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How Stereotypes Are Shared Through Language: A Review and Introduction of the Social Categories and Stereotypes Communication (SCSC) Framework

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Abstract

Language use plays a crucial role in the consensualization of stereotypes within cultural groups. Based on an integrative review of the literature on stereotyping and biased language use, we propose the Social Categories and Stereotypes Communication (SCSC) framework. The framework integrates largely independent areas of literature and explicates the linguistic processes through which social-category stereotypes are shared and maintained. We distinguish two groups of biases in language use that jointly feed and maintain three fundamental cognitive variables in (shared) social-category cognition: perceived category entitativity, stereotype content, and perceived essentialism of associated stereotypic characteristics. These are: (1) Biases in linguistic labels used to denote categories, within which we discuss biases in (a) label content and (b) linguistic form of labels; (2) Biases in describing behaviors and characteristics of categorized individuals, within which we discuss biases in (a) communication content (i.e., *what* information is communicated), and (b) linguistic form of descriptions (i.e., *how* is information formulated). Together, these biases create a self-perpetuating cycle in which social-category stereotypes are shared and maintained. The framework allows for a better understanding of stereotype maintaining biases in natural language. We discuss various opportunities for further research.

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Highlights

- Based on an integrative review we propose the SCSC framework that explicates the linguistic processes through which social-category stereotypes are consensualized.
- We discuss how biases in language use both result from and maintain perceived category entitativity, stereotype content, and essentialism.
- We distinguish biases in both the content and linguistic form of social-category labels.
- We distinguish biases in both communication content and linguistic form in descriptions of behaviors and characteristics of categorized individuals.
- Our integrative framework allows for a better understanding of stereotype maintaining biases in natural language

Content

Introduction

An abundance of research has demonstrated the pervasive and fundamental role of social categorization and stereotypes in social perception, judgment, and interaction (Allport, 1954; Mackie, Hamilton, Susskind, & Rosselli, 1996; Moskowitz, 2005; Dovidio, Hewstone, Glick, & Esses, 2010). Social categories and their associated stereotypes are generally considered to be highly functional for people as they allow us to quickly and efficiently make sense of our complex social environment. Simultaneously, however, reliance on social-category stereotypes may promote prejudice, discrimination and intergroup conflict when people pre-judge categorized individuals on the basis of generalized (negative) stereotypic beliefs (Fiske, 1998; Macrae & Bodenhausen, 2000). As such, stereotypes play a fundamental role in many pressing societal problems relating to racism, sexism, ageism and intergroup tensions.

Stereotypes are particularly consequential because they are socially shared across large groups of people. That is, people in the same context (i.e., within the same [sub-] cultures) appear to hold similar beliefs and expectancies about social categories (Hogg & Reid, 2006; Oakes, Haslam, & Turner, 1993). The question of how stereotypes become shared knowledge, however, received relatively little research attention, as most of the stereotyping literature has focused on cognitive and individual-level processes (Haslam, Turner, Oakes, McGarty, & Reynolds, 1997; Klein, Tindale, & Brauer, 2008). Except for the assertion that the sharing of stereotypes is usually assumed to somehow occur through communication, research on the exact means, and the general underlying principles is relatively scarce and scattered across various subfields in the literature. Focusing on these dynamics, however, is crucial to understand how stereotypes evolve, are maintained, and how they can possibly change (Collins & Clément, 2012; Mackie et al., 1996).

In this article, we argue that, to understand how stereotypes become shared knowledge, it is crucial to focus closely on language use in communications about socially categorized people. Language reflects which groups are singled out as targets for stereotyping, and is the main carrier of stereotypic information we come to associate with these groups. In often quite subtle ways, our language reflects, constructs and maintains beliefs about social categories. By studying language use, we can thus gain important insight in the occurrence and development of social category stereotypes within cultural groups. Current research on this topic has so far mainly focused on specified stereotype-maintaining linguistic biases in experimental settings, mostly by manipulating artificial sentences in isolation. This research provided valuable insights into the link between categorization, stereotypic expectancies and both the production and inferential consequences of specific linguistic features. Yet, for a complete understanding of these mechanisms and their real-life impact, the required next step is to focus on natural language in which various biases may occur in combination. Such an approach is even more interesting in light of current developments in computational linguistics that provide more and more opportunities for automated analysis of natural language (Caliskan, Bryson, & Narayanan, 2017; Pennebaker, Mehl, & Niederhoffer, 2003; Fokkens, Ruigrok, Beukeboom, Gagestein, & Van Atteveldt, 2018). To enable this type of research, a theoretical integration of the ways through which social-category knowledge is shared through language is much needed.

Goals and Approach

In this article, we integrate the major strands of literature on stereotyping and biased language use into one framework: The Social Categories and Stereotypes Communication (SCSC) framework. The SCSC framework shows how communication about categorized individuals determines the formation, dissemination, and maintenance of social-category stereotypes within cultural groups. The framework distinguishes different types of communicative biases (focusing on content and linguistic form of category labels and behavior descriptions), which have hitherto been studied in largely independent fields. Within each bias type, we focus on a number of (often implicit) linguistic means through which people share their social-category stereotypes. The SCSC framework specifies how these bias types feed and maintain three fundamental cognitive variables in (shared) social-category cognition: perceived category entitativity, stereotype content, and perceived essentialism of associated characteristics and traits. Integrating both the linguistic means and the cognitive antecedents and consequences within one comprehensive framework creates a number of important insights. An integrated understanding of the role of language use in the formation and use of stereotypes allows one to monitor their occurrence and evolvement and

can be translated into interventions to change stereotypic views. The theoretical and practical contributions will be explored in the general discussion.

The different sub-fields of (psychological) research on stereotype bias in language use we integrate exist quite independently with little cross-reference, even though they are in fact closely related. Based on their focus, we distinguish these sub-fields as (1) biases in linguistic labeling and (2) biases in describing behaviors and characteristics of categorized individuals. Both sub-fields in turn are further specified in terms of (a) content (i.e., meaning of labels, what is communicated) and (b) linguistic form (i.e., word classes, formulations).

With the terms "linguistic bias", or "biased language use", we refer to instances in which language use reflects (shared) social-category cognition[1]. Thereby, we define a linguistic bias as *a systematic asymmetry in language choice that reflects the social-category cognitions that are applied to (a) described category(ies) or individual category member(s)* (adapted from Beukeboom, 2014). This means that language choice, in referring to and describing a target, varies as a function of the social category in which this target is categorized, or to whether the target's characteristics and behaviors fit with an activated stereotype or not. Furthermore, the word 'systematic' indicates that these differences in language choice are general patterns, as opposed to anomalies by individual speakers. As noted, the different bias types manifest this systematic asymmetry in different ways, through language content (e.g., word meaning, topic choice) and/or linguistic forms (e.g., nouns vs. adjectives, negations vs. affirmations, etc.).

A number of the reviewed linguistic bias types were previously linked to perceived category entitativity, stereotype content and perceived essentialism, mainly in the inferential consequences of biased formulations in recipients (Beukeboom, 2014; Carnaghi et al., 2008). Perceived category entitativity and essentialism are regarded as two fundamental variables in category perception and stereotyping, yet in the literature the terms are often conflated and vary in meaning (McGarty, Yzerbyt & Spears, 2002; Prentice & Miller, 2007).

Based on a literature review, we present an integrative framework on the formation and maintenance of social-category knowledge that explains how specific, observable linguistic aspects relate to these fundamental cognitive variables of perceived category entitativity, stereotype content and essentialism as both antecedents and consequences. Our specific focus on language use and its connections to these three cognitive variables provides a unique contribution that complements previous attempts to elucidate the mechanisms through which stereotype consensuality is achieved (e.g., Bigler & Liben, 2006; Haslam et al., 1997; Kashima, Klein, & Clark, 2007).

For our review, we searched for studies within the literature on social and developmental psychology and communication studies – focusing on social categories or stereotypes that included linguistic variables (i.e., language content or form) as independent or dependent variables. Rather than aiming to include all studies about a limited number of biases, we aimed to maximize the variety of linguistic means in available research. As most of the work on category entitativity and essentialism is not explicitly linked to linguistic variables, we independently searched for literature on these topics. Before we turn to reviewing the literature as the basis for the SCSC framework, we provide a foundational context and definitions.

Foundational Considerations and Definitions

Grouping individuals into categories is a fundamental human tendency. Social categories and their associated stereotypes help people to make sense of the social world and to gain some predictability (Allport, 1954). The term stereotype refers to the cognitive representation people hold about a social category, consisting of beliefs and expectancies about probable behaviors, features and traits (Dovidio et al., 2010). This cognitive component can be distinguished from an affective or evaluative response towards a social category (Amodio & Devine, 2006). The term 'prejudice' usually refers to negative affective evaluations of a social category and its members. These cognitive and affective associations may

[1] We use the term "(shared) social category cognition" to refer to the social categories that are considered meaningful (i.e., perceived entitativity of social categories), their associated stereotypes and perceived essentialism, which are organized in a category taxonomy, and which may or may not (yet) be shared between communication partners.

(in concert or independently) induce discriminatory behaviors (Amodio & Devine, 2006).

Identifying a new individual as a member of a category allows one to draw on knowledge and experiences with similar individuals from that category and thus provide us with inferred properties that go "beyond the information given" (Allport, 1954). Yet, the simplification this brings has serious downsides. First, when relying on categories, perceivers both exaggerate similarities between individuals within categories (i.e., they are seen as all alike) and differences between categories (Allport, 1954; Brewer & Harasty, 1996; Taylor, Fiske, Etcoff, & Ruderman, 1978). Second, while judging a categorized person based on stereotypic expectancies associated with the category provides information gain (i.e., stored category cognition is applied to this individual), it also involves information loss, because the individuality and situational constraints of category members are ignored (Mackie et al., 1996). Discrimination occurs when individuals or groups are treated, described and/or judged based on generic social category associations, rather than on available individuating information.

Stereotypes have mostly been defined (and studied) as intrapersonal phenomena, as belief systems that are the product of mental processes in the mind of individuals. This focus has neglected the fact that stereotypes are in essence products of collections of individuals, as they become consensually shared across large numbers of people within (sub) cultures (Haslam et al 1996; Haslam et al., 1997; Holtgraves & Kashima, 2007; Kashima et al., 2010; Semin, 2008). Learning which social categories are meaningful and learning the shared expectancies with these social categories is part of an enculturation process in which we acquire the norms, values and appropriate behaviors of the culture we are immersed in. Creating and maintaining shared social categories and associated expectancies is thus rooted in our cultural upbringing and in childrens' development. When growing up, we learn to categorize objects (e.g., animal types, toys) and people (e.g., based on professions or gender), and we learn what is expected of objects and individuals belonging to such categories (Bigler & Liben, 2006).

Likewise, when joining a new subgroup or (sub)culture, the socialization process involves internalizing the norms and social-category stereotypes that prevail within this subculture (Crandall, Eshleman, & O'Brien, 2002). This is illustrated by research that shows powerful effects of perceived consensus on this internalization process. Learning that stereotypic beliefs are consensually shared within an ingroup bolsters one's stereotypic views (Haslam et al., 1997; Haslam et al., 1996), increases the expression of prejudice and discrimination (Crandall et al., 2002) and even increases stereotype accessibility (Sechrist & Stangor, 2001). Together, these processes ensure that members of subcultures internalize shared stereotypes and thereby create a shared social reality (Kashima, 2004; Thompson & Fine, 1999; Semin, 2008).

Communication plays a crucial role in the emergence, maintenance and change of consensually shared category stereotypes within (sub)cultures (Brauer, Judd, & Thompson, 2004; Haslam et al., 1997; Schaller & Latené, 1996; Klein et al., 2008). Category representations are shared and maintained through mass media (e.g., Ramasubramanian 2011; Schemer, 2012; Saleem, Prot, Anderson, & Lemieux, 2017) and in interpersonal conversation (Barr & Kronmüller, 2006; Bigler & Liben, 2006; Bratanova & Kashima, 2014; Ruscher & Hammer, 2006). Although stereotypes may be acquired from other sources than linguistic communication (e.g., direct interaction or observations of others' interactions with category members, visual depictions of groups in the media, or perceived segregation of groups within a society), even these factors likely co-occur with linguistic categorization in communication. When observable social groups are labeled and discussed in communication, they are more likely to become the target of stereotyping than social groups that are not (Bigler & Liben, 2006). Communication can thus function as a carrier, confirmer, as well as an accelerator in stereotype formation and maintenance.

