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Decoding social media speak: Developing a speech act theory research agenda

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Abstract

Purpose—Drawing on the theoretical domain of speech act theory and a discussion of its suitability for setting the agenda for social media research, this study explores a range of research directions that are both relevant and conceptually robust, to stimulate the advancement of knowledge and understanding of online verbatim data.

Design/methodology/approach—Examining previously published cross-disciplinary research, the study identifies how recent conceptual and empirical advances in speech act theory may further guide the development of text analytics in a social media context.

Findings—Decoding content and function word use in customers' social media communication can enhance the efficiency of determining (1) potential impacts of customer reviews, (2) sentiment strength, (3) the quality of contributions in social media, (4) customers' socialization perceptions in online communities, and (5) deceptive messages.

Originality/value—Considering the variety of managerial demand, increasing and diverging social media formats, expanding archives, rapid development of software tools, and fast-paced market changes, this study provides an urgently needed, theory-driven, coherent

research agenda to guide the conceptual development of text analytics in a social media context.

Keywords—Social media communication, Text mining, Speech act theory

Paper type—Conceptual paper

"Language is the currency of most human social processes."

(Chung and Pennebaker, 2007 p.343)

The past decade has witnessed an incredible increase in the volume and importance of online social media conversations. Spanning virtually all ages, ethnicities, and geographies, the spectacular rise of websites such as Facebook, LinkedIn, and Twitter is revolutionizing the way people communicate and interact with friends, family, colleagues, complete strangers, and businesses. The increasing prevalence and accessibility of social media communication and online discussions, together with their powerful influence on purchase decisions and product/service evaluations, have become central driving forces for marketing decision makers (Bharadwaj et al., 2013). Sixty percent of Facebook users comment directly on the products and service they purchase (Incite, 2011), and 72% of consumers expect brands to respond within an hour to complaints posted on Twitter (Gesenhus 2013). Business performance in turn are suffering, as a result of companies' inability to decipher and analyse conversations with and among their online customers (Bonnet and Nandan, 2011). Considering the scale and scope of company-relevant exchanges, it is pertinent that marketers monitor, join, and come to grips with efforts to decode "social media speak." Therefore the development of new analytical methods to gain greater insights from unstructured verbatim social media data has been suggested a tier one priority by the Marketing Science Institute for

2016.

Depending on the epistemological position taken, such social media speak are either (1) accounts of what customers do or (2) symbolical reflections on customers' intentions (Ludwig et al 2013, Ludwig et al. 2014, Pollach 2012, Taylor and van Every 2010). For both positions, the sheer volume of online conversations and their unstructured, verbatim nature renders traditional market research methods (e.g., surveys, experiments, interviews, focus groups) ineffective (Kambil et al., 2005). Therefore, the advantages of using software for the analysis of textual data are obvious, and given the ample availability of verbatim data in social media, the question is no longer whether or not to use computer-aided text analysis, but how to approach a given dataset (cf. Pollach 2012). Methodologically, the central premise of text mining is based on the assumption that the frequency with which particular words and concepts occur in a text is a measure of their relative importance, attention or emphasis (Krippendorff, 2004). As such, psychologically relevant information is conveyed, beyond the words' literal meaning (Pennebaker et al., 2003). Two basic approaches to text mining analysis differ in the source of the word lists (or text mining dictionaries) used to extract text-based measures. That is, researchers can make use of existing dictionaries (commonly referred to "top-down" approach) or compile a dictionary specifically for a particular study (commonly referred to "bottom-up" approach) (Pollach, 2012). Although bottom-up approaches can provide substantial insights and we will briefly outcome the merits of each approach, in this article we focus on top-down methods for text analysis. Arguably, self-constructed dictionaries are better suited to exploratory research. For example, they have served to provide an overview of the justifications for manager compensation in corporate statements (Porac et al., 1999) or explore metaphors for teamwork in interviews (Gibson and Zellmer-Bruhn, 2001). Conversely, in their efforts to study categories of organizational values, the impact of customer intimacy training (Kabanoff et al., 1995), social relations

between conversants (Ireland and Pennebaker, 2010), and the emotional tone of newspapers (Humphreys, 2010), researchers have drawn on existing, predefined dictionaries

