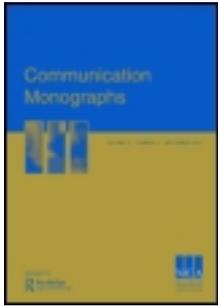


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# Blurting

Dale Hample, Adam S. Richards & Christine Skubisz

*Blurting is production of speech that is spontaneous, unedited, and negative in its repercussions. Study 1 (N = 230) analyzed open-ended descriptions of situations in which respondents had blurted and situations in which they had been tempted to blurt but stopped themselves. Coding of those materials supported our essential understanding of blurting. A self-report measure of blurting was developed and produced these findings: Blurters endorsed more messages overall and rejected fewer because of harm to other or relationship; they saw interpersonal arguments in a less sophisticated way, and as less cooperative or civil, but more pointedly emphasized the utility, identity display, dominance, and play goals for arguing; blurters were higher in verbal aggressiveness, indirect interpersonal aggression, psychological reactance, sensation seeking, psychoticism, extraversion, and neuroticism; and they were lower in perspective-taking and lying. People were most likely to blurt when they believed they had high rights to speak in a situation, and were less likely when personal benefits and relational consequences were at issue, or when the situation made them apprehensive. Study 2 (N = 570) clarified the psychometric properties of the new blurting scale and established its convergent and discriminant validity when compared to a measure of simple spontaneity in speech.*

*Keywords:* Arguing; Argument Frames; Blurting; Editing; Message Production; Spontaneity

Blurting, saying things spontaneously and without editing, has not often been an explicit research topic in communication. Blurting has been a minor element of various theories of message production, most often by contrast with its opposite, careful planning. Generally, theories have implicitly assumed that blurting does not occur, even though the theorists would probably never have made such a declaration: they simply preferred to study effortfully generated utterances. From Freudian slips (Motley, Baars, & Camden, 1983) to inappropriate witticisms to unthinking remarks

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made in anger, many of us have personal experience of saying things we soon wished we could pull back. We might also say something both spontaneous and clever, but we particularly tend to remember the social disasters, and these are normally what we call blurts. The two studies reported here are initial exploratory investigations of blurting. We begin with the assumption that some people blurt more than others, and we wish to distinguish those people in terms of their individual differences. We will also typify blurts and describe situations in which people almost blurted but did not. The second study clarifies the structure and validity of a newly developed self-report scale for blurting.

### Message Planning

Message production studies are dominated by the goals-plans-action model (GPA; Dillard, 2004; Dillard, Segrin, & Harden, 1989). This simple but productive idea is that, upon contact with a situation that might call out communication, people generate social goals, develop plans to achieve those goals, and finally settle on an acceptable plan to use as a blueprint for message actions. The goals, the plans, and the actions are all held to be organized in complex hierarchies, with abstract entries at the top and concrete elements at the bottom (Berger, 2007). A goal might immediately stimulate a plan, but the production process hesitates at this point so that the plan can be evaluated, revised, and perhaps replaced (Berger, 1997, 2010; Meyer, 1997). GPA work either asserts or implies that the first and third parts of the process are spontaneous and only the middle step is cognitively effortful. That is, goals are immediately registered upon contact with a situation (Dillard & Solomon, 2000), and messages are simply performative readings of the plans. Plan development is what is cognitively difficult.

Meyer (1997) studied details of the plan formation and revision processes. She postulated two distinctive elements. The first occurs on contact with the message-stimulating situation. *Situation-action associations* are activated from long-term memory. These are records of what sorts of things ought to be done in recognizable social circumstances. A situation immediately activates an action in one's cognitive system and this is a sort of nomination for the action to be performed. But the proposed message is not theorized to be articulated until it has survived a testing process (Hobbs & Evans, 1980; Miller, Galanter, & Pribram, 1960). Key components of this testing are Meyer's second element, and the *action-consequence associations* are also stored in long-term memory. The proposed message is connected to various outcomes by means of records in one's knowledge base. These outcomes are compared to the immediate social goals and if they violate the goals, the action is supposed to be re-planned. Meyer's research program has repeatedly shown that politeness and other secondary goals influence the messages that survive this testing, and also those that are reconsidered, suppressed, or revised when they fail the consequence-goal comparisons (Meyer, 2001, 2002, 2003).

Quite a lot of the research designs investigating planning have invited conscious work on the part of the planners. People are instructed to generate alternative plans,

to build in branch points to take account of possible choices, to write their plans out, to consider their message choices carefully and rate them on various measures, and so forth. This is unobjectionable but it gives the planning literature a pointed bias in favor of the implication that messages are prototypically planned in a conscious effortful way. Spontaneity and blurting do not have a convenient place in these theories because “the GPA model focuses on *volitional behavior*” (Dillard, 2004, p. 186).

Theorists have tried to deal with spontaneity in several ways. All the approaches have in common that they treat spontaneous utterances as planned, often consciously planned, in some limited but specifiable fashion. Let us review several ways of expressing the matter. Hobbs and Evans (1980) discussed “bi-directional planning.” This occurs at a conversational moment in which a speaker considers top-of-hierarchy matters such as one’s goal along with bottom-up matters, such as what conversational moves seem to be available in the instant. Ochs (1979) distinguished between planned and unplanned discourse. At the extreme, unplanned discourse would be “a string of nonsensical, haphazard sounds” (p. 55), whereas planned discourse is thought out beforehand. Ochs said that actual conversation tends to be intermediate between these extremes and wrote about actual conversation as being *relatively* planned or unplanned. Waldron (1997) distinguished between pre-conversational (worked out prior to interaction) and conversational (in the moment) planning and discussed the various sorts of planning that occur in interactive instants. He said that there are three types of conversational or “online planning:” knowledge-based (drawing prefabricated plans from memory), accommodative (adapting the prefabrications to immediate circumstances), and creative. The last requires the speaker “to consciously determine goals for the near or long-term conversational future and construct hypothetical action sequences which move self and other toward those goals” (p. 204). Berger (2007), too, preferred the term “online planning,” which he characterized this way: “When individuals are engaged in conversations, plans may have to be instantiated rapidly and any conscious planning must be done on the fly, most likely when individuals find themselves in the listener role” (p. 57). In considering the topic of spontaneity explicitly, Berger (1997, p. 140) assimilated it to planning. Those who “claim” to be acting spontaneously may still be described as having “. . . a plan, perhaps one that is not consciously available to the ‘spontaneous’ actors, [that] is guiding their conduct” (p. 43). Another formulation that permits planning to be a bit less carefully tactical and self-aware is that of Hayes-Roth and Hayes-Roth (1979), who characterized planning as “opportunistic:” “. . . at each point in the process, the planner’s current decisions and observations suggest various opportunities for plan development. The planner’s subsequent decisions follow up on selected opportunities” (p. 276). Throughout the planning literature we see an insistence that all discourse is planned, and even apparently spontaneous speech is often still held to be planned consciously.

The idea of spontaneity—and blurting, by implication—is not easy to discern in these formulations. These scholars’ idea is that, either consciously or unconsciously, our apparently spontaneous actions are directed by the same processes and resources

that are evident when we ask people to perform planning tasks carefully and on purpose. We agree that messages are not random, and that even spontaneous ones are controlled by cognitive contents and known actions (e.g., Greene, 1997). But when some message does not seem to proceed from a pre-conversational planning session, an imagined interaction (Honeycutt, 2003), or conscious calculation, we think that calling it “planned” in any respect (bi-directional, relatively, online, unconscious, opportunistic) is somewhat presumptive. Spontaneous action should not be *assumed* to be the degenerative result of hasty, resource-impaired, or imperfect planning, and these terminologies do that. It is entirely possible that blurting will in fact prove to be degenerative, and therefore ought to be reconciled to the planning literature as a defective or primitive case. But research is needed to test that thought, and a discrete concept will help us explore those possibilities. We should be thinking about blurting as an affirmative phenomenon, rather than somehow-not-planned messages. The difference is that we would then be studying something conceptualized as having its own nature, rather than some absence or deficiency in something else.