Research by Thompson, Judd, and Park (2000) showed how the mere act of communicating category impressions can increase stereotypicality. That is, after category impressions had been discussed in several triads along a serial communication chain, participants endorsed a more extreme stereotype content; they ascribed many stereotype-consistent traits, and few inconsistent traits to the group as a whole, and category members were seen as more alike. Moreover, consensus about these impressions between participants in triads became greater in later triads, and was also greater compared to groups who did not discuss their impressions (Thompson et al., 2000). This study illustrates how communication is front and center in the formation and consensualization of stereotypes.

In our integrative review, we focus specifically on the role of language in the consensualization of social category

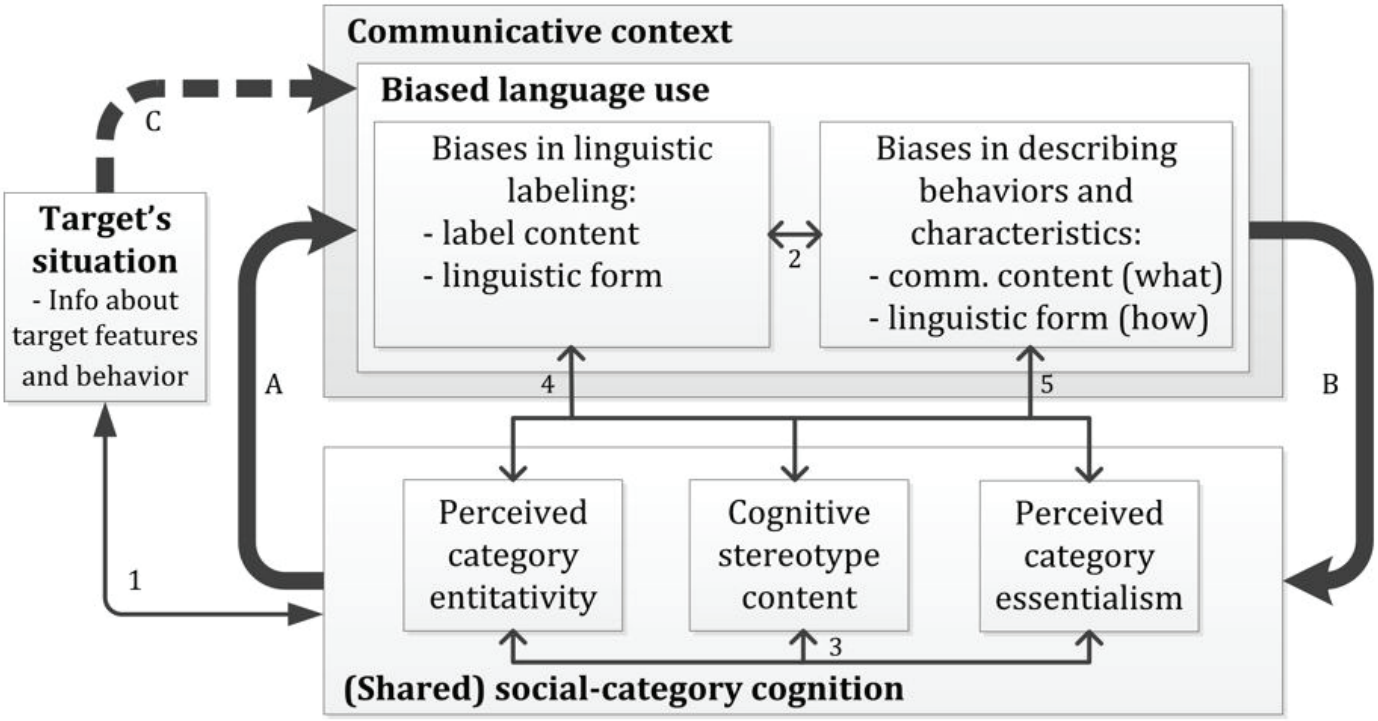
stereotypes. Language reflects and maintains which categories are considered as meaningful distinctive entities (i.e., category entitativity) and consequently become relevant dimensions for comparison. Second, language use in communications about categorized individuals reflects and feeds which stereotypic characteristics are associated with a given category (i.e., stereotype content), and the extent to which these associated characteristics are perceived to be essential for a given category (i.e., category essentialism).

The Social Categories and Stereotypes Communication (SCSC) Framework

The Social Categories and Stereotypes Communication framework (SCSC framework, see Figure 1) integrates the linguistic means through which social-category cognition is communicated and maintained. The framework presents language use as the main vehicle through which shared social-category cognition is transmitted and maintained (cf. Beukeboom, 2014; Collins & Clément, 2012; Maass, 1999; Wigboldus & Douglas, 2007). When communicating about other people and their behavior, our language echoes the (shared) cognitive representations of any activated social categories associated with these people. Stereotypic beliefs surface in (often subtle and largely implicit) linguistic biases that reflect the existing stereotypic expectancies we have with discussed categorized individuals (Fig. 1, Arrow A). Moreover, linguistic biases feed shared social-category cognition by sharing and confirming these existing stereotypic views (Fig. 1, Arrow B). These forces create a self-perpetuating cycle in which social-category cognition is continuously shared and maintained.

As argued in the previous section, intrapersonal and interpersonal processes go hand in hand during this process. The reflection of social-category cognition in biased language use is usually regarded as a product of an intrapersonal process in a speaker/sender (Fig. 1, Arrow A). This reflection in language has immediate interpersonal consequences when recipients draw (stereotypic) inferences from biased descriptions. Moreover, in an interactive communicative situation, speaker and recipient continuously switch roles, and biased communication patterns become interpersonal as well. One person may introduce stereotypic bias in

Figure 1. *The Social Categories and Stereotypes Communication (SCSC) model.*



an interaction, in which the other joins. One person's utterances may activate social-category cognitions in the other person and subsequently induce biased language use in this person, and so on. Also, biased utterances by speakers may not only induce cognitive inferences in recipients, but also in the speakers themselves (Fig. 1, Arrow B). That is, people's cognitive representations can be shaped by how they verbally describe them, for instance when they tailor their descriptions to assumed beliefs of their audience (Higgins & Rholes, 1978; McCann & Higgins, 1990; Marsh, 2007).

The SCSC framework (Fig. 1) explains the consensualization of social-category cognition through biased communication about categorized targets. It consists of three main parts: (I) Target's situation: Information about discussed target's features and behavior (II) (Shared) social-category cognition (perceived category entitativity, stereotype content, perceived essentialism), and (III) The different types of biases in language use. These different bias types in communications about categorized individuals both reflect and feed shared social-category cognition (hence the bidirectional arrows 4 and 5). These are:

(1) Biases in the type of *linguistic labels* used to denote and distinguish categories, in which we distinguish biases in:

a) label content (i.e., meaning of the used terms)

b) linguistic form of labels

(2) *Biases in describing behaviors and characteristics* of categorized individuals, in which we distinguish biases in

a) communication content (i.e., *what* information about categorized individuals is communicated (i.e., topic prominence).

b) linguistic form of descriptions (i.e., *how* is information about categorized individuals formulated (e.g., grammar, predicate types).

The different biases used in communication about categorized targets are always embedded in a communicative context. The inclusion of the communicative context in the framework acknowledges that biased language use may differ as a function of factors in the social context in which the (biased) communication takes place. These factors include, first, constraints and affordances of the communicative situation like, for instance, interactivity between communication partners: Is a recipient present, can s/he respond immediately to a speaker (e.g., face-to-face; online chat) or with a delay (e.g., email)? A second important factor relates to the relationship between communication partners. We argue (see above and following sections) that the consensualization of stereotypes through biased language use is most likely within (sub)cultures, or specifically, when sender and recipient are ingroup members or share a social identity. More specific related factors therein are the presence of shared social category knowledge, and norms and conventions about how to communicate about discussed targets. A third important factor concerns the relation of communication partners (i.e., speaker and recipient) to the discussed target. In much of the research reviewed below, the discussed target is an absent (member of a) social category to which speaker or recipient do not belong. Research on intergroup communication, however, shows that the social identity of the communication partners vis a vis the category of a discussed target (i.e., ingroup, outgroup, minority?) brings an additional factor that may influence language use. We will relate the SCSC framework to the intergroup perspective in the general discussion.

In the following sections, we further explain the different building blocks of the SCSC framework and their mutual relationships. Before we get into linguistic variables, we discuss how communication and language use relate to both the described target's perceived situations in reality and relevant social-category cognition. After all, when communicating about other people, our language alludes both to situations in reality and social-category cognition.

Input About Target's Situations

Social-category stereotypes are generalized impressions, which implies that features and characteristics associated with a particular social category are –depending on perceived category entitativity, stereotype content, and essentialism, as we will discuss– expected to apply to all individual category members and to be stable across situations. Communication plays a crucial role in the formation of such generalized impressions. To understand how this works, it is important to note that the extent to which communication about categorized people refers to specified people acting in particular situations (depicted in the 'Target's situation' box in Figure 1), or instead generalizes across individuals and across situations, can vary.

Beike and Sherman (1994) distinguished three levels of social information. These are usually discussed as cognitive levels, but we will argue they are also reflected in language use. The lowest, most specific, level of information refers to the situational behaviors of specified individual(s) or category

member(s) (e.g., This girl helped her mother yesterday). Here, a clear link to a specific person(s) acting in a specified situation is drawn. Note that this information can either be self-observed (currently or retrieved from memory), or it may be learned second-hand through communication. At the intermediate level of information, personality characteristics (i.e., traits) of individuals (e.g., This girl is helpful) are mentioned. Such information still refers to specified individual(s), but is more abstracted in that it generalizes behavioral characteristics across situations and is therefore not observable in a single actual situation. At the highest level of information (Beike and Sherman, 1994), one refers to qualities and characteristics of social categories (e.g., Girls are helpful). At this high level of generalization, the information is separated from both specified persons and behavioral situations. It refers both to a general category of unspecified individuals and to characteristics in generic abstracted terms that generalize across situations. Communication can thus generalize along two dimensions: in referring to a target (from specified individual[s] to a generic social category) and in describing behaviors (from specified situational behavior to enduring characteristics and traits of categorized individuals).

Importantly, information at one level can lead to inferences at another level. Beike and Sherman (1994) propose that there are three directions of inferences. First, Beike and Sherman (1994) refer to the process of using information from lower levels to draw inferences at a higher level of information as 'induction.' The inductive process of drawing inferences from the situational behaviors (lowest level) or traits (intermediate level) of individual category members to form generalized expectancies about social categories (highest level) corresponds to stereotype formation[2] . Second, the process of using higher-level information to draw inferences about specified individuals (lower levels) is called 'deduction' (Beike & Sherman, 1994). Deduction occurs when information at the highest level (i.e., a category stereotype) is applied to draw conclusions about individual category members (i.e., usually called stereotyping). In Figure 1, these processes are visualized in arrow 1. Thirdly, Beike and Sherman (1994) refer to the process of using information at any level to draw inferences at the same level as 'analogy'. This occurs, for instance, when information about a category's characteristics leads to the inference of the existence of associated characteristics (e.g., they are helpful, so they must be nice).

These inferences are usually considered as cognitive processes, but they are reflected in, and mediated by, communication and language use. In Figure 1, this is visualized in the path from arrow C to arrow B. For instance, an observer of a specified target situation (e.g., a policeman beating a person) may communicate her perception to others in different ways. She may directly communicate the observed information (i.e., verbalize the low-level target behaviors; e.g., This policeman was beating a man) and/ or verbalize the high level cognitive inference she made (e.g., Policemen are aggressive). In turn, recipients of the communicated information may draw their own inferences from the communicated information they receive, but, we will argue, this inference process is influenced by the ways in which information is verbalized. When information is formulated at a low level, recipients can draw their own inductive inferences or refrain from doing so. When information is formulated at a high level (e.g., Policemen are aggressive), the stereotypic inference is readily presented, while the actual situation on which an inference was based is not. Thus, the route from actual target situations to social-category cognition is often mediated by communication and language use, but the input of information from target's situations (Fig. 1, arrow C) may vary in weight (hence the dashed visualization of arrow C).

It should be noted that, in natural language, descriptions of a target's situational behavior and generic statements about a category as a whole can go back and forth. A single utterance may contain information at different levels of social information. Descriptions of the situational behavior of an individual category member, for instance, can be used as evidence or illustration for inferences about a generic social category (e.g., Lucy helped her mother yesterday; girls are really helpful). Individual category exemplars and their behavior may thus be invoked as evidence for the stereotypic characteristics of a social category (Ruscher, 1998). Depending on the communicative context, these dynamics can become interactive. In dyadic conversation, a speaker's utterances at one level can induce cognitive inferences and linguistic utterances at another level in a conversation

[2] Drawing inferences from the lowest to intermediate level corresponds to impression formation of persons (e.g., spontaneous trait inferences).

partner (Ruscher & Hammer, 2006).

