, 1999; Soto & John, 2017) to characterize 5 main traits: (O)penness to Experience, related to intelligence, aesthetic sensitivity, and curiosity; (C)onscientiousness, related to productivity, time-keeping, and organization; (E)xtraversion, related to sociability, energy level, and assertiveness; (A)greeableness, related to trust, compassion, and warmth; and (N)euroticism, related to anxiety, depression, and emotional volatility. Traits are assessed using surveys asking people to rate their agreement with self-descriptive statements such as: "I am someone who is emotionally stable, not easily upset" (assesses Neuroticism trait) or "I am someone who makes plans and follows through with them" (assesses Conscientiousness trait). Appendices A and C

provide details of the exact survey questions that probe the behaviors that are relevant to each trait. These traits have been validated across many studies, and shown to be reliable predictors of people's behavior (John et al., 2008; John & Srivastava, 1999; Soto & John, 2017). A common criticism of traits is that they are typically self-reported, leading to a social desirability bias (Ellingson et al., 2001; Konstabel et al., 2006; Marshall et al., 2005). However, there is a large body of work on stranger ratings (where people who do not know the person rate their traits), which are largely consistent with self-reports (Borkenau & Liebler, 1992). Observers can also infer traits from objects and environments, whether physical (Gosling, 2009; Gosling et al., 2002; Naumann et al., 2009) or digital (Gosling et al., 2011; Gosling & Mason, 2015). Thus it is possible for strangers to accurately infer traits from the layout and objects in a student's dorm room as well as their Facebook profile (Gosling et al., 2002, 2011; Vazire & Gosling, 2004).

The current study uses personality measures to examine behavior in video versus offline settings as WFH changes important aspects of the interactive context. To illustrate how traits may be affected by different conversational settings, Figure 1 provides trait definitions offering examples of how the expression of big 5 traits may be manifested for different contexts, audiences and topics.

The Openness to Experience trait is realized through behaviors that reveal curiosity, creativity and imagination, but the exact expression of these behaviors might be influenced by different types of video conversation. A video conversation about an unfamiliar topic with an unknown audience might stimulate greater curiosity and imagination. In contrast a conversation about a known topic with a familiar audience is much less likely to promote novelty and creativity. Signature behaviors that reveal Conscientiousness are being careful and diligent. Such behaviors are more likely to emerge when conversing over video in professional contexts where there is a need to project an organized and well-prepared persona. In contrast, there is less need to appear well organized when holding personal, casual conversations which are impromptu in nature. Extraversion is signaled by outgoing social behaviors where one actively enjoys interactions with others. Such gregarious behaviors are likely to be more prevalent when talking to familiar people such as friends and family. In contrast outgoingness may be reduced when talking to strangers which may induce inhibition. Agreeableness is revealed through interactions that are warm and trustful. These behaviors are more likely in settings that are comfortable and intimate but decrease when the setting is unfamiliar, where conversations may instead be seen as shallow and impersonal. Finally Neuroticism is signaled by behaviors such as being anxious, moody or negative, all of which are more likely in conversations featuring unpredictable topics such as when talking to strangers. Feeling anxious awkward and self-conscious is more likely when talking to large groups of strangers about unfamiliar topics.

Figure 1: Trait Definitions and Examples: For each trait we provide signature behaviors and examples of how these behaviors might be affected by different audiences, settings, and topics.

TRAIT	DEFINITION	EFFECTS OF VIDEO CONVERSATION AND CONTEXT ON TRAIT SELF-PRESENTATION
Openness to Experience	Intellectually curious, creative, and imaginative	Openness increased in video conversations discussing novel topics, which should stimulate participants' imagination and creativity. Decreased when talking about known topics.
Conscientiousness	Careful and diligent	Conscientiousness increased in professional video conversations where there is a need to carefully prepare and organize. Decreased in personal, casual conversations that are likely to be more impromptu.
Extraversion	Outgoing and social, enjoying interactions with others	Extraversion increased in video conversations with known audiences, who are likely to be responsive and sociable. Decreased with unfamiliar audiences where people are likely to be more inhibited.
Agreeableness	Considerate, kind, generous, and trusting	Agreeableness increased in video conversations held in intimate familiar settings. Decreased in large scale conversations with unfamiliar settings which are seen as more superficial and impersonal.
Neuroticism	Anxious, moody, and subject to negative feelings	Neuroticism increased in video conversations with less predictable topics and unfamiliar audiences where there is a need to manage one's emotions to avoid feeling awkward and self-conscious. Decreased in conversations with predictable topics and audiences.

Our work explores behavior on communicative media using traits to quantify and compare self-presentations. However, if we want to understand elements of the environment, situation, or media that people may find themselves in, we also need a way to theorize about these. Furthermore, since we want to investigate how context collapse might alter self-presentation, we need a way to characterize and compare contexts. Media can influence how people self-present (Baym, 2015; Taber & Whittaker, 2018, 2020). Personality alone can't fully explain why people might act one way when in person and another when on a video call. To better understand this difference, we now discuss media affordances, as they provide specific ways to theorize about and understand differences between media in different settings.

2.3. Affordances

We can use affordances to understand behaviors on different social or communicative media (Baym, 2015; DeVito et al., 2017; Fox & McEwan, 2017; Walther, 1996). Affordances describe how people perceive a medium's features regarding how people interact with them. Affordances are helpful ways to analyze social/communicative media since they describe what users perceive to be possible rather than capturing objective technical features that might change over time. Communicative media each have distinct affordances

that influence users' interactions with the medium. Devito et al. (2017) present a taxonomy of affordances for different social media, which is general enough to apply to other communicative media types. They identify three broad categories of affordances related to the Self, Other Actors, and Audience. The Self includes subcategories of presentation flexibility, content persistence, and identity persistence. These subcategories relate to the ability to present the self differently, how long content is accessible and editable, and self-presentations' stability. Other Actors, or how other users can interact with the self, includes content association and feedback directness. These aspects relate to how others can link content to us and how direct that feedback is. Finally, Audience is viewed through transparency and visibility control, addressing how easy it is to understand who sees content and control over who sees which content. Although Devito et al. apply this framework exclusively to social media, we explore whether affordance frameworks can also be applied to other communicative media such as Video calls or Offline conversations.

Early research on Computer-Mediated Communication also used an affordances perspective. A long history of work explains differences in communication processes and outcomes resulting from media differences (Clark & Brennan, 1991; Fussell et al., 2004; Kraut et al., 2002; Whittaker, 2003a; Whittaker & O'Conaill, 1997). For example, researchers used analytic frameworks such as grounding (Clark & Brennan, 1991) to explain how media such as texting with affordances of being asynchronous lead to more verbose conversations because of the absence of incremental feedback (Oviatt & Cohen, 1989). In the same way, differences between video and phone-based conversations are explained in terms of the non-verbal information offered by the visual channel about important objects (Gergle et al., 2013; Whittaker et al., 2003) and other participants (O'Conaill et al., 1993; Olson & Olson, 2000; Sellen, 1992).

Based on affordances theory, a large body of work has assessed differences between mediated and offline communication for collaborative work. Despite many potential benefits of online tools, prior work shows that offline collaborations are more efficient and productive. Sharing a physical environment makes it possible to have impromptu conversations, engage in frequent rich informal interactions, and straightforwardly share visual resources. In contrast, mediated communications are less frequent, more formal and task-oriented (Kraut et al., 2002; Olson & Olson, 2000). And while dedicated video and object sharing environments have been designed to share rich visual information (Fussell et al., 2004; Gergle et al., 2013; Whittaker et al., 1993), these do not fully emulate offline interactions (Kraut et al., 2002; Olson & Olson, 2000).