### Message Editing

Besides being spontaneous, a blurt is also unedited. Just as we found blurting submerged in the planning literature as not-entirely-planned discourse, we find it in editing research as not-edited discourse. Editing is something that is expected to occur as part of the process of planning a message. Conveniently, the editing literature does make it fairly obvious where unedited activity fits into our theories.

As mentioned above, Meyer's (1997) theory of editing specifies two processes. First, exposure to a message-inviting situation activates actions from long-term memory. Second, these actions each activate their associated consequences, and these consequences are immediately held up against the person's primary and secondary goals for the communication episode. The first process is essential. If it is skipped, no message will be produced. But the second process could conceivably not occur. If it does not, a message activated by the situation's primary goal will be produced without having been checked against secondary goals, such as those involving politeness or identity. Such a message would be unedited. Unedited messages might, by accident, achieve a variety of goals. But having bypassed the process that tests nominated messages against the possibility of goal violation, these messages might also be the unhappy ones that we immediately label as blurts.

Hample and Dallinger (1987) developed a procedure for studying message editing. They provided respondents with a situation and a list of possible messages and asked which messages would they be willing to say and which would they suppress. They also gave a list of reasons for suppression and asked the people to indicate the reason that would explain the suppression. The list of available reactions to each proposed message helps us to see blurting's place in this research. The first choice is endorsement, indicating that the respondent would be willing to say or do the proposed action. Endorsed messages therefore, either survived the editorial process Meyer (1997) described, or were never exposed to it. All the other choices refer to

reasons for suppression. These include estimates of effectiveness, projections of effects on participants or their relationship, and worries about the quality of the discourse.

Blurters say the first (only) thing that occurs to them. Conjoining the Meyer and Hample-Dallinger work, we can see that, compared to people who edit, people who do not edit will endorse more messages, because they are not working through reasons for rejection. For the same reason, they will make less use of the various matters that can be editorial issues, especially identity problems, politeness issues, relational issues, relevance, and/or truth. Since we will be using a trait measure of blurting in this study, we should see a positive association between the blurting measure and endorsement, and negative correlations to at least some of the editorial criteria.

### Argument Frames

The final place to look for an understanding of blurting is the work on argument frames (Hample, 2003, 2005). Here, at last, blurting has been an explicit interest, if not a focal one. This research program was designed to answer the question, “What do ordinary arguers think they are doing when they argue?”

To develop answers to that question a battery of instruments was developed, each designed to capture a kind of perception or expectation about interpersonal arguments. The instruments fall into three categories, which are held to be in order of sophistication about the arguing experience. The first group is self-oriented and describes arguers’ primary goals for arguing, the views that frame the interaction. This category includes respondents’ perception that people argue in order to obtain some *utilitarian* outcome, to assert their *dominance* over the other person, to exhibit some aspect of own *identity*, or to *play*. Notice that in this set of frames, the other person is regarded mainly as a foil needed to obtain outcomes, absorb an identity display, accept dominance, or provide playful interaction. The second category of frames reflects the connection between self and other and describes the degree to which an arguer adapts to the other person’s goals. Here the other person is seen as an authentic agent, deservedly having his/her own goals and intentions. The particular measures are *blurting*, *cooperation*, and *civility*. Blurting is a transitional measure, indicating whether or not an arguer is able to pass from self-oriented objectives (utility, dominance, etc.) to those that involve the other person as more than a means for achieving personal goals. A non-blurter has moved beyond exclusive self-focus and so may see that arguments can be cooperative and civil. Cooperation and civility both require that the other arguer be treated genuinely, with his or her own goals registered and taken seriously. The final category of frames, abstract reflections on the arguing experience, has only one instrument called *professional contrast*. This offers respondents a choice of opposed descriptions (e.g., uncontrolled emotionality v. reason giving, dominance v. issue resolution, relationally damaging v. relationally developmental) and asks which best describes arguing. The contrasts were selected because ordinary arguers sometimes have views opposite those of the professional

argumentation community on those points (that is, in the example items scholars would insist on the second choice but many people choose the first). Advanced arguers are those whose reflective understandings of arguing best match those of argumentation scholars.

This theoretical understanding of argument frames indicates where blurting sits in this system. Blurters are self-focused and so they are not expected to participate in the more advanced understandings of arguing. Consequently, blurters should not see arguing as cooperative or civil, and should have low scores on the professional contrast instrument.

## Study 1

### *Descriptions of Blurring and Non-Blurring*

Our initial objective was to acquire a simple description of blurring. We asked respondents to give open-ended descriptions of a situation in which they blurted, and a situation in which they might have blurted but did not (that is, they were aware that they edited, either suppressing or revising whatever came first to mind). We will do a qualitative analysis of these materials along with some light descriptive coding to address this research question:

RQ1: What are the characteristics of blurts and blurring episodes and how do they differ from situations in which blurring was tempting but avoided?

Respondents also rated both situations on a standard set of scales that measure several features of situations (Cody, Woelfel, & Jordan, 1983). These measures reflect the stakes involved in the situations, as well as apprehension levels and the arguers' relative status. On the assumption that blurters *can* edit, even if they decline to do so, we expect that they will be most motivated to edit when the stakes are highest and least motivated when the consequences of blurring are lowest. Therefore we predict

H1: When comparing situations in which people did and did not blurt, the blurring situations will be rated as higher on right to remark, and lower on personal benefits, relational consequences, situational intimacy, other's dominance, and situational apprehension.

These scales have been applied in the editing research program, and several connections were found between the situational descriptors and endorsement (summarized in Hample, 2005, p. 182). The results were supportive of Hypothesis 1, on the assumption that blurring will be associated with more endorsements.

### *Blurring and Editing*

The editing literature implied that blurters (compared to non-blurters) should endorse more messages and make less use of various editorial criteria. These two hypotheses have to do with the validity of our conceptualization and measurements. Should blurring not be related to editing in the ways we have indicated, serious questions would arise about this project.

H2: Self-reports of blurting proclivity will be positively associated with endorsement of possible messages.

H3: Self-reports of blurting proclivity will be negatively associated with use of several editorial codes: harm to other, harm to relationship, irrelevance, and truth.

Our reasoning is that blurters do not make much use of Meyer's (1997) action-consequence associations, and so will not be as likely to notice that messages might damage relationships or violate ordinary norms of discourse. Therefore, they will be willing to endorse messages that others would reject on these grounds. Earlier versions of the blurting instrument had factor structures that were hard to interpret and the present study aims to improve this measure. Using earlier measures of blurting, Hample, Warner, and Young (2009) failed to associate blurting with editorial activity in the ways specified in Hypotheses 2 and 3.

### *Blurting and Argument Frames*

The next hypothesis derives from the empirical work on argument frames. Our reasoning begins with the idea that blurters do not make the transition from self-oriented frames to those that seriously involve other people. We make no particular prediction about how blurting will relate to the first-order frames (utility, dominance, identity display, and play). However, we expect that people high on the blurting instrument will see arguments as less cooperative and civil, and that they will be less likely to agree with argumentation professionals on the characteristics of arguing encounters. Therefore,

H4: Self-reports of blurting proclivity will be negatively associated with the cooperative and civil frames for argument, as well as professional contrast scores.

Using a different version of the blurting measure that had three subscales, Hample et al. (2009) showed uniform support for this hypothesis for one subscale ("blurting to take care of business") but no support at all for another ("blurting what's on my mind"). The third subscale, "blurting without thinking," had negative correlations for all three of the predicted relationships, but the one for cooperation was not significant. Although they do not report the pertinent results, the data set from Hample, Warner, and Norton (2006) also gives uneven support for the hypothesis. Analysis of their blurting items yielded two subscales. With the subscale "blurting without thinking" their data produced negative correlations with civility ( $r = -0.18, p < 0.05$ ) and professional contrast ( $r = -0.23, p < 0.01$ ), but not with cooperation ( $r = 0.10, ns$ ). Their other subscale, this time "blurting for honesty," yielded a positive correlation with cooperation ( $r = .28, p < .001$ ), but non-significant associations with civility and professional contrast. The distinctions among these various blurting subscales have never been clear, but previous work gives some empirical support for Hypothesis 4.