Conversations or stories may develop from discussing situational behaviors of one or a few categorized individuals to generalizations about the category as a whole, which, in turn, can induce inferences about (future) behavior of individual category members. Importantly, communication can also occur at the highest level without any link to actual target situations. That is, people may often communicate generic category impressions without any reference to specified persons or situations (e.g., the Japanese are really industrious). We will argue that such high-level (versus low-level) communications are most likely used to convey existing (shared) social-category stereotypes, which in turn contributes to their consensualization and maintenance. In the next sections, we get into more detail about the specific linguistic variables that relate to the different levels of information, and the ways through which they reflect and induce social-category cognition of senders and recipients.

(Shared) Social-Category Cognition: Perceived Category Entitativity, Stereotype Content, and Perceived Essentialism

Before turning to biases in language use, we discuss how (shared) social-category cognition is structured. We distinguish three fundamental variables in social-category cognition: (a) perceived category entitativity (Campbell, 1958; McGarty, Haslam, Hutchinson, & Grace , 1995) (b) stereotype content, and (c) perceived category essentialism (Medin, 1989; Medin & Ortony, 1989). In general, there is consensus that perceived category entitativity and essentialism play a fundamental and crucial role in the formation and use of social category stereotypes (i.e., induction and deduction), yet simultaneously there are different views on the definitions of and relations between the constructs (see Haslam, Rotschild, & Ernst, 2000; McGarty et al., 2002; Prentice & Miller, 2007; Yzerbyt, Corneille, & Estrada, 2001; Yzerbyt, Judd, & Corneille, 2004), which we explain below.

Perceived category entitativity.

Perceived category entitativity (Campbell, 1958; McGarty et al., 1995) refers to the extent to which a social category is perceived as a coherent, unified and meaningful entity, and as "having real existence." In other words, it refers to the perceived "groupness" or "unity" of a group or category, or how closely tied together its members seem to be (Hamilton & Sherman, 1996; Moskowitz, 2005). On the one hand, perceived entitativity may arise from the perceptual features of the category members that are observed in actual target's situations. That is, Campbell (1958) originally argued that perceived category entitativity is derived from perceptual Gestalt principles similarity (e.g., in group members' appearance like skin color or physique), physical proximity, collective movement, and common fate among category members. Later research confirmed that such perceptual cues indeed determine the perception of category entitativity (Abelson, Dasgupta, Park, & Banaji, 1998; Hamilton & Sherman, 1996).

On the other hand, more recent broader definitions, state that perceived category entitativity may also, in addition to observable perceptual features of group members, arise from assumed commonality in unobservable aspects of group members (Brewer, Hong & Li, 2004). This could include a common origin or history (e.g. ancestry, cultural socialization), shared experiences or life events, common goals and coordinated collective action, and also common attributes like innate, internal dispositions (i.e. genetics, traits, personality disorders; Brewer et al., 2004; Yzerbyt et al., 2004; Kashima, 2004; Rothbart & Park, 2004). Thus, even when there are no perceptual features that call for grouping, a group of individuals may be perceived to be high in entitativity. Based on this, we use the following operational definition: *Perceived category entitativity is the extent in which a category is perceived as a meaningful, unified and coherent group, as opposed to a loose set of individuals*.

Cognitive stereotype content.

Our operational definition of *cognitive stereotype content, as noted above, is: the content of the cognitive representation people hold about a social category, consisting of beliefs and expectancies about probable behaviors, features, and traits* (Dovidio et al., 2010). This cognitive representation may include observable, perceptual features of the category members (e.g., skin color, clothing). However, much of the work on the consequences of stereotypes has focused on the influence of trait attributes (e.g., emotional, reckless, competent) that are part of a stereotype, which corresponds to high-level social information that generalizes across individuals and situations.

Notably, stereotypes are often argued to contain more complex knowledge beyond simple beliefs about the presence or absence of attributes or characteristics. That is, stereotypes can include a causal structure that links various

attributes to each other and to other knowledge about the world. For instance, stereotypes about minorities may include assumptions regarding underlying causes about attributes like 'poor' or 'uneducated'. A stereotype can thus become 'theory-laden' in that it includes rich and complex information about the interconnectedness and causal relationships among both observable and unobservable characteristics of category members (Gelman, Coley, Rosengren, Hartman, & Pappas, 1998; Medin, 1989). Some have argued that perceived essentialism about a category can serve as an underlying explanation for the attributes and characteristics that are associated with it (Yzerbyt, Rocher & Schadron, 1997).

Perceived category essentialism.

Perceived category essentialism (Medin, 1989; Medin & Ortony, 1989) has been defined and measured in various ways. A common view of essentialism (Rothbart & Taylor, 1992) is that some social categories, such as race and gender, are perceived to possess a deeper, underlying biological essence or nature, that gives rise to their surface appearances and behaviors, and causal connections among them. Such an assumed essence may be perceived to cause category members to be fundamentally similar to one another, and to behave consistently across situations (Gelman, 2003; Haslam et al., 2000). Rothbart and Taylor (1992) argued that such beliefs arise because people treat social categories like race and gender as if they were natural kinds rather than social constructs. Hence, the characteristics people assign to a particular social category can be perceived as if they were genetically inherited or so entrenched that they are almost impossible to change (Rothbart & Taylor, 1992; Kashima, 2004).

However, social categories that do not share an obvious genetic core – like plumbers or hipsters – can also be endowed with perceptions of essentialism. Essentialism has often been studied with respect to perceptions about specific characteristics associated with social categories (e.g., emotional, artistic, likes to draw paintings; e.g., Wigboldus, Semin, & Spears, 2000; Beukeboom, Finkenauer, & Wigboldus, 2010; Carnaghi et al. 2008). Higher perceived essentialism then relates to beliefs that these specified characteristics are stable, unchangeable, and dispositional, and have a high repetition likelihood across category members and situations (see Beukeboom, 2014 for an overview).

Although different in focus, the different approaches have in common that essentialism relates to beliefs that category members have stable characteristics in common, that they are, to some extent, basically the same (Haslam et al., 2000). This means that higher levels of perceived essentialism permit richer inferences about category members. That is, high perceived essentialism means that the properties and characteristics that are associated with a category are perceived to have a high degree of immutability (Kashima, 2004). One believes that category members possess a set of internal, dispositional and immutable characteristics that are stable across individual members and situations. Categorizing a person to a highly essentialized category thereby provides a rich source of inferences (i.e., much "information gain") as it allows one to understand and predict a categorized target person's behavior across situations.

For the purpose of the present article, we are interested in how perceived essentialism of a set of characteristics and traits that one associates with a category comes about. Rather than looking at whether one believes in an innate underlying essential core (e.g., as in a genetic make-up of natural kinds, cf. Rothbart & Taylor, 1992) that explains commonalities among category members, we are interested in the perceived content of the perceived commonalities (i.e., perceived stereotype content), and the extent in which these commonalities are perceived to be immutable (perceived essentialism). We, thus, relate perceived category essentialism to the perceived immutability of the stereotypic characteristics and traits associated with a given category (i.e., stereotype content). This approach aligns well with how essentialism has been conceptualized within the literature on language and stereotyping (see Beukeboom, 2014). Our operational definition is: *Perceived category essentialism refers to the extent in which an associated set of characteristics is perceived to be immutable to its members, and stable across time and situations.*

Mutual relationships among the three variables.

As can be derived from the above definitions, perceived category entitativity, stereotype content, and essentialism are closely related to each other. First, all three variables are usually considered to positively relate to perceived homogeneity of category members. Perceived group entitativity increases with perceived homogeneity, and decreasing diversity or variability, in one or more visible or non-visible aspects among group members (Brewer et al., 2004; McGarty et al. 1995; Yzerbyt et al., 2004). Likewise, stereotype

content by definition includes generalizations across individual members, and this perception increases to the extent that perceivers assume that the set of associated characteristics are essential (immutable) to the group as a whole.

Although there are quite different views on the definitions of, and relations between these constructs[3] , in general scholars agree that it is valuable to consider entitativity and essentialism as distinct constructs (Yzerbyt et al., 1997, 2004). That is, social categories may independently vary in the extent to which they are perceived to have entitativity, the stereotype content they become associated with, and the extent in which associated stereotypic characteristics are perceived to be essential (Haslam et al., 2000; Prentice & Miller, 2007). Simultaneously, the constructs are closely and causally related to each other, in a reciprocal manner (Fig. 1, arrow 3). On the one hand, a minimal level of perceived entitativity is needed before a category can acquire a stereotypic impression and essentialism. The more a collection of individuals is perceived to have high (as compared to low) entitativity, the more perceivers tend towards an inductive process to find the stereotypic characteristics considered to be essential to its members (Hamilton & Sherman, 1996; Spencer-Rodgers, Hamilton & Sherman, 2007; Yzerbyt et al., 1997). On the other hand, high essentialism may also induce higher perceived entitativity. That is, believing that a set of essential, shared characteristics exists for a category may, in turn, be taken as evidence to believe in the categories unity and real existence (i.e., its entitativity; Kashima 2004; Yzerbyt et al., 2004).

Treating entitativity and essentialism as distinct constructs also helps to explain their crucial role in the formation and use of social category stereotypes. For instance, using a savings-in-relearning paradigm, Crawford, Sherman, and Hamilton (2002) showed that for groups high (compared to low) in entitativity, trait inferences drawn from individual group members' behaviors (i.e., induction) were more likely to be generalized to other group members and the group as a whole. In other words, for categories high in entitativity, participants draw a general essentialistic impression about the group a whole, and seize to view members as individuals (i.e., high-level inference; Beike & Sherman, 1994). Once this generic group impression is formed, it is applied (i.e., deduction) to all other individual group members (Crawford et al., 2002). In contrast, information about members of low entitative groups (i.e., aggregates of individuals) must be processed and learned individually. Here, members are treated as unique individuals, and information related to specific individuals is stored separately in memory. Once a behavior–trait association is made for one individual, no further generalizations, to other individuals or to the group as a whole, are made (Crawford et al., 2002). Thus, with low entitativity, information remains at a low or intermediate level (Beike & Sherman, 1994) and is processed in an individuated piecemeal manner (Fiske & Neuberg, 1990).

In sum, with increasing perceived entitativity, it is more likely that a generalized stereotypic impression consisting of a set of associated essential characteristics is formed. This stereotype is then associated with all individual members of the group, which allows perceivers to generalize beyond the characteristics of the individual members. However, this information gain comes with a loss; recollection of specific information about individual members becomes more difficult. It is more difficult to remember which of the members of the group performed a behavior that initially induced the inference of the trait, as all of the group members are associated with the trait implied by the behavior. Several other studies confirm these ideas (e.g., Yzerbyt et al. 2001; Yzerbyt, Rogier & Fiske, 1998).

In this article, we argue that specific aspects of language use relate in a predictable way to the formation and maintenance of perceived category entitativity, stereotype content and essentialism. In the following section, we review and integrate research from various fields to elaborate and support these ideas.

[3] In the literature, social category entitativity and essentialism have been defined in quite different ways and the terms are sometimes used interchangeably (Yzerbyt et al., 2004; Haslam et al., 2000; 2004). Depending on how broad the constructs are defined, they can either be considered to share a nested, hierarchical, or overlapping structure (Yzerbyt et al., 2004). Note that when entitativity is defined according to the mentioned broad definition (i.e., as arising from assumed unobservable common attributes; Brewer et al., 2004) entitativity begins to overlap with essentialism. Assumed shared essential traits among a group of individuals (e.g., extraverts) could induce perceived entitativity (i.e., they are seen as a coherent group).

Biased Language Use

Based on our integrative review, we argue that social-category cognition (i.e., the perceived entitativity, stereotype content, and essentialism of social categories) is both reflected in, and maintained by, language use, specifically by (1) biases in linguistic labeling, and (2) biases in describing the behaviors and characteristics of categorized individuals. Thereby, language use plays a crucial role in the consensualization of social category cognition within cultural groups. In Figure 1, these bias types are embedded in a 'Communicative context' box. This acknowledges that biased language use may differ as a function of factors related to the social context and relationships between communication partners and the target. We will elaborate on this in the following sections and the general discussion.

(1) Biases in linguistic labeling.

The first bias type deals with the category labels used to refer to individuals or groups. Different label types (in content and linguistic form) will be used depending on existing social-category cognition that may or may not (yet) be shared within a given subculture. Specifically, we will argue that label use both results from perceived category entitativity, stereotype content, and essentialism in speakers, and also feeds and maintains this in message recipients, and arguably also in speakers (Figure 1, arrows 4).