Text analysis is rapidly becoming an established method in marketing (Ludwig et al 2013) and studies analyzing verbatim data and quantifying its implications are essentially entering the domain of linguistics. Yet, considerations of established approaches by linguistics are scant, which hinders the advancement of text analysis in consumer research on social media. Consequentially current best practices seem to rely on haphazard trials of relations between linguistic elements and marketing relevant implications. While predicting customer sentiment in social media conversations represents a key concern, accuracy rates for predicting customer sentiment reportedly rarely exceed 30% or are heavily context specific (Wright, 2010). Beyond assessing customer sentiment in online reviews, there is a pressing need for text analytic tools that can gauge the quality of customer posts in contexts such as user innovation communities or crowdsourcing initiatives, to filter out impossible solutions (Ransbotham and Kane, 2011). Yet, current research predominantly considers context specific content words rather than generic automated ways to approximate quality from writing. Online retailers such as Amazon.com and Bertelsmann.com receive thousands of customer reviews and posts on a given day, as well as a multitude of online claims and complaints, such that they need efficient tools to sort through all the communications and assess their validity (Schlautmann, 2012). Finally, the rich intricacies and unruliness of natural language challenge predictive analytics. Figures of speech, colloquial expressions, and various negations (e.g., “not bad”) are not to be taken literally, which is usually what algorithms do. As these examples illustrate, automated text analysis can be incorporated in multiple ways into consumer research, but the lack of a conceptual linguistic foundation on the various performative functions in language and communication prevent comprehensive and robust insights.

We outline how the lens of speech act theory (SAT) as the overarching paradigm (Searle 1976, 1969) may guide the use of text analysis in studying verbatim social media data for marketing purposes. SAT conceptualizes all forms of speech as acts and suggests interpretations of communicated words require recognition of a higher-order linguistic context. This corpus linguist theory establishes the notion of locutionary and *illocutionary acts*, which refer to utterances and their intended meaning innate to all forms of communication (Sbisa 2001) and can exert a differential impact on the audience (Luca 2011). Following a brief introduction to this linguistic theory and its suitability for setting the research agenda, we explore a range of research directions that are both relevant and conceptually robust, in an effort to stimulate the advancement of knowledge and understanding of verbatim social media data. We conclude by discussing implications for researchers, companies, and customers.

Spelling out the foundation: Speech act theory

People (i.e., writers) use words (and images) to convey substantial information about who they are, their relationship with their audience, and their intentions (Pennebaker et al., 2003). In social media, language is not simply a means to share objective information or descriptions of reality but becomes a way to create a reality (Gergen and Thatchenkery, 2004). The relatively minimal media richness available in chats, reviews, and blogs means that verbatim communication is fundamental to how social media users construct, share and form views, perceptions and identities. Accordingly, the central premise of speech act theory is that language construction (in speech or writing), through words, sentences, and interactional exchanges, conveys a speaker's underlying meaning and intention (Austin, 1962, Searle, 1976). More colloquially, "to *say* something is to *do* something" (Austin, 1962 p. 12).

As the most influential linguistic theory to study language-in-use, speech act theory refers to how word categories and sentence constructions, apparent in people's everyday language use, give insights into their intentions, perceptions and identities (e.g., Bagozzi, 2007). A common conceptual distinction among speech act theorists is among *locutionary acts*, in which the person says or states something; *illocutionary acts*, which are what people intend to achieve by saying or stating something; and *perlocutionary effects*, or the impact of the communication on an audience. When the locutionary and illocutionary acts surrounding an utterance (i.e., literal text and intended meaning) align, the result is a sincere, direct speech act. In contrast, in insincere speech acts, the connection between the utterance and the intended meaning is not manifest (Searle and Vanderveken, 1985). A speaker thus uses insincere speech acts, such as lying or making a deceitful claim, when he or she "purports to have [beliefs or intentions] that he does not have" (Austin, 1962 p.57). In this sense, speech acts are a function of the communicator's intention, underlying the communicated sentence in which they appear (Searle 1969). Such intentions are organized into conversations according to predefined patterns (Goldkuhl 2003) and derive from the content and style of communication (Meibauer 2005). At a word level, "content words are generally nouns, regular verbs, and many adjectives and adverbs. They convey the content of a communication" (Tausczik and Pennebaker, 2010, p. 29). Content cannot be communicated without so-called style words though. As Tausczik and Pennebaker (2010, p. 29) state, "intertwined through these content words are style words, often referred to as function words. Style or function words are made up of pronouns, prepositions, articles, conjunctions, auxiliary verbs, and a few other esoteric categories." These categories identify not only what people convey (i.e., sentential meaning) but also how they write (sentential style).

To date, most text mining research in a marketing context has focused on words that suggest specific content themes, and predominantly sentiment (Humphreys, 2010, Das et al., 2005).

