

(Virtual) Identity Communication: Motivations and Contextual Factors

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Abstract

Although prior literature has explored the important process of identity communication in face-to-face settings, significant changes in how work is accomplished in modern organizations require the development of new theory. Building on extensive identity research in non-virtual settings, this paper develops and justifies a new theoretical model that better explains the antecedents of virtual identity communication. The model explores how identity motives lead to identity communication, and how virtual communication environments alter these processes. We summarize our data collection methodology and the results of a preliminary data collection and conclude by discussing theoretical and practical contributions. The concepts and relationships presented here can help theorists and managers better address identity issues faced by modern, technology-infused organizations.

1. Introduction

Virtual communication and collaboration technologies continue to transform the global economy, facilitating productivity from geographically dispersed employees [1]. A virtual workforce allows organizations to access a diverse labor pool, unconstrained by location, while also reducing costs, in order to compete more effectively in the global marketplace [2]. For virtual employees, however, geographic dispersion is problematic as the lack of face-to-face interaction can result in feelings of isolation and a lack of connectedness to the organization and co-workers [3]. Identity communication is one way that employees attempt to make connections with one another; however, the use of technologies to communicate places restrictions on what is communicated and how it is communicated [3-5]. The struggle to accurately communicate identities in virtual environments may stem from a variety of reasons, such as the lack of clear norms about what and how to communicate identities

virtually, the lack of a feedback loop to gauge reception of identity communications, or the difficulty in communicating certain identities with the technology as the intermediary. Virtual interactions are often treated differently than face-to-face, due to the tendency for people to deindividuate and behave differently [59]. Identity communication in virtual environments is more nuanced than in face-to-face situations, and recent literature [6] has called for additional theory to help guide future research and provide direction for managers as they grapple with these identity communication challenges.

A diverse body of literature has been developed around the study of face-to-face identity communication and virtual collaboration. However, we argue that prior theories are inadequate to address the unique nuances of virtual identity communication—which we define as the actions individuals take to convey self-definitions to others in technology-mediated environments. Identity communication via technology is complicated and deliberate, and may be driven by different motivations than those that have been studied in face-to-face settings. Furthermore, the technology-mediated context of identity communication will likely impact the virtual identity communication process. Thus, in addition to understanding the drivers of virtual identity communication, there is also a need to understand how contextual factors affect the process of identity communication in virtual settings.

In response to this need, the objective of this paper is to develop and test a new theory of virtual identity communication. First, we briefly summarize and justify our theoretical model, then we summarize our data collection methodology and the results of a preliminary data collection. We conclude the paper by discussing theoretical and practical contributions. The resulting theory provides valuable insight for both researchers and practitioners as they seek to understand, use, and improve virtual collaboration technologies.

2. Background

Identities, defined as definitions of one's self (Gecas 1982), can derive from personal characteristics (e.g., charisma, sense of humor, conscientious), demographic group membership (e.g., sex, ethnicity), and indicators of membership in other social groups (e.g., sports team fan, political party), to name a few. People have a natural desire to communicate their identities, or self-definitions, and have them verified by others [7]. Effective identity communication—which occurs when identities are communicated and received as intended by the sender—is a strong predictor of individual and group outcomes such as individual satisfaction and group creativity, and can ultimately determine the overall success of a team [8, 9]. Individuals who experience effective identity communication have high levels of satisfaction, meaning, and self-worth at work [10, 11], and thus are more motivated to promote positive outcomes for teams [8] and their organizations [12]. Members of groups who understand one another's personal identities perform well [8, 9, 13], cooperate [14], feel connected and immersed [15], behave authentically, and focus energies on improving group outcomes [8].

Although identity communication has been studied in many face-to-face contexts [9], relatively little research has studied this phenomenon in virtual environments, in which technology provides the primary conduit for communication. Exceptions exist, however, and several of these bear mentioning. Carter and Grover [16] advance a theory of “IT identity,” which provides conceptual footing for the relevance of identity issues in virtual contexts. Their theory focuses on how and why information technologies become an integral part of one's identity. This is conceptually distinct from our focus, i.e., how and why identity information is transmitted during virtual interactions. Other research has investigated identity communication in online dating [17], online communities [18], and online social networks [19, 20], though none of this work has investigated identity communication in virtual organizational environments.

