

# Personality Influences on Etiquette Requirements for Social Media in the Work Context

## When Jaunty Juveniles Communicate With Serious Suits

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**Abstract.** Today social media is used extensively in both private and professional contexts, with using habits and conventions shaped by the private using context. It is unknown how in the users perception professional social media usage might differ from the private context and which implicit or explicit etiquette criteria apply. With an empirical questionnaire approach (N=99, ages 20-59) we examined the impact of perceived formal correctness, formal politeness and workflow compatibility of social media applications (email, blog and chat) on the acceptance of social media in the working context. We additionally analyzed the impact of personality on users perceptions toward social media etiquette. Therefore we examined correlations between two Five Factor Model (FFM or Big Five) personality traits (conscientiousness and agreeableness) and requirements for formal correctness, formal politeness and compatibility. Linear regression shows that requirements for social media etiquette are strongly influenced by conscientiousness, age and social media expertise. Differences in etiquette are evaluated in regard to formal addressing, correct spelling, acronym and emoticon usage, work disruption and perceived urgency. Furthermore differences in etiquette between different media are explained.

**Keywords:** Social media, technology acceptance, etiquette, personality, user centred-design

## 1 Introduction and Motivation for Research

Using social media in a professional context has been an integral part of company strategies for some years now. Although social media has arrived in nearly every business sector, the implementation alone is no guarantee for its success. Company efforts in social media are visible on the Internet through activities on Facebook, twitter, blogs and others[1].

Invisible to the public eye are all activities in the field of internal communication. The typical fields of application for internal usage of social media are social networks sites with included wikis[2], blogs and other networks functions

that are used for internal knowledge management. Knowledge management was devised along fundamental changes in the work environment. The shift from physical labour to knowledge work turned knowledge into a central resource of these days [3]. As Peter Drucker wrote, “knowledge is the only meaningful economic resource” [4]. Considering that the majority of baby boomers are going into retirement within the next decade, the importance of retaining expert knowledge within organizations and companies is crucial for their survival. The progressively aging workforce in combination with the increasing shift towards a knowledge society implies considerable requirements for the challenge of how expert knowledge of older workers can be efficiently used and distributed within a company [5]. Since effects like propinquity and social exchange are important for effective cooperation [6], companies put a lot of effort into technical solutions like social media that can support knowledge storage and exchange by leveraging social exchange.

The fundamental problem in this context is the circumstance that the bare technical solution is by far not enough: Professional communication has its own rules. Communication partners share knowledge of both explicit communication rituals as well as implicit and tacit communication habits and rules [7]. Those are not necessarily cognizant to communication partners, though implicitly well-established within and across companies and working groups. Similar to private communication professional communication is governed by an own etiquette and unspoken rules.

In the context of social media in the work environment we face the problem that a technology with private communication habits looms into an official sector. Especially in German language areas a gap between the usage of formal and informal language exists, due to the fine-grained variance in honorific addresses [8].

In order to find out more about acceptance parameters in the context of professional social media usage we executed this explorative study to examine the influence of a perceived need for formal correctness (like spelling), formal politeness (like honorific addresses) and the compatibility of social media into the workflow. These factors have been found to convey a sense of politeness in the chat medium in prior research [9]. Additionally we analyzed the impact of two personality (conscientiousness and agreeableness) traits on communication style preference. These factors were selected, because prior research has shown that these moderate the influence of communication between superiors and subordinates [10].

The following section presents related work and how it motivates this study. Section 3 presents the main focus of the study and the central questions addressed. Section 4 contains the methodology of the study with a description of the variables used and the questionnaire instrument. The sample is described in section 5. The central findings of the study are presented in section 6 and discussed in section 7 with a conclusion and the naming of some limitations.

## 2 Related Work

In the following subsections we present the different elements relevant to our study. Section 2.1 presents the status quo of social media usage in company internal communication. Section 2.2 gives more insights into the relevance of etiquette for computer-mediated communication. Section 2.3 introduces blog and chat as possible social media applications for internal business communication. Section 2.4 presents what we mean by user personality and the FFM items used for this study [11].

### 2.1 Social Media in Internal Communication and Its Acceptance

Social media in internal communication is mostly used for knowledge management. A recent study about the implementation of social media in German, Austrian, and Swiss companies revealed that the goals of social media implementation in the working context are predominantly congruent with the goals of knowledge management [12].

According to Richter et al. the main benefit of social media usage in a company's context can be seen in goal orientated communication, efficient knowledge transfer, the foundation of networks of experts, foundation of an open corporate culture, and an enhancement of transparency and innovation of the company [12]. But pure implementation of social media does not imply any success. Acceptance, mediated by perceived ease of use and usefulness for the potential users, is the key to a successful installation and realization of any technology. Acceptance also depends on how much a technology considers individual abilities, communication needs and requirements [13–17]. This is particularly true for social media [18].

The integration of the users specific needs was identified as one central criterion for acceptance of any Web 2.0 usage [19]. In this context it is crucial that individual preferences have to be satisfied before any collective usage should commence, although a collective usage of social media is the key feature for its professional usage. In this context the need for an understanding of the individual communication preferences becomes relevant. Ignoring individual needs and comforts would risk acceptance of the potential users.

Summing this section up we can say that proper social media integration supports the goals of knowledge management by improving internal communication of companies.

### 2.2 Etiquette and Its Relevance for Communication

Human communication underlies several rule systems. Starting from rules of phonology, semantics, syntax rules, pragmatics, prosodic rules stretching over to idiosyncratic rules as well [20]. Some of these rules are in place to enable content transmission, others to enrich transmission with messages of relationship, emotion but also belonging.