### *Blurting and Individual Differences*

We expect that people will rarely label spontaneous and unedited *nice* things as blurts. Mostly blurts will be associated with inadvertent harm to self or other. People who

are habitually sensitive to such issues should be less likely to say harmful things. In Meyer's (1997) terms, people who do not blurt are those who work more with action-consequence associations. If our reasoning holds, we should see blurters being more willing to say hurtful and aggressive things. Therefore,

H5: Self reports of blurring proclivity will be positively associated with willingness to approach arguments, willingness to say verbally aggressive things, and willingness to engage in indirect interpersonal aggression. Blurring should be negatively associated with a tendency to avoid arguments, motivation to engage in prosocial behavior, and empathy.

These behavioral patterns are associated with several other individual differences, and so we hypothesize further:

H6: Self reports of blurring proclivity will be positively associated with psychological reactance, sensation seeking, and masculinity, and negatively associated with femininity.

Argumentation research affords some evidence for Hypotheses 5 and 6. Gilbert (1995, p. 845) insisted that empathy is the key to achieving coalescence in interpersonal arguments, but we theorize that blurters do not engage other people's nature with this degree of involvement. People higher in argumentativeness tend to make more arguments in interaction, suggesting that they would endorse and blurt more often (reviewed in Hample, 2005, p. 180). Argumentativeness and verbal aggressiveness are both varieties of assertiveness (Rancer & Avtgis, 2006) and are positively associated ( $r = .17$ ; Hamilton & Mineo, 2002). This suggests that things correlated with argumentativeness will also tend to be associated with verbal aggressiveness. Males tend to have higher scores on verbal aggressiveness (Infante & Wigley, 1986) and argumentativeness (Infante & Rancer, 1982), suggesting that if blurring is associated with sex it may have further connections to masculinity and femininity. The editing research (summarized in Hample, 2005, pp. 223–224) showed that endorsements on the editing task were positively correlated with argument-approach and verbal aggressiveness. Hample et al. (2009) offered some support for the hypothesized predictions regarding reactance, masculinity, femininity, argument-avoid, and both verbal aggressiveness subscales. Only sensation seeking and indirect interpersonal aggression have no precedent in the argumentation literatures on these topics. Sensation seeking should match the impulsiveness of blurring and indirect interpersonal aggression may be associated with blurters' relative disregard for social niceties.

### *Blurring and Supertraits*

McCroskey, Heisel, and Richmond (2001) reported a number of correlations between fundamental personality measures and several of the variables used in this study. They reported that argumentativeness was positively correlated with psychoticism and extraversion, and verbal aggressiveness was also positively correlated with psychoticism. Compulsive communication, which may have some conceptual

connection to blurting, was positively associated with extraversion. The basic idea in this research is that the overarching personality traits are heritable (Beatty, Heisel, Hall, Levine, & La France, 2002). Communibiologists argue therefore that anything associated with those variables is also likely to have a genetic component and to be implemented in heritable human biology. Given that we are predicting associations between blurting and several of the Big Three's correlates, blurting may have the same sort of relationship to these supertraits. Therefore,

H7: Self reports of blurting proclivity will be positively associated with extraversion and psychoticism.

Altogether the research question and hypotheses should put us in a position to describe self-identified episodes of blurting and to sketch a profile of blurters. Besides learning something about blurters' other communication traits, individual differences, and perceptions of argumentative episodes, we will also acquire an idea as to how people integrate situational perceptions into their planning (or not planning) of message behavior.

### *Method*

*Participants.* Data were collected online. Communication majors were emailed links to several surveys, which they completed at convenient times over about two weeks. A total of 230 students participated, and 68% were female. The sample's average age was 20.8 years ( $SD = 2.70$ ). None were freshmen; 20% were sophomores, 35% were juniors and 45% seniors. Euro-Americans constituted 52% of the sample, followed by African-Americans (12%) and Asian-Americans (8%). The remainder self-reported that they were a combination of the available choices (7%), or had some other ethnicity or national origin.

### *Measures*

*Blurting.* As the literature review indicated, measurement of blurting has been problematic in the past. Here, we began with 16 items intended to measure blurting. An exploratory principal components analysis suggested a two-component solution, but we did not regard the second component as conceptually distinct from the first; it mainly consisted of reverse-worded items (e.g., "While arguing you should adapt your message to the needs of others," "I'm always careful to edit what I say during arguments"). We therefore selected the ten items that clearly loaded on the first component, and used the average of these as our blurting measure. Table 1 reports the surviving items along with their loadings on the single principal component. Respondents used a five-point Likert scale for each item (strongly disagree to strongly agree); unless otherwise noted, this was the response format for all other measures in Study 1. Cronbach's alpha was .81.

*Blurting and non-blurting situations.* Each respondent reported on a situation in which she/he had blurted and another in which she/he almost blurted but did not. The instructions for the blurting situation were: "Please think of an episode in which

**Table 1** Blurting Items

Item	Component loading
When I interact with another person I just say what's on my mind	.503
During arguments, I don't have time to think about what I'm going to say	.488
After an argument, I often regret some of the things I said	.597
*In an argument, if I think it, I will say it	.710
*I argue without thinking before I speak.	.766
I always say what's on my mind	.601
During a heated argument, my mouth is engaged, but my mind often isn't	.672
*When I make a point in an argument, I'm usually not very concerned about how the other person is going to take it	.468
*I sometimes offend other people during arguments	.582
*Sometimes when I think of a really good point to make, I just can't stop myself from making it, even if I should	.566

\*Items retained after Study 2 analyses.

you blurted—that is, said something without thinking, something that you think you shouldn't have said.” For the other situation the instructions were: “Please think of an episode in which you did NOT blurt—that is, you thought of something to say but immediately suppressed it because you realized you shouldn't say that.” In the blurting condition, respondents were asked to describe the blurt and explain why they identified it as such. In the non-blurting situation, they were asked to report what they almost said but didn't, and what they said or did instead.

In addition, respondents rated each of these situations on a battery of scales (Cody et al., 1983; see Hample & Dallinger, 2002). Cody et al. originally developed the items to study persuasive situations, so we reworded some items to say “remark” instead of “persuade.” These instruments are personal benefits (Cronbach's alpha = .91 for the blurting situation and also .91 for the non-blurting situation), situational apprehension (.83 and .87), expected resistance from target (.78 and .75), respondent's right to remark (.83 and .85), situational intimacy (.82 and .86), other's dominance (.88 and .91), and relational consequences (.82 and .85).

*Editing.* The Hample and Dallinger (1987) methodology was used to assess respondents' editorial tendencies. The stimulus situation, requesting a friend to accompany the respondent to a movie that the friend was not likely to enjoy, was followed by 48 possible messages. For each message, participants could say they would be willing to use it (“endorsement;” any number of messages could be endorsed) or that they would not. For suppressed messages, respondents indicated the main reason why they would reject it: it would be ineffective, it was too negative to use, it would harm self, it would harm other, it would harm the relationship, it seemed irrelevant, it seemed false, or some unlisted reason. To reduce respondent fatigue, we only used one situation, meaning that this data set does not produce reliability estimates. In Hample and Dallinger (1998), contingency coefficients among repeated measures were generally .80 or higher for each of the response codes.

Hample et al. (2009) compared responses among four different situations and reported generally satisfactory Cronbach's alphas for the response codes: poor alphas were found for harm to relationship (.63) and false (.66), but all the other estimates were between .73 and .90.

*Argument frames.* The argument frames battery (Hample et al., 2006) requests respondents to indicate the degree to which they believe that interpersonal arguments have, or can have, certain characteristics (Hample, 2003). Blurting is one of the frames but was detailed above. The remaining frames are using arguments to display one's identity (Cronbach's alpha = .77), using arguments to display dominance over the other person (.81), using arguments for play (.78), and using arguments to obtain utilitarian outcomes (.74; four reverse-worded items were dropped to increase reliability). Frames measures also include seeing arguments as cooperative rather than competitive (.70 after dropping one item) and as being civil (.77). The last instrument is professional contrast (.79).

*Argumentativeness.* The argumentativeness instrument (Infante & Rancer, 1982) has two ten-item subscales, argument-approach and argument-avoid. Cronbach's alpha for argument-approach was .86, and was .84 for argument-avoid.