A first indication for the link between category labeling and perceived category entitativity comes from research on category perception. Several studies (e.g., Corneille & Judd, 1999; McGarty & Turner, 1992) have shown that the use of even a trivial category label in referring to judged objects or individuals induces perceivers to exaggerate similarities within categories (i.e., assimilation) and to accentuate the differences between categories (i.e., contrast). For instance, Foroni and Rothbart (2011, 2013) showed that the presence of a label (compared to no label) with silhouette drawings of body types (e.g., anorexic, normal, obese) reduced perceived differences between members of the same category (i.e., they are judged as more alike), while the perceived differences between members of different labeled categories increased. Labels thus play an important role in conveying category boundaries (Rothbart, Davis-Stitt & Hill, 1997). It appears that once a (observable) group is linguistically labeled, it is explicitly defined and distinguished from other groups, and it thereby gains in its apparent reality and perceived entitativity (McGarty et al., 1995).

More direct evidence comes from research in child development. Linkages between linguistic labels and category perception and formation already emerge early in language acquisition (Waxman & Markow, 1995). Simply introducing a label in conjunction with a number of individual items facilitates pre-school children to form categories, as shown in a better performance in a sorting task compared to children who hear no labels. These effects occur both for familiar English labels (e.g., animals, clothing, food) as well as for foreign Japanese words (e.g., dobutzus, kimonos, gohans; Waxman & Gelman, 1986). Once a linguistic label is used to refer to a group of objects or individuals, this group is perceived as a more unified and coherent whole that is distinguished from other categories within a conceptual hierarchical taxonomy. Labeling thus appears to be related to higher perceived category entitativity. Other research also suggests relationships of category labeling with stereotype content and perceived essentialism. These linkages become more apparent when we specifically focus on two aspects of labels; (a) their content (i.e., label meaning) and (b) their linguistic form.

(a) Biases in label content.

As noted above, a label functions to refer to a category of people that exists in reality. The label content thus communicates which category of people is referred to, and thereby conveys category boundaries and the category's position in a hierarchical social-category taxonomy. Labels vary in how broad or narrow they are (Anderson, 1991; Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976). They can range from superordinate broad levels (e.g., gender, age groups, racial and ethnic groups), to more narrow subordinate levels of aggregation (e.g., specific and specialized professions; Richards & Hewstone, 2001).

Aside from referring to a given category and conveying category boundaries, a label functions to convey meaning about a category and its members. First, conveying meaning (cf. information gain) occurs because labels become associated with a set of stereotypic characteristics. When a group of individuals is repeatedly referred to with a given linguistic label (e.g., immigrants), it will gain in entitativity, which in turn facilitates stereotype formation (cf. Crawford et al., 2002). Hearing or reading a given linguistic category label can, in turn, activate (i.e., prime) the stereotype content that has become associated with this label (Dijksterhuis & Van

Knippenberg, 1996). Linguistic labels thus function as verbal tags for social stereotypes (Mullen, 2001).

Second, the semantic meaning or conceptual content of the used linguistic term may bring an additional meaning. Often, different labels can be used to refer to the same social category. For instance, to refer to soccer spectators one can use various labels, like 'fans,' 'supporters' or 'hooligans.' To refer to 'immigrants,' one can use negative labels like 'fortune-seekers,' 'aliens,' 'outsiders,' or highly negative metaphorical terms like 'parasites' (Musolff, 2014). Some labels will be used mainly as a descriptive term, to refer to and identify individuals or groups in an affectively neutral manner (e.g., spectators, plumbers). Other labels, however, have a stronger positive or negative connotation. Derogatory labels and social slurs, are more likely used when one intends to convey negative prejudice, and to qualify categories or category members in a disparaging manner (Croom, 2013; Fasoli, Carnaghi, & Paladino, 2015).

Different labels for the same category may thus be associated to a different cognitive representation (i.e., stereotype content) and may convey different affective evaluations (i.e., prejudice; see the distinction between cognitive complexity and valence of ethnophaulisms; Mullen, 2001; Mullen and Johnson, 1993). Derogatory group labels or stigma are obviously associated with a different more negative stereotype content and associated affective response than neutral labels (Carnaghi & Maass, 2007; Dovidio, Major, & Crocker, 2000; Maass, Suitner, & Merkel, 2014; Smith, 2007). Sexist derogatory slurs (e.g., "bitch," "whore"; see Fasoli et al., 2015), for instance, derogate women by conveying hostile stereotypic expectancies about women (i.e., promiscuity, sexual looseness, low morality), while simultaneously conveying negative affect (e.g., contempt and disgust).

In a text or conversation about a category and its members, various terms may be used. After identifying a category using a (more or less neutral) descriptive label (e.g., immigrants) one may introduce additional labels (e.g., parasites, fortune-seekers) to qualify the category or specified members. By means of metaphorical (e.g., parasite) and non-metaphorical label-terms (e.g., outsider), speakers can convey a semantic meaning that is applied to (members of) the category. Such negatively or positively connotated terms may, in turn, induce new stereotypic associations with the category immigrants.

The fact that linguistic labels both bring a semantic meaning, and over time becomes associated with a stereotype content, is demonstrated by cases in which group labels with an offensive connotation are substituted by politically correct labels (Maass et al., 2014). Such politically correct substitute terms usually have a euphemistic connotation, but tend to lose their positive meaning over time when the label becomes associated with the same negative stereotypic associations, thus creating the need for repeated replacements. Examples for this process, known as a "euphemism treadmill", can be found in labels for mental disability (moron, mentally retarded, mentally challenged, learning difficulties, special needs) or race (from the use of the N-word as a derogatory group label to the use of the label 'people of color'; Maass et al., 2014).

In sum, the label content functions to identify a given category of people, and thereby conveys category boundaries and a position in a hierarchical taxonomy. We argue that referring to a category using different label types goes hand in hand with perceived category entitativity. When a category is conventionally labeled within a subculture, it gains in perceived entitativity, and vice versa.

Second, the label content plays a role in communicating the content of the set of stereotypic characteristics associated with a given category. As noted, this relationship is two-directional. On the one hand, the use of linguistic category labels can activate (i.e., prime) the stereotype content that has become associated with this label, or bring an additional semantic meaning that eventually becomes part of the (shared) category representation. On the other hand, existing stereotype content can induce the use of associated linguistic category labels. That is, people who hold negative stereotype views are expected to be more likely to use derogatory labels. Importantly, however, the choice to use such labels depends on social norms and whether it is considered appropriate in the communicative context (Crandall et al., 2002; Croom, 2013). In social groups in which negative stereotypes prevail, the use of derogatory labels or slurs will be relatively acceptable (Crandall et al., 2002; Croom, 2013; Fasoli et al., 2015), and this, in turn, can contribute to the consensualization of such negative stereotypic views.

(b) Biases in the linguistic form of labels.

A second aspect of linguistic labels lies in their linguistic form. Interestingly, different linguistic forms of labels are related to different cognitive inferences about categories. Around preschool age, children become sensitive to the grammatical form of words (nouns, verbs, adjectives) and

assign particular types of meanings to them (Brown, 1957). When children hear nouns, they take these as referring to entities. That is, they see common nouns (e.g., mothers, teachers) either as a reference to the category to which persons, locations or objects belong (Waxman, 1990; Waxman & Markow, 1995) or as a reference to unique individual objects, locations or persons (i.e., proper nouns; Lucy, London). Nouns thus function to denote taxonomic relations and distinctions among classes or categories in a conceptual hierarchy with various levels of abstraction (Waxman, 1990).

In contrast, other linguistic forms like adjectives serve other purposes. Children soon learn that, while nouns refer to categories, adjectives refer to properties of objects and to subordinate level distinctions (Hall, Waxman & Hurwitz, 1993; Markman & Hutchinson, 1984; Waxman & Gelman, 1986). Indeed, nouns can be used to refer to entities (individuals or categories) in the function of sentence subject or object, while single adjectives[4] cannot. Adjectives typically function to denote one of many qualities that a person or category may possess (Carnaghi et al., 2008). Nevertheless, even though, in most situation, single adjectives strictly are not used as referring labels, the comparison between nouns and adjectives is interesting, because in person descriptions nouns and adjectives can be used in an exceedingly similar manner (e.g., she is an athlete [noun] vs. she is athletic [adjective]). In such descriptions, nouns and adjectives induce different inferences that relate to both category entitativity, stereotype content, and essentialism (Carnaghi et al., 2008).

First, noun labels activate the stereotype content that is associated with the labeled category, while adjectives do not. That is, when a target person is labeled using a noun (vs. adjective), this more strongly induces stereotype-congruent inferences about the target, while simultaneously inhibiting counter-stereotypical inferences. For instance, when a target person is described as "a Jew," recipients tend to more strongly expect other typically Jewish habits compared to when he or she is described as "Jewish" (Carnaghi et al., 2008).

Second, nouns have an either-or quality (e.g., one either is or is not an *athlete*) while adjectives can vary in degree (e.g., one can be a little or very athletic). Consequently, once a person is classified using a noun (e.g., an athlete) they are less likely categorized into alternative categories (e.g., an artist). By contrast, adjectival descriptions (e.g., athletic) more easily allow alternatives (i.e., somebody can be both *athletic* and *artistic*; Carnaghi et al., 2008; see also Waxman, 1990). Nouns thus function as stronger category labels, and, compared to adjectives, can be expected to relate to higher perceived category entitativity.

Moreover, nouns induce stronger inferences regarding the perceived essentialism or immutability of associated stereotypic characteristics. When persons are described with a noun (e.g., Kevin is a traditionalist), compared to a corresponding adjective (e.g., Kevin is traditional), category-congruent behavioral preferences (e.g., sends Christmas postcards) are seen as a more profound and unchangeable, to have a higher enduringness, and higher likelihood of future repetition (Carnaghi et al., 2008). Likewise, Gelman and Heyman (1999) showed that children of ages five and seven inferred that a person's characteristics (e.g., Rose eats a lot of carrots) were more stable and enduring when they were described with a noun label (e.g., She is a carrot eater) compared to when they were presented in a descriptive phrase (e.g., She eats carrots whenever she can).

The above studies show effects of a label's linguistic form on recipients' inductive inferences (Figure 1, Arrow B). Carnaghi et al. (2008, study 6) also showed experimental effects of speakers' label use as a result of perceived category essentialism (Figure 1, Arrow A). For instance, participants who were led to believe that athletic abilities are genetically determined (high essentialism) were more likely to choose a noun label than an adjective to describe an individual target person active in athletic sports (athlete), compared to participants who believed athletic abilities are a transient characteristic and the result of training (low essentialism). Perceptions of high essentialism thus also induce the use of stronger noun labels.

Another important distinction in the linguistic form of labels lies in whether labels are formulated as generic (e.g., Germans are …), subset (e.g., these Germans are …), subtype (e.g., female Germans are …) or individual (e.g., This German is…) references. Although references can be expressed in different and quite complicated ways (Cimpian & Markman, 2008), preschool children are already sensitive to cues

[4] When adjectives are used in labels referring to individuals or categories they are usually combined with a noun, as in subtype labels (e.g., female surgeon; see below).

that indicate whether a label refers to a generic category (i.e., a kind) a specific subset of exemplars, or a specific exemplar (e.g., cats have tails, the cats have tails, the cat has a tail; Gelman & Raman, 2003). Note that such generic versus specific exemplar labels respectively correspond to the high and low levels of target references described above (Beike & Sherman, 1994).

Generic references have received particular research interest in developmental psychology, as these are considered to play a crucial role in the transmission of category knowledge (Cimpian & Markman, 2008, 2009; Gelman et al. 1998). Generic sentences combine generic labels with a characteristic and thereby express generalizations both across individual category members and situations (e.g., Boys play with trucks; Girls are sweet). These utterances thus correspond to the high level of social information as described by Beike and Sherman (1994). Generic sentences, or generics, explicitly convey that a characteristic applies to an entire category. Importantly, this type of category–characteristic mapping cannot be observed directly, nor can this information be illustrated for someone else without the use of language (Gelman, Taylor, Nguyen, Leaper, & Bigler, 2004). Generics are frequent in child-directed speech, and argued to be important in children's conceptual development (Gelman, 2003; Gelman, Ware, & Kleinberg, 2010).

In the English language (and many other languages), generic sentences can be expressed with bare plural nouns (e.g., Boys play with trucks), but also with definite singulars (e.g., The elephant is found in Africa and Asia), or indefinite singular articles (e.g., A girl wears pink), and are accompanied by present-tense verbs (Gelman et al., 2004; Rhodes, Leslie, & Tworek, 2012). Unlike utterances containing universal quantifiers such as all, every, or each, generic statements allow for exceptions. That is, while a single counterexample would disprove the generalization "All boys play with trucks", the generic statement "Boys play with trucks" remains true even after an encounter with a single boy who does not. This feature makes generic sentences ideally suited to convey characteristics that are typical for a category but that can nevertheless admit exceptions. They convey qualities that are stable (non-accidental), enduring, and persistent across time and situations (i.e., essential), and thereby also imply that a category is a coherent, stable entity (Gelman et al., 2004).

