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Are Chinese Immigrants Evaluated as More Competent than Warm?

(In)congruence between Stereotypes and Speech Evaluations

by

Yang Fang

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Abstract

This study concerns the stereotypes of Chinese immigrants, perception of Mandarin-accented speakers, and the relationship between them. Whereas the study of accented speech has focused on attributes related to *status* and *solidarity*, recent research on stereotypes has centered on the two fundamental dimensions of competence and warmth. Working on the premise that accents can facilitate recognition of social categories, this study examines the thesis that accented speech can cue personality evaluations of the speakers congruent with cognitive stereotypes held of the same social categories. 330 Canadian undergraduates evaluated speeches made by recent Chinese immigrants, and reported their stereotypical representation of Chinese immigrants as a group. Results suggest incongruence in these two types of evaluation: whereas stereotypes of Chinese immigrants are rated as higher in competence than in warmth, Chinese immigrant speakers are rated as higher in warmth than in competence.

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Introduction

Mastering a new language is one of the primary challenges facing immigrants. Competence in the language spoken by the larger society is a key determinant of educational status (Broeder & Extra, 1999; Wang & Goldschmidt, 1999), employment (Dustmann & Fabbri, 2003; McManus, 1985), and social fulfillment (Morales & Hanson, 2005; Yeh, Okubo, Ma, Shea & Pituc, 2008) . Unfortunately, a wide vocabulary and flawless grammar alone are insufficient. Accented speech often erects barriers to employment success and social acceptance. (Gluszek & Dovidio, 2010; Munro, 2009) While some foreign accents receive attractive portrayals in the media, most foreign accents signal alien status, which can bring about damaging inferences about a speaker's ability and good-will. In fact, despite accent strength correlation with lower comprehensibility and intelligibility in second non-native speech, it does not necessarily lower these two qualities (Munro & Derwing, 1999). As well, accentedness (the degree to which speech is perceived as different from a particular variety; Hayes-Harb & Watzinger-Tharp, 2012) should not surpass improving intelligibility (the most important goal of pronunciation teaching; see Munro & Derwing, 1999), in determining oral proficiency in non-native speakers. Understanding how accented speech affects the perception of immigrants speakers is, therefore, of paramount concern to a multicultural society such as Canada. This study will address how accented speech produced by Chinese immigrants, a rising population in Canada (Statistics Canada, 2008), is perceived by native English speaking, non-Chinese

Canadians. Moreover, it will examine the hypotheses of the Stereotype Content Model (Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, Glick, & Xu, 2002) that predict the conditions under which such stereotypes arise and the implications of those stereotypes for the perceiver's affect and behaviour.

Evaluative consequences of speaking with standard versus nonstandard accents have attracted considerable research attention (Garrett, 2010; Giles & Marlow, 2011; Gluszek & Dovidio, 2010a). A significant body of research has established *status* (associated with intelligence, competence, ambition) and *solidarity* (associated with likability, kindness, dependability) as critical dimensions along which evaluations of accents differ. With considerable consistency, speakers of languages associated with groups of relatively high social and cultural standing (including speakers of standard accents) tend to be rated higher on variables such as intelligence, competence, and other so-called status variables. Less clear is the reason for evaluations of *solidarity*. In their review, Bourhis and Maass (2005, p. 1590) claim that "the general findings from a large number of language stereotype studies … show that the in-group accent or language variety is evaluated more favourably on solidarity dimensions, while the out-group speech variety is upgraded on status traits if the out-group accent or language is used by a ruling elite or dominant majority". However, Giles and Marlow (2011, p. 166) maintain that "those who speak nonstandard varieties are upgraded on traits of social attractiveness (or benevolence) and hence, viewed as more friendly, generous, and likeable than their standard speaking counterparts". Hence, these mixed opinions about whether the ingroup or the lower status group