*Verbal aggressiveness.* The verbal aggressiveness instrument (Infante & Wigley, 1986) also has two ten-item subscales (Levine et al., 2004). Verbal aggressiveness (antisocial) had a Cronbach's alpha of .82, and verbal aggressiveness (prosocial) gave an alpha of .76.

*Indirect interpersonal aggressiveness.* This instrument measures the impulse for indirect, possibly deniable, ways to be aggressive toward another person (Beatty, Valencic, Rudd, & Dobos, 1999). This is a ten-item scale that produced Cronbach's alpha = .90.

*Empathy.* Two aspects of empathy were taken from Davis' battery (Davis, 1980, 1983; Stiff, Dillard, Somera, Kim, & Sleight, 1988). These were perspective taking (Cronbach's alpha = .77) and empathetic concern (.71).

*Reactance.* We used the Dowd, Milne, and Wise (1991) therapeutic reactance scale to assess psychological reactance. This instrument was reduced to 19 items (essentially, all the reverse-worded items were dropped) and produced a Cronbach's alpha of .81.

*Sensation seeking.* The Revised Non-sexual Experience Seeking Scale (Kalichman & Rompa, 1995) was used to measure sensation seeking. This eleven-item instrument produced a Cronbach's alpha of .82.

*Masculinity and femininity.* The Bem Sex Role Inventory (Bem, 1974) has twenty items to index masculinity and twenty for femininity. Applying seven-point Likert instruments to these items produced a Cronbach's alpha of .88 for masculinity and .83 for femininity.

*Big three.* Psychoticism, neuroticism, and extraversion were assessed with the short form of the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975; Eysenck, Eysenck, & Barrett, 1985). This battery also includes a "lie" scale, which is calculated by noticing unrealistic answers. Cronbach's alphas for the instruments were .89 for extraversion, .89 for neuroticism, .64 for psychoticism, and .80 for lying.

### Results

Table 2 reports descriptive results for the study's variables, with the exception of the codes and ratings for the open-ended descriptions of the blurt and non-blurt situations. These will be reported separately. Correlations among all the individual differences measures are available from the authors.

*Research question 1.* Our initial objective was to answer the question, "What are the characteristics of blurts and blurring episodes and how do they differ from situations in which blurring was tempting but avoided?" We read the open-ended descriptions of situations in which respondents had blurted and situations in which they had almost blurted, but stopped themselves. We went through the descriptions, took notes independently, conferred, re-read, filled out our notes, conferred again, and so forth until we had reached conceptual satiation (Ayres, Kavanaugh, & Knafl, 2003; Morse & Field, 1995). At that point, we generated coding instructions for some of the features of the situations and then coded the materials. Two of us each coded all the descriptions. Tables 3 and 4 display Cohen's kappas for the codes, as well as descriptive information.

We retained some rare codes in our final system to display how unusual certain characteristics were. For instance, only one respondent identified something as a blurt that involved a socially desirable remark:

When talking to a friend that I do not want to live with, who wants to live with me, I said that I would consider living with her, even though I had committed to living with someone else. . . . I shouldn't have said I would live with her, but I am too much of a people pleaser to speak the truth and speak up for myself most of the time.

Every other example of a blurt was immediately negative, and even this exception was personally regrettable. More typical blurring outcomes were embarrassment, regret, and offense. For example, this blurt caused immediate mutual embarrassment:

I have a joke that I usually play with someone when they want a favor from me. Joking around I would say "Call me master," and I usually say it with my close

friends. Well when my one African-American friend asked me to do something, I said this comment.

Another example is reminiscent of nearly every televised situation comedy: “I was on the phone with my girlfriend and blurted out my ex-girlfriend’s name. I tried to catch myself, but my girlfriend already knew I was calling her by my ex’s name.” Almost exclusively, only remarks with negative outcomes are understood to be blurts.

**Table 2** Descriptive statistics, Study 1

Measure	N	Items	Mean	SD
Blurting	225	10	2.91	0.42
<b>Editing</b>				
Endorsement	229		12.54	7.44
Ineffectiveness	229		8.30	7.94
Too negative	229		5.50	6.67
Harm self	229		1.35	3.14
Harm others	229		3.79	5.76
Harm relationship	229		3.15	4.69
False	229		5.09	7.52
Irrelevant	229		5.08	5.86
Residual	229		2.15	4.56
<b>Argument frames</b>				
Utility	225	13	3.01	0.40
Identification	225	8	3.42	0.56
Play	225	4	2.56	0.83
Dominance	225	6	2.63	0.72
Cooperation	225	8	3.54	0.47
Civility	225	10	3.40	0.50
Professional contrast	225	7	3.52	0.62
<b>Various measures</b>				
Argument approach	228	10	3.22	0.61
Argument avoid	228	10	3.04	0.64
VA prosocial	228	10	3.40	0.51
VA antisocial	228	10	2.53	0.62
Indirect int aggress	220	10	2.55	0.73
Reactance	225	19	3.01	0.44
Empathy perspective	220	7	3.38	0.58
Empathy concern	220	7	3.71	0.50
Sensation seeking	219	11	3.33	0.67
Masculinity	228	20	4.82	0.76
Femininity	228	20	4.77	0.67
<b>Big Three</b>				
Psychoticism	228	12	2.18	0.41
Extraversion	228	12	3.84	0.57
Neuroticism	228	12	2.87	0.72
Lying	228	12	2.87	0.57

Note: The editorial codes are counts with a maximum of 48. Masculinity and femininity were measured on a 1–7 scale. All other variables were measured on a 1–5 scale. Higher means indicate more of the named characteristic.

Our respondents' free form answers also displayed spontaneity. Some were inadvertent slips ("While eating lunch at my grandparents' house one day, I accidentally discussed plans for my aunt's surprise party while she was in the room. I was asked what I was doing the following day and spilled the surprise."). Others occurred during unthinking anger: "If I wasn't so angry and she would have seen my point of view, then I wouldn't have blurted that she had no friends." The codes for 'didn't immediately appreciate the harm of what I was saying,' 'inadvertent disclosure,' 'spoke out of anger or frustration,' and 'a private thought just slipped out,' accounted for 87% of the blurts (Table 3). Blurts are spontaneous and unedited.

Most commonly the blurts had a bearing on some relationship issue (48%). Blurters ordinarily had a noticeable relationship with the other person, often blurting to family, friends, or romantic partners. A little more than half the time, the blurt occurred in the context of a private dyadic conversation. Almost as often, it took place within a larger group.

When a blurt was tempting but avoided, we see a different proportion (Table 4). Dyadic conversations accounted for almost two-thirds of the non-blurts, suggesting that perhaps these more obviously personal interactions motivated more focus on what was about to be said.

Particularly interesting are the data concerning what people did instead of blurting. A little more than half said nothing at all. Sometimes these episodes resembled Berger's (2004) reports about speechlessness in the face of emotional overload: "I wanted to yell and scream and tell her that I felt she was just trying to be annoying. But because this is my mom I had to respect her. I stood there quiet, and did not utter a word." More often, however, silence was a considered choice, as in this example: "I bit my tongue and listened to her [mother's] advice. Even though I didn't 100% agree with it, I knew she was saying it because she cared about me and was trying to make me think positively."

For the nearly half of respondents who were more active than this in the face of blurting temptation, 86% revised their impulsive utterance plan to make it more appropriate and polite. This is a typical revision: "A girl asked me if she looked too heavy in a dress she was wearing. [I first thought to say] that the dress was too tight . . . I told her she looked great in the dress."

Although the proportions are a bit different when compared to situations in which blurting took place, the non-blurts still tended to be in conversations with friends or close relational partners. Relational issues were not as prominent as they were for blurts, but they were still the leading sort of topic. Discussion of other people's appearance and habits were more common topics when blurts were avoided than when they happened.

In sum, the open-ended materials display evidence that blurts were spontaneous, they were not (or at least less) edited, and they resulted in outcomes that were felt as negative. When people intentionally avoided blurting, their primary course was inaction—silence or topic change. Not quite half the time, they actively revised, and their editing was uniformly aimed at moving away from unfavorable outcomes, as Meyer's (1997) theory predicted.

