

*Citation for published version:*

Muir, K, Joinson, A, Cotterill, R & Dewdney, N 2016, 'When Communication Accommodation Backfires: Interpersonal Effects of Social Power and Linguistic Style Accommodation in Computer-Mediated-Communication', Paper presented at 66th International Communication Association Annual Conference, Fukuoka, Japan, 9/06/16 - 13/06/16.

*Publication date:*  
2016

*Document Version*  
Peer reviewed version

[Link to publication](#)

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**Abstract**

Within Communication Accommodation Theory, social power is an important influence upon the likelihood of accommodation in communicative behaviours. Across two studies, we explore if the influence of power extends to a non-conscious aspect of accommodation, *linguistic style*, and to computer mediated forms of communication. We manipulated social power experimentally to create a series of instant messaging conversations between high and low power participants. Low power induced greater likelihood of linguistic style accommodation, whilst in a low versus high power role (study 1) and when participants undertook both roles (study 2). Notably, linguistic style accommodation by individuals in a high power role 'backfired': greater accommodation was associated with a negative impression formed by their conversational partner. The results show robust effects of power in shaping language use across CMC. Further, the interpersonal effects of linguistic accommodation depend upon a complex interplay of social context, social norms, and the communication medium.

NOTE. This is the author's version of work accepted for presentation at the 66<sup>th</sup> International Communication Association Annual Conference, Fukuoka, Japan, 9 – 13<sup>th</sup> June 2016. This version may not exactly replicate the paper presented at the conference or published in proceedings.

**When Communication Accommodation Backfires:****Interpersonal Effects of Social Power and Linguistic Style Accommodation in  
Computer-Mediated-Communication**

In modern life, computer-mediated-communication (CMC) is pervasive and abundant, taking a variety of forms including email, social media, blogs, online community forums and more. How CMC shapes the ways in which we communicate, the development and maintenance of relationships, and the interpersonal effects of changing communication technologies, is an important focus in interpersonal CMC research (Walther, 2011). In this paper, we explore how an individual's level of social power influences language use whilst communicating over instant messaging, a synchronous form of CMC. We frame our work in relation to Communication Accommodation Theory (CAT), examining how linguistic accommodation in association with power influences interpersonal outcomes, in terms of the impression formed by interlocutors of the speaker's personal qualities.

As communication forms have evolved, so too have the theories developed to explain and predict communication behaviours. One such prominent theory is Communication Accommodation Theory (CAT) which describes the ways in which people adjust their communication behaviours during social interactions, their motivations for doing so and the social consequences (Giles, Coupland, & Coupland, 1991). Within the CAT framework, *convergence* describes when people alter their communication behaviours to be more similar to others, whilst *divergence* describes ways in which people accentuate dissimilarities in communicative behaviours. Convergence is motivated by the desire to gain social approval, whereas divergence represents the desire to emphasise or increase social distance between conversationalists. Convergence in a variety of communicative behaviours is

common, and is usually related to positive evaluations of the communication, the individual and the relationship (Soliz & Giles, 2014).

Early views of CMC suggested the text-based nature and lack of visual and non-verbal cues rendered the CMC environment detrimental to interpersonal communication. However, later theories and research claim that individuals adapt to CMC to form interpersonal relationships similar in nature to those formed face-to-face (see Walther, 2011 for a review). Thus, CAT has been extended from face-to-face (FtF) communication to encompass a variety of online or otherwise computer-mediated interactions (Gasiorek, Giles, & Soliz, 2015). Accommodative behaviours have been observed in asynchronous CMC, in terms of convergence in politeness terms over email (Bunz & Campbell, 2004), and convergence in gendered language use in online discussion forums (Thomson, 2006). Similarly, research has reported accommodation in synchronous forms of CMC, including convergence in language use in multiparty negotiations using online chat-rooms (Huffaker, Swaab, & Diermeier, 2011), and convergence in message length and duration in instant messaging conversations (Riordan, Markman, & Stewart, 2013).

Much accommodative behaviour is viewed as consciously motivated and enacted by interlocutors. In contrast, one aspect of accommodation thought to occur non-consciously is *linguistic style accommodation*. Linguistic style is defined by an individual's use of function words, which are processed and produced non-consciously (Chung & Pennebaker, 2007). Although most of our vocabulary consists of content words, function words (such as pronouns, conjunctions, and articles) represent over half of the words used during an interaction, have little independent semantic meaning, and are used to express grammatical relationships within a sentence (Pennebaker, 2011). An individual's use of function words is proposed to

link to social behaviours (Tausczik & Pennebaker, 2010) and be representative of interpersonal alignment between conversationalists (Ireland et al., 2011). For instance, high levels of synchronization in the use of function words between conversationalists (linguistic style matching, or LSM; Niederhoffer & Pennebaker, 2002) have been observed in successful dialogues of police negotiations (Taylor & Thomas, 2008) and in conversations between speed-daters who later initiate a relationship (Ireland et al., 2011). Studying linguistic style accommodation thus provides an unobtrusive window into the nature of personal relationships, and the factors influencing interpersonal communications that occur outside of an individual's awareness.