In 1978 Brown and Levinson first described politeness theory in order to understand how possibly aggressive parties are able to communicate by applying a diplomatic protocol [21]. Furthermore people apply this protocol in everyday life situations to enable them to live and work together effectively. “Etiquette is not always about being pleasant, it is about being appropriate” [22]. This appropriateness needs further assessment when regarding it to language use in social media.

Cultural specific aspects are also important to acknowledge when looking at acceptance of any technology [23]. Since language is heavily culture dependent, cultural depend analyses must be performed.

In this work we consider etiquette for written online communication. This means we consider formal correctness, formal addressing and work disruption. Work disruption means how one feels to be disrupted by communication and how urgency of a particular medium influences work disruption.

In the following subsection the two social media applications chat and blog are presented in short to illustrate the range of services of social media that may be present in internal communication and how they relate to human communication.

### 2.3 Media

The three central media that we look at in this work are *chat*, *blog* and *email*. All three of them are compared. These media were selected, because they appear in many social platforms designed for internal communication. In order to have a similar understanding of what exactly chat and blog refer to and why they are different from email, we briefly describe their characteristics.

**Chat.** Chat as one application of the social media portfolio offers the opportunity to start up a conversation with someone instantly. Although chat represents an electronic mean of communication it even shows some oral communications habits [24]. Examinations of chat communication revealed that chat is medi-ally classified as a written and connectional as an oral form of communication [24]. When looking at many chat transcripts one can find that upper and lower case usage as well as proper punctuation marks are usually missing [25]. Kilian states that people economize finger-to-key-motions, which causes the absence of this formal correctness. Another reason for mistakes and fuzziness in the field of spelling is the fact that the chat is a synchronous channel of communication: The synchronicity of communication induces a feeling of time pressure, which explains frequent mistakes as well as using abbreviations and acronyms (e.g. “afk” ~ away from keyboard) and emoticons (smiley). Emoticons are additionally used to compensate for the missing opportunity to communicate with gestures and facial expressions. Emoticons are substitutions of important para- and nonverbal communication facets which are naturally present in face-to-face communication [26]. It is important to note, that chat communication changes depending on the circumstances it is used in, because emoticons and abbreviations might not be adequate for the working context.

**Blogs.** Weblogs (or Blogs) are a new medium for publication on the Internet. Via content management systems the opportunity for publication on the Internet arises for every one. Articles that are published in a Blog, appear in a chronological order on a web page. A blog offers a comment function that allows a reader to voice his opinion in regard to the published article. This opportunity enables discussions and exchange, and has even been used in learning environments [27]. Additionally a blogger has the chance to refer to other web pages via Hyperlinks. Especially through the comment function and the opportunity to refer to other web content the blog is a suitable medium for group communication [28]. The blog language is predominantly colloquial. In contrast to chat communication, communication in blogs takes orthographical rules into consideration more intensively. The reason for the higher consideration of spelling can be seen in the asynchronicity character of blog communication. Blog communication and the blogosphere, according to Schmidt, claim to adhere to formal correctness of language, correctness in terms of content as well as actuality of content [29].

It remains to be seen whether applying blogs to a work context is a suitable approach to improve knowledge exchange. In particular rules for blog etiquette and their importance need to be established.

## 2.4 Personality

Differential psychology has established measures of differences in personality that have been validated in many studies [30]. The most used model that emerged from prior research is the five-factor model (FFM) that measures the factors (1) neuroticism, (2) extraversion, (3) openness to new experiences, (4) conscientiousness and (5) agreeableness. Prior research suggests that personality traits influence usage behavior of social media in regard to private usage [31, 32]. How personality factors relate to social media in the professional context and the work environment has not been established yet.

## 3 Main Focus of the Study and Questions Addressed

For this research it was of interest whether the personality traits “conscientiousness” and “agreeableness” influenced the perceived importance of etiquette in social media usage in the work context. When looking at existing models of technology acceptance for social media, the influence of personality traits has been investigated recently only for private social networks [33–35]. Since users pick the interactions themselves within private social networks, it can be assumed that questions of etiquette are managed in a similar fashion as in private real life.

In the work environment habits of interaction are not voluntary but necessary and obligatory. This circumstance is framed by work and/or organizational requirements. Normal forms of politeness should remain similar in social network communication, but social media mediated communication brings new questions

to the table. In particular it is of interest whether certain ways of using social media are accepted differently from social media in general.

Is social media used as a written medium or regarded as an oral medium? Do written or oral forms of politeness apply? How is it perceived in the work environment and is the perception of usefulness of social media influenced by the diversity of users with different amounts of experience with social media usage? Is social media different from established forms of computer-mediated communication (e.g. email)?

- RQ1: Does conscientiousness influence etiquette for social media?
- RQ2: Does agreeableness influence etiquette for social media?
- RQ3: Does the medium play a role for etiquette?
- RQ4: Does age play a role in etiquette?
- RQ5: Does social media experience play a role?

From these research questions the following hypotheses were formulated.