Yet, the style of communication is equally important, according to speech act theorists (Meibauer, 2005, Ludwig et al 2013, Ludwig et al 2014), as it conveys illocutionary acts and achieves perlocutionary effects as well. As an illustration, consider two examples in which customers express their views of a book on hip hop and reggae musical styles on social media:

Message 1: *"This book rocks, really awesome stuff—you need to get it right away!"*

Message 2: *"This book is very poorly written; it is also missing significant information and seems incomplete in general. I would suggest looking for an alternative."*

Not only do the messages' contents and hence the intentions diverge (recommending vs. dissuading), but the styles in which they are written hint at other relevant information. Message 1 is very colloquial and informal in style, whereas Message 2 is almost too stiff and formal. The two writers differ in their linguistic styles—or at a word level, in their function word usage (i.e., pronouns, prepositions, articles, conjunctions, and auxiliary verbs). Although the content of a message can be conveyed in different ways, these ways also differ to the extent that they exhibit fit with the object of discussion. We likely expect a customer review of a book on hip hop to have a different style than a book on consumer behaviour, determining their perlocutionary impacts on readers while simultaneously reflecting the writer's intentions and perceptions (Bird et al., 2002).

Recognition of the significance of speech acts should illuminate the ability of language in social media conversations to provide insights on other things reality descriptions. Studies in marketing which automatically categorize social media conversations during or after they actually take place according to content or style words of interest, are essentially engaging in forms of speech act profiling. Such marketing research is attuned in social media

conversations not primarily to the locutionary act (e.g. what has been said), but to what is intended, namely the illocutionary act (e.g. requests, warnings, invitations, promises, apologies, predictions) and the perlocutionary effect (e.g. persuading, convincing, scaring, enlightening, inspiring) that those utterances are used to perform. Speech act theory is thus the central foundation for decoding social media speak and the basis for developing research avenues of interest to marketing scholars and practitioners, as we outline in the remainder of this paper.

Decoding impact of the message

The act of posting an expressive like: "This is a poor product" or asserting that "I will not use this service again" may be intended, interpreted or counting as a dissuasion or warning, given the appropriate contextual conditions like online customer review sites. Such sites have amplified and accelerated the influence of existing customers' product and service experiences on potential customers, to the point that nearly any customer comment can function as an influential product recommendation or dissuasion. However, not all customer reviews have equal impact: some assertions, expressed opinions go viral, but others are destined for obscurity. In fact 71% of tweets, for example, will never get read (Abell, 2010). The sheer mass of verbatim customer reviews posted daily creates an urgent managerial need to come to grips with peer-to-peer communication and gauge its impact accurately. The heuristic processing of most customer reviews (Ludwig et al., 2013) has prompted many researchers to consider the implications of expressive speech acts that contain affective content words. Such affective expressions influence evaluations and decision making (Lench et al., 2011) by eliciting automatic affective responses, which require fewer processing resources and surface rapidly to influence receivers' attitudes (Baumeister et al., 2007, Cohen et al., 2008). Research examining the content words of social media messages finds direct

links between the mood of online messages and stock market behaviours (Das et al., 2005) and changes in the affective content of blog posts before and after September 11, 2001 (Cohn et al., 2004). However, the impact of affective content is not always straightforward (Petty et al., 2003). When the semantic content in review texts is too positive, consumers grow suspicious, as witnessed by reports of fake reviews. In a field study on Amazon.com, monitoring weekly changes to reviews posted and the conversion rates of product sites, Ludwig et al. (2013) confirm that sharp increases in positive affective content on a product site lead to smaller conversion rate increases than if the positive affective content increases were more moderate. For a negative change, no such attenuation effect exists though: More negative affective content in customer reviews always deters more potential customers from buying and is more detrimental to conversion rates.

Beyond the differential perlocutionary effect of content words, the use of function words also directly influences readers'. Ludwig et al. (2013) text mine customer reviews for function words to reveal style properties and study their dynamic influence on conversion rates in online retail sites. They show that the impact of the linguistic style of reviews extends beyond their content, establishes source perceptions, and evokes a positive bias that subsequently shapes conversion rates. A theory-based explanation might account for the manner or style in which a person communicates, which not only reveals her or his personality but also elicits relational perceptions in the communication partner (Pennebaker, 2011). Speech acts of assimilation, through greater synchronization in communication styles (e.g., voice, posture, gestures) in conversation dyads, also lead participants to perceive a common social identity, decrease their perceptions of social distance, and elicit more approval and trust (Pickering and Garrod, 2004). Even in text-based (nonverbal) communication, linguistic styles elicit relational perceptions. Linguistic style matches (LSM), or degree of synchronization between two conversants in terms of their use of function words

(Ludwig et al 2013), transcend the actual content of the conversation to establish, perlocutionary, common ground perceptions (Ireland and Pennebaker, 2010). Accordingly, customer reviews with high LSM with the target audience help readers establish rapport with the reviewer, which stimulates them to rely on source cues to form attitudes, sometimes even to the exclusion of the message content. In online customer review settings, devoid of face-to-face cues, the impact of the use of function words in reviews extends beyond their content to establish source perceptions; it also evokes a positive bias that subsequently shapes conversion rates (Ludwig et al., 2013).