is likely to be perceived more positively on solidarity traits (than the outgroup or the majority group, respectively). A recent meta-analysis of twenty studies done by Fuertes, Gottdiener, Martin, Gilbert, and Giles (2012) found that while standard-accented speakers are rated as higher on solidarity than nonstandard-accented speakers overall, a number of studies found the opposite pattern, whereby nonstandard-accented speakers are rated as higher in solidarity (Giles et al., 1981; Powesland & Giles, 1975). While the authors suggested that the anomaly might be due to the participants perceiving nonstandard accented speakers as ingroup members, an alternative explanation to the anomaly exist: nonstandard accented speakers were not perceived as ingroup members, but rather, ethnolinguistic outgroups associated with their nonstandard accents that are stereotyped to be higher in solidarity traits than standard-accented groups. Therefore, more research is needed to clarify the conditions under which nonstandard-accented speakers are perceived to be higher on solidarity traits compared to standard-accented speakers.

I will begin the exploration of research on nonstandard speech with studies guided by the "*status* vs. *solidarity*" evaluative framework. Then, I will propose the Stereotype Content Model (SCM; Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002) as a useful tool for understanding nonstandard accented speech of Chinese immigrants in Canada. Specifically, I will highlight the parallels and distinctions between the key dimensions of Stereotype Content Model—"*competence* vs. *warmth*"— and the "*status* vs. *solidarity*" framework that has been the roadmap for much language attitude research thus far. Further, I

will explore whether the Stereotype Content Model, which includes correlates and antecedents of person evaluations, as well as affective and behavioural consequences of intergroup judgments, affords a useful theoretical framework for understanding accented speech by immigrants.

Accents and Interpersonal Evaluation

Accents play an important role in interpersonal evaluation. Not only do they influence the listening experience by affecting the comprehensibility and aesthetic qualities of utterances, they reveal social information about the speaker and elicit evaluative judgments from the listener (Ryan, Carranza, & Moffie, 1977; Ryan & Sebastian, 1980). Being one of the "main clues to class" (Argyle, 1993), accents combine with the knowledge of a person's class to influence interpersonal evaluation (Ryan & Sebastian, 2011; Ryan & Bulik, 1982; Giles & Sasoon, 1983). Many evaluative differences are found between *standard* and *nonstandard* accents (Fuertes, Gottdiener, Martin, Gilbert, & Giles, 2012). *Standard* accents, within a given country and language, are usually accents spoken by the educated middle and upper classes. They are usually perceived as more desirable, prestigious, and pleasant to listen to than nonstandard, lower class, or ethnic accents (Cargile, Giles, Ryan, & Bradac, 1994; Edwards, 1999; Lippi-Green, 1997). Some examples of standard accents include Received Pronunciation (the accent of Standard English in England), Parisian French, and Castilian Spanish. Some nonstandard counterparts, in contrast, include Chicano English and African American Vernacular English, Canadian French, and different Spanish varieties spoken in the Americas. This list of nonstandard language varieties highlights

geographical diversity; it shows that, in addition to socio-economic status, nonstandard accents are social cues to people's regional or national identity.

Other than social class and regionalism, accents can also be a telling cue to ethnicity, and whether one is a native speaker of a tongue. Ethnolinguistic Identity Theory posits that, for many ethno-cultural groups, language is an essential component of ethnic identity (Giles & Johnson, 1987). The recent drive to purge English usage from restaurant menus in Montréal to preserve the French Canadian identity attests to the fact that the ethnic identity of some groups is defined by their language use (CBC.ca, 2013). Categorization of others into social categories is an automatic and efficient process that enables people to function in the world (Fiske, 1995). To the extent that an accent is associated with a social category, such as ethnicity, accents are bases for categorizing others. Accents enable native speakers to recognize second-language speakers at a rapid rate (Munro, Derwing, & Burgess, 2010), and they can be a stronger ethnicity cue than appearance in social categorization of ethnicity (Rakić, Steffens, and Mummendey, 2011a). Accents influence judgments of native and non-native speakers of a language alike. A non-native accent can also reveal whether the speaker is a native speaker of her tongue, and functions as a cue to his or her country of origin. In a series of studies conducted in the USA, Gluszek and her colleagues (A. Gluszek & Dovidio, 2010a, 2010b; A. Gluszek, Newheiser, & Dovidio, 2011) found that speakers of English in a nonnative accent suffer from a host of undesirable consequences, such as stigma, communicative difficulties, and feeling a lack of belonging to the USA. Studying the implications of accents is hence an important component in

the larger inquiry into language attitudes, that is, the social evaluation of language and speech style (Garrett, 2010).