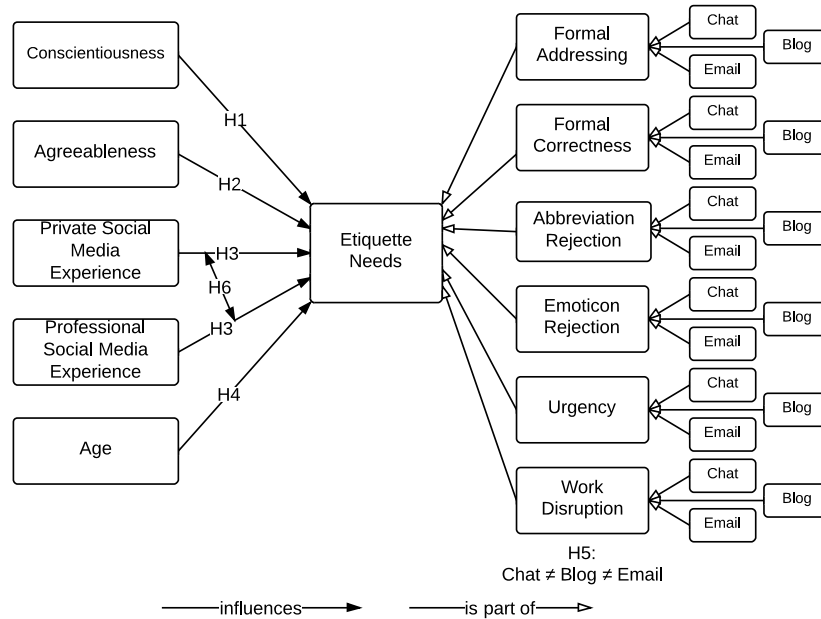
- H1: Conscientiousness has a positive effect on desire for etiquette.
- H2: Agreeableness has a negative effect on desire for etiquette.
- H3: Social Media Usage has a negative effect on desire for etiquette.
- H4: Age has a positive effect on the need for etiquette.
- H5: Chat is the medium with the least requirements in etiquette.
- H6: Private social media and work social media experience have different effects on etiquette.

## 4 Methodology

The main goal of this study was to find out whether the personal wish for an adequate etiquette has an influence on the attitude towards social media usage in the working context. To reach a larger number of participants the questionnaire method was chosen. The questionnaire was delivered electronically. The questionnaire instrument was revised by a sample of adults of different ages before the study was executed in order to check phrasing and comprehensibility of questions. Filling out the questionnaire took the testing sample between 15 and 25 minutes. Participants were approached through the researchers individual networks. Participation was voluntary and thus the sample is self-selected.

### 4.1 Variables

As independent variables we have chosen age, gender, social media expertise as well as the factors conscientiousness and agreeableness of the Five Factor Model (FFM). Dependent variables were the evaluation of formal correctness, formal politeness and compatibility with the workflow for email, chat and blog as social media components. The research model is visualized in Figure 1.



**Fig. 1.** The research model of this work. Etiquette needs consists of four subscales, which each consist of items for the three media

### 4.2 The Questionnaire

The questionnaire was divided into four main parts: (a) demographic data, (b) social media expertise, (c) FFM personality traits (conscientiousness and agreeableness) as well as (d) evaluation of etiquette preferences related to formal correctness, formal politeness and compatibility (with the workflow) in the context of e-mail, chat and blog. The last part measures the willingness to use both chat and blog.

**Demographic Data.** In order to get more information about the participants of this survey we asked them to answer questions about their age, gender and field of work (technical or non technical).

**Social Media Experience: Private and in the Working Context.** The private social media experience was measured by a question asking whether a person uses social media with dichotomous answering options. Additionally we asked for the frequency of social media usage and how much one likes to use it. According to usage frequency answers had to be selected out of a 7-point scale (daily, 2-3x/week, once a week, 2-3x/month, once a month, 2-3x/year, never). Asking for the degree of liking social media (“I use social Media...” ), the participants could choose answering option from 1 = very unwillingly to 6 = very willingly.

In the context of the professional usage of social media participants had to indicate whether they use social media for professional reasons (answering options “yes” and “no”). Additionally we asked the participants whether their company had their own internal social media application (answering options “yes” and “no”). In addition to this general information also the frequency of usage was assessed (7= daily to 1 = never) as well as the extent to which users like using the application (1=very unwillingly to 6 very willingly), addressing the hedonic component of using social media.

**FFM Personality Traits Conscientiousness and Agreeableness.** The personality traits “conscientiousness” and “agreeableness” were measured by a German item set for the Big Five [11]. These constructs refer to the original FFM variables of the used factors. Each factor had to be evaluated by 10 items on a six-point Likert scale from (1=totally disagree to 6= totally agree). Items that did not reach sufficient Kaiser-Meyer-Olkin measures in principal component analysis were dropped from the full scale (remaining items see Table 1). The scales were calculated as the means of the remaining items.

**Table 1.** Items for agreeableness and conscientiousness (translated) and Cronbach’s  $\alpha$  for each scale

Scale and Reliability Item-Text	
Agreeableness, $\alpha = .716$	I put an effort into always being kind.
	I am a polite person.
	I am socially engaged.
	I am a generous person.
	It is easy for myself to defer my needs for others.
	I would never take my bad mood out on someone.
Conscientiousness, $\alpha = .887$	I have principles and I adhere to them.
	Even having to pay a small fine is uncomfortable for me.
	I put an effort into assuring that rules are complied to.
	I am very duteous.
	I complete my tasks with high precision.
	I was neat and tidy even as a child.
	If I have decided, I will not stray.
	I always do things with a plan in mind.

**Etiquette in Email, Blog and Chat.** The attitude towards etiquette in the context of e-mail, blog and chat had to be evaluated by a six-point Likert scale (1 = totally disagree – 6 = totally agree) with 11 items over the three different forms of communication (33 items total – see Table 2). All scales showed high reliability (alpha values ranging from .74 to .92). Scales were calculated as sums and then normalized by item count.



**Table 2.** Etiquette items for e-mail, blog, and chat (translated) and Cronbach’s  $\alpha$  for each scale

<b>Scale and Reliability</b>	<b>Item-Text</b> (one for email, chat and blog each)
Formal addressing, $\alpha = .918$ for 3x3 items	Formal salutations are important for me. An honorific address is important for me. I want to be addressed with my full name.
Formal correctness, $\alpha = .820$ for 2x3 items	Messages that disregard a correct spelling bother me. I pay attention to correct spelling and punctuation marks.
Abbreviation Rejection, $\alpha = .831$ for 1x3 items	I wish abbreviations like fyi (for your interest), brb (be right back), afk (away from keyboard) would be disposed.
Emoticon Rejection, $\alpha = .775$ for 1x3 items	Using emoticons (like smilies etc.) is okay for me. (negative item).
Urgency, $\alpha = .789$ for 2x3 items	I want a quick response to my message. I feel forced to response to messages quickly.
Disruption, $\alpha = .789$ for 1x3 items	Arriving messages interrupt my workflow.