Fox and McEwan (2017) examined the impact of affordances on video calls and several other forms of social media such as Facebook. They compared a broad set of media, including offline, having people rate different media for a set of ten affordances identified in prior literature. The affordances were: accessibility, bandwidth, social presence, privacy, network association, personalization, persistence, editability, conversation control, and anonymity. They used confirmatory factor analysis to check fit and found a range of Cronbach's alphas from .78-.95, indicating that an affordance framework is broadly applicable to social media (Taber & Whittaker, 2018, 2020) as well as communication media. Fox and McEwan (2017) also found that offline communication had perceived

drawbacks compared to other media. For example, it was seen as ephemeral, less accessible, and providing reduced control.

Affordances therefore, provide a valuable and productive way to conceptualize and quantify the social environment of media. The current paper applies generated themes of Control and Expressiveness to video calls. Control relates to the user's ability to manage aspects of the conversation, particularly how information is shared with the other party and the ability to view and edit content before it is sent. Expressiveness relates to the ability to convey rich emotional information through a channel.

Overall, prior work discusses essential differences in media self-presentation and how these might be expressed through personality (DeVito et al., 2017; Taber & Whittaker, 2018, 2020). We extend that prior research by directly comparing self-presentation across media, across settings and for different types of occupation using mixed methods. We conduct three studies, one with a sample of pre-COVID students and two others from students and office workers doing WFH. We examine differences in how people view self-presentation through communication media in different work/study contexts in order to investigate potential effects of context collapse.

3. Study 1: Pre-COVID students' self-presentations in video and offline.

We begin by assessing student's pre-COVID video self-presentations. Self-presentation on social media platforms exhibits a social desirability bias compared with offline, emphasizing positive personality characteristics like Extraversion and Openness while de-emphasizing negative ones such as Neuroticism (Taber & Whittaker, 2018, 2020). Therefore, we wanted to know whether such positivity is also present in video.

3.1. Method

Participants

Our first study was conducted pre-COVID during Spring 2018. We drew student participants from a large US University who participated for class credit. There were 73 participants (53 women, 19 men, 1 preferred not to state), aged 18-25, (M = 19.89, SD = 1.77), 32% Caucasian, 28% Asian/Asian American, 24% Hispanic/Latino, 9.5% Mixed Race/Ethnicity, 5.4% Black/African American.

Survey and Interviews

We used a method that has been deployed successfully in prior work (Taber & Whittaker, 2018, 2020), administering a standard personality survey twice, before and after an interview about video usage. Participants completed both surveys and the interview in a single session which lasted 30-45 minutes.

Participants first assessed their regular offline personality using the 44 item Big Five Inventory (BFI) (John et al., 2008). The BFI is a standard personality survey deployed widely and has been used successfully in similar work (Taber & Whittaker, 2018, 2020). People rated their agreement with self-descriptive statements such as: "I am someone who makes plans and follows through with them" (assesses Conscientiousness trait). The 44 Item BFI questions are listed in supplemental material. We also modified the survey to probe self-presentation when using video. The second time participants completed the BFI survey, we modified each question to assess personality using video. Participants, therefore, answered the following question: e.g., "*On video*, I am someone who makes plans and follows through with them" (assesses Conscientiousness trait on video). Previous studies show that participants can interpret modified survey questions (Taber & Whittaker, 2018, 2020) straightforwardly.

Before responding to the modified personality questionnaire, participants discussed their behavior over video in an offline semi-structured media interview. The interview probed self-presentation on video and offline, again based on questions used in prior work (Taber & Whittaker, 2018, 2020) (see supplemental material). These questions addressed: how participants generally use video, which people they interact with using video, how video influences their relationships, if participants feel they can control their self-presentation when using video, differences between offline and video self-presentations, concluding with questions addressing unique attributes of the medium (the self-facing feed on video). Participants were encouraged to expand upon their responses by follow-up questions. We contextualized these questions by asking about the use of common apps such as Skype, Facetime, or Zoom, both on phones and computers.

3.2. Results

Survey Analysis

We first analyzed the surveys using paired sample t-tests for each of the five OCEAN traits (See Figure 2). Results largely confirm our expectation of greater social desirability when using video. Compared with offline, people accentuated positive traits. Their ratings indicated lower Neuroticism, but higher Extraversion and Agreeableness scores when using video. Openness was an exception, as ratings were lower for video, and we discuss this below. There were no differences in Conscientiousness ratings between offline and video. We now turn to the interview analysis, which offers potential explanations for these results.

Figure 2: Personality survey differences for Pre-COVID. Over Video, participants report higher Extraversion and Agreeableness ratings but lower levels of Neuroticism and Openness.

Trait	**Finding**	**Offline Mean**	**Video Mean**	**d (effect size)**

Openness	**Offline > Video**	**3.73**	**3.59 ****	**0.36**
Conscientiousness	No differences	3.29	3.32	0.08
Extraversion	**Offline < Video**	**3.46**	**3.90 *****	**0.63**
Agreeableness	**Offline < Video**	**3.71**	**3.82 ***	**0.30**
Neuroticism	**Offline > Video**	**3.29**	**2.65 *****	**1.12**

Note: asterisks show statistical significance levels. *** $p < .001$, ** $p < .01$, * $p < .05$, $df = 74$. Rightmost column d shows effect sizes.

Interview Analysis

To probe these survey differences, we analyzed 64 semi-structured interviews. First, we transcribed and analyzed interviews using reflexive thematic analysis following Braun et al. (2018). Four trained analysts conducted an inductive, exploratory analysis to identify initial codes relating to participants' self-presentation and how the facets of video/offline influenced that self-presentation. Next, we transformed codes into themes over subsequent rounds of analysis by clustering codes expressing similar meanings, phrasing/language, or related ideas (Braun et al., 2018). For example, participants repeatedly mentioned using video to interact intimately with family and friends, but talking to a broader set of people when offline. These codes coalesced into the Audience theme. We then linked themes to specific personality traits to explain the differences seen on the surveys. For similar examples of this analysis process, see (Buehler, 2017; Taber & Whittaker, 2018, 2020; Yau & Reich, 2019).

After identifying and discussing recurring themes, the four analysts defined a codebook. The codebook contained descriptions of each theme, inclusion criteria for codes, as well as representative examples for each theme. The codebook went through 4 revisions until it was finalized, with themes refined and disagreements about examples resolved by discussion between analysts. The analysts reached complete agreement in each revision. The lead analyst frequently re-familiarized himself with interviews and checked analysts' codes to ensure that data was consistently interpreted, bringing up inconsistent items in regular discussions.

Interview Findings

Participants discussed the specific video technologies they used. They talked almost exclusively about two technologies: Skype and Facetime, and almost never mentioned Google Meetings or Microsoft Teams. Furthermore, participants did not describe using Zoom, although, as we shall see, they discussed it much more frequently in studies 2 and 3. Participants also made few distinctions between how these technologies were used, with

the one exception that participants mainly used Skype with family members and used Facetime for peers, including friends and romantic partners.

We now present the main interview themes and explore how these relate to the self-presentational differences identified in the survey analysis. Our interviews identified three main themes that participants felt influenced their self-presentation, which concerned Expressivity, Control, and Audience. We supply frequency counts for each of these.