A number of studies have shown the important role of generics in forming perceptions of category entitativity and essentialism. Both Gelman et al. (2010) and Rhodes et al. (2012) conducted a series of experiments in which pre-school children and adults were introduced to a novel and fictional category labeled "Zarpies" via an illustrated picture book. The characteristics were presented on separate pages with pictures of Zarpie exemplars accompanied by either generic noun labels (e.g., Zarpies hate ice cream), individual noun labels (e.g., This Zarpie hates ice cream), or no-label (e.g., This hates ice cream; Gelman et al., 2010).

First, using various methods, these studies demonstrate that generics, compared to both individual and no-label, induced stronger category–characteristics links (i.e., stereotype content). When Zarpie characteristics were learned by means of generic sentences, respondents were likelier to mention these characteristics as explanations for behavior of Zarpie exemplars, to generalize them to novel Zarpie exemplars, and to expect that category members are alike in other unmentioned characteristics as well (Gelman et al., 2010).

Second, the studies show that generics led to stronger perceived essentialism. When characteristics were learned from generic noun labels, compared to individual noun label and no-label, they were expected to be innate and inevitable, and stable across time (Gelman et al., 2010; Rhodes et al., 2012). Moreover, after being exposed to descriptions with generics, respondents were likelier to provide dispositional, rather than situational, explanations for Zarpie behaviors (Gelman et al., 2010). The individual noun label still induced stronger category essentialism compared to no label, but the use of a generic label led to the highest level of perceived category essentialism (Gelman et al., 2010; Rhodes et al., 2012).

Interestingly, Rhodes et al. (2012) also showed that the *use* of generic labels is related to perceived entitativity. Parents who were first led to believe that Zarpies are a distinct kind of people with many biological and cultural differences from other social groups (i.e., high entitativity), rather than a non-distinct kind (i.e., low entitativity[5]), used more generic

[5] Note that Rhodes et al. (2012) use a broad definition of essentialism and use the term essentialism here to include perceptions of entitativity.

references when they talked about them to their child from a picture book without accompanying text (Rhodes et al., 2012, Study 3).

Section summary.

In sum, research shows clear linkages between the content and linguistic form of labels and perceived category entitativity, stereotype content, and essentialism. First, the use of any category label (compared to no label) both reflects and induces a higher level of category entitativity. Second, particular types of labels (in content and linguistic forms) reflect and induce differences in perceived category entitativity, stereotype content, and essentialism. Verbal descriptions and adjectival references imply lower entitativity and essentialism than noun labels. Noun labels, particularly in generic form, imply the highest entitativity and perceived essentialism of specified characteristics. To the extent that a category is labeled as a stronger entity, the likelier it is to acquire a set of associated characteristics, and the likelier these characteristics will be seen as essential to all members of the category[6].

The role of biased labeling in the consensualization of social category cognition.

The SCSC framework explains how label use contributes to the consensualization of social category cognition. In this section we further discuss three important aspects of this process: (a) label use reflects and shapes social category cognition; while (b) label use is simultaneously shaped by a perceived reality (the target's situation), and (c) by processes in the communicative situation.

First, the above sections show that the use of different labels is biased by social-category knowledge, by reflecting (and inducing) perceived category entitativity, stereotype content, and essentialism. Thus, when we communicate about other people (about targets in specified target situations, but also in generalized terms), existing social-category knowledge determines which categories are applied, which in turn is reflected in the labels used. Research on the categorization process demonstrates that people are most likely to apply categories that are cognitively salient (Fiske & Neuberg, 1990; Mackie et al., 1996). These findings suggest that categories that are part of existing (shared) social category knowledge, particularly chronically salient categories with high perceived entitativity[7] that are regularly activated, have an advantage of being activated again, and to be linguistically labeled. By means of label use subcultures thus develop their own taxonomy of social categories that are consensually considered as distinct and meaningful "kinds" (cf. Rosch et al., 1976). Some cultures may distinguish a given category of people by conventionally labeling it, while other subcultures do not label and distinguish it.

Second, label use is simultaneously shaped by available information about the target's situation. Research on the categorization process shows that category activation also depends on *fit*, which is the degree of overlap between the observed or discussed features and behaviors of a target and the characteristics denoted in a given cognitive category representation (Fiske & Neuberg, 1990; Mackie et al., 1996). Category activation and label use are thus shaped by available information (e.g., observed or communicated) about features and behaviors of a discussed target (Fig. 1, Arrows 1 and C). People are expected to seek the strongest category with the most information gain in a given situation, in order to maximize the accuracy of predictive inference (Anderson, 1991; Hamilton & Sherman, 1996).

This cognitive search for the most fitting categorization to apply to a given target situation can be characterized as a narrowing process. When inconsistencies are perceived between a target person's features and behavior and an activated category representation (i.e., *fit* is low; e.g., a person does not behave in stereotypical ways), this will prompt a perceiver to process more deeply. First, inconsistencies may prompt perceivers to search for a more sensible or specified

[6] Note that, in natural text or conversation, after an initial categorization using a linguistic label, other linguistic cues may further determine perceived category entitativity and essentialism. The use of pronouns, for instance can provide further verbal cues about targets' category membership (e.g., he vs. she), their position in a category hierarchy (e.g., he vs. they) and the boundaries between groups (e.g., we, they, us vs. them).

[7] It seems reasonable to assume that perceived category entitativity and essentialism, and the use of stronger noun labels, are positively related to chronic salience. We are, however, not aware of any research that supports this hypothesis.

alternative categorization, resulting in re-categorization or subtyping, or ultimately (with enough time, resources, and motivation) a piecemeal integration of individual attributes (Fiske & Neuberg, 1990; Hamilton & Sherman, 1996). Thus, inconsistencies between a target's situational information and activated existing social-category cognition will prompt a tendency towards lower levels of information (cf. Beike & Sherman, 1994).

This narrowing process can be observed in various ways in the labels that are used in communications about other people, both in terms of label content (i.e., the categories position in a hierarchy), and in linguistic form. First, to refer to a target person showing behavior that fits the category stereotype, people should be inclined to readily use a chronically salient and strong (i.e., noun) category label. However, when a target person's attributes and behaviors are incongruent with the characteristics denoted in an activated category representation, or when the communicative context calls for a specification (e.g., a critical response), people typically tend to narrow down to subordinate categories. This process can result in finding an alternative subordinate category (e.g., "chemist" rather than a superordinate label "scientist"). In this case, an alternative category with distinct entitativity is referred to with an independent noun label (i.e., an independent representation; Rothbart & Park, 2004). In finding such alternative categories, categories that are relatively high in cognitive salience should again have an advantage.

When fit is low, but re-categorization is not possible, people are likely to specify a subtype within a previously activated category (Hilton & Von Hippel 1990; Richards & Hewstone, 2001; Weber & Crocker, 1983). Subtyping is linguistically usually reflected in the use of modified noun labels like "friendly hooligan" or "tough woman" (adjective + noun) or compound nouns like "career women," "desk officer" or "math girl" (noun + noun). By creating subtypes, exceptions to the rule are placed in a subcategory that is narrower than the broad group, and this allows one to preserve the existing general stereotype (Devine & Baker, 1991; Richards & Hewstone, 2001). The main noun refers to a superordinate category, but is modified by an adjective or another noun. Such labels reflect nested representations (Rothbart & Park, 2004). Subtype references are, for instance, expected in references to females and males who function in roles or occupations that are inconsistent with gender stereotypes. In these cases, people tend to add an explicit mention of the person's sex (e.g., female surgeon, male nurse; Stahlberg, Braun, Irmen, & Sczesny, 2007; Romaine, 2001), while this is not expected when the person's sex fits the respective gender role (Beukeboom, 2014). Note that such new distinctions may at first be marked with adjectival phrases, but in time these subtypes may gain in salience and entitativity. They may then acquire a single noun label (see Waxman, 1990), gain in essentialism, and evolve in a strong category with a rich stereotype (e.g., hipsters).

In sum, the use of category labels is in various ways biased by existing social-category cognition. Chronically salient categories have an advantage, but the fit with a discussed target's features and behavior affects label choice. Stronger noun labels are likely reserved for targets showing expectancy consistent features and behavior for the applied category, i.e., the typical category member. In contrast, targets showing characteristics or behaviors that are inconsistent with activated social-category cognition are likelier referred to with more narrow category labels, with modified or compound noun labels (i.e., subtypes), adjectives, or descriptive phrases. Note that these tendencies to distinctly label inconsistent targets outside a generic category serve to maintain existing social category stereotypes.

Finally, the third aspect depicted in the SCSC framework explains that the above processes are shaped by factors in the communicative context. That is, the process of seeking the most fitting and currently relevant categorization is determined in the interaction between conversation partners, and shaped by factors like the assumed knowledge in, and perceived consensus with, message recipients. This notion aligns with research based on a well-known theory in pragmatics: Relevance Theory (Wilson & Sperber, 2004) describes how people strive to make their communications optimally relevant, both in terms of activated intrapersonal cognitions (cf., fit), interpersonal processes and contextual meaning. Narrowing utterances (i.e., lexical narrowing) is one way to achieve this relevance (Gibbs & Bryant, 2008; van der Henst, Carles, & Sperber, 2002). In formulating utterances, people strive to achieve optimal relevance while minimizing the cognitive effort needed for themselves and their addressees; a narrower utterance is thus only provided when required (Sperber & Wilson, 1995).

Another factor in the communicative context, as mentioned before, are social norms about which labels are considered appropriate to identify and qualify discussed targets. Social norms may affect the use of labels with varying content. Particularly labels with a highly negative connotation

(e.g., derogatory labels, slurs, ethnophaulisms) are in many contexts regarded as offensive and socially unacceptable, and this will induce people to refrain from using them (Crandall et al., 2002; Croom, 2013; Fasoli et al., 2015). Social norms may also affect the use of labels of different linguistic form. For instance, particularly with negatively stereotyped categories, the use of strong noun labels may be perceived as inappropriate, because this fixates the individual as a typical instance of the social category (Mullen 2001). Within cultural groups, social norms, thus, determine what labels to use. This too contributes to the consensualization of social category cognition, because it induces people to communicate and internalize the social category cognition that is consensually shared.

(2) Biases in describing behaviors and characteristics of categorized individuals.

Once a category is perceived (and labeled) as a meaningful entity, perceivers can acquire, and subsequently maintain, a set of stereotypic characteristics that are held to be – to a varying extent – essential to the category as a whole. Two types of biases in communications about categorized individuals play a crucial role in the process of stereotype formation and maintenance: (a) biases in communication content (*what* we communicate about), and (b) biases in linguistic form (*how* information about categorized individuals is formulated).

(a) Biases in communication content.

What information about categorized individuals is communicated. One way through which a labeled category acquires and keeps its stereotypic associations is determined by *what* information is shared in communication about category members. The information that is shared may determine stereotype content if there is a general tendency for people to systematically communicate more about certain features and characteristics categories relative to others (Schaller, Conway, & Tanchuk, 2002). Numerous studies on serial reproduction and dyadic conversation have revealed a stereotype-consistency bias, showing that stereotype-consistent information tends to be shared more prominently compared to stereotype-inconsistent information in conversations about categorized individuals (Klein et al., 2008; Kashima, 2000; Ruscher, 1998; Schaller et al., 2002). Once target individuals are labeled as a member of a category (e.g., by using a label like "an alcoholic"), conversation dyads increase their focus on label-congruent information (Ruscher, 1998). Particularly when information is already part of the common ground (i.e., shared cognition) between communication partners, communication of stereotype-congruent knowledge becomes likelier (Fast, Heath, & Wu, 2009; Lyons & Kashima, 2001, 2003; Wittenbaum & Park, 2001).

In addition to interpersonal communication, mass media are a powerful transmitter of stereotypic characteristics associated with categories (Arendt, 2013; Ramasubramanian, 2011; Ramasubramanian & Oliver, 2007). For instance, television announcers covering professional football and basketball have been shown to subtly induce associations by more frequently emphasizing athleticism of African-American players, while emphasizing intellectual abilities and character traits of White players (Billings, 2004; Eastman & Billings, 2001; Rada, 1996; Rada & Wulfemeyer, 2005). These and other types of biased representations in media content of different categories have an effect on recipients. For instance, Arendt and Northup (2015) found that increased exposure to local television news, in which African Americans are overrepresented as criminals, is related to more negative implicit and explicit attitudes about African Americans. Likewise, negative news portrayals of immigrants have been shown to increase negative stereotypic attitudes in an audience, while exposure to positive news reduced the activation of negative attitudes about immigrants (Schemer, 2012).