## 5 Sample Description

In order to allow retesting we report demographic data, social media expertise and personality traits of the sample in the following sections.

### 5.1 Demographic Data

A total of 99 participants answered the questionnaire in an age range between 20 to 59 years ( $M=28.8$  years,  $SD=10$ ). The gender distribution was quite balanced with 46 male and 53 female participants. Regarding the field of work the majority of the participants work non-technical jobs ( $n=70$ ). Only 29 reported to have a job that belongs to a technical field.

### 5.2 Social Media Experience: Private and in the Working Context

In the private sector the majority (89%,  $n=80$ ) of our participants use social media. Only 11 out of 99 reported not using social media for private purposes. We can also report that those who use social media are doing this regularly: Figure 2 illustrates that over 80% of the sample use it daily.

The question how much someone likes using social media, on a six-point Likert scale (from 1=“*very unwillingly*” to 6=“*very willingly*”) was answered from 36% with very much, further 46% reported to like using social media. Only 18% rather liked or disliked using social media (see Fig.2).

In the context of a professional usage of social media, we found that 31% ( $N=25$ ) are currently using social media in the working context.

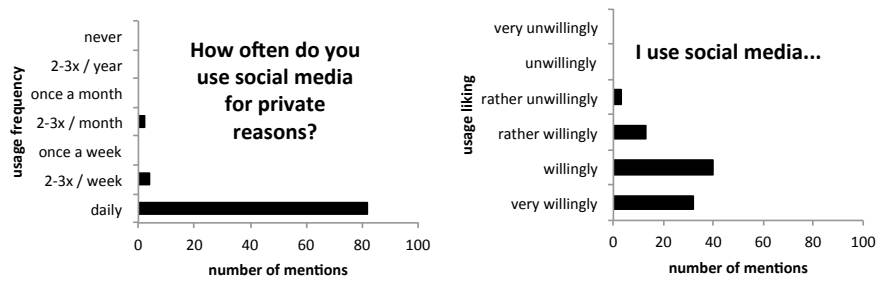


Fig. 2. Usage frequency and liking of usage of social media

For the working context we additionally asked if the company of our participants uses own social media like internal blogs, or social networks. In our sample a total of 27 participants reported that their companies offer such technologies. When looking at individual liking of social media usage we could see that replies are not as homogenous. In our sample 20 out of 28 stated liking using social media usage (“*very willingly*” – “*rather willingly*”).

Summarising we can say that participants of the study were found to be quite familiar with social media in a private context. In contrast, for the job context, we can report that only the minority is yet using social media at work. Those who have the opportunity to use company-owned social media revealed a heterogeneous using frequency and degree of liking to use it.

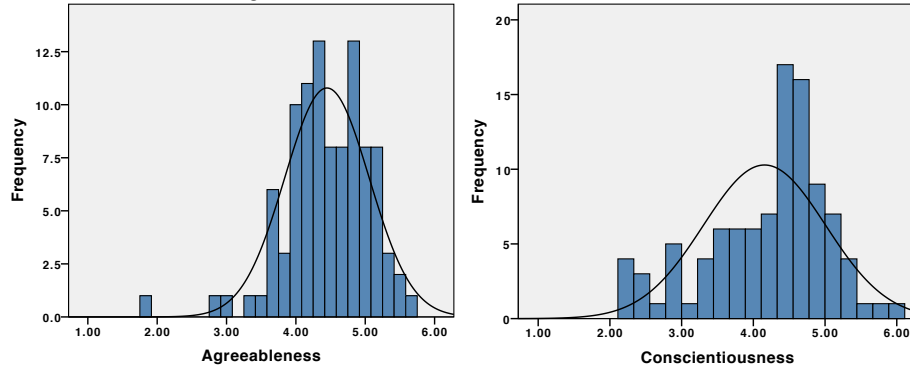
### 5.3 FFM Personality traits conscientiousness and agreeableness

In addition to the assessment of demographic data and individual expertise with social media in the private and the working context we asked each participant to answer the FFM personality scales for the two selected factors, *agreeableness* and *conscientiousness*, in order to relate personality effects to the acceptance of social media and its etiquette.

Testing both scales with Kolmogorov-Smirnoff revealed that only *agreeableness* is distributed normally in this sample ( $p > .05$ ) (see also Fig. 3). People of this sample score rather high on conscientiousness.

## 6 Results

Results were analyzed using bivariate correlation analysis and then in a second step with linear regression analysis. A level of significance was chosen with 95%. Test for differences of means was performed with *t*-tests, supported with ANOVA and ANCOVA analysis. Effect sizes for non-parametric tests are reported as Pearson’s *r*-values with explained variances if applicable ( $r^2$ ). For all used scales Cronbach’s alpha for the tested sample is reported. For linear regression analysis



**Fig. 3.** Histogram and normality plot of agreeableness (left) and conscientiousness (right). The sample leans slightly to the higher end of the scale of agreeableness. Although tested as distributed normally, the conscientiousness distribution peaks at the higher middle ranges of the scale

*B*-values with standard errors as well as standardized slopes ( $\beta$ ) are reported. Missing values were deleted list-wise.

Note that the semiotic meanings of the scales are different, which should be kept in mind when reading the results. The scales “formal addressing” and “formal correctness” represent a desire for these items, while “abbreviation” and “emoticon rejection” represent a reluctance to use these items. The “urgency” scale represents the perceived need for urgency in response to social media and “disruption” describes the perceived disruptiveness of social media.