Expressivity: Video supports rich interactive multimedia conversations. Confirming many prior studies (Fussell et al., 2004; Kirk et al., 2010; Kraut et al., 2002; Olson & Olson, 2000), participants noted the expressive affordances of video. We coded comments with the theme of Expressivity if, for example, participants mentioned being able to easily elicit or express emotional information and avoid misunderstandings. These comments highlighted how video provides rich visual information about other conversationalists' reactions and their context. Interviewees also talked about how straightforward it was to communicate with others. They observed how video allowed them to directly express their emotions or see the real-time reactions of others. Twenty-five (40%) participants made a total of 37 comments discussing such properties. Several noted how this led video communications and their resulting self-presentations to be direct, unambiguous, and authentic.

In the following interview, P17 notes that using video makes it straightforward to express multiple types of rich interpersonal information. Video not only provides context but reduces ambiguity and miscommunication. Many participants discussed the importance of seeing others' emotional reactions, making conversations expressive and more easily interpretable: "you can show a lot more emotion and feel more- and express your feelings and there's less miscommunications". Using a rich Expressive medium such as video also seemed to make the communication feel "personal":

> Yeah, it just kind of helps to have that more personal experience of talking to someone and being able to see their face and maybe show them something or just be able to see their reaction instead of just a text that you can't really tell what's going on and I feel like you can show a lot more emotion and feel more- and express your feelings and there's less miscommunications (P17).

P62 also observes the direct benefits of seeing the other person's facial expression. Tone can be difficult to convey effectively or even hidden in other media, whereas our participants described that video seems to have an intrinsic Expressivity that can be difficult to replicate in other media.

> Just because you can see their faces, and kind of see their expressions and when they talk about things, you get more out of it by seeing how they talk about certain things, and like, so, if my friend is stressed out, and she were to say that email or texting, even phone call 'cause like, tone doesn't always mean what it is, but when you look at her expression you can kind of see how stressed out she is, versus if she was like, "hey, I'm stressed out," but either you think she's really stressed out or not so much, so you get more context of what's going on (P62).

Video Offers Self-Awareness that Supporting Enhanced Control. These observations suggest that video has much in common with offline communication supporting rich, expressive synchronous interactions. However, confirming other work (Kirk et al., 2010; O'Conaill et al., 1993; Olson & Olson, 2000; Sellen, 1992), it was clear from participants' comments that

they did not judge video and offline communication to be equivalent. Many participants observed key attributes that differentiated video from offline communication. In particular, they drew attention to the additional Control video offered over their self-presentation, which seemed to be mediated by enhanced self-awareness.

One pronounced difference is that on video, unlike offline communication, people can often see themselves. Our participants were very aware of this, with 42 of them (65%) making a total of 72 Control comments describing how the self-facing video increased their self-awareness and sensitized them to how they appeared. We coded instances of this theme when participants discussed knowingly using elements like the self-facing video feed to alter their self-presentation. For example, the following participant talks about the self-facing video. She jokes about how enhanced awareness of how she appears, allows her to actively modify her self-presentation.

> Normally, I guess, when you're talking to someone face-to-face you're not that aware of your own facial features or like your body language. But when there's something to stare at constantly reminding you and you're like, "Oh my God, I look ugly right now." (laughs). And then you will shift to adjust however you're looking right now. (P8).

Somewhat counterintuitively, this self-awareness did not seem to promote negative self-consciousness. We already noted that survey scores for Neuroticism were lower over video than offline, and self-presentations over video perceived to be more Extraverted and Agreeable. Why then was video perceived so positively? As we see in the above interview, while potentially distracting, the increased self-awareness afforded by self-facing video nevertheless enhanced participants' Control over their self-presentation. Consistent with other social science research (Chou & Edge, 2012; Halpern et al., 2017; Michikyan et al., 2015), real-time visual feedback enabled participants to be more strategic about their self-presentation, to performatively control what they wanted others to see. For example, on seeing how she appeared on video, P8 responded by: "shift[ing] to adjust however you're looking right now".

The following participant P14 also describes how video enhanced control over self-presentation. For example, it allowed her to show just her face or her entire room. She contrasts this with offline communication, where conversants can freely choose where to focus their attention: "in person it depends on whatever that person wants to focus on".

> you get to choose what to show on Facetime and what that person is going to see from you. So if I just wanted them to see like my face or if I wanted I could let them see my whole room. Like compared to in person it depends on whatever that person wants to focus on (P14).

In extreme cases, participants used such editorial control to keep important aspects of their appearance secret from potentially judgmental audiences. For example, the following participant dyed her hair and often wore make-up but made extensive efforts to prevent her conservative parents from knowing this. She used the additional control offered by video to carefully plan how she would appear when Facetiming her parents, even restricting how much she moved her head so they wouldn't see her blonde highlights! It is hard to imagine being able to keep these key features of one's appearance secret when meeting one's parents face to face:

Yeah, also, well, also my parents didn't know I had blonde hair for a long time. So I would also have to tie my hair back and like, sometimes wear a hat, but that'll look kind of sus [suspicious]. So I'll try not to move my head left or right, so I'll tie my hair back when I know I'm going to see them. And they don't like when I wear makeup, so I wouldn't wear makeup when Facetiming them (P7).

However, such control is not limited to physical appearances. For example, the following participant first describes how video helped control insecurities about their body, but then observes how it allows them to actively moderate conversational behaviors and appear more outgoing over video.

Um, I mean all a person can see is like how you present yourself so I feel like any insecurities you have like if you don't want to show your body or whatever, you don't have to. I don't know. I guess you have to be kind of…you have to be mostly who you are, but you could be more enthusiastic (P65).

P65 also notes that disengagement is a potential strategy if one feels insecure in a video communication: "if you don't want to show your body or whatever you don't have to". In addition, one can present oneself more enthusiastically if needed. P65 and the interview with P3 below show that participants tended to use the latter tactic when they talked to intimates. Thus, disengagement is a possible strategy if someone is feeling insecure. However, with friends and family, it makes more sense to instead be more performatively cheery in communicating positive emotions over video:

If I'm excited about a certain thing and I want to tell my family or my boyfriend through text, then I'll probably just use capital letters or emojis. But through video calls I can show through my face how exciting something actually is and raise my voice or use a higher pitch than I would usually use in person (P3).

Additionally, video communication often takes place in a personal space, potentially reducing worries about self-presentation. The effect of a personal, controlled space reducing inhibition echoes other work characterizing how people feel that they can be more authentically "themselves" when online (Taber & Whittaker, 2018, 2020):

When I'm talking on Facetime, I'm usually in my room by myself, so I can be as weird and goofy as I want. While in person, I'm not going to expose yourself in person like that [laughs] (P7).

As P7 states, having a comfortable, controlled environment lets them feel more confident in their interactions. This enhanced confidence may arise because participants feel relaxed in a familiar environment, reducing inhibitions when expressing themselves. The reduced inhibitions may explain the increased Agreeableness and Extraversion we observed in video compared with offline communication.

Audience: Video is used for Intimate Conversations with Strong Ties. The next theme identified *how* participants deployed video communication; serving to characterize the primary audiences and types of conversations held over video. Students typically used video for targeted types of intimate communications. These usually involved a familiar, trusted audience, with the goal of maintaining relationships with a small group of friends and family. We coded statements with this theme when participants discussed using video to communicate with strong ties: significant others, friends, family, etc., or described how offline was used for a broader audience. Thirty-nine (60%) of participants made a total of 80 comments describing how they deployed video differently across these different

Audiences.