**Table 3** Descriptions of Blurring Situations, Study 1

Code	Frequency	Percentage	Kappa
Why Call It a Blurt?			.73
Regret	37	17%	
Untrue	25	12%	
Embarrassing	12	6%	
Offensive	84	39%	
Neg. Consequences	43	20%	
Other	17	8%	
Blurt Situation Impulse			.87
Gave desirable response	1	0.5%	
Wanted to hurt other	19	9%	
Didn't realize the harm	27	12%	
Inadvertent disclosure	30	14%	
From frustration/anger	96	44%	
Private thought slipped	37	17%	
Other	7	3%	
Number of people present			.98
Two	120	55%	
More than two	97	45%	
Relationship type			.91
Stranger	12	5%	
Friend/acquaintance	82	38%	
Roommate	11	5%	
Co-worker	5	2%	
Family	52	24%	
Romantic partner	30	14%	
Other/ > One/Not Specify	26	12%	
Conversation topic			.79
Academic	14	7%	
Job/professional	11	5%	
Daily activities	16	7%	
Money/financial	3	1%	
Relational issues	103	48%	
Others' appearance/habits	31	14%	
Own appearance/habits	2	1%	
Social events	14	7%	
Use Material goods	4	2%	
Entertainment	9	4%	
Religion	1	0%	
Politics	3	1%	
Other	6	3%	

*Hypothesis 1.* The first hypothesis concerns the scales on which respondents rated the blurt and non-blurt situations that they described. Our reasoning was that the higher the stakes in the conversation, the more that people would be motivated to swallow their potential blurts. In particular, we predicted that the blurring situations would be rated higher on right to remark, and lower on personal benefits, relational consequences, situational intimacy, other's dominance, and situational apprehension. [Table 5](#) reports the results of a series of within-subjects mean comparisons.

Results show that the blurring situations were in fact rated as higher on right to remark and as lower on personal benefits, situational apprehension ( $p = .054$ , two-

**Table 4** Descriptions of Non-Blurring Situations, Study 1

Code	Frequency	Percentage	Kappa
What did you do?			.98
Said nothing	116	54%	
Edited, then spoke	100	46%	
If edited, how?			.94
Kinder/gentler remark	86	86%	
Changed topic	14	14%	
Number of people present			.98
Two	149	69%	
More Than Two	68	31%	
Relationship type		.97	
Stranger	16	7%	
Friend/acquaintance	91	42%	
Roommate	25	12%	
Co-worker	6	3%	
Family	35	16%	
Romantic partner	25	12%	
Other/ > One/Not Specify	19	9%	
Conversation topic			.87
Academic	14	7%	
Job/professional	9	4%	
Daily activities	22	10%	
Money/financial	5	2%	
Relational issues	78	36%	
Others' appearance/habits	54	25%	
Own appearance/habits	1	0%	
Social events	9	4%	
Use material goods	5	2%	
Entertainment	6	3%	
Religion	4	2%	
Politics	1	0%	
Other	8	4%	

tailed, as are all the other significance tests in this report), and relational consequences. Several of the effect sizes were noticeable. These results accord with our prediction. However, we did not find support for our predictions that the blurring situations would also be lower-rated for situational intimacy and other's dominance. Hypothesis 1 received partial support.

*Hypotheses 2 and 3.* The next two hypotheses associated blurring and editing. We predicted that blurters will endorse more messages because they don't edit much and that, because they do not consider secondary goals prior to utterance, they will make less use of the editorial standards that concern harm to other, harm to relationship, relevance, and truth. We tested these hypotheses by correlating the blurring self-report to the number of times people made use of each of the editorial choices. Hypothesis 2 is supported, because the correlation between blurring and endorsement was  $r = .27$ ,  $p < .001$ . Hypothesis 3 received uneven support. Consistent with predictions, blurring was negatively associated with use of the harm to other

**Table 5** Within-Subjects Comparisons of Blurting and Non-Blurting Situations, Study 1

Measure	Blurting		Non-Blurting		<i>t</i>	<i>r</i> <sup>2</sup>
	Mean	SD	Mean	SD		
Personal benefits	2.48	0.94	2.69	0.99	−2.56*	.03
Sit. apprehension	2.92	0.91	3.07	0.99	−1.94†	.02
Resistance	2.47	0.83	2.55	0.85	−1.17	
Rights to remark	2.98	0.93	2.58	0.94	5.09***	.11
Intimacy	2.17	0.92	2.27	0.97	−1.38	
Other dominance	2.45	1.01	2.41	1.05	0.49	
Relatnl. Conseq.	2.96	1.07	3.54	1.08	−6.25***	.15

Note: Degrees of freedom for each test is 220. All variables were measured on a 1–5 scale. Significance tests are all two-tailed. Higher means indicate more of the named variable.

† $p = .054$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

suppression criterion ( $r = -.13$ ,  $p = .054$ , two-tailed) and harm to relationship ( $r = -.15$ ,  $p < .05$ ). However, blurting was unassociated with either relevance ( $r = -.05$ ,  $ns$ ) or truth ( $r = .04$ ,  $ns$ ). Hypothesis 2 was supported and Hypothesis 3 received partial support.

No predictions were made regarding the other editorial choices, and the relationships between them and blurting were uniformly non-significant. For effectiveness,  $r = .07$ ,  $ns$ ; for too negative to use,  $r = -.04$ ,  $ns$ ; for harm to self,  $r = -.09$ ,  $ns$ ; and for the residual category,  $r = -.05$ ,  $ns$ .

*Hypothesis 4.* The fourth hypothesis connected blurting to several of the other arguing frames. Because blurters were theorized not to pass into the more sophisticated understandings and perceptions of interpersonal arguing, we predicted that blurting would be negatively associated with scores for cooperation, civility, and professional contrast. This hypothesis was clearly supported. For cooperation, the correlation with blurting was  $r = -.20$ ,  $p < .01$ ; for civility,  $r = -.32$ ,  $p < .001$ ; and for professional contrast,  $r = -.26$ ,  $p < .001$ . We made no predictions about the relationships between blurting and the first order frames. In fact, blurting was positively associated with each of them: for utility,  $r = .26$ ,  $p < .001$ ; for identification,  $r = .21$ ,  $p < .001$ ; for dominance,  $r = .39$ ,  $p < .001$ ; and for play,  $r = .22$ ,  $p < .001$ . In sum, Hypothesis 4 was supported, and we also discovered that blurting is closely associated with sensitivity to the self-oriented goals for arguing.

*Hypotheses 5 and 6.* These two hypotheses move study of blurting into the general domain of individual differences. We chose a number of trait measures that would fill out our description of blurters' profiles.

Hypothesis 5 predicted that blurting would be positively associated with various sorts of assertiveness and aggression: argument-approach, verbal aggressiveness (antisocial), and indirect interpersonal aggression. Contrarily, we also predicted blurting would be negatively correlated with argument-avoid, verbal aggressiveness

(prosocial), empathy (perspective-taking), and empathy (concern). Blurting was in fact positively correlated with the antisocial subscale of verbal aggressiveness ( $r = .45$ ,  $p < .001$ ) and with indirect interpersonal aggression ( $r = .29$ ,  $p < .001$ ), but not with argument-approach ( $r = .10$ , *ns*). The predictions of negative correlations were also only partly sustained: for argument-avoid,  $r = .06$ , *ns*; for the prosocial subscales of verbal aggressiveness,  $r = -.32$ ,  $p < .001$ ; for the perspective-taking empathy measure,  $r = -.35$ ,  $p < .001$ ; and for the empathetic concern subscale,  $r = -.11$ ,  $p = .10$ , two-tailed. Hypothesis 5 was partially supported.

Hypothesis 6 predicted that blurting would be positively associated with psychological reactance, sensation seeking, and masculinity, and negatively associated with femininity. For reactance,  $r = .43$ ,  $p < .001$ ; for sensation seeking,  $r = .21$ ,  $p < .01$ ; for masculinity,  $r = .08$ , *ns*; and for femininity,  $r = -.09$ , *ns*. Thus Hypothesis 6 was supported for psychological reactance and sensation seeking, but not for gender.