### 6.1 Interaction of Personality and Etiquette

Factors that regarded to etiquette were first analyzed using correlation analysis (Spearman’s  $\rho$  for ordinal data). Agreeableness showed no correlational interaction with all established measures like age, conscientiousness, formal addressing, formal correctness, abbreviation rejection, emoticon rejection, urgency, disruption, social media usage or social media liking ( $p > .05$ ). Apparently, this personality trait is not at all influential for the usage and evaluation of social media.

In contrast, conscientiousness showed highly significant correlations with formal addressing ( $r = .329, p < .01$ ) meaning that the more conscientious a person is, the more s/he required formal addressing. Similar interactions hold for abbreviation rejection ( $r = .322, p < .01$ ) emoticon rejection ( $r = .351, p < .01$ ) and disruption ( $r = .301, p < .01$ ). This translates to conscientious people disliking usage of abbreviations and emoticon usage. They also feel disrupted in their workflow when using social media in the workplace.

Interestingly no interaction of conscientiousness with formal correctness could be revealed ( $p = .057$ ), showing that the degree of conscientiousness does not necessarily influence whether users put high regard on correct spelling when

using social media. This measure remains only slightly under the level of significance. All etiquette scales show interaction effects, with the exception of emoticon rejection and formal correctness (see Table 3).

Urgency only showed an interaction with emoticon rejection ( $r = -.231$ ,  $p < .05$ ), while work disruption showed no correlation with any other measure.

**Table 3.** Correlation table for etiquette items with their level of significance (2-tailed \* $p < .05$ , \*\* $p < .01$ )

Variable	(1)	(2)	(3)	(4)	(5)	(6)
(1) Formal Addressing	1					
(2) Formal Correctness	.329**	1				
(3) Abbreviation rejection	.539**	.332**	1			
(4) Emoticon rejection	.421**	-.058	.266*	1		
(5) Perceived Urgency	.129	.080	.058	-.206	1	
(6) Work Disruption	.107	-.035	.036	-.036	.185	1

## 6.2 Interaction of Demographics and Social Media Usage

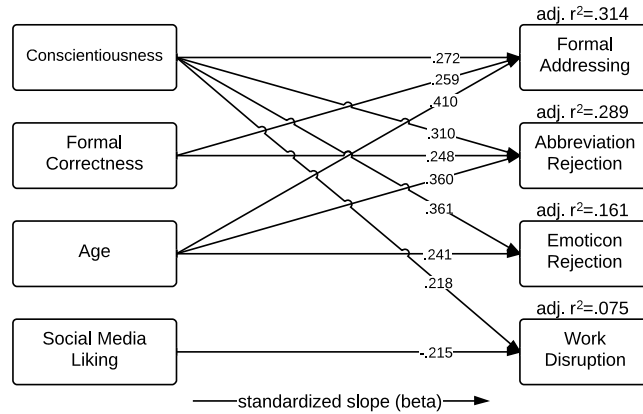
Private social media usage frequency interacts with age ( $r = -.627$ ,  $p < .01$ ), social media liking ( $r = .339$ ,  $p < .01$ ), formal addressing ( $r = -.362$ ,  $p < .01$ ) and abbreviation rejection ( $r = -.264$ ,  $p < .05$ ). Older people less often use social media. The more you use social media, the more you like it and the less you require formal addressing. Individual rejection of abbreviations also is lower when using social media often. Also it was found that liking interacts with disruption ( $r = -.252$ ,  $p < .05$ ), meaning that persons who like to use social media do not feel disturbed by using them.

In regard to professional social media usage only effects between frequency and liking were measurable ( $r = .546$ ,  $p < .01$ ). Meaning that the more you use social media for work purposes, the more you like it. Age interacts with formal addressing ( $r = .402$ ,  $p < .01$ ), abbreviation rejection ( $r = .353$ ,  $p < .01$ ) and emoticon rejection ( $r = .226$ ,  $p < .05$ ). Meaning that the older the users are, the more they appreciate correct formal addressing and the less they accept the usage of emoticons and abbreviations in social media interaction. Gender, in contrast, showed no significant effect on any of these scales ( $p > .05$ ).

## 6.3 Interaction Effects and Linear Regression Analysis

This section presents the results of all linear regression analyses performed (see Fig. 4). Considering all the interactions described in the previous sections leaves the impression that formal correctness is a measure on its own that should rather be interpreted as an independent variable than any dependent variable. There are no interactions with any independent variables (age, gender, social

media expertise, personality factors) but strong interactions with all dependent variables (formal correctness, politeness and compatibility with the work flow).



**Fig. 4.** Linear regression results for etiquette needs, showing both increase in explained variance (adjusted  $r^2$ ) and standardized slopes ( $\beta$ ) for all predictors and outcome variables

Linear regression analysis (multiple linear regression, enter-method) reveals that the linear model for formal addressing can explain 31% more variance than the scale mean by using age, conscientiousness and formal correctness as predictors (adjusted  $r^2 = .314$ ,  $p < .01$ , see Table 4). Adding social media usage frequency or liking decreased the explained variance. This means that age is the strongest predictor for the need of formal addressing. Older, more conscientious, and more “correct” people show a stronger impact of formal address (they want to be addressed properly).

Variance in rejection of abbreviation rejection can be explained to 29% more using a linear model than using the scale mean, by using age, conscientiousness and formal correctness as predictors (adjusted  $r^2 = .289$ ,  $p < .01$ , see Table 6). This means that rejection of abbreviations is most strongly predicted by age. Older, more conscientious, and more “correct” people reject usage of abbreviations more strongly.