The following participant discusses how conversations with a known trusted audience promotes a sense of togetherness, engendering an intimate communication style that partially helps compensate for reduced offline contact with people they'd like to see more often. Of course, P16 sees no need to be self-conscious or project a persona with this audience because they know them so well.

So I guess it's just nice because it feels like very personal, like you guys are there together. I think it just helps communicate with people that I can't see as often as I'd like to, it feels like you're staying up to date when you're able to see them and they can see you so it is more of an intimate conversation to be able to have with them when you can see them via FaceTime (P16)

Target audiences for video communication were highly delineated, however. Pre-pandemic students offered stringent guidelines about who they communicated with over video, carefully managing the contexts in which they used video. Participants saw video as appropriate only for intimates, whom one is "close to" or "comfortable with." Such context-dependent use seems to arise from video's Expressivity, which participants felt should only be deployed when there is intimacy and trust. Using video outside this context for weak ties was "uncomfortable.", leading the following participant (P38) to observe: "I couldn't imagine doing it [using video] with someone I'm not really close to." They then explain why they do not Facetime with acquaintances such as classmates, preferring instead to text them, so as to avoid "having to see them in person or actually speak to them":

I just feel like it'd be like uncomfortable to FaceTime just because I'm not close to them. …I usually just do it with my best friends or like my family, and usually we're just like doing weird things we usually just do with each other. I couldn't imagine doing it with someone I'm not really close to. I don't know why, it's just easier to text someone that you're not close to rather than having to see them in person or actually speak to them (P38).

3.3. Discussion

In this pre-COVID study, students report significant differences in self-presentation between offline and video in their survey responses. Overall, video self-presentations are more positive than offline, confirming a social desirability bias when digital, which has been observed in prior work on social media (Chou & Edge, 2012; N. B. Ellison et al., 2011; Hogan, 2010; Taber & Whittaker, 2018, 2020). Interviews suggest that this may be because video is primarily used in restricted contexts with familiar audiences for positive intimate conversations while also allowing control over self-presentation.

However, this data was collected in 2018, before the pandemic reconfigured work and communication. We therefore conducted a natural follow-up study to investigate how profound changes in media use following COVID have affected people's self-presentation and perceptions of video. The next two studies were conducted in 2020 during pandemic social distancing when participants were experiencing WFH. Data collection was done remotely, and surveys replaced interviews, but the experimental procedure was identical otherwise.

4. Study 2: WFH Students' Self Presentation on Video and Offline

Study 1 showed that pre-pandemic students predominantly use video in a limited set of contexts for intimate conversations with friends and family. This trusted audience potentially explains why video engenders positive self-presentations. However, the pandemic radically changed students' video audiences. WFH and having classes through Zoom mean that students are exposed to new video experiences with larger groups of unfamiliar people, potentially leading to context collapse (Marwick & boyd, 2011). However, Study 1 also revealed that video enhanced self-awareness, which promoted greater Control over self-presentations, and it may be that such enhanced Control may at least partially compensate for these challenges of managing multiple contexts. Our second study set out to explore this.

4.1. Method

Participants

We again recruited participants from a large US University who were experiencing Working From Home (WFH). Although these were different participants, they were drawn from the same university and cohort as the participants in Study 1. They completed the study online and received a chance to win a game code or $10 Amazon gift card. The final sample was 51 participants (25 women, 25 men, 1 preferred not to state), aged 18-48 (M = 23, SD = 4.5). Within our sample, there were: 43.1% White/Caucasian, 29.4% Asian/Asian American, 11.8% Hispanic/Latinx, 9.8% Mixed Race/Ethnicity, 3.9% Black/African American, 2% Native American. Responses were gathered approximately two months into the COVID pandemic, when participants had a chance to adjust to new video experiences induced by WFH.

Survey and Interviews

60 Item BFI2. As in study 1, participants answered the personality survey twice, with open answer prompts interspersed between each survey to replicate the interview process. We switched our survey to the BFI-2 (Soto & John, 2017) as the original BFI had been updated (see BFI-2 items in supplemental material). As in Study 1, participants first rated their regular offline personality in the initial survey. The second survey was again a modified version of the standard survey, with questions changed to include references to video. As the pandemic precluded offline interviews, we asked probe questions as open survey prompts where participants answered textually. We added a WFH question, asking if participants were using video to replace offline work conversations and what adjustments they were making in these situations (See supplemental material). All participants again completed both surveys and the open answer prompts in one session.

4.2. Results

Survey Analysis

We first analyzed the surveys using paired sample t-tests for each of the five OCEAN traits (See Figure 3). We see that Conscientiousness, Agreeableness, and Neuroticism were significantly different for video while Openness was close to significant.

Figure 3. Survey differences for WFH students. Over Video, participants report higher Agreeableness and Conscientiousness ratings but lower levels of Neuroticism.

Trait	Finding	Offline Mean	Video Mean	d (Effect size)
Openness	No difference	4.06	3.90++	0.36
Conscientiousness	**Offline < Video**	**3.54**	**3.83****	**0.45**
Extraversion	No difference	3.06	3.12	0.09
Agreeableness	**Offline < Video**	**3.72**	**4.04****	**0.53**
Neuroticism	**Offline > Video**	**2.81**	**2.32*****	**0.69**

Note. *** $p < .001$, ** $p < .01$, ++ $p = .051$, $df = 51$. Rightmost column d shows effect sizes.

There are direct similarities to Study 1 in these survey responses. Again we see a social desirability bias for video compared with offline. Video is again significantly more Agreeable and less Neurotic than offline. These results again suggest a positive online persona, even though media usage and audiences have shifted dramatically with the onset of WFH. However, there were also differences between studies. Unlike Study 1, Conscientiousness on video when WFH was significantly higher than offline. In addition, the differences in Extraversion observed pre-COVID was not present for WFH students, although Openness was trending in the same direction as study 1. Overall the survey results of our natural experiment suggest that participants retained their positivity; Neuroticism and Agreeableness are relatively unaffected by WFH-induced changes in audience and contexts of use, while Openness is marginally influenced. In contrast, Conscientiousness and Extraversion are both clearly changed by WFH, suggesting that new audiences and contexts influenced these traits.

We again analyzed participants' qualitative responses to probes to understand the survey responses. Two researchers analyzed probe responses from 51 participants, using the same inductive thematic coding approach as Study 1, beginning with the codebook and themes used in that study. Analysts again identified themes, categorizing participants' responses to media and how they affect self-presentation. In addition to the themes identified in Study 1, analysts also documented specific adjustments that participants described having to make when using video when WFH. We noted experiences of context

collapse or when participants talked about using video in new ways or with different audiences.

4.2.1. Open Answer Prompt responses

Study 2's qualitative analysis revealed some overlapping themes with Study 1, with discussions of Expressivity and Control again being prevalent. These themes again seemed to relate to positive self-presentations for video compared with offline, as revealed by greater Agreeableness and reduced Neuroticism. However, there were also differences between the two studies. These centered around participants' descriptions of how they adjusted to WFH, particularly their experiences of using video in large online classes. These forced adaptations may explain differences between the survey results across the two studies, specifically the increased Conscientiousness for WFH video and the disappearance of the Extraversion results in Study 1.