These prior studies establish the value of understanding identity communication processes in virtual environments, but they may not generalize to broader organizational contexts. In organizational virtual environments employees are: (1) often required to work with specific coworkers; (2) usually labeled by their actual name and title; (3) typically goal- and task-driven; and (4) supported by a wide

variety of technologies (e.g., video conferencing, voice conferencing, email, group support systems) in their interactions. In contrast, online communities are characterized by (1) voluntary membership, (2) interactions using anonymous identifiers, (3) individual decisions about how much to contribute, if anything, and (4) interactions within the confines of a particular technology (e.g., text-based discussion forums).

In the organizational context, almost no prior work has generated understanding on identity communication in virtual teams. In one exception [21], researchers showed that providing virtual team members with profile information emphasizing similarities about their teammates can mitigate team conflict and increase team effectiveness. The results of this study thus support the positive role that identity information can play in virtual teams, although the study was limited to a single type of identity information (a profile containing a summary of the team member's values and beliefs), and this identity information was not integrated with the virtual environment used in the experiment. To clarify the nature of virtual identity communication and its benefits in organizational environments, we build theory to help explain the motivations behind virtual identity communication and the ways that technology and other contextual factors influence this communication.

3. Theoretical Model

In this section, we develop a theory of virtual identity communication (see Figure 1). In developing this theory, we narrow our focus to the first interactions that occur between employees, as opposed to those associated with long-term relationships of virtual employees over an extended period of time. We assume that the identities communicated in initial interactions are the most important and influential, since individuals tend to anchor to early impressions [22].

Prior research in offline settings has defined identity communication as “the extent to which individuals strive to communicate each of their identity elements to others in everyday life” [23, p. 320]. We adapt Vignoles and colleagues' [23] definition for virtual settings and define virtual identity communication as *the extent to which individuals convey self-definitions to others in technology-mediated environments*.

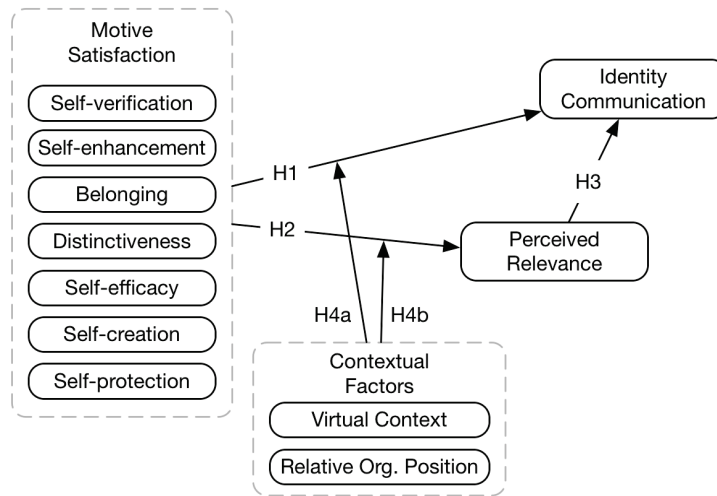


Figure 1. Theoretical Model – Motives and Contextual Moderators for Identity Communication

3.1. Identity Motive Satisfaction

Motives represent psychological needs that drive behavior and are typically linked to one's sense of self-esteem or self-worth [24]. Identity motives are defined as "pressures toward certain identity states and away from others, which guide the processes of identity construction" [23, p. 309]. From the existing identity literature, we incorporate five key motives relevant for virtual identity communication: self-verification, self-enhancement, belonging, distinctiveness, and self-efficacy. We expand this list by adding two motives that are particularly relevant in virtual settings: self-creation and self-protection. We argue that these seven motives will predict identity communication in virtual environments.

In the interest of using our limited space judiciously, we will lean heavily on established literature to justify the first five motives' relation to virtual identity communication behavior. These motives have been the subject of extensive theoretical and empirical work in prior literature. Under the assumption that identity motives tend to be relatively stable over time and across many contexts, we simply argue that these motives will be relevant predictors of virtual identity communication [25].