Finally, the impact of customer reviews relates further to combined speech acts, namely, content and function words together. Online reviews exert a greater influence on customer behaviour when they convey affective content and match the typical linguistic style of the target audience. When expressed through similar uses of function words, LSM elicits similarity perceptions, increasing the perceived relevance of a review and leading the target to grant greater importance to its content. As Ludwig et al. (2013) show, the combination of expressive speech acts containing affective content and assimilating speech acts with greater degrees of LSM exerts the greatest influence on readers of customer reviews and thus sales.

Decoding strength of conviction

When it comes to online reviews, (star-) rating systems are the prevalent means customers use to share their opinions and the strength of their convictions: A 5-point average rating indicates stronger overall positivity than a 4-point rating. These differences matter, and a one-point improvement in an overall product rating translates to significantly more sales online (Zhu and Zhang, 2010). However, product and service opinions voiced in other social media formats, such as Twitter and Facebook, do not include such global rating scales. These verbatim messages also differ in the strength of the conviction expressed through the forcefulness of the language being used (Rastogi et al., 2014). Speech act theory again may

provide insights, in the form of a theoretically rooted understanding of how to derive the strength of writers' intentions from the meaning of the sentence in which they appear (Searle, 1969). Villaroel Ordenes et al. (2014) propose that, in addition to content words that can be text mined to distil the valence of customer sentiments, function words carry significant sentiment implications for assessing strength. Chung and Pennebaker (2007) suggest that function words are illocutionary force mechanisms that modify or alter the meaning of affective content words (e.g., adjectives or verbs). Such speech acts allude to different sentiment strengths or invert the valence of sentiments through force modification. Consider the use of negations ("not good") or certain versus tentative words (absolutely vs. apparently). We propose that function words, in combination with affective content words, can invert, boost, or attenuate the expression of a specific sentiment.

Expressive speech acts are not always a prerequisite for conveying sentiments (Pinker et al., 2008). Indirect sentiment expressions can be conveyed through indirect speech acts, or expressions in which the speaker alludes to an act without explicitly stating it (Searle, 1975). For example, directives such as "do not buy this book" or declarations such as "I will never use this product again" convey indirect sentiments, without the actual use of any affective words (Asher and Lascarides, 2001). Indirect speech acts often convey sentiment implicitly or indirectly, across varying communication contexts (Balahur et al., 2011). As Koester (2002) argues, these acts represent the norm rather than the exception in natural speech. Therefore, accounting for indirect speech acts should lead to improved assessments of customer sentiment expressions pertaining to products and services and the strength thereof.

Decoding quality of the message

Another social media format, enjoying growing popularity, is online user innovation communities. Similar to customer reviews sites, these forums can be leveraged by companies to gain access to customers' insights and co-creative efforts (Dahlander and Frederiksen,

2012). A critical success factor is the means to encourage the identification and proliferation of quality contributions (Ransbotham and Kane, 2011). Well-formulated, well-developed arguments determine the value of members' community contributions online (Ransbotham and Kane, 2011, Hansen and Haas, 2001), possibly even more so than the actual content or strength of the argument (Seibold et al., 2010). Ludwig et al. (2014) apply speech act theory to understand how text mining might help automatically establish the quality of contributions in user innovation communities. They posit that well-structured arguments characteristically use more causal words (e.g., because, cause, effect) and other words suggestive of cognitive processing (e.g., realize, understand). The argumentative quality of a message in social media in general and user innovation communities in particular therefore should relate to the function words that members use to substantiate and develop their statements and arguments. That is, social media messages with more developed arguments should be perceived as better, more informed statements, which also enhance the appeal of using and contributing for others (Seibold and Meyers, 2007)

This conceptualization corresponds with communicative argumentation quality research, which demonstrates that the development of reasoning, rather than its strength, predicts decision outcomes (Seibold et al., 2010). Notably, a measure of quality based on speech acts related to the development of an argument supports deductions about the quality of a message, irrespective of its content. Therefore, it can address both types of messages that are typical of communication, namely, agreement/convergence-seeking and disagreement (Seibold et al., 2010, Seibold and Meyers, 2007). We argue that text mining causal and cognitive function words, which are symbolically reflective of the speech act of conscientious argument, can provide a reliable measure of contribution quality in user innovation communities and other social media contexts.