First, participants confirmed the expected expansion of contexts when WFH using video. Many participants discussed how they had extended the audiences and settings in which they deployed video. Twenty-four participants reported using video both professionally (for school and/or work) and socially, while 14 mentioned using it mostly professionally and 12 mentioned using it mostly socially. These heterogeneous contexts stand in contrast with the highly restricted uses of video seen in Study 1. These new contexts largely mentioned new uses of Zoom for largescale lectures, with FaceTime and Skype being talked about less often, and exclusively for intimate conversations.

Nevertheless, when using video for WFH, as in Study 1, people again discussed self-monitoring issues and how achieving an acceptable self-presentation was a primary concern. Participants were again highly self-aware over video, with 27 participants (53%) mentioning this on 28 occasions. They described how they exploit the greater self-awareness and Control afforded by video to engender positive self-presentations. However, their strategies for doing so were very different from the pre-pandemic setting. In contrast to Study 1, the demands of presenting to a broader unfamiliar audience meant participants had to work harder to achieve an acceptable professional self-presentation. The following participant, P81, clearly describes the performative nature of their WFH self-presentation elicited by this new professional video context. They also contrast professional with personal personas. Their carefully cultivated "positive and hardworking" WFH persona is very different from that used with friends, where it's more acceptable to "show weakness." Such a positive professional video persona naturally leaves little room for displaying less positive traits.

I only communicate with coworkers on video so of course I present a positive and hard working version of myself with no flaws. [I] can't show weakness like around friends (P81).

In particular, participants acknowledged potential for awkwardness and embarrassment when using video in large class settings. They therefore adopted two very different WFH strategies, performative cheeriness, and disengagement that were intended to address this. Performative cheeriness involved exerting effort to smooth rough

conversational edges, by keeping the conversational tenor enthusiastic and positive. Disengagement took the opposite approach, seeking to avoid negativity by withdrawing from impersonal discussions. These strategies were also mentioned in Study 1, but in that context participants were free to choose the contexts and audiences in which they used video. Such choices were removed when WFH, since video was often required for school or work, so refusing to use it for that context was no longer possible. Overall, 16 people (31%) made 26 comments about performative cheeriness, while 8 (16%) people made 11 comments about disengagement.

Participants' comments offered important details about each of these strategies for dealing with potential context collapse when using video. The following participant describes how they actively project cheeriness by "smiling more" and making an effort to "sound more enthusiastic." They also note that this active strategy is needed to counteract challenges arising from others' disengagement. P74 describes effortfully projecting a positive outlook to help keep others engaged and on task. Such performative strategies may help to explain why WFH video still showed enhanced positivity compared with offline.

For example, I put more effort into acting 'cheery' over video calls. When I would host meetings, I would try to smile more and sound more enthusiastic. I had hoped that this would help keep people engaged, although I admit that our brains were all a little scattered (P74).

Other WFH participants addressed potential video awkwardness in the opposite manner. Rather than proactively addressing it, they opted out, using the Control that video gives them. Such disengagement took different forms. Some avoided the awkwardness of WFH video by turning off their personal video channel unless they had to use it. This response is in direct contrast to Study 1, where we saw no examples of participants opting out. In extreme cases, participants totally disengaged, by never using the video channel for any of their video calls:

I've never used the video feature while on a call, I used the text option. I think [using video] would make me insecure and feel a bit uncomfortable [...] I'd rather text or have a phone conversation or have an in person visit with people. [...] I would be very shy while using it (video calls) and a bit anxious and uncomfortable so I don't think I would come off very well (P92).

Others only used video intermittently when they felt a "need to engage", trying as much as possible to avoid using video in this now uncomfortable context.

I try to turn on my camera give facial cues to respond to the speaker when I feel I need to engage. If I don't feel that I need to engage, I do not turn on my camera and will use the text chat features if I have any questions (P66).

The overall result of disengagement was that professional WFH video conversations felt less interactive. Because of this, some WFH conversations came to seem superficial, with participants noting a general lack of involvement that is very different from the rich person-focused interactions we saw in pre-pandemic video. The following participant describes only using video to maintain "surface level relationships" and only interacting when explicitly requested to do so by their superiors.

I use video chat for professional and educational reasons. The people I interact with are people I only have surface level relationships with. This means that I only interact with these people if I need to as requested by superiors. Otherwise, I won't do it (P72).

Consistent with this disengagement, WFH participants were generally more conservative about how much they interacted, often hanging back and waiting to see whether others responded to a general question before contributing. For example, the following participant describes themselves as being "shy/introverted" when using video in classes:

I'm noticeably a lot more shy/introverted on video calls since it feels more awkward. An example being when a question is posed and I often wait to see if anyone else has any ideas before I volunteer myself to go. [...] This is often because I can sometimes be the only one on video in a whole room full of people (P66).

Other participants confirmed the effort needed in taking conversational turns and managing enthusiasm over video. Some were struggling to get through the barrage of meetings. Others tried to amplify their enthusiasm to keep a conversation going, but were concerned about overwhelming others when talking over video. This effort required to get through long meetings and avoiding "sticking out" may also reduce the Extraversion we saw in video during Study 1. The following participant describes moderating the effort they invest in the conversation to avoid being drained: "I get tired easily because there isn't a way to just sit with people in silence without it feeling awkward." At the same time, they are cautious about expressing their enthusiasm and inability to relax over video:

I feel more cautious about being excitable because that can be overwhelming in a video conversation, and it is harder to relax into the space with people I don't know as well. I also find that I get tired easily because there isn't a way to just sit with people in silence without it feeling awkward, and it can be hard to address people individually on a group call (to have a side conversation for example) (P91).

WFH participants in large classes also mentioned being very aware of the differences between communicating offline versus over video. Comments in Study 1 emphasized the straightforward and natural Expressivity of video when talking to a small, trusted audience. But reactions were very different in Study 2, when interactions involved strangers. Here participants noted how much effort was required to focus on others' video conversations, with 14 mentions of investing additional effort from 12 participants (24%). Participants also noted how video technology such as Zoom makes additional demands even when engaging in simple conversational processes such as attending to the speaker or turn-taking. In the following quote P78 notes: "the social cues as to when you're done talking or if you're pausing are more difficult through video call so there's more interruptions". This additional effort may explain the increased Conscientiousness scores that we saw for video compared with offline in Study 2.

For instance, when you're in person, you're up close to the person you're talking to and can notice certain behaviors such as if they're listening to you and paying attention. But with video chat, you have to make more of an effort. For instance, sometimes you can't tell if a person is listening to you when you're talking or if they're having technical difficulties. In addition, the social cues as to when you're done talking or if you're pausing are more difficult through video call so there's more interruptions (P78).

As in Study 1, participants wanted to Control video self-presentation while also

contending with video's technical issues in a new, broad, less forgiving, professional domain. Issues with navigating turn-taking and paying demonstrable attention to the speaker led participants to describe how they were putting extra effort into appearing "normal" over a different medium, which again may contribute to the increased Conscientiousness scores observed for video compared with offline:

I try to come off as normal as I can in video chats but sometimes it can be hard. For whatever reason gaps of silence become very awkward during video chats where it would be natural if everyone was together in person. Sometimes this makes it more forced to try and keep conversation going where I would not normally do that in real life... I may try to be more talkative and be less comfortable with silence in video chats versus real life, but I think that is just an issue with video conferencing in general that people are not yet used to (P75).