Self-verification is defined as individuals' use of a variety of techniques to validate their self-views [26], and individuals have a need for others to see them as they see themselves [26]. *Self-enhancement* refers to the desire to view oneself positively [27-29], and takes the form of self-presentation or impression

management [30] designed to improve self-esteem. The *belonging* motive refers to the desire to expand the self-concept to include connections with others and to feel a sense of belonging with a larger group [31], and individuals who are part of a group derive a portion of their self-concept and self-esteem from that association [32]. The *distinctiveness* motive is derived from an individual's need to feel unique [33], and individuals are motivated to communicate identities that distinguish them from their peers. Finally, *self-efficacy* represents the pursuit of competence, considered a fundamental human motivation [34]. Thus "individuals will try to maintain an identity structure...characterized by competence and control" [35, p. 8].

Virtual environments present additional opportunities and challenges for identity communication. Unlike face-to-face communication settings, virtual environments are both more restrictive (i.e., it is difficult to convey affective tendencies such as warmth and kindness) and more permissive (i.e., one can convey false information). Furthermore, communicating identities virtually involves additional risks not experienced in non-virtual settings. Thus, in addition to the above five motives, we introduce two new motives that are particularly relevant to the virtual context: *self-creation* and *self-protection*. We discuss and incorporate them here to account for the nuanced identity communication context in virtual environments.

Self-creation represents the psychological need to both create and present a new version of "self" to

others [36, 37]. We propose that this need will manifest in virtual environments more prominently than in offline settings. This is supported by previous research that has highlighted the personal home page [38-40] and virtual avatars [e.g., 41, 42] as channels through which individuals create identities for themselves, which may or may not be accurate representations of their actual selves [43, 44]. Admittedly, these self-creations are more common in non-organizational settings, where the likelihood of meeting one's communication partners (e.g., the readers of one's blog) in the real world is low. However, even organizational technologies (e.g., email, company directories, intranets, etc.) which are relatively transparent, provide opportunities for self-creation. This concept has roots in long-standing assumptions that one's identity is "malleable" [45], but has become much more pronounced since the advent of virtual environments where it is possible to create one or more "versions" of one's identity [43, 44, 46]. In virtual interactions, individuals have significant latitude in the extent to which they can create virtual identities that suit their desires [43, 44], sometimes having only a weak correlation with their actual selves. Virtual environments provide many opportunities for a variety of self-creative activities, and we propose the self-creation motive as a predictor of virtual identity communication.

Another motive relevant to the virtual identity communication context is *self-protection*. An individual who communicates identity information in a face-to-face setting is aware of who is receiving that information—probably limited to those within the immediate vicinity who can either hear or see the interaction. When communication occurs through technology, however, messages are transmitted in some digital form. These digitized communications are stored, at least temporarily, and then transmitted via openly accessible communication networks. Mediated communications, including virtual identity communications, are thus more prone to risk and privacy concerns than are face-to-face communications [47]. Once stored or transmitted, these communications are beyond the direct operational control of the individual and several risks arise, including possible misinterpretation, lack of privacy, and even physical or financial risk [48]. Technology often provides little or no information regarding whether the recipient is interpreting a communication correctly and forming accurate impressions of the sender's identities, placing at risk the reputation and/or self-esteem of the sender. A coworker might misinterpret an email signature referencing the sender's graduate degree as boasting, for example, while the sender merely intended to

associate herself with her alma mater's sports teams. We thus propose that the self-protection motive reduces individuals' virtual identity communication behavior, which is in contrast with the proposed positive relationship with the other motives we have discussed.

In summary, we propose seven primary motives as predictors of virtual identity communication. As individuals form identities to satisfy various motives, these identities will also be routinely conveyed to others. As Vignoles [49] states, "people do not just define their identities on a private, cognitive level, they also enact them for both real and imagined audiences, and this [is] a central part of identity construction" (p. 412). Thus, when an identity satisfies one or more of the aforementioned motives, they will be more likely to be communicated.

H1: Identities that satisfy an individual's (a) self-verification, self-enhancement, belonging, distinctiveness, self-efficacy and self-creation motives will be more likely to be communicated, while those that satisfy the (b) self-protection motive will be less likely to be communicated.

3.2. Contextual Factors, Relevance, and (Virtual) Identity Communication

Contextual factors should play an important role in determining how an individual engages in identity communication behaviors. While a number of contextual factors can be identified (e.g., professional vs. non-professional settings, small vs. large communication audience), we focus this research-in-progress paper exclusively on two: communication medium (virtual vs. non-virtual) and the nature of the receiving audience (communicating to one's peers vs. one's superiors). As shown in Figure 1, we argue that these contextual factors will moderate the extent to which a given identity is considered relevant. The contextual relevance of a given identity, in turn, partially predicts the extent to which the individual attempts to communicate the identity.

