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The accuracy with which adults who do not stutter predict stuttering-related communication attitudes

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ABSTRACT

The purpose of this study was to examine the extent to which adults who do not stutter can predict communication-related attitudes of adults who do stutter. 40 participants (mean age of 22.5 years) evaluated speech samples from an adult with mild stuttering and an adult with severe stuttering via audio-only ($n = 20$) or audio-visual ($n = 20$) modes to predict how the adults had responded on the S24 scale of communication attitudes. Participants correctly predicted which speaker had the more favorable S24 score, and the predicted scores were significantly different between the severity conditions. Across the four subgroups, predicted S24 scores differed from actual scores by 4–9 points. Predicted values were greater than the actual values for 3 of 4 subgroups, but still relatively positive in relation to the S24 norm sample. Stimulus presentation mode interacted with stuttering severity to affect prediction accuracy. The participants predicted the speakers' negative self-attributions more accurately than their positive self-attributions. Findings suggest that adults who do not stutter estimate the communication-related attitudes of specific adults who stutter in a manner that is generally accurate, though, in some conditions, somewhat less favorable than the speaker's actual ratings. At a group level, adults who do not stutter demonstrate the ability to discern minimal versus average levels of attitudinal impact for speakers who stutter. The participants' complex prediction patterns are discussed in relation to stereotype accuracy and classic views of negative stereotyping.

Educational objectives: The reader will be able to (a) summarize main findings on research related to listeners' attitudes toward people who stutter, (b) describe the extent to which people who do not stutter can predict the communication attitudes of people who do stutter; and (c) discuss how findings from the present study relate to previous findings on stereotypes about people who stutter.

1. Introduction

1.1. Listener reactions and stuttering

Stuttering is a speech impairment that affects speech fluency and, in many cases, it results in some degree of communication-related disability (Anderson & Felsenfeld, 2003; Craig, Blumgart, & Tran, 2009; Langevin, Packman, & Onslow, 2010; Plexico, Manning, & DiLollo, 2005; Yaruss et al., 2002). It is well-known that the degree of fluency impairment one

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exhibits varies both within and across individuals, and that performance variability seems to stem from a variety of factors, some of which are intrinsic and others of which are extrinsic to the individual. Examples of intrinsic factors – beyond the severity of the speech impairment itself – that can affect the expression of stuttering include the amount and type of speech therapy that one receives (e.g., Bothe, Davidow, Bramlett, & Ingham, 2006), the effectiveness of one's strategies for coping with the impairment (e.g., Blood & Wertz, 1997; Plexico, Manning, & Levitt, 2009; Vanryckeghem, Brutten, Uddin, & Van Borsel, 2004), and the feelings, attitudes, and beliefs that one has about stuttering and communication (Cream, Onslow, Packman, & Llewellyn, 2003; Finn, Howard, & Kubala, 2005; Manning, Dailey, & Wallace, 1984; Tran, Blumgart, & Craig, 2011).

Extrinsic factors, also termed *environmental* factors, involve actions and circumstances that are beyond the speaker who stutters but nonetheless affect his or her communicative functioning (Logan, 2005; Yaruss & Quesal, 2004). One aspect of the environment that has been studied extensively in relation to stuttering deals with so-called "listener reactions" the stuttering-related actions, feelings, attitudes, and beliefs of people who interact with the speaker who stutters. Listener reactions to stuttering have assumed a prominent role in many models of stuttering (e.g., Johnson, 1959; Smith & Kelly, 1997; Van Riper, 1971) and they can play a significant role in shaping the speaker's experience of stuttering (Davis, Howell, & Cooke, 2002; Gabel, 2006; Murphy, Yaruss, & Quesal, 2007). One general finding from the research literature is that people react to stuttered speech in ways that differ from how they react to fluent speech. For instance, parents of preschool-aged children who stutter report feeling anxious, frustrated, guilty, and uncertain about how to respond to their child's disfluent speech (Langevin et al., 2010). Further, adult listeners have been found to exhibit different eye gaze patterns when a speaker is stuttering versus when a speaker talks fluently (cf. Bowers, Crawcour, Saltuklaroglu, & Kalinowski, 2010; LaSalle & Conture, 1991). Stuttered speech also appears to induce physiological responses associated with autonomic arousal within adult listeners, as demonstrated by changes in skin conductance response and heart rate during exposure to stuttered speech versus fluent speech (Guntupalli, Kalinowski, Nanjundeswaran, Saltuklaroglu, & Everhart, 2006; Guntupalli, Everhart, Kalinowski, Nanjundeswaran, & Saltuklaroglu, 2007).