Decoding socialization of the writer

In addition to argument quality, and due to the lack of switching barriers in virtual communities (Iriberri and Leroy, 2009), members must develop a sense of integration and identification with an online community (Kohler et al., 2011). Yet the relative anonymity in these gathering spaces means that socialization by participating members remains largely under the radar. It is hard to develop a sense of members' commitment to the community. In response, speech act theory might provide some guidance, because members' socialization is inherent in the way they write.

Research on communication accommodation (Giles, 2009) notes that beyond informational content, a communicative process pertains to how the conversants align, in terms of a consensual interaction style. Communities in social media thrive on the diversity in members' ideas and views (Di Gangi et al., 2010), but subtle similarities in the patterns members use to converse may indicate an active process of social integration, related to their ongoing participation. Although most studies entail offline, face-to-face communication settings, Ludwig et al. (2014) show that in verbatim social media communication, LSM among channel members signals social identification perceptions and influences cooperative behaviour. Following from the proposition that high levels of LSM in customer reviews help establish rapport with the reader, assimilations in function word use also could serve as subtle, subconscious symbols of socialization by the writer with an online collective.

In contrast with a one-time customer review, members' social integration into any organization is an inherently ongoing process (Levine and Moreland, 1994), and deriving socialization perceptions through social media messages is predicated on considerations of temporal development over time. Researchers identify three forms of socialization development: identification, disidentification, and ambivalent/neutral identification (Elsbach and Bhattacharya, 2001, Kreiner and Ashforth, 2004). These forms reflect the ways people can define (and redefine) themselves through attachments. In contrast with identification,

disidentification acknowledges that members derive a sense of self by distancing (rather than aligning) themselves from a particular collective's attributes or principles (Elsbach and Bhattacharya, 2001). Furthermore, members can have mixed, rather than one-sided, views of their fit with a collective. Ambivalent identification enables members to define themselves as the same as the collective at one time but different from it at other moments (Kreiner and Ashforth, 2004).

By monitoring the development of LSM in members' posts toward a consensual linguistic style within the respective online community, Ludwig et al. (2014) propose two temporal parameters: trends and reversals in LSM. These temporal grouping principles have symbolic meaning for members' socialization with online communities. Specifically, more rapid alignments in linguistic style (vs. distancing) in members' community messages over time signal their accelerated identification (disidentification) with the user community. Frequent changes in LSM suggest members' ambivalence toward identification with a community. Therefore, speech acts of assimilation toward an online collective, as manifested in patterns of LSM over time, should be symbolically reflective of members' socialization perceptions of a social media channel.

Decoding insincerity of the message

For sincere speech acts, the communicated act (consciously or subconsciously) is unambiguous and directly related to the speaker's intentions. Unfortunately, an increasing amount of social media messages in various channels reflect insincere, deceiving intentions (Tsikerdekis and Zeadally, 2014). In customer review settings, for example, customers must be wary of fake, overly negative or positive evaluations (Anderson and Simester, 2014). Spam filters seek to safeguard users from email scams. Even in business-to-business loyalty programs administered through social channels, fraudulent communicative acts account for $1.4 billion in profit losses each year (Nickerson et al., 2011). Humans are very poor lie

detectors though, especially when it comes to detecting deceit in written statements (DePaulo et al., 2003), creating a pressing need for better techniques to identify deceitful intentions in verbatim claims (cf. plagiarism checks). Despite a nascent body of research into linguistic cues of deceit, different linguistic cues seem mostly haphazardly tested and context specific, leading to mixed findings across scientific disciplines (Matsumoto and Hwang, 2014). The use of a theoretical lens derived from speech act theory instead might serve to construct a comprehensive research agenda for decoding deception in social media verbatim comments.

Unlike speech acts used to convey sincere intentions, deceptive writers actually use speech acts to mask, rather than to reveal, their true intentions. Ludwig et al. (2015) introduce a speech act framework for studying linguistic cues of deception in the claims made by members of a loyalty program. They show that deceptive intentions manifest themselves at three distinct speech act levels. First, similar to conceptualizations in face-to-face deception contexts (DePaulo et al., 2003), these authors discern the use of certain words and word combinations as linguistic markers of deception. For example, deceivers are likely to use fewer personal pronouns (e.g., I, her, they) Second, in terms of patterns and structural features within the message, deceivers appear to structure their presentation of a string of statements and sentences within their claim very differently. Third, at the meta-speech-act level, deception might be detected by focusing on how deceivers develop their communication across a string of conversational intervals, following the discussion of a claim.