To better explain this positioning, we must consider the way in which identity communication fulfills the motives summarized in the previous section. According to identity theory, one way in which a person fulfills a central need (i.e., a motive) for, say, belonging is to formulate and then communicate an identity that provides a sense of belonging [31]. For example, a person might enjoy belonging to the group of local college football fans. In order for this identity to effectively satisfy the belonging motive, this person might then communicate this identity in a variety of ways to

others [49], from wearing team paraphernalia (in face-to-face settings) to including the team logo in the signature block on email messages (virtual settings). Through these and other actions, the person conveys to other people that he or she belongs to that sports fan group, thus satisfying that motive. The sports fan identity may not, however, satisfy other motives (e.g., self-efficacy), so individuals tend to formulate and communicate a variety of identities, each addressing different motives to different extents. The model depicted in Figure 1, then, is to be understood as a *multi-level model*, predicting relationships pertaining to identities at level 1, *nested within* the individual and/or a given context at level 2. Each identity satisfies different motives to different extents, and is also communicated to different extents [23].

In addition, we suggest that the communication context will dictate the extent to which a person's various identities will be communicated. An identity (e.g., competent statistician) that a person frequently and consistently communicates to coworkers might not be very relevant to members of that person's religious congregation (and vice versa). Likewise, for our purposes, an identity that is frequently communicated in face-to-face environments might be more or less relevant in virtual settings, and the set of identities one communicates to his or her peers might be different from the set communicated to a supervisor. Taken together, the remaining hypotheses are intended to represent these contextual dependencies.

First, we add an additional level 1 variable, which we label *perceived relevance*, which represents the extent to which a given identity is perceived as relevant in a given context. To model this situation accurately, we propose both a main effect (H2) and a contextual moderation for each link between the proposed motives and relevance (H4a) (and the extent of communication, H4b) of the identity in question, as described below.

The proposed motives we have described should, in general, be associated with greater relevance *across different contexts*. In other words, an identity that satisfies one or more motives will be, in general, more likely to be perceived as relevant as compared to an identity that does not satisfy these motives. This suggests a set of positive main effects from each motive on perceived relevance:

H2: Identities that satisfy an individual's (a) self-verification, self-enhancement, belonging, distinctiveness, self-efficacy and self-creation motives will be more likely to be perceived as relevant across contexts, while those that satisfy

the (b) self-protection motive will be less likely to be perceived as relevant across contexts.

As we have discussed, individuals form a variety of identities, in part in order to satisfy one or more motives [23], but not all identities are relevant in all situations, and people tend to cater their identity communication depending on the context or audience [50]. Thus, following the logic in the preceding paragraphs, identities that are perceived as relevant in a given situation will be most likely to be communicated. Accordingly, we predict a significant relationship between perceived relevance and identity communication:

H3: An identity's perceived relevance will be positively associated with the extent to which that identity is communicated.

Technology affects the way in which identities are communicated [51]. For example, virtual environments enable impression management strategies (Wilson, 2014; Wilson, 2015; Ellison, 2006; Kramer, 2008) in which "ideal" selves can be conveyed to others. Relatedly, virtual environments allow a person to generate prestige or reputation, either through contributions to virtual knowledge repositories [52] or more generally in organizational communications [51]. Compared to face-to-face situations, many virtual environments also provide convenient access to a much broader audience with whom identities can be shared [19, 51]. These and other features of technology significantly alter the identity communication landscape in today's organizations [3, 6, 53].

Features of the communication audience should also affect identity communication processes. Prior research has shown that audience characteristics alter a communicator's self-presentation tactics [54]. This might be especially salient in comparing communications with one's peers vs. one's superiors (i.e., a manager or executive in the company). Individuals may choose to be more guarded or careful in the presence of superiors, communicating only the "safest" identities. Alternatively, an ambitious employee may choose to project the most self-enhancing identities to his or her superiors in order to create positive impressions that might lead to career advancement.

While prior research supports the notion that these contextual factors create alternative identity communication contexts, we lack strong theory predicting specific mechanisms that either enhance or attenuate identity communication processes vis-à-vis the identity motives we include in our model. As defining such mechanisms is beyond the scope of this

paper, we argue that these two contextual factors will simply affect identity communication processes, moderating the relationships proposed in H1 and H2. In this paper, we generate exploratory, non-directional hypotheses to this effect:

H4(a): The proposed relationships between motive satisfaction and identity communication (H1) will be different in virtual vs. face-to-face communication, and in communicating with organizational peers vs. superiors.