Synchronization in linguistic style has also occurred over CMC, including in posts to online blogs (Goode & Robinson, 2013) and within conversational threads on online discussion forums (Welbers & de Nooy, 2014). As in face-to-face communication, the extent to which people use similar proportions of function words over CMC is also predictive of positive social outcomes: high levels of linguistic style matching amongst groups conversing in online chat-rooms has positively predicted measures of group cohesiveness (Gonzales, Hancock, & Pennebaker, 2010). Therefore, linguistic style synchronization over CMC can also be considered as representative of interpersonal alignment, consistent with theories of CMC as harmonious with personal relationships despite a reduction in social and non-verbal cues compared to FtF communication (Walther, 2011).

### ***Power and Linguistic Style Accommodation over CMC***

An understudied area within CAT relates to factors that predict whether one person will be more likely to accommodate their linguistic style compared to another. Social power is one such factor that has been extensively studied in relation to its

influence on an individual's tendency to accommodate aspects of their behaviours in FtF communications (Giles, 2008). CAT predicts that individuals in low power roles have motivation to seek social approval from their higher power partner, leading to convergence in their communications (Giles et al., 1991). Consistent with this, people in lower social power/status roles often converge their communications to those in higher/more dominant roles (Giles, 2008). Examples of this in FtF communication include witnesses in courtrooms converging their language use towards those of legal professionals, who are in higher positions of power and status within the courtroom situation (Gnisci, 2005).

Social power influences accommodation in a similar manner over CMC. For instance, people accommodate their language depending on the power or status of the anticipated recipient of a message on internet forums (Walther, 2007). Researchers have also used the Enron email corpus to identify phrases predictive of an individual's position in a company hierarchy, showing that people also accommodate aspects of their communications in accordance with power structures when conversing via email (Gilbert, 2012).

There are a limited number of studies suggesting the influence of power on accommodative behaviour over CMC extends to linguistic style. For instance, research shows that use of personal pronouns (one aspect of linguistic style) alter in line with position in a hierarchy: "I" terms are used more when low status individuals communicate over CMC with higher status individuals than vice versa, including emails (Sherblom, 1990) and internet message boards (Dino, Reysen, & Branscombe, 2009). Danescu-Niculescu-Mizil et al. (2012) examined synchronisation in function word use by admins vs. non-admins on Wikipedia pages. They found use of a particular class of function words (i.e., articles) in one utterance by a high status

individual (admins) increased the probability of their lower status interaction partner (non-admins) also using that particular class of function words in their next utterance. Along similar lines, Jones et al. (2014) found that individuals who had low status within an online community forum were more likely to accommodate their linguistic style when conversing with high status members, compared to the other way around.

However, a limitation of previous work into linguistic style and CMC is that the interactions studied were mostly asynchronous, as is the case with communications on online forums or message boards. Further, social status or power was inferred from roles within those communities, instead of being directly measured or manipulated. The robustness and generalizability of findings in this area are therefore limited. In the present research, we address such issues by experimentally manipulating an individual's level of social power, to ensure power differentials between conversationalists are clearly defined. We examine if linguistic style accommodation in relation to social power occurs in synchronous CMC (instant messaging). Based on predictions from CAT and previous research, we form the following hypotheses:

H<sub>1a</sub>: There will be a greater frequency of conversations characterised by individuals in a low power role converging their linguistic style towards higher power partners, compared to individuals in a high power role converging towards lower power partners.

H<sub>1b</sub>: Individuals in a low power role exhibit a greater general tendency to accommodate their linguistic style, compared to individuals in a high power role.

### ***Linguistic style accommodation and impression formation over CMC***

A central concept within CAT is that people form impressions and evaluate their interaction partners based on perceptions of their communications. Perceptions

of convergence in FtF communications have been associated with greater evaluations of similarity and liking (Giles, Taylor, & Bourhis, 1973), whereas perceptions of divergence have generally been associated with evaluations of hostility or impoliteness (Giles & Gasiorek, 2014).

In respect of impression formation in CMC, the lack of physical features and non-verbal behaviour in CMC vs. FtF communications are argued to lead to reduced ability or opportunity to form impressions. The central tenet of this *cues filtered-out* approach to impression formation in CMC is that reduced availability of social cues in the CMC environment mean diminished capacity to convey personal information, leading to a depersonalized communication style and relatively incomplete personal impressions (see Culnan & Markus, 1987). Indeed, early research into impression formation in CMC found the lack of non-verbal signals led to impoverished impressions formed (Kiesler, Siegel, & McGuire, 1984).