*Hypothesis 7.* The final hypothesis was intended to relate blurting to two supertraits, extraversion and psychoticism. We predicted positive correlations in both instances. The result for psychoticism was in accord with the hypothesis ( $r = .15$ ,  $p < .05$ ) as was that for extraversion ( $r = .12$ ,  $p = .07$ , two-tailed). Neither result has a particularly large effect size. The unhypothesized relationships between blurting and the other subscales of the Big Three generated more substantial associations: for neuroticism,  $r = .32$ ,  $p < .001$ ; and for the lying subscale,  $r = -.31$ ,  $p < .001$ . Although Hypothesis 7 was generally supported, the more interesting results were that blurters were higher in anxiety and notably unlikely to give socially desirable responses on the survey instrument.

### *Discussion*

Study 1 was generally successful in providing a self-report measure of blurting, establishing its reliability, and demonstrating its validity. Because we reported such a large number of results, let us provide a simple summary of our findings. Blurters endorsed more messages overall and rejected fewer because of harm to other or relationship; they saw interpersonal arguments in a less sophisticated way, and as less cooperative or civil, but more pointedly emphasized the utility, identity display, dominance, and play goals for arguing; blurters were higher in verbal aggressiveness, indirect interpersonal aggression, psychological reactance, sensation seeking, psychoticism, extraversion, and neuroticism; and they were lower in empathy and lying. People were most likely to blurt when they believed they had high rights to speak in a situation, and were less likely when personal benefits and relational consequences were at issue, or when the situation made them apprehensive.

## Study 2

The purpose of Study 2 is to undertake further psychometric analysis of the blurting scale and to explore its validity in more detail. We will test the scale against several individual differences measures.

Three of these, verbal aggressiveness, non-sexual sensation seeking, and psychological reactance, were included in Study 1. Verbal aggressiveness, particularly the antisocial subscale, was a strong marker of blurting ( $r = .45$ ). This result captured the idea that blurting has negative social repercussions, and indicated that blurters have enough self-awareness to notice this. Reactance was also well associated with blurting, at  $r = .42$ . Sensation seeking had a lesser association ( $r = .21$ ), but is an indication of impulsiveness. We expect to replicate these three results.

H8: Blurting will be positively associated with verbal aggressiveness (antisocial), sensation seeking, and reactance.

In addition, we included three other individual differences measures, intended to give more precise information about spontaneity, impulsivity, and social sensitivity. Swann and Rentfrow (2001) developed the Brief Loquaciousness and Interpersonal Responsiveness Test (BLIRT). This instrument assesses the spontaneity of speech, with no indication that spontaneous speech has negative social effects (e.g., “I speak my mind as soon as a thought enters my head”). They found it to be positively associated with self-esteem, impulsivity, and quickness to speak. Vohs, Baumeister, and Ciarocco (2005) depleted respondents’ regulatory ability by instructing them not to think about a white bear, and found that this manipulation increased people’s BLIRT scores. This supported the validity of the scale by showing that it reflects simple spontaneity. BLIRT and blurting are both spontaneous, but only blurting includes the idea of negative repercussions. The two scales should be clearly related, but distinguishable. A second new instrument is the Barratt Impulsiveness Scale (Stanford et al., 2009). Both blurting and BLIRT, sharing a core spontaneous impulse, should be positively associated with impulsivity. Finally, we included measures concerning people’s sensitivity to own and other’s positive and negative face (Cai & Wilson, 2000). Blurters should show less concern for face issues pertaining to the other, compared to non-blurters.

H9: Blurting will be positively associated with BLIRT and impulsivity, and negatively associated with sensitivity to other’s face.

Assuming that blurting and BLIRT are clearly associated, a remaining question is whether the two phenomena can be distinguished using the measures in Study 2. In principle, blurting should show stronger connections to antisocial outcomes, because the BLIRT scale makes no mention of these. It however remains possible that simple spontaneity produces these negative outcomes anyway. Therefore, we ask:

RQ2: Are blurting and BLIRTING distinguishable?

*Method*

Respondents were 570 students enrolled in undergraduate communication classes. Their average age was 19.7 years ( $SD = 1.80$ ). More of the respondents were women (63.9%) than men (35.4%). Freshmen accounted for 28.1% of the sample, sophomores for 29.6%, juniors for 17.9%, and seniors for 23.5%. About 53% of respondents self-identified as Euro-American, followed by 10.4% African-American, and 9.8% Asian-American. The remaining were other ethnicities, citizens of other countries, or some combination of the available choices.

Respondents filled out instruments in one online session. They responded to the sixteen-item blurring measure used in Study 1, as well as the other instruments mentioned above: verbal aggressiveness, BLIRT, face, the Barratt Impulsiveness Scale, and the Revised Non-sexual Experience Seeking Scale. In this study, we used the Hong Reactance Scale (Hong & Faedda, 1996; Hong & Page, 1989) to assess psychological reactance. Students responded to every item using ten choices, rather than the five typically available in Study 1.

*Measurement models*

*Blurring.* All sixteen blurring items were used. They were subjected to a principal components analysis. Although five components had eigenvalues greater than one, the most conceptual clarity was again present in the two-component solution, which accounted for 41% of variance. The first component included the ten items used in the Study 1 analyses, and the second component was again comprised mostly of items phrased to indicate that respondents do not blurt (e.g., “I fully think through my argument before I speak”). Cronbach’s alpha for the ten items that loaded on the first component (the same ten as in Study 1) was .83.

The present sample size is sufficient to justify confirmatory factor analysis, conducted using maximum likelihood estimation in LISREL 8.8, as were those to follow. The ten blurring items did not have a good fit:  $\chi^2(35, N = 570) = 676.57, p < .001, RMSEA = .19$  (90%  $CI = .18 - .21$ ),  $CFI = .81, SRMR = .11, AIC = 826.16$ . To obtain a more secure measurement model, we selected the five items that had the highest loadings (all  $R^2$ s exceeded .40) on the latent blurring factor. The CFA for these items produced  $\chi^2(5, N = 570) = 69.25, p < .001, RMSEA = .15$  (90%  $CI = .12 - .18$ ),  $CFI = .94, SRMR = .05, AIC = 89.03$ . The  $RMSEA$  is larger than desired, but the other indices are satisfactory, and the  $AIC$  is clearly better (Burnham & Anderson, 2004, p. 271). Cronbach’s alpha for the five-item scale was .78. The correlation between the ten- and five-item blurring measures was .94 in this data set. These five items are marked with asterisks in Table 1. The five-indicator solution is preferred and will be used in analyses of Study 2 data.

*Blirt.* The BLIRT scale was subjected to a principal components analysis. This resulted in two components, one with four items worded to indicate spontaneity (e.g., “I never have a problem saying what I think”) and the other with four

expressing the opposite (e.g., “Sometimes I just don’t know what to say to people”). Reverse scoring of the items loading on the second component produced a Cronbach’s alpha of .77. The CFA produced poor results:  $\chi^2(20, N=569) = 840.23, p < .001, RMSEA = .29$  (90%  $CI = .28 - .31$ ),  $CFI = .68, SRMR = .21, AIC = 1034.26$ . Inspection of the loadings of each indicator on the BLIRT latent factor indicated that all of the reverse-worded items had  $R^2$ s less than .06, and all the spontaneity-worded items had  $R^2$ s greater than .50. Therefore, we reduced the scale to those four items, and obtained better fit:  $\chi^2(2, N=569) = 16.89, p < .001, RMSEA = .12$  (90%  $CI = .07 - .17$ ),  $CFI = .99, SRMR = .02, AIC = 33.61$ . The  $RMSEA$  is again higher than desired, but the other fit indices are good, and the  $AIC$  shows that this is a much better model than the eight-item CFA. Cronbach’s alpha for the four-item BLIRT scale was .88, and the correlation between the eight- and four-item scales was  $r = .77$ . The four-item scale is used in further analyses.