H4(b): The proposed relationships between motive satisfaction and perceived relevance (H2) will be different in virtual vs. face-to-face communication, and in communicating with organizational peers vs. superiors.

4. Methodology

In order to test the proposed model, we adapted the survey approach developed by Vignoles and colleagues [23, 55] to measure identity motive satisfaction and identity communication in face-to-face settings. This method uses a repeated-measures design to solicit multiple salient identities from each participant by having him or her answer the question “Who am I?” several times. Then a series of questions regarding motive satisfaction (e.g., “To what extent does this identity give you a sense of belonging?”) and identity communication behaviors (“To what extent do you attempt to communicate, display, or project this identity to others?”) are asked *for each identity* the participant has listed. We adapted this approach to our context with two key modifications. First, we presented each participant with one of four scenarios in a randomly assigned 2x2 experiment. Participants were told that they were either meeting with a set of coworkers in a face-to-face setting or in a virtual (text-based) environment. Participants were also told that their meeting would be with either peers or superiors. Given this scenario, we then asked them two questions (for each of their listed identities): “To what extent would your identity as [insert identity] be relevant to the situation?” (perceived relevance), and “To what extent would you try to communicate, display, or project your identity as [insert identity] in this setting?” (identity communication). These questions, along with demographic information and a few manipulation-checking questions were administered via a web-based survey with participants recruited from Amazon’s Mechanical Turk platform. Sufficient

precautions were taken, as recommended in prior literature [56], to ensure a good quality sample from Mechanical Turk. In addition, manipulation checks were included to ensure effective experimental manipulations.

5. Analysis

The methodology described above generates repeated-measures data, and thus the model was analyzed using mixed-effects linear regression, accomplished using the *nmle* package in R [57]. A linear mixed-effects analysis allows the researcher to specify both fixed and random effects [58], and supports testing repeated-measures designs with both within- and between-subjects variables, as well as interactions between the two. Our analysis included two between-subjects variables (the two contextual manipulations, coded as dummy variables), nine within-subjects variables (seven motive satisfaction measures, perceived relevance, and identity communication, one set of nine measures for each of the five identities provided by the participant), and several cross-level interactions (interacting the contextual manipulations with each of the relationships between the motive satisfaction variables and both perceived relevance and identity communication). In order to fully test the relationships in Figure 1, given the repeated-measures structure, we fit two different models to the data. Model 1 evaluated the relationships with perceived relevance as the dependent variable, while Model 2 evaluated the relationships with identity communication as the dependent variable. Both models met acceptable guidelines for fit, and the testing results are summarized in Table 1.

6. Discussion

We have argued that identity communication is different depending on various contextual factors. To test this assumption, our model positions the virtual context and relative organizational position of the communication audience as moderating variables that alter established identity communication processes. We hypothesized that identities that satisfy various motives will be perceived as more relevant and communicated more often. Our results support a few of these relationships, though several of these proposed relationships are nonsignificant or significantly negative.

Table 1. Summary of linear mixed-effects analysis for Models 1 and 2

Variable	Model 1 (Predicting Perceived Relevance)	Model 2 (Predicting Identity Communication)		
	Estimate	SE	Estimate	SE
(Intercept)	1.574†	.539	-.211	.370
Main Effects:				
Self-verification	.008	.163	-.010	.068
Self-enhancement	.847***	.181	.041	.078
Belonging	-.420**	.153	.074	.065
Distinctiveness	.294†	.169	.238**	.074
Self-efficacy	-.017	.080	.015	.046
Self-creation	-.046	.144	.003	.038
Self-protection	.238	.190	-.090	.038
Virtual context	-1.376	.798	.715†	.399
Rel. Org. Position – Superiors	.977	.905	.298	.405
Perceived relevance	---	---	.542***	.020
Interactions:				
Self-verification X Virtual	-.132	.184	-.072	.069
Self-enhancement X Virtual	-.099	.189	-.032	.097
Belonging X Virtual	.423*	.173	-.033	.074
Distinctiveness X Virtual	-.022	.179	.084	.078
Self-efficacy X Virtual	.316*	.132	.016	.056
Self-creation X Virtual	-.206	.165	.153*	.058
Self-protection X Virtual	.106	.211	-.108	.095
Self-verification X Superiors	-.297	.208	-.072	.069
Self-enhancement X Superiors	-.419†	.233	.198*	.100
Belonging X Superiors	.095	.174	-.043	.074
Distinctiveness X Superiors	.169	.174	-.277**	.076
Self-efficacy X Superiors	.136	.132	.014	.056
Self-creation X Superiors	.109	.164	.008	.074
Self-protection X Superiors	-.430*	.213	.220*	.061