Variance in rejection of emoticon rejection can be explained by 16% more using a linear model than using the scale mean by using age and conscientiousness as predictors (adjusted  $r^2 = .161$ ,  $p < .01$ , see Table 6). Emoticons and in particular their rejection are thereby mostly determined by conscientiousness. The more conscientious you are the less you accept usage of emoticons. Age plays a smaller role. Interestingly, the need for correct spelling (i.e. formal correctness) does not imply rejection of emoticons.

Perceived urgency does not correlate with any independent variables and is thus omitted from linear regression analysis. Work disruption can be predicted

using conscientiousness and social media liking, allowing to predict 8% more variance than the scale mean (adjusted  $r^2 = .075$ , see Table 7).

**Table 4.** Linear regression table for *formal addressing* with factors conscientiousness, age, and formal correctness

Model	B	SE B	$\beta$
(Constant)	-1.241	0.769	
Conscientiousness	0.382	0.146	.272**
Age	0.044	0.011	.410**
Formal correctness	0.283	0.113	.259**

\*\* ( $p < .01$ )

**Table 5.** Linear regression table for *abbreviation rejection* with factors conscientiousness, age, and formal correctness

Model	B	SE B	$\beta$
(Constant)	-1.755	0.819	
Conscientiousness	0.480	0.158	.310**
Age	0.042	0.012	.360**
Formal correctness	0.295	0.123	.248**

\*\* ( $p < .01$ )

**Table 6.** Linear regression table for *emoticon rejection* with factors conscientiousness and age

Model	B	SE B	$\beta$
(Constant)	-0.095	0.590	
Conscientiousness	0.428	0.119	.361**
Age	0.023	0.010	.241**

\*\* ( $p < .01$ )

#### 6.4 Differences Between Media

All scales when applied to individual media retained high Cronbach's alpha values ( $> .75$ ) if they consisted of multiple items. When comparing means for the measures between the different media, some differences become apparent (see Table 8).

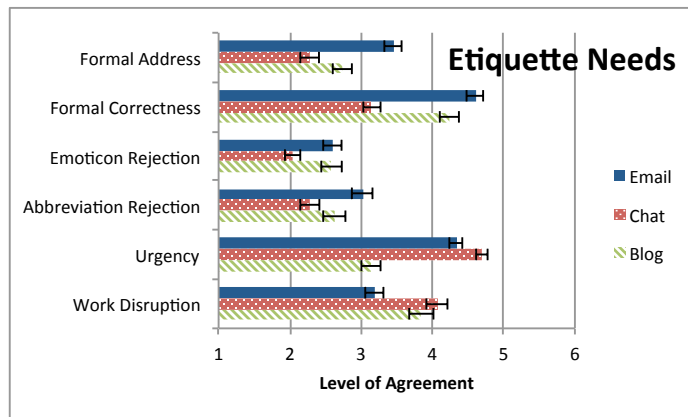
**Table 7.** Linear regression table for *work disruption* with factors conscientiousness and social media liking

Model	B	SE B	$\beta$
(Constant)	4.075	0.978	
Conscientiousness	.290	0.137	.218*
Social media Liking	-0.311	0.149	-.215*

\* ( $p < .05$ )

One effect is the difference of formal addressing between email and chat. Repeated measures ANOVA shows that a very strong effect due to the difference in medium for formal addressing ( $F(1, 85) = 125.216, p < .01, r = .771$ ). No between subject effects could be found to increase the effect size, while maintaining significance. When comparing email and blog a medium effect still holds ( $F(1, 76) = 35, 467, p < .01, r = .564$ ).

Another difference is the desire for formal correctness, which scores higher for blog and email than for chat (see Figure 5). Repeated measures ANOVA analysis between email and chat shows a strong effect on formal correctness due to the difference in media between email and chat ( $F(1, 95) = 139.624, p < .01, r = .771$ ). Adding either age or conscientiousness as between subject effects breaks this ANOVA analysis and leaves no statistically significant effect ( $p > .05$ ).



**Fig. 5.** Comparison of means with standard errors between media for formal address, formal correctness, emoticon rejection, abbreviation rejection, perceived urgency, and work disruption

When looking at emoticon rejection email and blog both show higher rejection than chat. Repeated measure ANOVA shows a medium effect between blog and

chat ( $F(1, 96) = 22.196, p < .01, r = .432$ ). This effect becomes a small effect when using gender as a between subject effect (gender \* medium,  $F(1, 82) = 5.164, p < 0.5, r = .243$ ). This means that participants rejected emoticons less in chat applications than in blog, with males seeing this difference slightly stronger than females.

A similar effect is found for rejection of abbreviation usage in emails and chat. The difference in chosen medium has a medium sized effect ( $F(1, 77) = 28.66, p < .01, r = .521$ ) and when combined with conscientiousness a smaller effect ( $r = .337, F(1, 25) = 3.206, p < .05$ ). This means that participants desire a formal addressing more in email than in chat, but require more correctness in blogs than in email or chat. Furthermore rejection of abbreviations is more present in email than in chat. In general one must say, that rejection of emoticons and abbreviations was rather low ( $M < 3$ , scale range: 1 – 6).

Perceived urgency is most prominent in chat and email, and least in blog. The difference between chat and blog is a strong effect when using repeated measure ANOVA ( $F(1, 81) = 135.321, p < .01, r = .79$ ). The effect remains high in size when comparing email and blog ( $F(1, 82) = 107.519, p < .01, r = .753$ ). No between subject effect could be found for any of the measured scales. But perceived urgency in general is different for the two sexes (the only scale, that showed a gender bias). Men perceived all three media combined as more urgently ( $M\sigma = 3.07, M\varphi = 2.70$ ) than women ( $t(93.157) = 2.396, p < .05$ ).

Experienced disruption of work is lowest for email. Blog and chat are perceived as rather disruptive to work. The difference between email and chat is a medium effect ( $F(1, 92) = 30.90, p < .01, r = .496$ ). No between subjects effects were found.