4.3. Discussion

Study 2 allowed us to probe further into the self-presentational differences observed in Study 1. Despite radical changes in contexts of video use, we confirmed important aspects of Study 1 in replicating positive self-presentation. Even when WFH from home and confronting the challenges of communicating professionally with larger, more anonymous audiences, participants still scored lower on Neuroticism and higher on Agreeableness over video, suggesting that self-presentations over video remained positive overall. Participants' comments indicate that they used video's affordances and enhanced Control to embrace two very different self-presentation strategies to meet the demands of their new expanded professional context. Some used this enhanced Control to project a professional persona that is deliberately cheerful. Others address interactive challenges by actively disengaging from the conversation or exploiting Zoom's text channel rather than communicating over video. Both strategies may enhance positivity and avoid awkwardness leading to reduced Neuroticism and enhanced Agreeableness scores over video. In other respects, however, WFH seemed to change media perceptions. Possibly because of the more significant efforts involved in managing basic communication processes with an unfamiliar Audience, WFH led participants to rate higher Conscientious scores over video than offline. The enhanced Extraversion scores observed for video in Study 1 also disappeared, which may also result from having to communicate with unfamiliar Audiences about diverse topics. This pattern of changes suggests that these responses are affected by the different settings and audiences engaged when WFH.

These impacts of contexts and audiences led us naturally to Study 3, which compares WFH students with WFH office workers, who have very different prior experiences with video. Unlike students, office workers have extensive prior pre-COVID experience using video communication technology in formal, work-related situations such as meetings but are increasingly using video for more informal work conversations during COVID. Workers are also confronting new challenges in managing their professional persona in domestic settings that may be vulnerable to interruptions. Study 3 examined whether these prior experiences led WFH office workers to present themselves differently from students when using video and whether they were better able to cope with potential context collapse. Again, we conducted a natural experiment following up on our prior findings. Studies 1 and 2 confirm that positive self-presentations over video persist despite

radical changes in audience and context following the pandemic. We anticipated that these effects would still emerge even though office workers constitute a very different population using video for very different purposes.

5. Study 3 WFH Office Workers' Self Presentations on Video and Offline

Study 3 was another natural experiment. As with WFH students, these workers face new challenges of context collapse, potentially undermining their ability to project a professional work persona. However, we anticipated that, like WFH students, office workers would be able to strategically adapt to these challenges, again leading them to present positively over video, with increased Agreeableness and higher Neuroticism scores. At the same time, given their more significant more significant experience of using video for WFH, we expected their uses to be less effortful, so we did not anticipate the elevated Conscientiousness scores we saw for WFH video in Study 2.

5.1. Method

Participants

The pandemic made it harder to solicit participants using standard methods such as flyering and in-person solicitation. We therefore recruited 70 Mechanical Turk workers currently employed full-time and residing in the United States. They received $7.50 compensation. The final sample included 28 women, 41 men, 1 Non-Gender Binary, aged 23-59, (M = 37.7, SD = 9.09): 77.1% were Caucasian, 11.4% Black/African American, 4.3% Hispanic/Latino, 4.3% Mixed Race/Ethnicity, and 2.9% Asian/Asian American. In addition, we used screener questions to determine that participants were currently using video to work from home. The study was conducted three months into the pandemic giving participants a chance to adjust to the demands of WFH. Participants used the following to describe their jobs: 7.1% Accounting and Finance, 4.3% Administrative, 2.9% Arts and Design, 10% Education and Training, 4.3% Engineering, 37.1% Information Technology, 12.9% Management, 4.3% Marketing, Sales, & Business Development, 10% Operations, 7.1% Other.

Survey and Interviews

60 Item BFI2. As in Study 2, participants completed the 60 item BFI-2 (Soto & John, 2017) twice, with open-ended probes administered between the two surveys. Due to social distancing limitations, as in Study 2, we used open-ended survey questions to probe personality trait responses instead of an in-person interview. We asked the same questions as in Study 2, with one addition. We asked WFH office workers if they had ever had their home context intrude upon their work context and how they had responded to this situation. All participants again completed the surveys and questions in one session.

5.2. Results

Survey Analysis

We first analyzed the surveys using paired sample t-tests for each of the five OCEAN traits (See Figure 4). Survey results largely confirmed our expectations. As in the first two studies, for Agreeableness, video scores were significantly higher than offline. A statistical trend emerged for Neuroticism, which follows the pattern in studies 1 and 2. As we expected, there were no differences in Conscientiousness, in contrast, to study 2.

Figure 4. Survey differences for WFH office workers. Over Video, participants report higher Agreeableness ratings.

Trait	Finding	Offline M	Video M	d (Effect size)
Openness	No difference	4.05	4.03	0.05
Conscientiousness	No difference	4.11	4.23	0.23
Extraversion	No difference	3.32	3.47	0.26
Agreeableness	**Offline < Video**	**3.76**	**4.03****	**0.58**
Neuroticism	No difference	2.18	2.04++	0.30

Note. ** $p < .01$, ++ $p = .051$, $df = 70$. Rightmost column d shows effect sizes.

Open Answer Prompt Response

Two analysts, familiar with the method used in Studies 1 and 2, analyzed all participants' open responses using the Study 2 codebook. Overall, participants used various video platforms, including Facetime (one mention) and Skype (two mentions), although Zoom was the primary video platform mentioned for work contexts (79 mentions). We again saw familiar themes of Expressivity and Control. Again, echoing student comments in Studies 1 and 2. Some office workers noted the self-depicting video window increases self-consciousness, leading them to be more deliberately positive and performative. The following participant describes making efforts over Zoom to be "presentable and seen and smart and funny". She contrasts this with in-person interactions where she can just "relax and not think about it":

I would say I'm slightly more positive and upbeat when I am on a video call. I feel like I have to be 'on' almost like when you are at work in a meeting that requires participation, if that makes sense. I feel like I need to be presentable and seen and smart and funny. If we were in person I would just relax and not think about it, but something to do with the nature of a video call being right in someone's face, and seeing my own reflected back at me, makes me more self-conscious. (P2)

In contrast to Study 2, however, fewer participants in Study 3 explicitly mentioned a need to Control their self-presentation in video, with just 8 (11%) stating this. But although office workers seemed less self-conscious than students overall, they were nevertheless definitive about the need to manage video interactions actively to ensure they go smoothly. We saw two main strategies used to achieve this. As in Study 2, office workers engaged in 'performative cheeriness' to smooth over conversational rough edges. However, unlike Study 2, these participants did not use a disengagement strategy; instead, they strived to proactively control their environment to reduce the possibilities of context collapse. Together these strategies may explain the increased Agreeableness and lowered Neuroticism scores for video compared with offline. The following participant describes performative cheeriness, noting that Video calls are vital for keeping everyone's spirits up while WFH. Here we see a crucial role for video calls in enhancing positivity by "shar[ing] some laughs":

Video chat plays an important role for our team in the fact we can stay connected. It makes us keep up with each other and we can share some laughs and continue our relationships. We would not be able to have such a close relationship without it we would lose out team drive and spirit and since we are in sales we need to focus on keeping the team motivated and we can do that with video chat (P28)

These active efforts to project positivity over video confirm the behaviors we observed in Study 2. However, in contrast to that study, we saw little evidence of office workers deliberately disengaging from video conversations. Just one office worker mentioned turning their video off altogether during a work call, and this was the unusual context of an 'all hands' meeting where senior management gave an informational presentation to a vast audience. This difference points to a potential skill gap between participants in Study 2 and Study 3. Unlike WFH students, office workers' response to potentially awkward encounters was usually not to withdraw.