Notes. $N=465$ (nested) observation from 93 participants. † = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$. Estimates and SEs greyed out were nonsignificant.

Related to our moderating contextual factors, we show that identities satisfying the belongingness and self-efficacy motives are much more likely to be relevant in virtual (as compared to face-to-face) settings. We also show that virtual environments do indeed provide opportunities for self-creation as such motives are more likely to be satisfied in virtual contexts. It may be that virtual settings require more proactive, overt identity communication. Particularly in our organizational setting, it may be very important to communicate competence and that the person belongs to relevant groups, and virtual settings may indeed required that individuals be very “up front” about those identities.

Our data also indicate that identity communication in the presence of peers vs. superiors is different. Identities satisfying self-enhancement are perceived as (marginally) less relevant in the presence of superiors, as are those that satisfy the self-protection motive. Oddly, these moderations

change direction when they are modeled as predictors of identity communication. The disparity between the predictors of perceived relevance and those of identity communication may highlight the difficulty of effectively enacting various identities in different contexts. It is our hope that the continuation of this program of research will provide significant insights explaining these and other related phenomena, and that we will be able to contribute unique insights into the factors that facilitate virtual identity communication.

We make several contributions to theory with our results. First, we connect identity motives to virtual identity communication. In so doing, we have incorporated five identity motives that the identity literature has investigated in offline settings—self-verification, self-enhancement, belonging, distinctiveness, and self-efficacy—and we argue that these motives are relevant for understanding virtual identity communication. Our results provide evidence

regarding the motives from the offline identity literature that are most relevant in virtual settings, and these can be the focus of future theoretical and empirical work in this area. We additionally present and justify two new identity motives: self-creation and self-protection. This theoretical development of motives provides much-needed guidance regarding the antecedents of virtual identity communication behaviors. Our preliminary results indicate support for self-creation as a virtual identity communication motive and self-protection as an important motive in supervisor interactions. Overall, the results demonstrate that some of the motives are significant predictors of both perceived relevance and identity communication, and future work will be needed to investigate more details regarding the nature of these relationships. Overall, our preliminary results do provide evidence of the relevance of different motives for different sorts of communication in virtual environments.

We note that some of our results are a departure from findings in prior identity literature, and we acknowledge this as an avenue for further investigation. It is important to understand if this departure is due to the context, i.e., virtual identity communication, or an artifact of the method and subjects. We have reason to believe it is due to the virtual nature of the identity communication. Research has shown that online interactions are often treated differently than face-to-face, due to the tendency for people to deindividuate when an ‘anonymous’ member of a group [59]. In a working environment, people may not truly be anonymous, but there is a certain amount of visual anonymity when leveraging text-based communication that can lead to reduced evaluation concerns [60]. An important future direction will be to understand the role of deindividuation in virtual identity communication.

Our research will also make contributions to practice. We hope to provide much-needed guidance for managers who are attempting to achieve the benefits of a distributed, virtual workforce while avoiding the numerous potential drawbacks associated with mediated communications. Managers increasingly acknowledge the benefits of identity communication relative to key organizational outcomes, but these benefits may be reduced or lost altogether as organizations implement new collaboration technologies [3]. By exploring how virtual identity communication is carried out, we show that managers need not necessarily sacrifice identity-related outcomes for the benefits of a virtual workforce.

7. Conclusion

Building on prior identity research in non-virtual settings, we have explored a new theoretical model that better accounts for the nuances of identity communication in virtual settings. Adapting a unique scenario-based data collection approach, we tested for relationships between a number of identity motives and identity communication processes in a variety of contexts. Our initial exploratory findings indicate that virtual contexts do indeed alter identity communication processes, as do the characteristics of the communication audience. The theory developed here constitutes important initial steps toward better understanding the identity issues faced by modern organizations.

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