In table 1 we summarize the aspects studied in emerging research outlined above using social media messages, their relation to speech act theory and suggest operationalization approaches using computer aided text-analysis. Next we develop suggestions for future research.

Table 1: Summary of speech act theory-based social media research

Decodable Social Media Factors	**Definition**	**Speech Act Approach**	**Operationalization/Proposed Measurement**
Impact of the message	The potential impact of a social media message on evaluations and decision making (Lench et al., 2011)	Considerations of the perlocutionary effects of speech acts, based on the performative function of content (e.g. assertives, expressives) and function words	The use of computer aided text-analysis to derive the proportion of words that relate to the diagnosticity (e.g. affect-laden words) and accessibility (e.g. LSM) of social media messages may be particularly relevant to predict their impact
Strength of the conviction	The level of arousal inherent to a conviction (Russell and Barrett 1999).	Considerations of illocutionary acts altering the forcefulness of the language being used	The use of computer aided text-analysis to derive the proportion of words that boost (superlatives) or attenuate (e.g. negations) affect laden content words (e.g. good vs. bad) may be relevant in assessing strength of conviction
Quality of the message	Well-formulated, well-developed arguments transcending the actual content or strength of a message (Seibold et al., 2010)	Considerations of illocutionary acts reflective of cognitive processing by the writer	The use of computer aided text-analysis to derive use more causal words (e.g., because, cause, effect) and other words suggestive of cognitive processing (e.g., realize, understand) may be relevant to identify weel-structured, quality social media messages
Socialization of the writer	Writers' sense of integration and identification with an online community	Considerations of illocutionary acts (conscious and subconsciously) reflective of	The use of computer aided text-analysis to derive alignments in the use of function words (e.g. pronouns, prepositions) may be relevant

	(Kohler et al., 2011).	communication accomodation.	to determine the degree of socialization between conversational partners or a community in social media.
Insincerity of the message	The writer purports to have beliefs or intentions that he does not have (Austin, 1962)	Considerations of illocutionary acts suggestive of deceitful intentions	The use of computer aided text-analysis to derive suspicious formulations (both content and function words) drawing on deception detection research in face-to-face communication (e.g. deceivers tendency to be evasive manifest through lack of personal pronouns in their writing) may be relevant to identify insincerity in social media messages.

Directions for researchers

Freud offered examples of "slips of the tongue" to emphasize that word use is diagnostic of people's mental, social, and physical states. The psycho-analyst Jacques Lacan (1968) and philosopher Paul Ricoeur (1976) both posit that the unconscious asserts itself through language use; the way people describe events defines the meanings of those events. Such conceptualizations of the implications of people's language use have been the foundation for work by sociolinguistics (e.g. Eckert, 1999), narrative and discourse analyses (Schiffrin, 1994), and communication research (Robinson and Giles, 2001). Just as people's word use signifies their own realities, it affects their audience. The way people communicate their experiences and viewpoints has direct implications for the accessibility and perceived diagnosticity of that information for their audience (Feldman and Lynch, 1988). This article suggests insights that might be assessed in systematic analyses of online verbatim content.

Conceptualizations of language use gain ever more importance for companies in the digital revolution age. The rise of social media has amplified and accelerated conversations

among customers, to the point that discussions of products and services are no longer just acts of intimate, one-on-one communication. Today, customers share their views and experiences on a one-to-many basis by writing product reviews on online retail sites or posting and disseminating opinions through user communities. Facing thousands of text-based conversations, it becomes critical for companies to determine customer perceptions efficiently, then derive implications from these textual accounts.

To pave the way forward, in future studies it would be useful to test directly for the effects of speech acts on customer's perceptions of social media messages and business relevant outcomes. For example research could investigate which illocutionary acts make messages particularly influential in the consumer decision making journey through different social media formats. Which acts are particularly persuasive, for which target audience, at which decision stage and for which purchase occasion? Furthermore, research could investigate if there are differences between peer-authored and company-authored messages. Such work may provide valuable insights into the decision making process by consumers using unstructured, verbatim social media communication.

Another avenue could be the development of a typology of speech acts typical in social media. Whilst a number of studies have investigated and developed typologies of speech acts in information system research, such typologies could be similarly valuable to the field of marketing. Such research may uncover primary intentions for consumer and company interactions and consumer-to-consumer interactions. Further it may allude to how different social media channels may be used for different purposes and may necessitate different rules for interacting.