The consequence of this bias in communication content is that members of (sub)cultures will be exposed relatively more to congruent information of shared stereotypes, which leads to a continuous confirmation of existing stereotypic associations. Frequent exposure to a category label in combination with certain characteristics strengthens these associations. These strenghtened associations, in turn, increases accessibility and likelihood of the link being activated and shared again in subsequent communications. By repeatedly retelling a certain category-trait association, it can thus become a widely shared, cultural belief amongst members of a subculture (Bratanova & Kashima, 2014). Hence, the stereotype consistency bias shows that communications about characteristics and behavior reflects and shapes stereotype content and possibly also perceived essentialism (Figure 1, dashed arrows 5).

Like label use, the communication of stereotype congruent information is shaped by factors in the communicative context. One explanation put forward for the tendency to

predominantly communicate existing stereotype-consistent information, in addition to its increased accessibility, is that it is relationally beneficial. People prefer to communicate information they believe resonates with their audiences because it allows them to develop common ground and it facilitates perceptions of similarity, liking, and agreeableness (Bratanova & Kashima, 2014, Clark & Kashima, 2007; Higgins, 1992). Also, conveying shared stereotype-consistent (vs. inconsistent) information to a conversation partner likely allows for a smooth interaction; it usually requires fewer processing resources (in communication time, number and length of utterances), because conversation partners can easily reconcile this information with existing assumptions, and it less likely leads to misunderstanding or disagreement (Klein et al., 2008).

The stereotype-consistency bias can thus follow from a motivation to reach consensus and agreement with a conversation partner (Ruscher, 1998). When these social goals prevail, the message constructed for an audience need not even reflect communicators' own beliefs about a social target. Transmitting a stereotypic target-group description to a recipient who is likely to endorse it may follow from communicators' proclivity to form or affirm a social relationship and to show in-group solidarity (Bratanova & Kashima, 2014; Clark & Kashima, 2007; Ruscher, Cralley, & O'Farrell, 2005).

The communicative context may also induce factors that prevent or even reverse the stereotype-consistency bias. In some contexts, stereotype-*in*consistent information becomes more relevant and therefore features in communications. For instance, when a sender is motivated to inform an audience (rather than to create and maintain a social relationship), stereotype-inconsistent information is considered more useful (Clark & Kashima, 2007). Likewise, when speakers are motivated to develop an accurate individuated representation of a target, they tend to devote more communication time to stereotype-inconsistent information (Ruscher, Hammer, & Hammer, 1996; Karasawa, Asai, & Tanabe, 2007). Sharing of stereotype-inconsistent information also increases among groups of communicators who each have unique target information, as this increases their sense of accountability and desire to be accurate and complete (Brauer, Judd, & Jacquelin, 2001; Ruscher & Duval, 1998). These factors thus induce a motivation towards lower and individuated levels of information that mimics the narrowing process described above (cf. Fiske & Neuberg, 1990).

Another moderator of the stereotype-consistency bias relates to the social acceptability of verbally expressing certain stereotypic views (Ruscher et al., 2005). As discussed above, social norms often dictate that it is socially unacceptable to express prejudiced stereotypic beliefs about social categories to which the speaker does not belong (e.g., Crandall et al., 2002; Croom, 2013). In such cases, an interaction may develop towards increased sharing of counter-stereotypic attributes, in order to convey non-prejudiced impressions.

One should realize, however, that sharing stereotype-inconsistent information is not necessarily always stereotype disconfirming. First, attempts to plea in favor of a negatively stereotyped group may increase category entitativity, because the group is explicitly labeled (see above). Second, subtle variations in linguistic form in communications about stereotype-inconsistent (compared to consistent) information may adversely have stereotype confirming effects (see next section).

Section summary.

In sum, research shows that more time is allocated to communicating stereotype-consistent information compared to stereotype-inconsistent information. This facilitates the formation and maintenance of a set of (more or less) immutable stereotypic associations with (labeled) categories (stereotype content and perceived category essentialism). This bias likely has the strongest inductive effect on stereotype formation when category entitativity is high; i.e., when the discussed category is labeled with a noun, and particularly with a generic noun and sentence, as explained in the previous sections. Repeated exposure to a category label along with certain characteristics creates or reinforces cognitive linkages between the category and characteristics (stereotype content), and these characteristics may also increasingly be perceived as essential for the category. When such linkages exist, it, in turn, becomes more likely that the characteristics are introduced again in communications about relevant categorized persons.

Nevertheless, stereotype-inconsistent information is – although less frequently – mentioned in communication. Without considering *how* stereotype-inconsistent information is introduced in communications, one might simply assume that stereotype-inconsistent information is always stereotype disconfirming. The next section about how stereotype information is introduced in communications and

its relation to stereotype content and perceived essentialism will argue that this assumption is not warranted.

(b) Biases in linguistic form of communications about categorized individuals.

A second way through which a labeled category acquires and keeps a set of associated essential stereotypic characteristics is determined by *how* information about categorized individuals formulated. When people communicate about categorized individuals, their formulations refer in various ways to what is expected for the categorized individual or applied category as a whole. Research within this field shows that information about people that is consistent with existing social-category cognition is formulated differently than information that is inconsistent with social-category cognition (Beukeboom, 2014). Several subtle variations in verbal formulation have been shown to subtly communicate what is expected (i.e., part of the stereotype content and essential) rather than unexpected for a categorized target.

The most investigated linguistic means to communicate the extent to which behavior is expected or not is language abstraction as defined by the Linguistic Category Model (Semin & Fiedler, 1988). Any behavior can be described in concrete terms, using action verbs (e.g., she *kicks* him) or using increasingly more abstract terms like state verbs (e.g., she *hates* him) or adjectives (e.g., she is *aggressive*). Research on the Linguistic Intergroup Bias (LIB; Maass, Milesi, Zabbini, & Stahlberg 1995; Maass, 1999) and Linguistic Expectancy Bias (LEB; Wigboldus et al., 2000) shows that language abstraction varies as a function of stereotype consistency. A target's behavior is likelier described in abstract terms when it is stereotype-consistent and the fit between the described behavior and existing stereotypic expectancies is high (e.g., adjectives; the woman is emotional), but more concretely when it is stereotype-inconsistent and fit is low (e.g., descriptive action verbs; the man is crying).

Given that abstract descriptions provide more information about the actor's stable dispositional qualities and less information about the specific situation (Semin & Fiedler, 1988), higher levels of abstraction endorse existing stereotypic beliefs. That is, abstract words used for stereotype-consistent behaviors imply attribution to stable traits that are present across situation (i.e., high essentialism), whereas concrete words used for stereotype-inconsistent behaviors imply attribution to transient situational causes, suggesting rule exceptions (Wigboldus & Douglas, 2007). Note that this corresponds to generalizations on the behavior description dimension (Beike & Sherman, 1994), as more abstract terms generalize across situations (high-level information) while concrete terms describe specified situational behaviors (low-level information). Recipients are sensitive to these subtle variations and infer higher essentialism from abstract compared to concrete descriptions. Higher levels of language abstraction thus both follow from, and induce, perceptions that the described behaviors are essential for the categorized actor and are stable across situations (Wigboldus et al., 2000).

The Stereotypic Explanatory Bias (SEB) relates to a comparable linguistic variation, and proposes that speakers (and conversing dyads, Hammer & Ruscher, 1997) tend to produce more explanatory comments for stereotype-inconsistent (vs. consistent) behaviors (e.g., the man is crying, because he has a rough day; Hastie, 1984; Hamilton & Sherman, 1996; Sekaquaptewa, Espinoza, Thompson, Vargas, & von Hippel, 2003). Such explanations of stereotype-inconsistent behavior are aimed at clarifying the apparent inconsistency, which is not needed for stereotype-consistent behavior. Inconsistencies are surprising, and in order to maintain coherence in one's existing stereotypic impression, a perceiver strives to resolve inconsistencies and attempt to explain why the inconsistency occurred (see also Hegarty & Pratto, 2001, study 3). Both concrete situational descriptions and explanations are linguistic reflections of such attempts.

When communicating about stereotype-inconsistent information, speakers can also introduce stereotype-consistent terms, for instance by using negations or irony. Research on the Negation Bias (NB; Beukeboom et al., 2010) revealed that the use of syntactic negations (e.g., *not stupid*, rather than *smart*) is more pronounced in descriptions of stereotype-inconsistent compared to stereotype-consistent behaviors. For example, if a sender's stereotypic expectancy dictates that garbage men are stupid, but a particular garbage man violates this expectancy by showing highly intelligent behavior, the sender is likely to reveal his prior expectancy by using a negation like *The garbage man was not stupid*. In contrast, for stereotype-consistent behavior (e.g., The garbage man was stupid; The professor was smart), the use of negations is less likely. Negations thus allow one to introduce stereotype consistent concepts in communications about stereotype-inconsistent information, and thereby re-affirm existing associations with a category.

A similar mechanism has been shown to occur in the

Irony Bias (IB, Burgers & Beukeboom, 2016). Research on the IB shows that speakers find ironic remarks particularly appropriate to comment on stereotype-violating (vs. stereotype-confirming) behaviors. An ironic remark about stereotype-inconsistent behavior (e.g., "what a neat person" about someone's messy room) allows speakers to introduce the expectancy (*the person is expected to be neat*) and simultaneously signal its failure. The literal meaning of ironic comments is inappropriate for the context, and thereby (ironically) refers to some relevant information, like implicit (stereotypic) expectancies (e.g., Attardo, 2000; Utsumi, 2000; Wilson & Sperber, 2004). Like negations, ironic remarks introduce opposite terms to describe a behavioral situation. This led some scholars to consider irony as a form of "indirect negation" (Giora, 1995). Both negations and ironic comments about stereotype-inconsistent behavior can thus activate and communicate the implicit stereotypic expectancy in message recipients. Moreover, recipients infer lower essentialism from both negated behavior descriptions (compared to affirmation; Beukeboom et al., 2010) and from ironic (compared to literal) comments (Burgers & Beukeboom, 2016), showing that these biases serve to maintain expectancies about what is and what is not essential for members of a given social category.

Interestingly, various studies suggest that these biases, particularly the SEB (Hamilton & Sherman, 1996), LEB (Spencer-Rodgers, Hamilton, & Sherman, 2007), and LIB (Moscatelli & Rubini, 2011; Rubini, Moscatelli, & Palmonari, 2007) are stronger when the described target category is high (vs. low) in perceived entitativity. The higher perceived entitativity and expected consistency, the more troubled perceivers will be by perceived stereotype inconsistent behaviors, and this increases perceivers efforts to resolve these (Hamilton & Sherman, 1996). The strenghtened efforts to resolve such inconsistencies, in turn, are revealed in biased language use.

Finally, there are undoubtedly other linguistic means that allow one to indicate whether described behaviors of category member(s) are expected or not, but that have hitherto not been studied with respect to stereotypes. First, any language contains an abundance of potential signal words to indicate that behavior is typical (e.g., as always; indeed; again) or rather that it is an unexpected one-time-event (e.g., this time; once; unexpectedly). It seems plausible that speakers use such signal words to indicate whether or not a target's discussed characteristics and behavior are stereotypically expected. It has been argued, based on studies using categorizations of toys and colors, that speakers convey confidence cues (e.g., hedges and hesitations; I guess, I don't know) when they are uncertain about a categorization, and that recipients use these cues to draw inferences about category structure (Barr & Kronmüller, 2006).

Another possible linguistic means for bias relates to work by Haviland and Clark (1974). They argued that, in order to maintain common ground and understanding, communication partners adhere to a given-new contract, which dictates a conversation norm to indicate what is given information, and what is new information. Given information may be something that is shared before, but also general knowledge that is considered known. This includes social-category stereotypes that are shared between communication partners. 'New' information is not yet shared and thus requires a modification in the shape of the listener's current knowledge (MacWhinney & Bates, 1978). When information is assumed to be given, it is either omitted or referenced briefly or in general terms. When information is new, in contrast, it is likelier to be marked (Clark & Haviland, 1977). Note, that – if we consider stereotype-inconsistent information as new information – the above-described biases fit with this reasoning; i.e., when stereotype-inconsistent information is introduced it tends to be marked by using concrete terms (LEB), by adding explanations (SEB), the use of negations or irony (NB, IB), and potentially by using signal words, hedges, and hesitations.