Status and Solidarity

A large body of research has built upon the seminal work of Lambert and his colleagues (Lambert, 1967; Lambert, Hodgson, Gardner, & Fillenbaum, 1960) to examine the effect of speech styles and language varieties on social evaluation (Ryan, 1983; Giles & Sassoon 1983). S*tatus* and *solidarity* have emerged as critical evaluative dimensions along which features of speech, such as accents, can influence social attitudes and judgements (Fuertes et al. 2012). Examples of traits associated with *status* include intelligence, ambition, and confidence, whereas that associated *solidarity* include trustworthiness, friendliness, and kindness. As revealed by Fuertes et al. (2012), much evidence supports the contention that standard language varieties, for example, Tokyo Japanese as opposed to Kansai Japanese, are evaluated more favourably in attributes related to *status*.

The evaluative consequences on attributes related to solidarity, however, are less clear. Some studies report positive associations with nonstandard accents: nonstandard speakers are viewed as more friendly, generous and likeable than their standard-speaking counterparts (Linn & Piché, 1982; Luhman, 1990); nonstandard accents also increase masculinity ratings of males speakers (Giles & Marsh, 1979). Still, a recent meta-analysis of language attitude studies challenges this stance: though smaller in effect size than *status*, *solidarity* traits are still rated higher for standard accents than nonstandard accents except in five studies

(Fuertes et al., 2012). This is not surprising when the distinction between *overt* and *covert prestige* in language varieties are considered. Although *overt prestige* (associated with consensually endorsed social status; Guy, 1989) is associated with standard accents in most social settings, *covert prestige* is accorded to nonstandard accents under certain circumstances, for example, when considering someone's suitability as a friend, or as an ingroup member (Guy, 1989). Giles, Wilson, & Conway (1981) showed that nonstandard-accented Welsh speakers are considered to be more agreeable and good-natured, and more preferable as candidates for low status jobs. Nevertheless, in intergroup situations where language use plays a critical role in defining intergroup dynamics, such as English versus French use in Quebec, using nonstandard varieties indicative of outgroup membership have damaging consequences for perception of a person's identity (Bourhis & Maass, 2005; Lambert, Hodgson, Gardner, 1960) Such a state of theoretical development warrants more research on how nonstandard accents affect the evaluation of the solidarity traits. This can occur through the context of evaluation, group membership of the speaker and perceiver, and the intergroup relationship (e.g. relative status, degree of competition) between the groups they are identified with. In addition, the effect of nonstandard accents on solidarity traits vis-à-vis other types of personality traits, including and not limited to status and solidarity, needs to be specified. These are the research questions driving this study.

Consequences of Language Attitudes

The consequences of speaking with nonstandard accents go beyond self-reported evaluations. Accents also affect real world social decision-making. Speakers of the standard accent are viewed as being more persuasive (Giles, Williams, Mackie, & Rosselli, 1995), more memorable (Gill & Badzinski, 1992), less likely to be presumed to be guilty in a simulated courtroom (Dixon & Mahoney, 2004) and are rated higher in comprehensibility as a teacher (Gill, 1994). De La Zerda and Hopper (1979), using simulated employment interviews involving Mexican American males, found that employment interviewers in Texas favoured speakers of the Standard American English accent for supervisor positions, and speakers with nonstandard, Mexican accent for semi-skilled worker positions. In Britain, English speakers perceive standard-accented speakers to be more employable than speakers with a Welsh accent (Giles et al., 1981).