The primary pitfall of the unprecedented access to information through social media is informational overload. We have highlighted first, nascent insights on how to derive measures of message quality using speech acts reflective of cognitive processing. While the

term “quality” is indisputably important, what it means, however it is not always clear and often context dependent. A better understanding of quality and how it is manifests itself through the speech acts within the social media message would be valuable so that managers of social media sites know what is worth to feature more prominently to lift the quality perceptions of their sites. Such research could also investigate the return of high quality social media messages across different social media contexts (e.g. innovation communities, review sites). For example, research comparing how different types of speech acts, reflective of quality, generate different returns (e.g. innovative ideas, customer satisfaction) would further aid managerial decision making.

While conceptual studies could focus on maximizing interpretation and meaning of speech acts in social media, additional studies should seek to maximizepredictive accuracy too. Further research might investigate theoretically unfounded linguistic cues of speech acts, for example by transferring findings about other nonverbal cues to written communication , or include multiple experimental tests to measure and increase predictive accuracy. Such insight may aid further research as well as practice.

Further research might focus on how content word categories, beyond affective content words, increase the diagnosticity of text mining tactics for studying communication across social channels. For example, many companies employ automated chatbots or dynamic website tools to adapt their conversational content automatically to particular segments of customers. Researchers might consider ways to improve the effectiveness of customer-focused dialogues. Alternatively, newly developed content word repositories could help assess the effectiveness of employee training, by examining how employees interact with customers after they complete a program on customer intimacy or cross- and upselling. Post hoc analyses of the dialogues between customers and employees could establish whether

the effective use of upselling techniques, for example, enhances the returns on investments in employee training.

More research is needed to advance understanding of linguistic style implications in social media (cf. Ireland and Pennebaker, 2010). For example, we need a more in-depth understanding of the occurrence and impact of context-specific vocabulary styles. Slang words, socially constructed context-specific words, and other non-functional words may be strongly embedded in the communication style of a particular segment of customers (Postmes et al., 2005), and their use may substantially predict behaviour. For example, the use of irony and ironic speech acts imply subtleties that communicate the opposite of the actual word meaning. Developing further insights into various aspects of such linguistic styles could, for example, help identify the sentiment orientation of text-based content and enable companies to avoid erroneous opinion mining across social channels.

Research could further investigate the potential negative, intrusive elements such detailed computer-aided text analysis can evoke both in B2C as well as B2B social media contexts. For example, and in contrast with the widely accepted negative stance on surveillance in academia, "big brother" control approaches may actually be beneficial, even socially accepted because they curb and even pre-empt opportunistic behaviours (McGrath's 2004).

Finally, text mining speech acts constitutes a theoretically grounded approach for handling vast amounts of verbatim social media communication, so research should look into factors that lead to heterogeneous links between language use in social media messages and the communicators' intentions, backgrounds and impact. Language and culture, for example, are strongly related (Whorf, 1941); a normal positive expression in one could stand for an extremely positive evaluation in another culture. Personality traits and relational circumstances similarly might create divergences in speech acts used to express sincere or

insincere intentions. By accounting for specific traits or states by the writer, the reader, and their relation, further research could identify moderating effects on speech acts and their symbolic value for intent and behaviour in social media speak. Aforementioned research questions are summarized in Table 2.

Table 2: Future research questions of interest

1	What are the direct effects of speech acts on customer's perceptions of social media messages and business relevant outcomes?
2	Are there differences between peer-authored and company-authored messages and if so, how can they be accounted for?
3	What constitutes a typology of speech acts appropriate for social media?
4	How can business achieve a better understanding of quality and how is does this manifest itself through the speech acts in social media messages?
5	How can we maximize classification accuracy of speech acts in social media using automatic text-analytics?
6	How can we increase the diagnosticity of text mining tactics for studying communication across social channels?
7	How can we advance an understanding of linguistic style implications in social media?
8	Are there potentially negative, intrusive elements that emerge from the use of detailed computer-aided text analysis?
9	What factors lead to heterogeneous links between language use in social media messages and the communicators' intentions, backgrounds and impact?

Decoding managerial lessons

As online text-based conversations grow rapidly, business models increasingly get reorganized to incorporate and manage social media conversations. This article set out to offer insights into how content and function word uses relate to conversants' speech acts and might help assess customer perceptions, intentions, and behaviours. Drawing on emerging

theory about speech acts, as well as growing empirical evidence, we show that the use of language—or language-in-use—is key to decoding social media speak. From this discussion, specific lessons for marketers emerge.