**Table 8.** Effect sizes ( $r$ ) for differences between media

Variable	Email vs. Chat	Email vs. Blog	Chat vs. Blog
Formal Addressing	.710	.564	*
Formal Correctness	.771	*	*
Emoticon Rejection	*	*	.432
Abbreviation Rejection	.521	*	*
Urgency	*	.753	.790
Work Disruption	.496	*	*

\* (no significant difference)

## 6.5 Effects on Acceptance

Interestingly no measured scales had any influence on the willingness to use of either chat or blog. Only perceived urgency correlated with the willingness to use a chat application ( $r = .296, p < .01$ ).



## 7 Discussion and Limitations

The results from this study reveal that conscientiousness and age have an effect on several measures of etiquette in social media applications (supporting H1 and H4). In particular people that are older and more conscientious tend to require a formal addressing (i.e. formal salutation, full name address, honorific address) in social media applications. Conscientious people are also more likely to feel disrupted by social media applications .

The desire for formal correctness (i.e. correct spelling and capitalization), seems to be an influence that is not itself influenced by any demographic or personality data (from this study). It also has a strong influence on the desire for formal addressing.

Similar effects were found for the rejection of using acronymic abbreviations and emoticons. Age and conscientiousness were the biggest influence factors.

The hypothesized effect of agreeableness on any measures has not been found (not supporting H2).

The usage of social media does go hand in hand with decreasing desire for formal addressing and the willingness to accept abbreviations in communication (confirming H3). But since social media usage is directly correlated with age, linear regression shows that age and conscientiousness are the predominant factors in this analysis. People with more social media experience also perceived social media usage as less disruptive.

Differences in media were also found (confirming H5). In particular it was found that chat has less requirements than email in regard to etiquette and blog and email require more formal correctness than chat. This strengthens the hypothesis that chat is perceived more as an oral medium applied synchronously rather than asynchronously. The blog on the contrary is perceived more as a publication medium than a communication medium considering that the desire for formal correctness is by far higher than in chat. Nonetheless requirements are the highest when using email. Interestingly email was perceived as the least disruptive but equally urgent as chat messages.

Differences between private social media and work social media were of the nature that experience with work social media did not influence any measures at all, where private social media experience did change desires for etiquette (confirming H6).

Summarizing we can say that personality, age and experience do play a role in etiquette needs in regard to social media usage at the workplace. User diversity must be considered when applying social networking solutions in the work environment. Social media is (at least in this sample) significantly but not extensively different from other forms of communication. In particular perceptions of synchronicity, publicity and immediacy carry over to social media etiquette. Nonetheless individual preferences apply as well.

**Application.** The findings in this study can be applied, when trying to bring older and younger users to use one internal social network. In particular younger

users must be instructed to regard formal addressing and usage of abbreviations and emoticons when communicating with older users. This is particularly true when posting or commenting on blog entries.

It is also important to regard the need for more formal correctness of users that score higher on conscientiousness. If employees of a company diverge strongly on this measure, stricter rules might help keeping everyone on board.

When trying to define rules for emoticon and abbreviation usage one must consider, both age and conscientiousness of future users. Different rules for different media might also be of use, as for example rejection of emoticons in chat messages is rather low generally.

Urgency is perceived more strongly in men, which means that using a chat application might appeal more to men than to women, because the synchronicity (and thus urgency of a message) might be the reason they use chat in the first place (although this was not statistically validated as a difference in acceptance between genders).

**Limitations.** The results of this study must be considered as culture-specific and only represent a German perspective. German clearly deciphers between a formal honorific address (Sie ~ honorific you) and an informal address (Du ~ informal you). Furthermore correct German requires capitalization of all nouns in sentences. This could mean that in different languages effects could be less strong than in this German sample. However, it could be interesting to identify further language-specific or culture specific formal addressing components and to specify whether the meaning of formal addressing, especially in the older user group, is also equally high in other language cultures.

Another limitation refers to the fact that the sample examined here does not represent the whole workforce. Rather, the sample was relatively young and non-technical in their educational background. Addressing a bigger sample could improve results and shed more light on some of these findings.

A full big-five assessment could improve the understanding what other factors influence etiquette requirements. In particular openness could influence rejection of emoticons or abbreviations negatively. The inclusion of more personality factors could also lead to the identification of personal user profiles and their preferences for different types of social media as well as media-specific etiquettes.

The measure of urgency, which only correlated negatively with emoticon rejection, could imply a hidden desire to comply socially over a social network since both measure the willingness to communicate more directly (either more quickly or more emotionally).

Further research is required to thoroughly understand these factors.