Not all nonstandard accents, however, are perceived negatively in relation to standard accents. Nonstandard accents may form a social hierarchy among themselves (Giles & Marlow, 2011; Mulac, 1975). Rakić, Steffens, and Mummendey (2011b) found that Germans ranging from 18-70 years old perceive speakers with standard German accents to be higher in socio-intellectual status than speakers with regional German accents associated with Saxon and Berlin, but not for regional accents associated with Bavaria, an economically strong region in Germany. In a study of discrimination against foreign accents in job application, Hosoda and Stone-Romero (2010) found that only Japanese-accented applicants, but not French-accented applicants, are disadvantaged in comparison to applicants with standard American English accents, when evaluated by American college

students. Taken together, these studies underscore the real world consequences—such as access to professional opportunities—of speaking with nonstandard accents, and how accented speech can precipitate discriminatory experiences. Moreover, different accents may be judged with varying levels of harshness.

Examining Accents Using the Stereotype Content Model (SCM)

Given that differently accented speech can have significant negative implications, it would seem important to better understand the circumstances under which an accent is perceived negatively. It has been argued thus far that evaluations of nonstandard accents along the *solidarity* dimension have yielded inconsistent empirical findings. Similarly, the attribute of *status* can benefit from clearer conceptual underpinnings. I attempt to achieve these two goals through delineating the evaluative consequences of speaking with nonstandard accents by drawing upon the Stereotype Content Model (Cuddy et al., 2008; Fiske et al., 2002). The Stereotype Content Model offers a systematic understanding of meaningful information found in intergroup stereotypes that has been cross-culturally validated (Cuddy et al., 2009). It focuses on two dimensions of social evaluation, *competence* (analogous to the operational definition of status), and *warmth* (analogous to the operational definition of solidarity). It proposes that groups can be stereotypically evaluated as relatively high or low in each of two dimensions. According to findings based in the USA, the stereotype of an elderly person can be seen as high in warmth but low in competence, whereas the stereotype of a lawyer can be seen as high in competence but low in warmth; as well, "middle class" is stereotyped as high in both warmth and competence,

whereas homeless people are stereotyped to be low in both warmth and competence. The Stereotype Content Model situates evaluations of warmth and competence within the context of intergroup relations. Consensually recognized status (such as economic and educational success) of members of a group predicts evaluations of high competence, whereas the degree of consensually recognized competition between members of the stereotyped group and members of one's own group predicts evaluation of low warmth (see Figure 1; Fiske et al., 2002). Because category labels link relevant associations and concepts to their referents, categorizing others enables people to use knowledge and concepts (i.e., stereotype contents) to make sense of people they have categorized. Since listeners use accents as a cue for ethnicity categorization (Rakić et al., 2011a), the knowledge and preconceptions they have of specific ethnicities can influence how they evaluate accented speakers, for example, on warmth and competence traits.

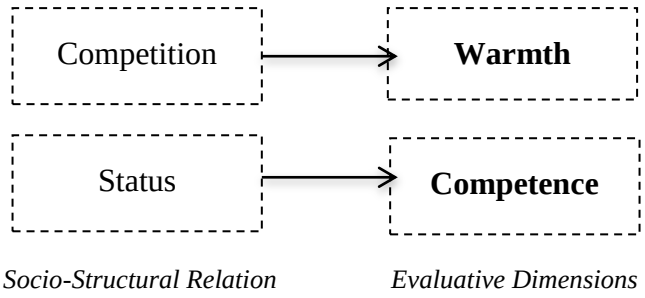

Figure 1: Hypothesized relations between socio-structural relations and evaluative

Different combinations of warmth and competence levels (usually operationalized into high vs. low levels) drive distinctive emotional reactions toward stereotyped groups. Factor analysis has yielded 4 types of emotions toward each warmth-competence cluster, as shown in Figure 2 (Fiske et al., 2002,

study 4). *Admiration*-related emotions (admiring, fond, inspired, proud, respectful; α=.86) are most strongly felt toward groups stereotyped to be high in both competence and warmth; *envy*-related emotions (envious, jealous; α=.89) are felt toward groups stereotyped to be high in competence and low in warmth; *pity*-related emotions (pity, sympathetic; α=.82) are felt toward groups stereotyped to be low in competence and high in warmth; and contempt-related emotions (angry, ashamed, contemptuous, disgusted, frustrated, hateful, resentful, uneasy; α=.93) are felt toward groups stereotyped to be low in both competence and warmth.