As an important first lesson, companies must pay close attention to how customer reviews are written. Social media enable every customer to share her or his opinion of products and services, yet only those written in a manner that provides both diagnosticity and accessibility to peers will truly affect customers' online purchase decision-making process. The lesson is to look beyond overall star ratings and consider the way the verbatim content is presented. Customers who describe their product experiences in a way that reflects their experiences vividly and in a writing style consonant with a particular target audience strongly influence the market performance of products and services. Although the presence of customer reviews in general increases the appeal of a social media site (Mudambi and Schuff, 2010), managers looking to make their site more compelling could provide writing guidelines to help customers ensure their opinions are heard. Such guides should elaborate on writing style, in addition to content, in customer review texts.

A second lesson relates to sentiment strength in social media speak. That is, loyalty and purchase or recommendation intentions vary with seemingly tiny differences in the word choices revealed in evaluations of brands, products, or services; a "good" experience has far less value than a "great" one. To grasp these nuances, text mining cannot just mine simple sentiment polarity (positive vs. negative); it must address the relative strength of conviction that drives the actions and responses of customers in social media (Thelwall et al., 2010). Whereas direct recommendations from peers generate engagement rates some 30 times greater than traditional online advertising, really strong positive recommendations nearly double this effect (Luca, 2011). Managers also should be aware of a ceiling effect; there is a limit to how strongly positive reviews can be before they would be regarded as insincere.

Nevertheless, by accounting for boosting and attenuating linguistic cues, as well as implicit and indirect speech acts, managers can differentiate among granular online sentiments and produce better online sentiment metrics.

A third lesson pertains to the identification of contribution quality in social media. Information overload in social media channels is almost as detrimental as no content at all (Hansen and Haas, 2001). Customers who need to sift through vast contents are unlikely to return, let alone recommend a channel (Mudambi and Schuff, 2010). Typically, social media sites and user communities support filters to organize posts by their recency, contributors, or views, to help users manage the vast amount of information available (Ma and Agarwal, 2007). Research also can provide community managers with a new, text-based proxy of message quality, derived by focusing on speech acts related to argument development. Speech acts that are symbolically reflective of posters' efforts to develop their communication entail words related to causal explanations and cognitive thinking. Ultimately, by establishing text mining systems, rewards, and controls for detecting and promoting quality contributions that feature more developed arguments, managers can enhance social media sites' appeal to users.

A fourth significant managerial take-away is the recognition that the value of communication transcends information content. There is more to communication than content. Speech acts innate to the style of communication (rather than its informational content) attach conversants' subjective meaning to situations and convey their underlying socialization intentions. The ability to assess social media users' socialization perceptions, such as those of an online community, by text mining their LSM with the online collective, then monitoring its temporal development, offers a range of opportunities. Rather than using surface-level parameters, such as posts and visit counts, to assess the viability of a social media channel, managers can integrate socialization perceptions in their decision making,

which are far more suitable for predicting users' ongoing involvement (Moran and Gossieaux, 2010). The automatic, text-based nature of this approach also facilitates continuous, real-time monitoring of ongoing socialization in social channels, so that managers can detect users whose styles start to diverge and quickly establish an individual line of communication.

Finally, managers should explore the power of text analytics for detecting deception. Although deception can occur in a single word, it commonly unfolds over a series of sentences or conversational turns. The ability of individual human beings to detect deception is barely better than chance (DePaulo et al., 2003) and drastically reduced in purely verbatim communications. Some indications suggest that deceivers' insincere intentions leak through in particular, out-of-the-ordinary speech acts. Managers thus can benefit from recent research that shows how liars choose their words, construct their sentences, and behave across conversational turns (Ludwig et al., 2015). Considering the extensive time and resources needed to investigate claims in detail, a text mining approach might help managers focus their efforts on those claims and messages that already have been classified automatically as potentially deceitful. Companies also should implement prevention measures. For example, asking directly for claim specifics restricts deceivers' freedom of expression and may deter them from even trying. Similar to a spam filter or plagiarism checkers, such detection tools could also help customers screen incoming emails for fraudulent intentions.

Closing thoughts

Recent years have seen a veritable explosion of online, text-based conversations. Acquaintances, friendships, and romantic relationships are established and maintained online; there are also multiple social media platforms for customers to share their product and service experiences, in their own words. The central premise of this article holds that particular word use in these conversations conveys much more than just content. Speech acts in text-based

conversations are windows to the perceptions and behaviours of writers. Moreover, these speech acts define the relative accessibility and diagonisticity of social media messages, causing divergent impacts on the audience. These new insights should help enhance understanding of how perceptions and intentions can be decoded from social media speak.

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