Comments that referred to Control were also different between Studies 2 and 3. Study 3 office workers were less likely to mention controlling physical appearance or emotional expression but were instead focused on managing physical space. Workers were very aware of the possibility of context collapse; WFH means that dogs, cats, and family members may all make unplanned video appearances, making it hard to project a professional persona. Workers were therefore more explicit about the need for careful planning to prophylactically avoid intrusions. At the same time, however, concerns about context collapse were also assuaged by colleagues forgiving attitudes when intrusions inevitably occurred. Even when plans fail and the home context inevitably intrudes, participants noted that coworkers generally responded sympathetically, which helped dissipate any potential embarrassment. The following participant tried to guard against interruption by locking their door and muting their mic. Despite their best efforts, the domestic environment nevertheless intruded in the form of their cat. But despite their being "slightly embarrassed", their co-workers actually welcomed the interruption:

I usually lock my door so that [context collapse] doesn't happen. And I mute my mic when I'm not talking. But on one video conference for work, my cat jumped up in my lap, got on the desk, put his face in the camera. I was slightly embarrassed, but my co-workers thought it was the cutest thing. (P21)

Others repeated this observation, 35 workers (49%) mentioned experiencing some form of outside interruption, but this seldom seemed to promote embarrassment. Rather than inducing the awkwardness we saw in study 2, the enhanced Expressivity of video seemed to allow participants to navigate thorny interruptions with consideration and grace. The following participant describes a clear example of context collapse when their baby cries, momentarily conflating the parental and work personas. And although they feel compelled to apologize, the experience does not become problematic, as P38's coworkers respond with sympathy and understanding:

[...] if my baby is crying in that background which is something that would never happen if not working remotely. This will sometimes make me laugh or apologize to everyone on the staff. Everyone is very understanding though and knows that we're not working in ideal circumstances due to COVID (P38).

Overall, this combination of performative cheeriness, careful planning, and other conversationalists' forgiveness seems to increase Agreeableness and lower Neuroticism scores. Workers worry less than students about context collapse as participants are all aware that this could happen to anyone. Workers also seemed to feel more relaxed being in their own space.

I might have a little bit of a different personality when on a video call because I am in my own comfortable home environment where I can feel more at ease when expressing myself and safer since I am home. (P37)

6. Discussion

We first summarize findings and then explore practical implications for the Future of Work and design implications. We conclude by linking results to computer mediated communication (CMC) theory.

Although we observed two different professions before and during the pandemic, it is striking that many results are consistent across all three studies, indicating that participant were able to adapt to WFH. Overall, we found a bias towards positive self-presentation when using video communication. Compared with their offline behaviors, participants in all three contexts reliably rated themselves as less Neurotic and more Agreeable on video calls. Qualitative analyses bore this out, indicating strong consistencies across studies, as participants repeatedly explained their behaviors in terms of the Expressivity and Control that video offered. Overall results suggest that participants can strategically exploit these affordances to overcome some of the challenges of WFH.

In contrast, other effects of video differed across our studies. In particular, WFH seemed to induce new student behaviors in response to difficulties of managing video in new settings. As expected, we saw that WFH students felt that using video demanded greater Conscientiousness than offline, as they began to use it for novel learning goals with broader audiences. Pre-pandemic differences in Extraversion scores additionally disappeared when students began using video for educational purposes. These changes may arise from the broader set of contexts in which students are using video when WFH. Students now need to appear more professional, which can sometimes lead them to withdraw from video in situations when Expressivity is uncomfortable. Overall, office workers showed less variability in their self-presentation when using video, except

Agreeableness and potentially Neuroticism, where we saw the same trend towards positive self-presentation as for students. It may be that their more comprehensive experience with video allows them to adapt to the challenges of managing different contexts when WFH.

What are the practical implications of our results? There has been much recent speculation about the impacts of ubiquitous video on work, with many popular press articles enumerating the challenges people may experience (Dans, 2020; Fosslien & Duffy, 2020; Stieg, 2020; Wen, 2020). These articles discuss 'Zoom fatigue' and the problems of context collapse that undermine a carefully crafted professional image. However, systematic studies of these phenomena and their consequences for students and office workers have been few. Our findings are therefore notable because they challenge some of these speculations. If these speculations are correct, then Zoom challenges should lead WFH participants to have a predominantly negative view of video communication. Worries about the need to remain professional should make using video a stressful and challenging experience. Instead, our participants essentially judged their video experiences positively. They consistently judged their self-presentations to be more Agreeable and less Neurotic than Offline, suggesting that video experiences are usually pleasant and not generally marred by emotional extremes. And while student participants made many comments indicating they were conscious of their appearance on video, this did not negatively affect the overall experience. Their reports instead suggest that they can harness this self-awareness to exert more control over their self-presentation. In particular, office workers successfully adopted strategies of "performative cheeriness" and active planning to manage different contexts and avoid negative video experiences. Workers also noted how others make allowances and are generous when context collapse inevitably occurs. One exception is some WFH students who withdrew from calls by turning off their video, and we return to this topic below.

And while WFH students frequently noted the challenges of retaining focus and turn-taking in large Zoom classes, this led to a greater perception of Conscientiousness rather than negative emotions. These participants simply felt that they had to work harder when using video in these new contexts. However, office workers with more digital media expertise at work seemed to have successfully adapted to the demands of video. Their experiences suggest that, given time, students may also develop strategies to engage in active video conversations. Overall, these positive results confirm other studies showing workers' flexibility in adopting new strategies in response to changing contexts (Bødker, 2016; Leshed et al., 2014).

Our results also suggest design implications. The self-depicting video seems to increase self-awareness, which can facilitate active self-editorializing. Nevertheless, some participants found the video distracting, which increased self-consciousness, as noted in our interviews. Given our repeated findings that participants want to exercise control over their digital self-presentation, future technical work might explore new designs that offer users ways to better control this video to moderate potential awkwardness, in particular for students.

Existing video communication systems often make default design decisions about the image they present, but providing greater ability to control one's image may have

implications both for self-awareness as well as resulting self-presentation. For example, some WFH students went to the extreme of entirely disconnecting their video channel to reduce self-consciousness. However, this has the disadvantage of decreasing engagement for others in the conversation. Alternative designs might allow these "shy" participants to retain their video feed while alleviating their self-consciousness. Such designs might involve providing video image controls that support more fine-tuned virtual proxemics (Hall, 1966). When offline, some students prefer to sit at the very back or front of a large lecture hall, and current video designs don't permit visual representations of such choices. Enhanced presentation controls could emulate these offline situations by allowing video users to choose where they "sit" in a virtual room, who they sit next to, their proximity to influential people in a meeting, and whether they are in the line of sight of these important people. Other designs to minimize self-consciousness might allow participants to "melt into the crowd," making their image part of a sea of faces in a manner similar to designs deployed in Microsoft Teams. Researchers can potentially design and explore many such experimental interfaces, but of course, it is essential to subject these designs to empirical testing.

Other technical solutions to visual self-presentation are also possible. For example, more speculative AI solutions could generate personalized avatars to convincingly simulate a participant's visual presence, actively following along with the conversation, while at the same time removing people's concerns that live video can lead to embarrassing self-presentations (for an example from NVIDIA, see (Sharma, 2020)). Other multimodal solutions are also possible for those who don't want to visually reveal themselves, while still allowing them to signal their engagement. Solutions might include alternative non-verbal ways to show one's presence and engagement, e.g., active cursors that follow along with the speaker's slides can serve as helpful presence indicators, and active user edits or texting show involvement (Whittaker, 2003b; Whittaker et al., 1993). Again, researchers should evaluate such designs, as our results suggest that non-verbal self-presentations may make conversations less positive when one can't see other people.