Interestingly, research has also shown a given-new ordering (Ferreira & Yoshita, 2003; MacWhinney & Bates, 1978) in that speakers tend to produce sentences in which given information is mentioned first, and new information later. Future research may shed more light on the extent to which these –and other– linguistic variations are used to indicate stereotypic exceptions and induce difference in essentialist inferences about social categories.

Section summary and integration.

In sum, research shows that biases in the content and the linguistic form of descriptions of the behaviors and characteristics of categorized individuals reflect and maintain existing social-category cognition, specifically with respect to stereotype content and perceived category essentialism (Figure 1, dashed arrows 5). Biases in communication content show a tendency to mainly communicate about behaviors and characteristics that are in line with existing

social-category stereotypes. This stereotype consistency bias reflects and strengthens associations between the target category and the content of the set of stereotypic characteristics (i.e., stereotype content); the repetition may increase perceptions that these associated characteristics are immutable and stable across situations (i.e., essentialism). Biases in linguistic form show variations as a function of whether described behaviors are consistent with existing social-category cognition or not, and also relate to perceived essentialism. When a described target's behavior is stereotype inconsistent (low fit; compared to consistent) it is likelier described in concrete terms, to contain situational explanations (cf. low-level information), and by means of negations and ironic remarks. Both negations and irony allow speakers to introduce stereotype consistent terms in descriptions about stereotype-inconsistent information and thereby confirm existing stereotypic associations. This means that even when people are confronted with stereotype-inconsistent information, a biased formulation may induce recipients to draw stereotype-confirming inferences, both with respect to stereotype content and perceived immutability of associated traits. That is, the formulations that are used to communicate stereotype-inconsistent information (compared to consistent) imply lower levels of essentialism (Beukeboom, 2014). Again, these processes function to consensualize social category stereotypes.

General Discussion: Contributions, Implications, and Future Directions

Although social-category stereotypes have mostly been defined and studied as an intrapersonal phenomenon, they are nevertheless generally assumed to become consensually shared within (sub)cultures (Haslam et al., 1997; Holtgraves & Kashima, 2007). Our integrative literature review attempts to elucidate the mechanisms through which stereotype consensuality is achieved by specifically focusing on the role of language use. The SCSC framework integrates knowledge about various linguistic means that hitherto existed in largely independent fields, and links these to three fundamental variables in (shared) social-category cognition: perceived category entitativity, stereotype content, and essentialism. The framework consists of three interrelated parts that together explain the consensualization of social category cognition. Based on our review, we pose that (1) social category cognition is reflected in, and shaped by), biases in language use in communications about categorized individuals (Fig. 1, arrow A and B, while acknowledging that language use about categorized individuals is shaped by (2) a perceived reality (i.e., target's situations, features and behavior; Fig. 1, arrow C), and (3) by processes in the communication context which, simultaneously, play a role in the consensualization process. In the following, we first summarize these three aspects of the SCSC framework, and then continue with discussing its theoretical contributions and future directions.

First, the SCSC framework poses that perceived category entitativity, stereotype content, and essentialism are reflected in, and shaped by, biases in language use in communications about categorized individuals (Fig. 1 arrow A and B). We distinguish two linguistic bias types, each of which is further specified by focusing on linguistic content and form. The first type of biases concerns the use of category labels. Research shows that once a category of individuals is linguistically labeled, it is perceived as a unified and coherent entity that is distinguishable from other categories within a social-category taxonomy. The content of the label (i.e., meaning of label term) is important because it conveys the category's position in this taxonomy (i.e., broad, superordinate vs. more narrow, subordinate) and may prime or complement the set of stereotypic characteristics that is associated with the category (stereotype content and essentialism; Fig. 1, arrows 4).

Like label content, the linguistic form of category labels relates in predictable ways to perceived category entitativity, stereotype content, and essentialism. That is, noun labels (as compared to adjective or descriptive labels) function to denote within-group similarities, and distinctions between categories and thereby imply a relatively high perceived category entitativity. Moreover, noun labels activate the stereotype content that is associated with the labeled category, and imply a higher perceived immutability of associated characteristics (perceived essentialism). Noun labels in generic form (i.e., generics) generalize across individual category members, and imply the strongest category essentialism and entitativity. In contrast, weaker labels, like adjectives, compound subtype labels, or descriptive phrases, imply lower category entitativity and essentialism and are likelier used when referring to stereotype-violating targets that are hard to categorize.

The second types of biases that have been studied concern the use of language in communications about behaviors and

characteristics of categorized individuals. In terms of communication content (i.e., *what* information about categorized individuals is communicated), research shows a stereotype-consistency bias. People tend to prefer sharing information that is already part of the stereotype content associated with (labeled) categories. In terms of linguistic form, several biases (e.g., in language abstraction, explanations, negations, irony) show subtle differences in formulating stereotype-violating compared to stereotype-confirming information about categorized individuals. Stereotype confirming behaviors tend to be communicated using more abstract descriptions (e.g., X is aggressive; Y is helpful) that generalize across situations, and thereby convey high levels of perceived essentialism of the described characteristic. In contrast, stereotype-violating behaviors of an activated category tend to be communicated with concrete verbs that link to specified situations (LEB), by providing situated explanations (SEB), or using negations (NB) or irony (IB) that introduce stereotype consistent terms. Such formulations have been shown to imply that the described behavior is a one-time exception to the rule and thus induce lower levels of perceived essentialism. Together, these biases reflect and thereby maintain both the content of existing stereotypes as well as the perceived level of immutability of these associated stereotypic characteristics (i.e., perceived essentialism; Fig. 1, dashed arrows 5).

Second, the SCSC framework acknowledges that language use about categorized individuals is shaped by a perceived reality (i.e., the target's situation; Fig 1, arrow C). That is, communication about categorized individuals likely starts with input about the target's observable features and actual behavioral situations. However, texts or conversations may further evolve to higher levels of information (i.e., using generic labels that generalize across individuals, and abstract behavior descriptions that generalize across situations) that have no direct reference to actual people behaving in specific situations. As a consequence, communication about social category stereotypes may acquire a "life of their own" with little or no basis in reality (Brauer, Judd, & Thompson, 2004).

As noted above, from our analysis we conclude that communication at a high generalized level (cf. Beike & Sherman, 1994) is most likely when a discussed target's features and behaviors fit with existing social category cognition (i.e., typical members showing stereotype-consistent behaviors). Generic sentences convey the highest level of information as these combine a generic label with an abstract behavior description and thus generalize both across individual category members and across situations (e.g., boys are tough; immigrants are violent). Generics have been shown to quite directly induce perceptions of category entitativity and associations between labeled categories and essential characteristics (e.g., Gelman et al., 2010); when a generic utterance is accepted by a recipient, no further inductive inferences are required for stereotype formation. In contrast, when a discussed target's fit to an activated category is low (i.e., a-typical individuals showing stereotype inconsistent behaviors), one may either seek an alternative more fitting category, or communicate the information at a low level (cf. Beike & Sherman, 1994). In the latter case, one thus tends to narrow to the use of more specified labels (individuals, subtypes), and concrete, situational behavior descriptions. As low-level formulations induce lower levels of category essentialism for the described behavior the result of this is that a-typical behaviors and characteristics are not essentialized.

Third, while the above processes are usually argued to result from intrapersonal processes (i.e., perceived inconsistencies between activated cognition and a perceived target), the SCSC framework acknowledges that language use about categorized individuals is shaped by interpersonal processes in the communication context. In line with others, we have argued that the consensualization of stereotypes is most likely within subcultures, or specifically, among groups of people who define themselves in terms of a shared social identity (Carnaghi & Yzerbyt, 2007; Crandall et al., 2002; Haslam et al., 1997; Haslam et al., 1996; Haslam, Oakes, Reynolds, & Turner, 1999).

On the one hand, this occurs because people are more likely to express social information (in content and form) in line with consensually shared social category stereotypes. That is, people tailor their descriptions to assumed stereotypic views of recipients (Carnaghi & Yzerbyt, 2007; Higgins & Rholes, 1978; McCann & Higgins, 1990; Marsh, 2007). Also, people are sensitive to social norms about expressing stereotypic impressions and will, for instance, refrain from expressing negative prejudice (e.g., using derogatory labels) when this is perceived as socially unacceptable (Croom, 2013; Fasoli et al., 2015; Crandall et al., 2002). Moreover, the tendency to pursue common ground in communication causes people to more prominently label known and accessible categories and discuss stereotype-consistent (compared

to inconsistent) characteristics and behaviors (Fast et al., 2009; Fiedler, Bluemke, Friese, & Hofmann, 2003; Klein, Clark, & Lyons, 2010; Lyons & Kashima, 2001, 2003; Wittenbaum & Park, 2001).

On the other hand, perceived consensus is used to validate the social information people receive or discuss, and thereby determines whether people internalize the information as part of their social-category cognition. When people learn that their pre-existing stereotypic beliefs are consensually shared by in-group members (but not by out-group members), these stereotypes are bolstered (Haslam et al., 1997; Haslam et al., 1996; Wittenbrink & Henly, 1996), and increase in accessibility (Sechrist & Stangor, 2001). Moreover, sharing and discussing social information allows people to monitor and verify whether their category cognition is correct, and agreement and confirmation can provide greater certainty (Klein et al., 2008; Kashima, Klein, & Clark, 2007; Kopietz, Hellmann, Higgins, & Echterhoff, 2010; Echterhoff, Higgins, & Levine, 2009. Research by Kashima et al. (2010), for instance, showed that the mere act of communicating about characteristics of a novel social category induced stronger dispositional attributions, and stronger beliefs about the immutable essence of the category (i.e., increased perceived essentialism). Importantly, this induction occured especially when the speakers' descriptions were socially validated by the conversation partner (i.e., grounded; conversation partners mutually recognized that they had reached an understanding about a target person; H. Clark, 1996; Echterhoff, Higgins, & Groll, 2005).

Together, the above processes explain how members of (sub)cultures create a shared social reality (cf. Kashima, 2004; Thompson & Fine, 1999) about which social categories are considered meaningful (i.e., perceived category entitativity) and their associated stereotypes (i.e., specified in stereotype content and perceived essentialism). We now turn to the contributions and future research of the SCSC framework for theory on stereotypes and intergroup dynamics.

Contributions: The Role of Language Use in the Consensualization of Social-Category Stereotypes

An important contribution of the SCSC framework lies in the integration of knowledge about various linguistic-bias types. As much research has been conducted in experimental settings, often relying on manipulations of artificial sentences in isolation, our integrative framework provides a crucial contribution; it allows for a better understanding of stereotype-maintaining biases in natural language in which various biases occur in combination, and opens up various opportunities for further research focusing on natural language. A number of research areas can profit from our integrative focus on language use.

The most immediate field our integrative framework can inform is research on linguistic bias. In natural language, various linguistic biases can be combined in ways that are usually ignored in experimental studies. Biases in labeling and in behavior descriptions can co-occur, but it seems possible that the use of one bias might also compensate for the other (Fig. 1, arrow 2). For instance, when a person categorized as Muslim shows behavioral inconsistencies with the associated stereotype for Muslims (fit is low, e.g., having lunch during Ramadan), this could result in the use of a weaker adjective label (a Muslim person) or subtype label (a non-practicing Muslim) rather than a noun label (He is a Muslim; cf. Carnaghi et al., 2008). When, however, a target has already been labeled with a noun (i.e., a Muslim), the use of biases in behavior descriptions might increase; e.g., speakers might be more inclined to use negations in describing his behavior (e.g., He does not practice Ramadan; cf., negation bias; Beukeboom et al. 2010) or to make ironic remarks (e.g., Well, well, he sure is a dogmatic Muslim; Burgers & Beukeboom, 2016), in order to reconcile the inconsistency while confirming the stereotypic associations that are activated through the used category label. This fits with the notion that higher entitativity (implied by the noun label) induces stronger biases in behavior descriptions (e.g., Hamilton & Sherman, 1996; Moscatelli & Rubini, 2011; Rubini et al., 2007; Spencer-Rodgers et al., 2007). Future research may shed light on combinations between labeling and biases in behavior descriptions, and on how various linguistic biases in behavior descriptions (e.g., language abstraction, explanations, negations) interact.