Other theories argue that people adapt their communication behaviours to the cues available in the communication medium (such as social information processing theory; Walther, 1992). People make impressions based on communication style (i.e., word choice and typographic information) as they do not have other information to base impressions on (Lea & Spears, 1992). Consistent with this view, there is evidence that people do form impressions of each other after conversing in CMC (i.e., Walther, Loh, & Granka, 2005; Yao & Flanagin, 2006). Aspects of communication such as agreements, topic changes, and timings (i.e., length of sequences typed and the duration of sequences) are argued to contribute to impression formation over CMC (Riordan et al., 2013). In line with this and with predictions from CAT, accommodation over CMC has been associated with positive impression formation. Convergence in word use over email has positively influenced perceptions of rapport



(Crook & Booth, 1997), and lexical mimicry (repetition of words or word phrases) was associated with increased perceptions of trust by people conversing via instant messaging (Scissors, Gill, & Gergle, 2008) and negotiators using online chat-rooms (Swaab, Maddux, & Sinaceur, 2011).

The picture with respect to the interpersonal outcomes of linguistic style accommodation over CMC is less clear. Although linguistic style synchronization between interactants communicating FtF predicts positive social outcomes, these outcomes have mostly been operationalized in terms of dyadic measures, such as successful outcomes of negotiations (Taylor & Thomas, 2008), or relationship initiation (Ireland et al., 2011) instead of individual recipient evaluations of the speaker. To our knowledge, only one previous study has examined individual interpersonal outcomes of linguistic style accommodation, and report positive impression formation in association with linguistic style accommodation in FtF communications (Muir, Joinson, Cotterill, & Dewdney, 2015). However, there is little evidence that such effects translate to linguistic style accommodation occurring via CMC. One study into linguistic style matching (LSM) found that although people synchronized their use of function words when communicating over CMC, high levels of LSM were unrelated to ratings of subjective rapport (Niederhoffer & Pennebaker, 2002). Contrarily, other research has shown synchronization in linguistic style over CMC was positively related to group cohesiveness (Gonzales et al., 2010), although this was a measure of group performance as opposed to an assessment of individual interpersonal impressions.

In the present research we address this gap in the literature by clarifying the interpersonal effects of linguistic style accommodation across CMC. CAT predicts

that accommodation is associated with a positive impression formed by their conversational partner, leading to the following hypothesis:

H<sub>2</sub>: Greater linguistic style accommodation is associated with positive perceptions of the speaker's similarity, rapport, and attractiveness by the recipient.

### ***Present research***

In this paper, we extend previous research investigating communication accommodation in CMC contexts. Specifically, we examined the influence of power on linguistic style accommodation in synchronous CMC (instant messaging) and the interpersonal effects of such accommodation. We present two studies designed to address these research questions. In Study 1, participants had a series of conversations using an instant messaging system, whilst playing either a high or low power role. We calculated the extent of linguistic style accommodation for each conversation, and as an overall tendency by each participant within his or her power role. We also collected self-report measures of the impression formed by each participant of their conversational partner. Study 2 replicated this study utilizing a within-subjects design, in which participants undertook both high and low power roles, to test the reliability and stability of the effects of power upon linguistic style accommodation.

## **Study 1**

### **Method**

#### ***Participants and Design***

Twenty-six participants took part in the study (12 females, 14 males), which was advertised as taking part in a 'speed networking using social media session'. Participants ranged from 18 to 25 years old ( $M = 20.83$ ,  $S.D. = 1.99$ ). Within each speed networking session, as explained below, thirteen participants were in the low

power role (workers) and thirteen participants were in the high power role (judges). Participants were unknown to each other prior to the study, and were paid a small monetary reward at the end of the study.

### ***Procedure and Measures***

*CMC System* We utilized a free online synchronous instant messaging (IM) program, designed for business networking and online team chat (<https://www.hipchat.com>). Prior to the study, each participant was given an email link to register with the Hip Chat program, to enable them to choose their own username and password for their individual user account. Within HipChat, we created a number of individual chat-rooms (labelled *Room 1*, *Room 2*, etc.) in which two participants at a time could enter and chat privately using IM. Although participants within the same chat-room could see each other's usernames, no other information was available about with whom they were chatting. The Hip Chat system automatically kept a secure transcript of all messages sent and received by users in each chat-room. These transcripts are only available for access by the administrative account owner (in this case, the first author) and were retrieved later for analysis.

*Speed Networking using CMC:* We utilised a power manipulation to create a situation in which participants felt they had either high or low levels of power (c.f. Muir et al., 2015). Thirteen participants were in the high power role (judges) and thirteen participants were in the low power role (workers). Workers pitched new business ideas to judges, who had the ability to award workers extra money after each IM conversation; meaning judges had power over workers. The study took place in a computer laboratory, with each participant seated at an individual workstation with a PC connected to the internet. Upon arrival, participants were randomly allocated to either the judge or worker role and given task instructions to read. Participants then

logged on to the HipChat program using their individual user accounts and were instructed in how to use the system (i.e., how to enter and leave chat-rooms, and how to send messages). Participants acting as Judges each entered an individual private chat-room, and remained in this chat-room for the duration of the study. Workers were given a series of instruction sheets, upon which was listed the chat-room they should enter (e.g., “please enter *Room 2*”) and the business idea they should discuss. Workers moved between chat-rooms, and had a five minute private one-to-one IM conversation with each of the thirteen judges, in which they discussed business ideas proposed by the worker.