Post-pandemic, it seems likely that many people will continue to collaborate and learn virtually via video, even if there is a partial return to offline work. Therefore, users of video technologies should be informed about the consistent self-presentation differences we observed across three studies for increased Agreeableness and reduced Neuroticism. A greater understanding of video impacts should allow users to make better-informed decisions about their media choices for specific audiences, contexts, and tasks. Users could also be informed about the successful strategies that more experienced office worker participants employed to enhance their video experiences, which resulted in positive self-presentations. Future empirical work could also address whether employing these proactive strategies is also successful in addressing the disengagement observed by some students.

Turning next to theory, we have identified both context-independent and situation-specific video effects. We first discuss context-independent effects, i.e., compared with offline, we see increased Agreeableness and decreased Neuroticism scores over video across all studies. We had initially hypothesized that enhanced Agreeableness and reduced Neuroticism scores might be audience effects engendered by pre-pandemic students using video exclusively for intimate conversations for strong ties because such conversations are

affirming, comfortable, and intimate. However, these two effects persisted even when students began using video for large anonymous classes, where the tone, content, and conversational audience were very different. We also observed these same effects for office workers who were also using video for a wide range of professional and social audiences. In both these WFH cases, participants described exploiting the additional affordances and Control offered by video to deploy new strategies to achieve these positive self-presentation effects (Baym, 2015).

In contrast to these stable, situation-independent phenomena, we saw other context-dependent effects. Some of these are intuitive. It is no surprise that shifting contexts from using video for intimate family conversations to large anonymous lectures led students to see WFH video as more Conscientious than offline. As discussed with the dramaturgical view of self-presentation, different contexts necessitate different performances (Goffman, 1982; Hogan, 2010). We offer similar explanations for the greater Extraversion seen in the pre-pandemic video. Students who were conversing over video with trusted, strong tie audiences about intimate topics likely feel more outgoing. In contrast, they are far less likely to feel as Extraverted when WFH using video in large student classes, where much of the interaction involves presentations and where they have problems maintaining focus and gaining the conversational floor. Finally, pre-pandemic students saw offline as more Open. Unsurprisingly, this effect is reduced when WFH, as many activities are drastically curtailed for WFH students and office workers.

These findings also have general implications for CMC and media theories. Prior research has taken a similar approach using personality surveys to examine self-presentation over social media (Taber & Whittaker, 2018, 2020), and there are significant overlaps with our current findings. Most strikingly, prior research demonstrates a bias for positive self-presentation, with participants stressing positive and de-emphasizing negative traits when using social media (Bayer et al., 2015; Chou & Edge, 2012). These prior findings are consistent with our observations across the three current studies. Specifically, our participants scored consistently less Neurotic when online than offline, a result that also occurs across multiple social media platforms, including Facebook, Instagram, and Snapchat (Taber & Whittaker, 2018, 2020). This consistency suggests a potential media-independent effect. It seems that regardless of the different affordances, audiences, and contexts of these platforms, people can exert more control of their emotions when online. This reliably leads to reduced Neuroticism when online, unless the purpose of the social media account is directly supporting emotional posting, i.e., an account created just for "venting" (Taber & Whittaker, 2020). This effect seems to be independent of whether people communicate using typed text or speech and whether the medium is synchronous or asynchronous. Such consistency across media indicates a potential avenue for future work to better understand how people use the control offered by digital media to manage how they present their emotions.

We also confirm other work showing a social desirability bias when using media (Bayer et al., 2015; Chou & Edge, 2012; Grieve & Watkinson, 2016; Reinecke & Trepte, 2014), and there are also overlaps with other theoretical accounts. Devito et al. (2017) offer a framework for analyzing self-presentation in social media that relies on affordances for Identity, Feedback, and Audience elements, arguing that participants are reflective in how

they actively exploit these affordances when self-presenting. Our work confirms this and other performative explanations (Baym, 2015; Goffman, 1982; Hogan, 2010), as well as the importance of audience in shaping self-presentation. However, we also extend that framework by identifying the importance of Control, which allows participants to strategically choose media that allow them to manage potentially emotionally fraught situations or editorialize how they appear. Our explanation here is closer to Fox and McEwan (2017), who also argue for the importance of Control in their analysis of media affordances. Finally, results support psychological theory (Duval & Wicklund, 1972; Scheier & Carver, 1985), confirming that self-depicting video may increase self-awareness, helping people present a more positive, socially acceptable self.

What other lessons might we draw about the Future of Work? While the long-term impacts of the pandemic on work practices remain unclear, it seems likely that some organizations at least will persist with WFH in some form. Our research speaks directly to that possibility. As noted above, despite the distractions of seeing oneself, communicating over video is generally rated as a positive experience that is not emotionally fraught. However, one intriguing question for future research concerns potential negative consequences for experiencing these predominantly pleasant interactions given the ubiquity of video communication. Are there projects where it is crucial that participants express less positive emotions, actively airing their disagreements to resolve them, and where participants must resolve conflicts for projects to progress? By relying exclusively on video, are we preventing such projects from making progress?

7. Limitations

Our work has several limitations. First, our method relies on self-report through surveys and interviews rather than direct behavioral observation. Therefore, it is essential to confirm our participants' self-reports, e.g., to behaviorally assess the impact that using video has on the presentation of negative emotions. There is a long history of empirically studying video to determine effects on conversational processes and productivity (Olson & Olson, 2000; Sellen, 1992; Whittaker, 2003a; Whittaker & O'Conaill, 1997), and researchers could use methods used in that research to assess behavioral indices of positivity, emotions, and personality factors. Furthermore, our survey responses asked general questions about video, which participants can use for many purposes. How then can we be sure that participants were responding to survey questions in consistent ways? Of course, it is possible that some participants were thinking about obscure or unusual contexts of video usage, but interview comments along with our consistent survey results suggest that esoteric interpretations are unlikely.

Another potential question about our approach concerns the extent to which our particular interview questions might have primed participants to view their video personalities in specific ways. However, prior work across multiple studies has shown that such priming effects do not occur (Taber & Whittaker, 2018, 2020). We also studied two specific user samples, namely students and office workers, and follow-up studies could focus on much more targeted questions about how results apply to a broader set of professions, as well as different contexts of usage. These two user groups may not represent

all students, and there are many types of office workers. We recruited our office worker sample through Mechanical Turk. We confirmed that they are office workers by establishing that they are working full time and working remotely. However, office workers working from home *and* using Mechanical Turk may not be representative of all office workers working from home. Finally, our work assesses self-presentation on different media, leaving open critical questions about broader media choice impacts on productivity, employee retention, and even employee mental health. All of these are important issues for future research.

8. Conclusions

We assess the effects of changing digital media use on people's self-perceptions when WFH. We use personality surveys and qualitative follow-up probes to examine self-presentation in video, before and during COVID, comparing samples of students with office workers. Despite the challenges of using video in new contexts, we find reliable positive effects of self-presentation using media. Even during the pandemic, people generally present a more positive self-image when using video than their offline selves, being less Neurotic and more Agreeable when using video. Probes suggest these media differences arise from performative strategies users adopt to address the challenges of WFH. Office workers and some students exploit the Affordances and Control offered by online media to engage in active efforts to appear positive over Video. When WFH, students grappling with the challenges of using video with larger unfamiliar Audiences avoid social awkwardness by disengaging from video. There are important implications for future media designs, theory, and deployment.

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