1.2. Listener attitudes

Another area of interest in studies of listeners' reactions to stuttering has been to examine the attitudes that people who do not stutter hold toward people who do stutter. A common method for examining societal attitudes toward stuttering is to compare the characterizations that nonstuttering individuals generate in response to contrasting, minimally specified concepts such as "a typical person who stutters" or "a typical person who does not stutter." Results from such studies have been highly consistent: The characteristics that typical speakers assign to people who stutter are, on the whole, less desirable than the characteristics they assign to people who do not stutter. Examples of undesirable characterizations that are commonly assigned to people who stutter include *shy*, *nervous*, *quiet*, *self-conscious*, *frustrated*, *withdrawn*, *anxious*, *angry*, and *lacking confidence* (Woods & Williams, 1971; Yairi & Williams, 1970). This response pattern has been reported for a variety of rater groups including teachers, college students, business managers, speech-language pathologists and, interestingly, other people who stutter (see Dorsey & Guenther, 2000; Gabel, 2006; Kalinowski, Armson, Stuart, & Lerman, 1993; Lass, Ruscello, Pannbacker, Schmitt, & Everly-Myers, 1989; Lass et al., 1992, 1994; Lass, Ruscello, Pannbacker, & Schmitt, 1995; McKinnon, Hess, & Landry, 1986; Woods & Williams, 1971, 1976; Yairi & Williams, 1970).

The undesirable characteristics that nonstutterers routinely attribute to speakers who stutter have traditionally been interpreted as evidence of negative stereotyping by nonstutterers toward speakers who stutter. Researchers who hold this view commonly note that although such attributes are present in some people who stutter, they certainly are not characteristic of all people who stutter, and thus the act of attributing undesirable characteristics to people who stutter is intrinsically inaccurate and unjustified (e.g., Cooper & Cooper, 1996; Dorsey & Guenther, 2000; Lass et al., 1992; Yairi & Williams, 1970). Implicit in this interpretation of the data is the assumption that listeners will attribute these undesirable characteristics to any person who stutters, regardless of whether that person exhibits the characteristics or not. For instance, Woods and Williams (1971), in interpreting the attributes that were assigned to hypothetical children who stutter, concluded that speech-language pathologists seem to believe "a stutterer is a stutterer is a stutterer." It also is often implied that listeners will assign these undesirable characteristics in a rigid, all-or-none manner, and in doing so harm people who stutter. For instance, Lass et al. (1992, p. 80) in a study of the kinds of attributes that teachers assigned to hypothetical speakers who stutter, concluded, "This generalizing reflects faulty, unfounded preconceptions of, and bias toward stutterers," and then called for altering the impact of these perceptions "on teachers' professional effectiveness with stutterers and the educational progress of students who stutter." Cooper and Cooper (1996, p. 132) suggested that listeners who assign negative attributes to people who stutter were not only inaccurate but may engage in bigotry, "holding blindly to opinions in the face of overwhelming contradictory evidence." Views that are similar to ones expressed in these studies also are found in contemporary reviews of listeners' attitudes toward people who stutter, where the term *stereotype* is routinely preceded by the adjective *negative* (e.g., Healey, 2010; Manning, 2010).