*Measures of Impression Formation* At the end of each five-minute conversation all participants completed the following measures: (1) a measure of similarity to their partner (Ireland et al., 2011); (2) a measure of subjective ‘clicking’ or rapport felt during the interaction (Niederhoffer & Pennebaker, 2002); and (3) measures of their partner’s social and task attractiveness (McCroskey & McCain, 1974). Judges had additional measures to complete after each conversation evaluating the worker’s idea and how much extra money to award. After completing these measures, workers left their current chat-room and moved into the next chat room listed on their instruction sheet.

At the end of the speed networking session, participants completed a manipulation check, rating the extent to which they felt they had power during the conversations, on a scale from 1 (not at all) to 5 (very much). Participants were then debriefed and paid an equal amount.

### ***Calculating Zelig Quotient as a measure of Linguistic Style Accommodation***

Computational measures of accommodation have been developed to quickly and easily quantify instances of communication accommodation in text. These

measures typically measure the extent to which language use increases in similarity in dyadic conversations (i.e., Church, 2000). Relevant to our interest in linguistic style, linguistic style matching (LSM) is one measure which quantifies the degree to which linguistic style similarity exists within a dyadic conversation (Niederhoffer & Pennebaker, 2002). The higher the LSM score, the greater the similarity in linguistic style between two speakers. As a dyadic score of linguistic style similarity, LSM has been used to predict dyadic or group outcomes (i.e., Ireland et al., 2011). However, although LSM is useful for determining stylistic similarity within a dyad, it provides a single score per dyad and so does not capture the extent to which each individual accommodates his or her linguistic style. For instance, LSM will not reveal if one individual in a dyad changes their usual linguistic style to a greater, or lesser, extent compared to their conversational partner.

We therefore chose to use the Zelig Quotient (ZQ) as a computational method for quantifying linguistic style accommodation for each individual (Jones et al., 2014). ZQ firstly determines an individual's baseline, or usual, use of nine function word categories (i.e., linguistic style; see Table 1). The extent to which an individual changes their linguistic style from their usual style to converge towards or diverge away from the linguistic style of each of their conversational partners is then computed (*pairwise speaker to recipient ZQ scores*). Further, by averaging the pairwise ZQ scores across all conversational partners, we can also estimate the individual's *general tendency* to accommodate their linguistic style to that of others, within his or her power role (*overall ZQ scores*). Positive Zelig Quotients (greater than zero) represent convergence to the linguistic style of their conversational partner. Negative scores (less than zero) represent divergence away from the linguistic style of their partner. Zelig Quotients close to zero represent maintenance of the individual's

own typical linguistic style, with any movement in linguistic style due to noise, rather than convergence or divergence. Use of the ZQ measure thus allows us to determine the effects of high vs. low power upon linguistic style accommodation, for each individual.

The HipChat software automatically kept a verbatim transcript of all messages sent and received by individuals within each of the private chat-rooms. These transcripts were processed using the Linguistic Inquiry and Word Count program (Pennebaker et al., 2007) to yield the percentages of function words uttered by each participant in each turn, in each conversation. We used the LICW percentages to calculate pairwise speaker-to-recipient ZQ scores for each conversation and an overall ZQ score for each participant, following the procedure described in Jones et al. (2014).

**Table 1.** Word categories used for calculating Linguistic Style

<b>Category</b>	<b>Examples</b>
Personal pronouns	I, his, their
Impersonal pronouns	It, that, anything
Articles	A, an, the
Conjunctions	And, but, because
Prepositions	In, under, about
Auxiliary verbs	Shall, be, was
High frequency adverbs	Very, rather, just