The second related field that may profit from our integrative review is research on stereotype formation and use. Perceived category entitativity and essentialism are generally considered to play a crucial role in the formation (induction) and use (stereotyping) of social-category stereotypes (Abelson et al., 1998; Crawford et al., 2002; Hamilton & Sherman, 1996; Spencer-Rodgers et al., 2007; Yzerbyt et al., 2001), but research in this area suffers from a lack of consensus (e.g., Hamilton, 2007) and has focused relatively little on

language use. The SCSC framework highlights the crucial role of language use in the formation and maintenance of stereotypes by explaining how category entitativity, stereotype content, and perceived essentialism are shaped by, and reflected in, language use. This approach fits with the view that social category stereotypes are, rather than merely intrapersonal phenomena, collectively created within subcultures, and formed and maintained by means of language use in socially situated interactions (Crandall et al., 2002; Semin, 2008). While categories and their associated stereotypes may be acquired from observation of features and behaviors of category members, these factors likely co-occur with language use when people communicate about them. Moreover, generic stereotypic knowledge as such is not observable, and can only be communicated through language. Hence, theory about stereotype formation and use is incomplete without considering the role of language use.

We have argued that once an aggregate of individuals is labeled using a (generic) noun label, it is likelier perceived as a meaningful, coherent group (i.e., high entitativity). An increase in category entitativity will be reflected in more frequent labeling. This, in turn, induces perceivers to cease viewing category members as individuals and generalize associated characteristics across individuals (Crawford et al., 2002), thereby facilitating the formation of a generalized stereotypic impression, consisting of a set of associated characteristics, that are perceived as more or less essential to its members. Language use thus reflects, shapes and maintains the category taxonomy that prevails within a (sub)culture (i.e., which categories are perceived as meaningful entities and become essentialized). In general, people will most likely discuss and apply conventional category labels and consequently continuously confirm and maintain the existing category taxonomy of chronically salient categories and associated stereotypes within their (sub)culture. However, new categories may evolve. For instance, people living between 140 and 150 degrees east longitude (see Kashima, 2004) or brown-eyed vs. blue-eyed people (Elliott, 1984) would conventionally not be considered as meaningful categories. When, however, such an aggregate is labeled and discussed in media and interpersonal conversation (e.g., hipsters) it will suddenly be perceived as an entitative category, acquire associations with a set of essentialist characteristics, and may become the target of prejudice and discrimination.

Social category perceptions thus emerge from the ways in which people communicate about social categories and their members. A well-known finding in this area, known as the out-group homogeneity effect (Ostrom & Sedikides, 1992), is that people tend to develop a more fine-grained and differentiated social category structure about their in-group, containing varying subordinate categories, compared to out-groups which tend to be more overgeneralized. While a number of cognitive explanations have been shown to underlie these differences (Park, Ryan & Judd, 1992; Ryan & Bogart, 1997), the SCSC framework explains how these are (simultaneously) driven by the ways people communicate about these categories. Category perceptions are reflected in language use, and will be confirmed and internalized as a result of that.

This notion is illustrated in a study by Harasty (1997) who studied language use in same-sex dyadic conversations about in- and out-groups (i.e., pairs of women or men talking about women and men). From the 5 minute conversation transcripts, the authors coded levels of generalization in labeling (i.e., self-reference, individual category member (e.g., my mom), subcategory (e.g., sorority women), generic category references (e.g., women), and two (albeit rather rough) levels of abstraction in behavior descriptions (i.e., non-traits; behavior or state like "wearing makeup" vs. traits like "assertive"). Results showed that discussions about out-groups contained higher levels of generalization. That is, out-group discussions included more generic labels (i.e., generalizing across individuals), and more abstract trait descriptions (i.e., generalizing across situations) than discussions about in-groups. Moreover, generic descriptions of the out-group were more likely negative than positive in valence. This demonstrates how out-group homogeneity and in-group favoritism are expressed and thereby maintained through communication.

Likewise, communication and language use can explain how perceptions of minority groups emerge. Research shows that stereotypes of minority groups are better known, more accessible, and perhaps even more automatized than are stereotypes of normative majority groups (Brewer, Weber, & Carini, 1995; Brewer & Harasty, 1996; McGarty et al., 1995)

This finding can be explained from studies that revealed a bias of focus in communications wherein several social categories are discussed simultaneously or compared to each other (Hegarty & Pratto, 2001; Miller, Taylor, & Buck, 1991). Building on Norm Theory (Kahneman & Miller, 1986), this

work shows that explanations of inter-category differences typically focus on the atypical category (e.g., a minority within the relevant domain), which is subsequently compared to the norm category (e.g., a majority). Explanations of differences between gay and straight men, for instance, typically take gay men as the subject, particularly in a context in which straight men are considered the normative majority group (Hegarty & Pratto, 2001). The same occurs in explanations of gender differences; i.e., when explaining a gender gap in illness rates for college professors (expected to be typically male) or elementary school teachers (expected to be typically female), participants focused their explanations on the atypical category (e.g., female professors are ...; Miller et al., 1991; see also Bruckmüller, Hegarty, & Abele, 2012; Hegarty & Buechel, 2006). Such an increased relative focus in category comparisons may be reflected in language as a combination of a) placing the atypical category in sentence subject position, b) mentioning it first in a comparison with a referent (e.g., Bruckmüller & Abele, 2010), or c) simply in more frequent use of the minority (vs. majority) category label.

The SCSC framework predicts that such an increased focus on minority categories, along with other bias types, will both increase perceived entitativity and essentialism of minority categories. The minority category is more prominently labeled and, because stereotypic and essential features of this category are put forward as explanations for the intergroup differences (Hegarty & Pratto, 2001), more strongly essentialized. The resulting higher entitativity and essentialism may further increase the accessibility of the stereotype and likelihood that it is applied to judge and discuss individual category members.

Another relevant field that can profit from a focus on language use is research in the tradition of Social Identity Theory (Tajfel & Turner, 1986) and Self-Categorization Theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Hogg & Reid, 2006). Language use not only shapes and reflects the categorization of others, but also people's self-categorizations, social identity, and the in-groups they identify with. Interestingly, research shows that higher perceived category entitativity facilitates in-group identification (Castano, Yzerbyt, & Bourguignon, 2003). The SCSC framework would predict that when people are linguistically categorized by others in a highly entitative category (i.e., by frequently being addressed or referred to with a strong noun label), this will increase their social identity and in-group identification. Likewise, increased use of such strong labels in self-descriptions (as compared to weaker labels like adjectives or descriptive phrases) likely reveals a relatively strong in-group identification.

In a broader intergroup perspective, people's social identity also affects how they communicate about in- and out-group members. Social category memberships are an inherent aspect of people's identity, and people strive to maintain and enhance a positive social identity (Turner et al., 1987). Several studies show how motivational factors and communication goals that may arise from a speaker's social identity can induce biased language use in the types of comments speakers make about behaviors by in- and out-group members.

Research on the Linguistic Intergroup Bias (LIB), for instance, demonstrated that the use of predicates of different abstraction referring to positive and negative behaviors of in- and out-group members is driven by a motivation to protect one's social identity (Maass et al., 1995; Maass, Ceccarelli, & Rudin, 1996; Wigboldus & Douglas, 2007). It was demonstrated that the LIB was more pronounced in intergroup settings wherein the in-group was threatened (e.g., hostility between Northern and Southern Italians). This motivational effect that results from a speaker's group memberships, was shown to be independent of the expectancy mechanism by which implicit cognitive associations and expectancies are reflected in language abstraction; i.e., expectancy consistent behaviors based on stereotypes about Northern and Southern Italians are described at a higher level of abstraction than expectancy inconsistent behavior (Maass et al., 1995; Maas et al., 1996). Douglas and Sutton (2003) showed that such motivational communication goals can have a strong effect on the use of language abstraction (e.g., adopting abstract predicates to describe positive behaviors and concrete predicates to describe negative behaviors to favorably portray a person or group) that can override the cognitive expectancy mechanism (i.e., LEB). On the recipient side, research shows that speakers who exhibit in-group-serving linguistic abstraction biases in their communications about others are more appreciated as good group members than speakers whose communication deviates from such linguistic biases (Assilaméhou & Testé, 2013).

It seems plausible that similar motivational processes play a role in other linguistic bias types as well. Burgers, Beukeboom, Kelder, & Peeters (2015), for instance, showed how soccer fans can employ ironic remarks to enhance group

identity. Irony about competent and incompetent behaviors of in-group and out-group team players can both be used as a linguistic tool for aggression towards out-group members, and to subtly communicate expectancies about desired in-group and out-group behavior. Likewise, speakers making ironic utterances echoing a negative stereotype of out-group members are more appreciated among in-group members (van Mulken, Burgers, & van der Plas, 2010). We also predict differences in labeling as a result of intergroup dynamics. An individual might mainly be labeled as an in-group member when he or she shows desirable (vs. undesirable) behavior. When in-group members show misdeeds, they might be more likely labeled as an uncategorized individual, or a subcategory or out-group member. In contrast, when out-group members show the same misdeeds, they may still be labeled under the collective out-group label.

Finally, it is interesting to study the effects of linguistic biases on the target of biased descriptions. So far, we mainly focused on communication *about* absent target(s). Linguistic biases, however, likely also play a role in communication *with* categorized targets who are also the recipient of a description. When a speaker talks to an addressee about their behavior (e.g., providing feedback in educational or professional settings), linguistic biases in labeling and behavior descriptions may reveal that the addressee is being categorized and (implicitly) associated with (negative) stereotypic characteristics. Such biases (e.g., particularly based on race, gender, sexual orientation) have been described as micro-aggressions. Micro-aggressions are defined as subtle insults directed toward a person that threatens and demeans the target (Sue, 2010). While the people perpetrating them are usually unaware they are causing harm and often intend no offense, targets may be sensitive to such subtle linguistic biases. Being stereotyped – albeit by means of subtle linguistic cues – may have several serious effects on targets. It may induce them to confirm expectancies as a self-fulfilling prophecy (Hummert, Garstka, Ryan, & Bonnesen, 2004), can induce impaired performance as a result of stereotype threat (Steele, 1997; Shapiro & Neuberg, 2007), can result in lower self-esteem (Bourguignon, Yzerbyt, Teixeira, & Herman, 2015) and deteriorate mental and physical health (Dovidio et al., 2000), but can also improve performance as a result of stereotype lift (Walton & Cohen, 2003). The linguistic biases we described have hardly been related to this area of research, but can provide interesting insights.

In sum, the SCSC framework opens up various new research directions. These research questions can be addressed by hand coding linguistic variables in natural texts generated in (dyadic conversations in) experimental studies. However, current developments in computational methods promise more and more opportunities for automated processing of natural language (e.g., Caliskan et al., 2017; Trilling & Jonkman (in press); Fokkens et al., 2018; Welbers, Van Atteveldt, & Benoit, 2017). The possibility of processing specific linguistic variables in large quantities of natural language, could provide a major leap forward in research on biased language use. It could not only bring unique knowledge to verify the validity of theoretical models of stereotyping and biased language use, it could also open up major opportunities for research in a variety of applied contexts (e.g., official forms, news, social media content). Our present contribution to integrate concrete, detectable linguistic aspects is a first step towards development of automatic processing tools to monitor and study implicit biases in natural language.

Practical implications

We have argued that the different types of biases in the SCSC framework are geared towards re-confirming existing categories and their associated stereotypes, which explains why stereotypes are hard to change (Fiske, 1998). However, awareness of the linguistic means through which such views evolve allows one to develop interventions that can help to change or prevent the formation of undesirable category stereotypes. Policies or instructions could be effective in helping people to refrain from using linguistic labels that unnecessarily categorize individuals, or from language that reveals and maintains stereotypic expectancies in official forms or texts, or (news) media. Intergroup bias and conflict can be reduced by strategically changing label use to transform perceptions of group boundaries (e.g., from "us" vs. "them" to a more inclusive "we," Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). We have also discussed that interpersonal responses and norms can prevent the expression of stereotypic views: Social norms can preclude the use of derogatory labels, and audiences can, by means of explicit questions or critique, push a speaker towards re-categorizing or individuating a target. When proficiently used, such relatively small interventions can play an important role in breaking the vicious cycle that maintains existing category stereotypes.

Conclusion

Social categorization and stereotyping are inextricably related to language use. Language reflects which categories are singled out as targets for stereotyping, and is one of the main carriers of stereotypic information we come to associate with these categories. Many complex societal problems result from social category stereotypes and the affective reactions and behavioral tendencies towards category members they may elicit (e.g., prejudice, discrimination, tensions, and conflict surrounding ethnic, racial, religious, gender, sexual orientation categories). The most severe forms of discrimination, prejudice and intergroup conflict and hostility occur when the members of social categories are viewed as very similar to each other, when the boundaries that differentiate the categories are sharp and fixed (i.e., high entitativity), and when they are perceived to have unchangeable and true essential characteristics (Yzerbyt et al., 2004). By explicating the linguistic means through which such views (implicitly) evolve, this paper facilitates the necessary awareness that may allow one to monitor, study, or correct undesirable forms of stereotype maintaining language use.

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