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## References

1. Kaplan, A.M., Haenlein, M.: Users of the world, unite! the challenges and opportunities of social media. *Business Horizons* **53**(1) (January 2010) 59–68
2. Holzinger, K., Holzinger, A., Safran, C., Koiner-Erath, G., Weippl, E.: Use of wiki systems in archaeology: Privacy, security and data protection as key problems. In: *e-Business (ICE-B), Proceedings of the 2010 Intern. Conf. on.* (July 2010) 1–4
3. Maier, R.: *Knowledge Management Systems: Information and Communication Technologies for Knowledge Management.* Springer (2004)
4. Drucker, P.F.: The information executives truly need. *Harvard Business Review* **73**(1) (1995) 54–63
5. Erlich, A., Bichard, J.A.: The welcoming workplace: designing for ageing knowledge workers. *Journal of Corporate Real Estate* **10**(4) (October 2008) 273–285
6. Calero Valdez, A., Schaar, A.K., Ziefle, M., Holzinger, A., Jeschke, S., Brecher, C.: Using mixed node publication network graphs for analyzing success in interdisciplinary teams. In: *AMT.* (2012) 606–617
7. Preece, J., Nonnecke, B., Andrews, D.: The top five reasons for lurking: improving community experiences for everyone. *Comp. in Hum. Beh.* **20**(2) (2004) 201–223
8. Hickey, R.: The german address system. *Diachronic perspectives on address term systems: Pragmatics and beyond* *New Series* **107** (2003) 401–425
9. Westbrook, L.: Chat reference communication patterns and implications: applying politeness theory. *Journal of Documentation* **63**(5) (September 2007) 638–658
10. Tepper, B.J., Duffy, M.K., Shaw, J.D.: Personality moderators of the relationship between abusive supervision and subordinates’ resistance. *Journal of Applied Psychology* **86**(5) (2001) 974–983
11. Satow, L.: Big-five-persönlichkeitstest (B5T): Test- und Skaldokumentation. <http://www.drSATOW.de> (July 2012)
12. Richter, A., Stocker, A., Mller, S., Avram, G.: Knowledge management goals revisited – a cross-sectional analysis of social software adoption in corporate environments. *ACIS 2011 Proceedings* (January 2011)
13. Davis, F.D., Bagozzi, R.P., Warshaw, P.R.: User acceptance of computer technology: A comparison of two theoretical models. *Management Science* **35**(8) (August 1989) 982–1003
14. Venkatesh, V., Morris, M.G., Davis, G.B., Davis, F.D.: User acceptance of information technology: Toward a unified view. *MIS Quarterly* **27**(3) (2003) 425–478
15. Arning, K., Ziefle, M.: Understanding age differences in PDA acceptance and performance. *Computers in Human Behavior* **23**(6) (2007) 2904–2927
16. Ziefle, M., Schaar, A.K.: Gender differences in acceptance and attitudes towards an invasive medical stent. *Electronic Journal of Health Informatics* **6**(2) (2011)
17. Calero Valdez, A., Schaar, A.K., Ziefle, M.: State of the (net) work address developing criteria for applying social networking to the work environment. *Work: A Journal of Prevention, Assessment and Rehabilitation* **41** (2012) 3459–3467
18. Schaar, A.K., Calero Valdez, A., Ziefle, M.: Social media for the eHealth context. a requirement assessment. *Adv. in Human Aspects of Healthcare* **10** (2012) 79
19. Richter, A., Koch, M.: Functions of social networking services. In: *Proc. Intl. Conf. on the Design of Cooperative Systems, Carry-le-Rouet, France.* Springer. (2008)

20. Rothwell, J.D.: In the company of others: An introduction to communication. McGraw-Hill Humanities/Social Sciences/Languages (1999)
21. Brown, P., Levinson, S.C.: Politeness: Some universals in language usage. Volume 4. Cambridge University Press (1987)
22. Hayes, C.C., Miller, C.A.: Human-Computer Etiquette. Volume 5. Auerbach Publications (2010)
23. Alagöz, F., Zieffe, M., Wilkowska, W., Calero Valdez, A.: Openness to accept medical technology - a cultural view. In Holzinger, A., Simoncic, K.M., eds.: USAB. Volume 7058 of Lecture Notes in Computer Science., Springer (2011) 151–170
24. Wirth, U.: Chatten. Plaudern mit anderen Mitteln. In Siever, T., Schlobinski, P., Runkehl, J., eds.: Websprache.net. Sprache und Kommunikation im Internet: Sprache Und Kommunikation Im Internet. 1 edn. Gruyter (June 2005)
25. Kilian, J.: T@stentöne. Geschriebene Umgangssprache in computervermittelter Kommunikation. Historisch-kritische Ergänzungen zu einem neuen feld der linguistischen Forschung. In Beisswenger, M., ed.: Chat-Kommunikation: Sprache, Interaktion, Sozialität & Identität in synchroner computervermittelter Kommunikation: Perspektiven auf ein interdisziplinäres Forschungsfeld. Ibidem-Verlag, Stuttgart [Germany] (2001)
26. Dresner, E., Herring, S.C.: Functions of the nonverbal in CMC: emoticons and illocutionary force. *Communication Theory* **20**(3) (2010) 249–268
27. Holzinger, A., Kickmeier-Rust, M.D., Ebner, M.: Interactive technology for enhancing distributed learning: a study on weblogs. In: Proceedings of the 23rd British HCI Group Annual Conference on People and Computers: Celebrating People and Technology. BCS-HCI '09, Swinton, UK, UK, British Computer Society (2009) 309–312
28. Koo, C., Wati, Y., Jung, J.J.: Examination of how social aspects moderate the relationship between task characteristics and usage of social communication technologies (SCTs) in organizations. *International Journal of Information Management* **31**(5) (October 2011) 445–459
29. Schmidt, J.: Weblogs: Eine kommunikationssoziologische Studie. Uvk Verlags GmbH (2006)
30. Digman, J.M.: Personality structure: Emergence of the five-factor model. *Annual Review of Psychology* **41**(1) (1990) 417–440
31. Rosen, P., Kluemper, D.: The impact of the big five personality traits on the acceptance of social networking website. *AMCIS 2008 Proceedings* (January 2008)
32. Devaraj, S., Easley, R.F., Crant, J.M.: Research Note—How does personality matter? relating the five-factor model to technology acceptance and use. *Information Systems Research* **19**(1) (March 2008) 93–105
33. Hughes, D.J., Rowe, M., Batey, M., Lee, A.: A tale of two sites: Twitter vs. facebook and the personality predictors of social media usage. *Comput. Hum. Behav.* **28**(2) (2012) 561–569
34. Correa, T., Hinsley, A.W., de Ziga, H.G.: Who interacts on the web?: The intersection of users' personality and social media use. *Comput. Hum. Behav.* **26**(2) (2010) 247–253
35. Amichai-Hamburger, Y., Vinitzky, G.: Social network use and personality. *Comput. Hum. Behav.* **26**(6) (November 2010) 1289–1295