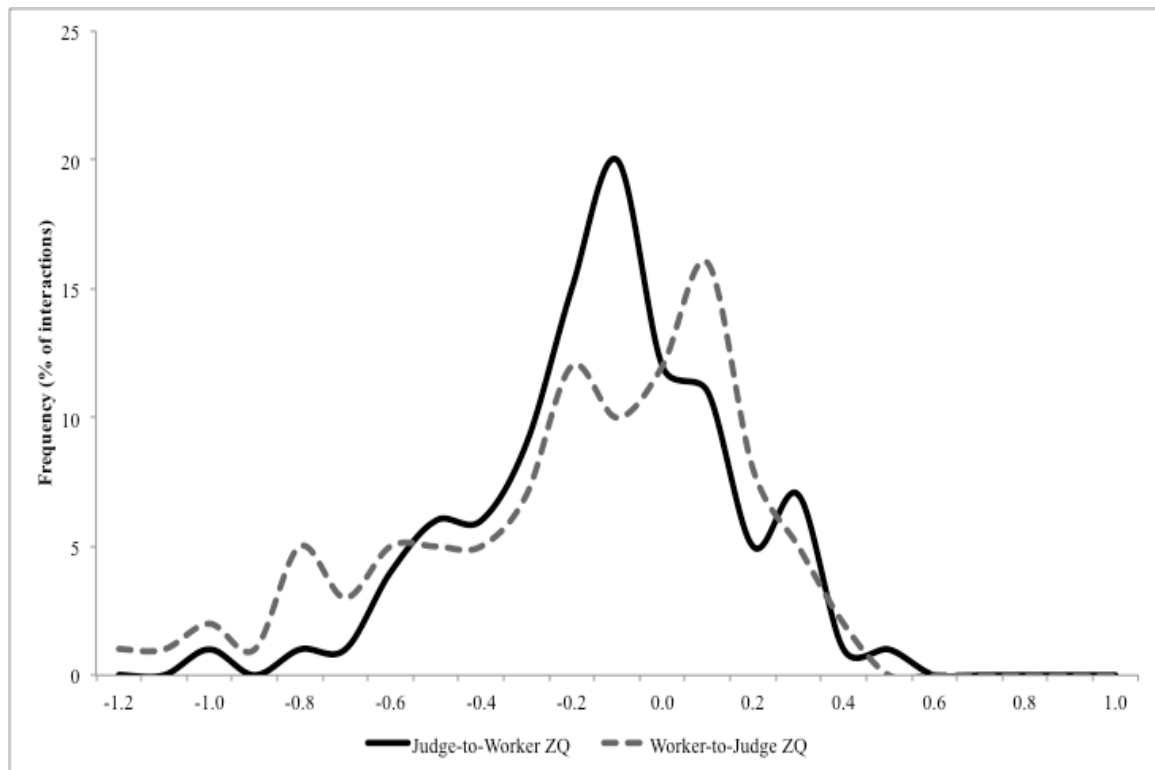
## Results

### *Manipulation check*

Judges perceived they had a greater level of personal power ( $M = 4.46$ ,  $S.D. = .77$ ) compared to Workers ( $M = 3.46$ ,  $S.D. = 1.12$ ;  $t(24) = -2.63$ ,  $p = .01$ ). Thus, the manipulation of power was successful in inducing the perception of a power difference between participants.

### *The Effects of Power upon Linguistic Style Accommodation*

We hypothesized that individuals in a low power role would exhibit a greater frequency of conversations characterised by *convergence* in linguistic style towards higher power partners, than individuals in a high power role would exhibit convergence towards lower power partners ( $H_{1a}$ ). Figure 1 presents the pairwise speaker-to-recipient ZQs for judges vs. workers (high vs. low power) as a percentage of the total number of conversations. These scores demonstrate the extent to which each individual accommodated their linguistic style within each conversation. Power role did not significantly predict the frequency to which individuals exhibited divergence or convergence ( $\chi^2(1) = .03$ , n.s.) However, judges exhibited a slightly higher percentage of negative ZQs (indicating linguistic style divergence) than workers (63% of interactions compared to 57%). The opposite is apparent for convergence, with workers showing a slightly higher percentage of positive ZQs (31%) compared to judges (25%).



**Figure 1.** Pairwise speaker-to-recipient Zelig Quotient distributions for conversations between workers (low power) and judges (high power) in Study 1. Positive ZQs represent convergence, negative ZQs represent divergence.

We further predicted that individuals in a low power role would exhibit a greater general tendency to accommodate their linguistic style, compared to individuals in a high power role ( $H_{1b}$ ). Consistent with this hypothesis, power was a significant influence upon overall ZQ ( $t(24) = 2.6, p = .007, d = .63$ ). Overall ZQ of workers ( $M = -.16, S.D. = .07$ ) were greater than those of judges ( $M = -.23, S.D. = .14$ ) demonstrating workers exhibited significantly less divergence in their typical linguistic style compared to judges.

### ***Interpersonal effects of linguistic style accommodation***

$H_2$  predicted that greater linguistic style accommodation would be associated with a positive impression formed of the speaker by the recipient. In the following



analyses, we therefore predicted Person B's ratings of A in terms of similarity, rapport, and attractiveness, from the extent of Person A's linguistic style accommodation (pairwise ZQ score). In all analyses we utilised the linear mixed effects model procedure (MIXED) in SPSS, which allows analysis of data as with traditional linear multiple regression techniques, whilst controlling for the clustering in our dataset resulting from repeated measurements nested within individuals (Heck, Thomas, & Tabata, 2014, pp. 4 - 11). For clarity, in the main we report only significant results here.