*Sensitivity to face.* The face variables were analyzed in a single CFA. The initial analysis produced an acceptable result:  $\chi^2(84, N=570) = 362.52, p < .001, RMSEA = .08$  (90%  $CI = .07 - .09$ ),  $CFI = .97, SRMR = .06, AIC = 444.42$ . However, we noticed that the fifth indicator for other’s positive face loaded poorly on its latent ( $R^2 = .01$ ), and so we deleted it. The revised model produced  $\chi^2(71, N=570) = 301.91, p < .001, RMSEA = .08$  (90%  $CI = .07 - .09$ ),  $CFI = .98, SRMR = .05, AIC = 376.94$ . The  $AIC$  statistic indicated that the second model is clearly better, and so other’s positive face will be calculated without this indicator.

*Non-sexual sensation seeking.* The eleven items for sensation seeking were submitted to confirmatory factor analysis. Results were  $\chi^2(44, N=569) = 666.21, p < .001, RMSEA = .16$  (90%  $CI = .15 - .17$ ),  $CFI = .88, SRMR = .09, AIC = 743.58$ . Only five of the indicators had  $R^2$ s greater than .50 with the latent variable. Restricting our analysis to those five items, results were  $\chi^2(5, N=569) = 90.13, p < .001, RMSEA = .17$  (90%  $CI = .14 - .20$ ),  $CFI = .96, SRMR = .05, AIC = 109.45$ . Although the  $RMSEA$  fit index worsened marginally, the other indices were better, and the  $AIC$  clearly pointed to the second model as better. The five-item sensation-seeking scale is used in further analyses.

*Barratt impulsiveness scale.* The thirty impulsivity items were subjected to a principal components analysis. Although seven components were associated with eigenvalues greater than 1, the most conceptually useful solution had two components (total variance = 39%). The first component contained items expressing impulsivity (e.g., “I do things without thinking”), and the second had items indicating the opposite (e.g., “I am a careful thinker”). With the second component’s items reverse scored, Cronbach’s alpha for the thirty-item scale was .82. The CFA for all thirty items generated  $\chi^2(405, N=566) = 4,810.26, p < .001, RMSEA = .19$  (90%  $CI = .18 - .19$ ),  $CFI = .75, SRMR = .15, AIC = 8,465.36$ . Only five of the thirty items had  $R^2$ s greater than .40 (items 2, 5, 14, 17, and 20, in the standard ordering). Item 20

had a negative loading with the latent variable even after being reverse scored, and so it was omitted to ensure statistical and conceptual coherence. The four-item model produced  $\chi^2(2, N=566) = 5.37, p = .07, RMSEA = .05$  (90%  $CI = .00 - .11$ ),  $CFI = 1.00, SRMR = .02, AIC = 21.28$ . The four-item measure is clearly better and will be used here. Cronbach's alpha for the four-item scale was .80. The thirty- and four-item versions correlated at  $r = .83$ .

*Verbal aggressiveness.* Verbal aggressiveness is composed of two ten-item scales, measuring antisocial and prosocial motivations. The Cronbach's alpha for the antisocial subscale was .89, and was .85 for the prosocial subscale. All twenty items were combined in a single CFA with two latent factors, with these results:  $\chi^2(169, N=569) = 816.54, p < .001, RMSEA = .09$  (90%  $CI = .08 - .09$ ),  $CFI = .93, SRMR = .07, AIC = 940.92$ . We selected the five best indicators for each subscale (in the standard ordering, we used items 1, 3, 5, 14, and 15 for the prosocial subscale, all having  $R^2 > .40$ ; and items 6, 7, 9, 16, and 19 for the antisocial subscale, all having  $R^2 > .50$ ). This reduced-indicator analysis gave better results:  $\chi^2(34, N=569) = 155.91, p < .001, RMSEA = .08$  (90%  $CI = .07 - .09$ ),  $CFI = .96, SRMR = .05, AIC = 194.61$ . The five-item scales are used in further analyses. Cronbach's alphas for the five-item subscales were .81 (prosocial) and .86 (antisocial). The full and reduced-indicator versions correlated at  $r = .92$  (prosocial) and  $r = .95$  (antisocial).

*Psychological reactance.* The Hong reactance scale has fourteen items (Hong & Page, 1989; also see Hong & Faedda, 1996). A principal components analysis yielded only two components with eigenvalues greater than 1. All items loaded positively and well on the first factor (the smallest loading was .49). Several of the second component's items had negative loadings on the second component, all concentrating on the idea of rejecting other people's advice (items 7, 13, and 14). All three of these items, however, had loadings larger in absolute value on the first component. These results were consistent with those of Shen and Dillard (2005), who indicated that a unidimensional solution is appropriate. Cronbach's alpha for the unidimensional 14-item scale was .89. We proceeded to a CFA with all 14 items used as indicators of a single latent factor. Results were poor:  $\chi^2(77, N=566) = 1,738.80, p < .001, RMSEA = .23$  (90%  $CI = .22 - .24$ ),  $CFI = .80, SRMR = .14, AIC = 2,453.78$ . Fit was much better when the five best items (loadings of  $R^2 = .47$  or better) were used:  $\chi^2(5, N=566) = 15.51, p < .01, RMSEA = .06$  (90%  $CI = .03 - .10$ ),  $CFI = .99, SRMR = .02, AIC = 35.62$ . Cronbach's alpha for the five-item scale was .83. The fourteen- and five-indicator scales correlated at  $r = .90$ . The five-indicator version is used in further analyses.

*Full Model.* Finally, we tested a measurement model that combined all the variables just mentioned, using the reduced-indicator measurements. Results were:  $\chi^2(979, N=570) = 2,986.92, p < .001, RMSEA = .06$  (90%  $CI = .06 - .07$ ),  $CFI = .95, SRMR = .06$ . These results were acceptable.

**Table 6** Descriptive Statistics, Study 2

Measure	<i>N</i>	Items	<i>Mean</i>	<i>SD</i>
Blurting	570	5	5.31	1.57
BLIRT	569	4	5.23	1.88
Sensation seeking	569	5	5.76	2.16
Other Pos Face	570	4	6.22	1.55
Self pos face	570	3	6.90	1.88
Other neg face	570	4	5.73	1.49
Self neg face	570	3	6.92	1.80
Impulsivity	566	4	4.90	1.18
VA prosocial	569	5	6.17	1.51
VA antisocial	569	5	4.54	1.74
Reactance	566	5	5.11	1.75

Note: All variables were measured on a 1–10 scale. Higher means indicate more of the named characteristic.

### Results

Descriptive results are in [Table 6](#), and correlations among the variables (calculated by averaging their items) are in the lower diagonal of [Table 7](#). The upper diagonal of [Table 7](#) contains the correlations among the latent variables, which are essentially corrected for attenuation due to measurement unreliability.

*Hypothesis 8.* The lower diagonal of [Table 7](#) provides correlations that bear on Hypothesis 8. As predicted, blurting was positively associated with verbal aggressiveness (antisocial), reactance, and sensation seeking. These correlations were similar in magnitude to those obtained in Study 1. Hypothesis 8 was supported.

*Hypothesis 9.* [Table 7](#) also shows that blurting and BLIRT are closely associated ( $r = .57$ ), as predicted. Blurting had non-significant relationships with the other's face measures, contrary to the expectation that these correlations would be negative. Hypothesis 9 was supported in regard to BLIRT, not with respect to face.

*Research question 2.* The remaining issue is Research Question 2, which inquired whether blurting and BLIRT can be distinguished here. Inspection of the lower diagonal in [Table 7](#) shows many parallels between the blurting and BLIRT measures. They are substantially correlated. Both have positive associations with sensation seeking, effort to protect own negative face, impulsivity, antisocial verbal aggressiveness, and reactance. [Table 7](#)'s lower diagonal shows some differences as well. Self negative facework was more substantially associated with blurting than BLIRT, as were antisocial verbal aggressiveness and the prosocial motivations that are the reverse of verbal aggressiveness.

**Table 7** Correlations Among Variables, Study 2

	Blurt	BLIRT	Sens Seek	Oth PosF	Self PosF	Oth NegF	Self NegF	Impuls	VA Anti	VA Pro	React
Blurting	–	.65	.27	–.01	–.02	.06	.23	.64	.67	–.23	.47
BLIRT	.57***	–	.27	.03	–.08	.07	.13	.51	.42	.02	.49
Sensat Seekg	.25***	.28***	–	.05	.06	.12	.16	.35	.22	.09	.29
Other Pos F	–.00	.03	.04	–	.63	.70	.31	–.01	.02	.61	.08
Self Pos Face	–.01	–.06	.05	.57***	–	.56	.52	–.07	–.08	.49	.00
Other Neg F	.06	.07	.12**	.60***	.51***	–	.34	.13	.14	.57	.13
Self Neg Face	.19***	.10*	.13**	.27***	.45***	.30***	–	–.05	.11	.31	.13
Impulsivity	.44***	.39***	.28***	–.10	–.06	.10*	–.06	–	.50	–.14	.56
VA AntiSoc	.55***	.38***	.23***	.04	–.02	.13**	.12**	.39***	–	–.21	.52
VA ProSoc	–.17***	.02	.08	.52***	.40***	.49***	.24***	–.10*	–.14***	–	–.05
Reactance	.37***	.41***	.27***	.08	.02	.11**	.12**	.41***	.43***	.02	–

Note: Correlations below the diagonal are between variables calculated by summing their contributing indicators. Correlations above the diagonal are between latent factors in the overall measurement model.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Table 8** Unstandardized Gamma Coefficients, Study 2

	Blurting	BLIRT
Verbal aggressiveness (prosocial)	-.16	.33
Verbal aggressiveness (antisocial)	.33	.21
Impulsivity	.36	.44
Sensation seeking	(.00)	(.03)
Other's positive face	(.02)	(.02)
Self-positive face	(-.01)	-.15
Other's negative face	(-.06)	(-.11)
Self-negative face	.11	.10
Reactance	(-.02)	.30

Note: Coefficients displayed in parentheses were not significant.

To clarify the similarities and differences between blurting and BLIRT, we estimated a structural equation model in which blurting and BLIRT were endogenous (and their errors allowed to covary), and the other latent variables were exogenous (and allowed to covary). These were the fit results:  $\chi^2(979, N=570) = 2,986.92, p < .001, RMSEA = .06$  (90%  $CI = .06 - .07$ ),  $CFI = .95, SRMR = .06$ . Blurting was more successfully predicted by this system of latent variables ( $R^2 = .64$ ) than BLIRT ( $R^2 = .38$ ). The error terms for blurting and BLIRT correlated at .23.

Table 8 shows the relationships between the exogenous and endogenous variables. Many of the results were similar, as we would expect given the common spontaneous nature of both processes. Both were quite impulsive, for instance, and involved some protection of own negative face. Several contrasts appeared as well. Simple spontaneity, indexed by BLIRT, was much more reactant and involved noticeable disregard for own positive face. Spontaneity allied with negative social effects, measured with the blurting scale, was much less prosocial and more antisocial. These results suggest that the two types of spontaneity are mainly distinguishable by the negative impulses involved in blurting, and the stronger reactant impulse that produces pure spontaneity.

### Discussion

Results of Study 2 were consistent with those of Study 1. Blurting's positive associations with antisocial verbal aggressiveness, sensation seeking, and reactance were replicated. Blurting and a similar construct, BLIRT, were closely correlated. Distinctions between blurting and BLIRT were subtle but evident. The conceptual difference is that blurting involved negative social effects and simple spontaneity may not. Blurting was more antisocial than BLIRT, but less influenced by psychological reactance. Simple spontaneity involved more disregard for own positive face than blurting did. In addition, confirmatory factor analysis produced evidence that the blurting scale has good psychometric qualities.

## General Discussion

### *Message Production*

This paper is theoretically situated in the standard GPA theory of message production. The theory begins at the point of contact with the situation, and says that goals are then activated, plans are formed, and messages are finally produced. Our variables give insight into contact with the situation, most directly with the descriptions and measures of blurting and non-blurting episodes, but also with the argument frames instruments that assess expectations and understandings of the situation. The many traits we assessed can also be partly understood in terms of orientation to the situation. These traits and perceptions give rise to the primary goals for interaction, and activate the relevant secondary goals. Those secondary goals, if registered, stimulate the editorial process that we have shown blurters skip. They lack the empathy, orientation to face issues, and commitment to civility that non-blurters have.

Meyer (1997) theorized that people go through two stages in producing messages. The first involves situation-action associations, and this step is required for a message to appear. The second makes use of action-consequence associations, and blurters may skip it. By identifying blurters—by their self-reports, by their reactions to situations, and by their traits—we have begun the process of predicting who will omit the second phase and produce regrettable messages.

To illustrate the theoretical virtues of having a discrete idea of blurting, consider a common design feature of message planning studies. Often experimenters manipulate the speaker's cognitive load in some way. People may be given less versus more time to plan, or harder versus simpler tasks. Planning is more constrained (less detailed, less effective) when time is limited, when less of the necessary information is supplied, or when the required message is more challenging. These studies have shown that planning results in beneficial effects on the messages, both their content and their physical delivery. However, if the researchers had been working at least in part with the idea of blurting, they might just as easily have concluded that for the conditions in which blurting was more feasible, deleterious effects occurred. The standard effects might also differ when blurters and non-blurters are compared. Blurters might be less affected by high cognitive load because they don't plan very elaborately in the first place. Or it might be that when instructions force people to plan anyway, it is primarily the blurters' performance that shows the effects of experimenter-impelled planning. These may be productive lines of thought to explore experimentally, and might generate more precise understandings of planning.

### *Blurting*

Analyses of respondents' open-ended descriptions of blurting and non-blurting situations were consistent with our original conception that blurting is spontaneous, unedited, and interactionally negative. When people stopped themselves from blurting, the most common result was simple silence. The potential blurts that were revised prior to utterance were made into messages that matched common secondary goals.

Our self-report measure of blurting is an improvement on the one used in prior argument frames research. It is more interpretable, is unidimensional, and has reasonable reliability. It captures more of the idea of blurting than the Swann and Rentfrow (2001) BLIRT measure, which is focused on the spontaneity of speech and ignores its carelessly negative outcomes. Validity evidence for the new instrument comes most directly from the editing data: blurters endorse more messages than non-blurters, and also make less use of harm to other and harm to relationship considerations. Other associations with individual differences—impulsivity, reactance, verbal aggressiveness, and sensation seeking, for instance—fill out the blurters' typical profile.

### *Why Do People Blur?*

An important question that we cannot presently answer has to do with the causes of blurting. Is it due to lack of motivation, lack of ability, or both?

Some of our results point to lack of motivation being a/the cause of blurting. Blurting and non-blurting situations were distinguishable in several respects. When the respondent felt she/he had more right to say whatever she/he wanted, blurting was more likely; conversely, when personal benefits to the interaction were potentially high, when the situation caused higher apprehension, and when relational consequences were salient, then people were less likely to blurt. The simplest explanation for this pattern is that people were more motivated to be careful in their remarks in high-stakes circumstances, and therefore suppressed their blurting.

We do not have any unmistakable indicants of ability in this study, but argumentativeness and verbal aggressiveness have sometimes been interpreted in that way (Rancer & Avtgis, 2006). In regard to verbal aggressiveness, we found that blurters were more antisocial. That finding might suggest that blurters simply do not have the ability to generate better messages. The modest association between blurting and psychoticism in Study 1 ( $r = .15$ ) implies that blurters are emotionally flat to some degree, and do not naturally take others into account. Other evidence concerns people's ability to exercise inhibitory control over their messages. Researchers found that general ability to inhibit could be impaired by high cognitive load, so that people made inappropriate comments to an experimenter when they were cognitively occupied by a memorization task (von Hippel & Gonsalkorale, 2005). So general and immediate inability to edit both have relevance to blurting.

For the most part, however, we believe that our results are explicable by recourse either to ability or motivation deficits, or to both. Blurting could be due to disinclination to be appropriate or to an inability to foresee consequences. Blurters' failure to rate arguments as potentially cooperative and civil, for instance, might be caused by their imperceptiveness, but it might also be a consequence of them simply not caring about those possible outcomes for an argument.

In short, we find some evidence pointing toward motivational problems, some indicating an ability deficit, and quite a bit that is ambiguous in this context. Since blurting obviously generates unhappy interpersonal outcomes, it should be a target

for instructional or counseling intervention. Before those interventions can be intelligently structured, however, we should have a better idea of what the causal balance is, between motivational and ability problems.

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