We observed no relationship between the extent of linguistic style accommodation by individuals in the low power position (workers) and judge's ratings. However, the extent of linguistic style accommodation by judges significantly and negatively predicted workers' perceptions of judges. With increases in judges ZQ, there was a corresponding decrease in worker's ratings of similarity ( $b = -2.22, t(34.4) = -2.79, p = .008$ ), rapport ( $b = -1.99, t(43.62) = -2.92, p = .005$ ), and social attractiveness ( $b = -.87, t(32.5) = -2.17, p = .04$ ). So, linguistic style accommodation by participants in the high power position was associated with a poor impression formed by their lower power partner.

## Study 2

The major procedural details of the study were the same as Study 1, with the exception that Study 2 utilized a within-subjects design. Thirty participants took part (15 females, 15 males), ranging from 18 to 23 years old ( $M = 19.24, S.D. = 1.62$ ). In the speed networking session participants undertook both the worker and judge role, in a counterbalanced order: fourteen participants undertook the worker role before the judge role, and sixteen participants undertook the judge role before the worker role.

Participants completed the same measures of impression formation as in Study 1. At the end of the speed networking session, participants completed a manipulation check to rate the extent to which they felt they had power during the conversations in each role, on a scale from 1 (*not at all*) to 5 (*very much*). As in Study 1, participants were unknown to each other prior to the study, and were paid a small monetary reward.

## **Results**

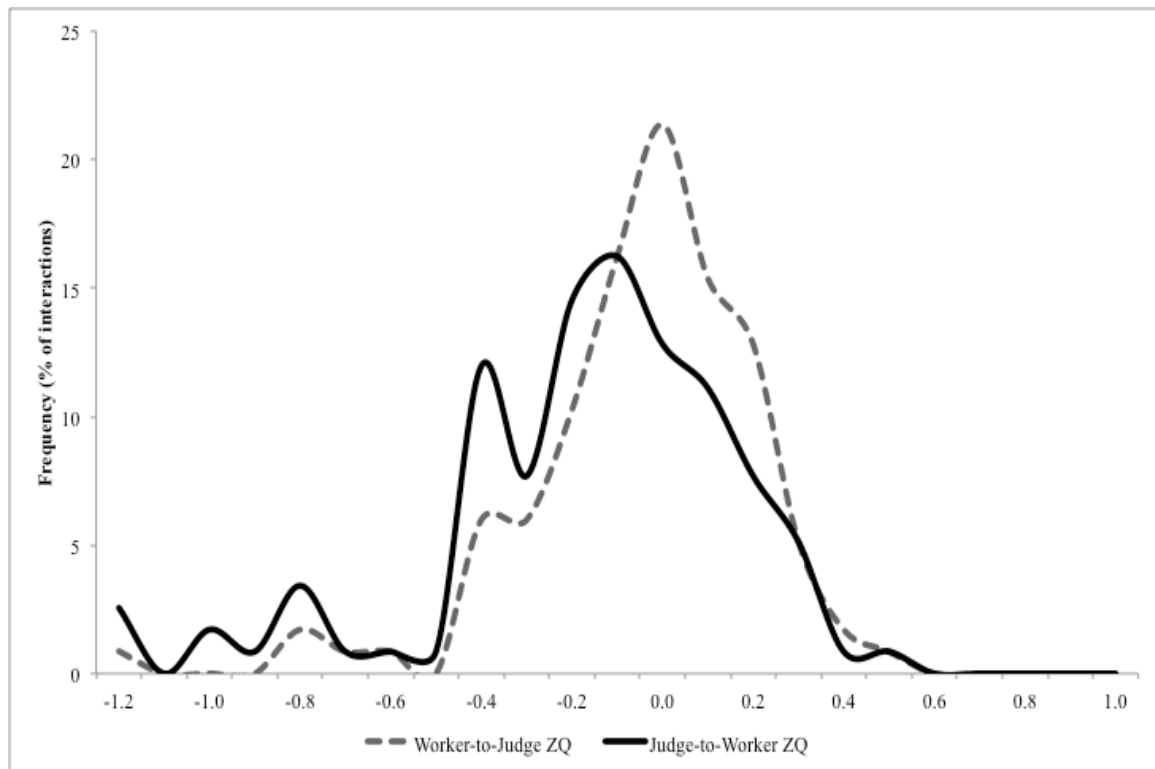
### ***Manipulation check***

A within-subjects ANOVA confirmed a significant main effect of power role, in that participants perceived significantly greater levels of personal power when they were in the judge role ( $M = 4.23, S.D = .77$ ) compared to the worker role ( $M = 3.60, S.D. = 1.06; F(1, 28) = 5.99, p = .02, \eta^2 = .17$ ). The order in which participants undertook roles was not significant in influencing perceived personal power ( $F(1, 28) = 1.88, p = .18, \eta^2 = .06$ ) and there was no interaction between role order and power role ( $F(1, 28) = 1.06, p = .31, \eta^2 = .03$ ). Thus, the experimental manipulation of power retained its effects in a within-subjects design: even though participants undertook both power roles, they still perceived having a greater amount of power when in the judge role.

### ***The Effects of Power upon Linguistic Style Accommodation***

Figure 2 presents the pairwise speaker-to-recipient ZQs for participants when they were in the judge vs. worker role (high vs. low power) as a percentage of the total number of conversations. This time, power role was a significant predictor of the frequency to which individuals exhibited divergence or convergence ( $\chi^2(1) = 4.81, p = .03$ ). Consistent with Study 1, when participants were in the judge role they exhibited a greater percentage of negative ZQs (indicating linguistic style divergence) compared to when in the worker role (62% of interactions compared to 43%). The

opposite is true for convergence: when participants were in the worker role they showed a greater percentage of positive ZQs (36%) compared to the judge role (26%).



**Figure 2.** Pairwise speaker-to-recipient Zelig Quotient distributions for conversations between workers (low power) and judges (high power) in Study 2. Positive ZQs represent convergence, negative ZQs represent divergence.

A within-subjects ANOVA showed a significant effect of power role upon overall Zelig Quotients ( $F(1, 28) = 9.71, p = .004, \eta^2 = .25$ ) but not of role order ( $F(1, 28) = 1.25, p = .27, \eta^2 = .04$ ) and no interaction between the two ( $F(1, 28) = .96, p = .33, \eta^2 = .03$ ). Consistent with Study 1, when participants were in the worker role they exhibited less linguistic style divergence ( $M = -.09, S.D. = .11$ ) compared to when in the judge role ( $M = -.22, S.D. = .17$ ).

### ***Interpersonal effects of Linguistic Style Accommodation***

We explored the influence of linguistic style accommodation by a speaker upon the impression formed by the recipient, by predicting Person B's ratings of A (similarity, rapport and attractiveness) from the extent of Person A's linguistic style accommodation. We again used the linear mixed effects model procedure, which controls for the nested nature of our data. We also included the order in which participants undertook power roles (judge first versus worker first) as a predictor, to ensure any order effects were controlled for in the analysis.

Consistent with Study 1, the extent of linguistic style accommodation by judges negatively predicted workers' perceptions of similarity ( $b = -1.33, t(6.24) = -2.43, p = .05$ ), rapport ( $b = -2.25, t(4.47) = -2.59, p = .05$ ), and task attractiveness ( $b = -1.64, t(35.37) = -2.27, p = .03$ ). Therefore, linguistic style accommodation by participants in the high power position was again associated with a poor impression formed by their lower power partner.

### **General Discussion**

Across both studies, judges and workers exhibited linguistic style *divergence* when communicating using instant messaging, in terms of negative overall Zelig Quotients. Although unexpected, this is actually in line with previous research on communications over CMC. For instance, Huffaker et al. (2006) found increasing divergence in language use by online community forum members across time. Divergence has also been seen in terms of linguistic style in relation to power. Kacewicz et al. (2013) reported that individuals who rated themselves as higher in power within a dyad conversing using an online chat-room used fewer first person singular pronouns compared to their lower power partner (i.e., partners diverged in

linguistic style). Similarly, divergence in linguistic style has been seen in messages between high and low ranking community forum members (Jones et al., 2014).

The concept within CAT of *speech complementarity* could account for this divergence in linguistic style between high and low power conversationalists (Dragojevic, Gasiorek, & Giles, in press). Speech complementarity describes communicative behaviours that appear divergent in nature, but have the function of conveying and reinforcing social roles. For instance, males and females diverge in speech pitch and tone, to maintain 'masculine' and 'feminine' voices in a socially appealing manner (Giles et al., 1991). Courtroom interactions have also been characterized in terms of speech complementarity: lawyers and defendants engage in divergent behaviours and language, which are actually in line with the social norms associated with their role within the courtroom (Linell, 1991). In the case of our experimental paradigm, objectively measured divergence in linguistic style may be representative of individuals attempting to reflect and preserve their respective power roles communicatively.

Importantly, we also found that overall, workers diverged their linguistic style to a *lesser* extent than judges, and in individual conversations were more likely to show convergence (i.e., positive Zelig Quotients). This is consistent with previous research into the effects of power on linguistic style in both FtF communication (Muir et al, 2015) and in online communities (Jones et al., 2014). Conversing with an individual in a higher power role is proposed to trigger motivations to gain social approval, which then leads to greater accommodation in communication behaviours (Giles et al., 1991). Our results suggest that not only does this process apply to an individual's linguistic style, but can occur across computer-mediated-communication mediums. Further, we observed similar effects of power upon linguistic style

accommodation over CMC when individuals were placed in either a high or low power role (between-subjects: study 1) and when participants undertook both roles (within-subjects: study 2). Increased likelihood of linguistic style accommodation in association with low social power therefore seems to be a reliable and robust effect: it occurs across both FtF and CMC forms of communication, and across both stable and shifting power contexts.

In respect to the interpersonal outcomes of linguistic style accommodation, across both studies there was no effect of workers accommodation upon the impression formed by judges. However, the extent of linguistic style accommodation exhibited by judges negatively predicted the impressions formed by workers. Social identity and deindividuation theory (SIDE; Lea & Spears, 1992) combined with expectancy violation theory (Burgoon & Hale, 1988) could help account for this surprising finding. SIDE proposes that the lack of nonverbal signals and interpersonal cues in CMC means people are reliant on other remaining social cues (such as status) on which to form impressions. Consistent with SIDE, social norms have a strong effect in CMC. In one study, where participants were visually anonymous and interacting via CMC, conformity to group norms was strengthened (Postmes, Spears, & Lea, 1998). Further, negative impressions can be formed over CMC, based purely on social groupings: one study found that anonymous CMC between students belonging to different social groups (i.e., subject studied) was associated with negative impressions formed of their partner's personal characteristics, compared to CMC where individuals were identifiable through a photo (Postmes, 1997; as cited in Postmes et al., 1998). Thus, impressions formed over anonymous, text-based CMC are largely based on cues associated with group identity (Lea & Spears, 1992).

In line with this theory, participants in our study could have been reliant on their perceptions and expectations of typical behaviours and communicative norms associated with high vs. low power roles, in order to form impressions of their interaction partners. Further, according to expectancy violation theory, when expectations about communicative behaviours are violated (i.e., when a conversational partner decreases or increases conversational distance, counter to expectations), this can be evaluated negatively (Burgoon & Walther, 1990). In the present study, individuals in the low power role may not have expected their higher power partner to accommodate their communications, as this violates the social and communicative norms associated with a high power role. This violation of expectations led to a negative interpersonal impression (i.e., Kalman & Rafaeli, 2011). Consistent with this idea, when legal professionals accommodate their communications downwards (i.e., to appear encouraging or empathetic towards defendants) by downgrading their formal communication style towards the defendants more informal language, this can be interpreted negatively by defendants as inappropriate to the situation, or patronizing (Linell, 1991). Thus, in our study accommodation in linguistic style over CMC from the higher to the lower power participant was perceived as inappropriate or violated expectations of social distance, and so was perceived negatively.

### ***Limitations and Future Directions***

One limitation of these studies concerns the short time periods in which participants conversed (five minutes). Researchers often allocate substantially longer times for CMC compared to FtF interactions; due to the extra time taken to type a response, five minutes conversing FtF does not equate to the same number of turns via CMC. Potentially, then, participants in our studies had only a limited opportunity

to form full impressions of their interaction partners, limiting the validity of our conclusions regarding the effects of linguistic style accommodation on impression formation. However, one study that directly compared impressions formed over FtF and CMC conversations found that although FtF conversationalists exchanged many more utterances compared to CMC, CMC participants were also able to form impressions and actually showed greater confidence in their evaluations. Thus, people are not necessarily limited by the medium when forming impressions over CMC and allocating extra time may not be necessary (Tidwell & Walther, 2002).

However, there is still the possibility that the linguistic style divergence we observed was as a result of people acclimatizing to their power roles, and such divergence could have turned into convergence given longer interactions. Thus, future research aims to examine interactions between high vs. low power individuals across a longer period, to examine the temporal aspects of linguistic style accommodation.

Although this research focused exclusively on linguistic style, an interesting future direction would be to explore other aspects of communication accommodation via CMC in respect to power. For instance, we could explore if linguistic content alters alongside or after linguistic style, and the interpersonal effects of content accommodation. Further, we also intend to examine if movement in a single linguistic style feature (such as pronouns) is responsible for the observed effects of composite linguistic style.

Other interesting directions to explore include further manipulation of an individual's motives for accommodating, beyond an asymmetrical social power relationship. These could include manipulating the feedback received by individuals during conversation (i.e., by giving people false information that they are making a



positive or negative impression upon their partner). According to predictions from CAT, increasing an individual's motives to accommodate should result in increased accommodation in linguistic style. Exploring if linguistic style accommodation is an aspect of communication that can be explicitly trained or disrupted could be another useful avenue of exploration, and may shed light on the situations in which communication accommodation is consciously versus non-consciously invoked.

### ***Conclusions***

Social power is an important influence on accommodative behaviours. We demonstrate that despite the limitations of computer mediated modes of communication, power transcends these to shape non-conscious language use. Further, we illustrate that communication accommodation is not always positively received. In this case, communication accommodation by individuals in a high power position actually backfired, leading to a negative impression formed by their partner. We thus show that the interpersonal effects of communication accommodation can be highly context dependent. The communication medium, in combination with social context in terms of power roles, appears to be an important factor in whether linguistic style accommodation is interpreted positively or negatively by conversationalists.

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