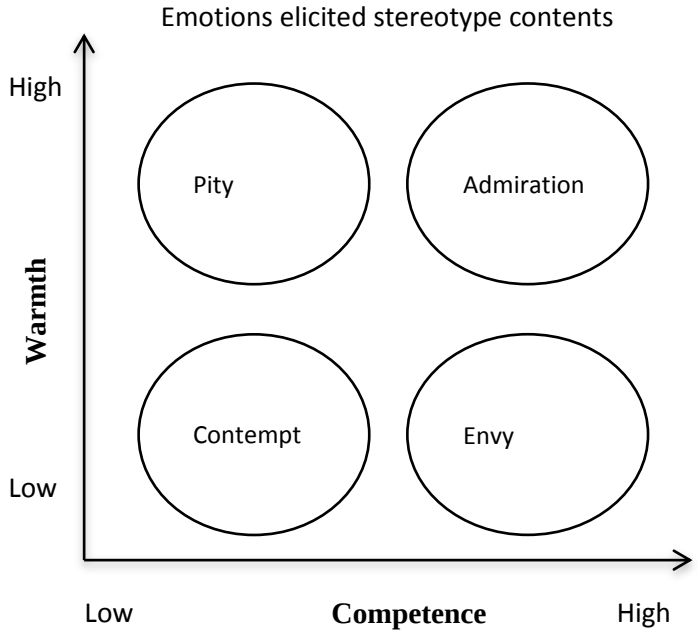

Figure 2. Representation of stereotypes clustered according to the emotions they elicit, and evaluative dimensions. (Adapted from Cuddy et al., 2002)

These emotions, in turn, drive behavioural tendencies toward stereotyped groups (see Figure 3), according to the Behaviours from Intergroup Affect and Stereotype (BIAS) Map (Cuddy et al, 2007), which is a complementary framework derived from the Stereotype Content Model framework. It posits that

warmth stereotypes determine active behavioural tendencies. When people feel greater warmth towards members of another group, they are expected to reduce active harm (e.g., attacking) and initiate active facilitation (e.g., helping) of those group members. Conversely, competence stereotypes determine passive behavioural tendencies. When people feel that another group is highly competent, they can be expected to reduce passive harm (e.g., ignoring) and increase passive facilitation (e.g., associating). In other words, the Stereotype Content Model goes beyond a cognitive analysis of stereotypes and reaches into the distinctive emotions toward groups marked by different competence-warmth combinations. The BIAS Map, in turn, specifies how intergroup affect drives active and passive behavioural tendencies toward these groups, which are indicative of discriminatory responses in the real world.

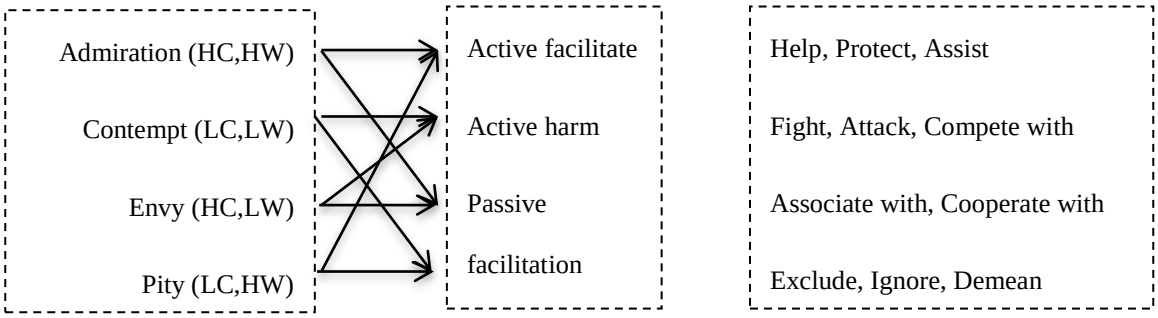

Figure 3. Stereotyped groups and the behavioural tendencies they elicit. Each group is theorized to elicit two types of behavioural tendencies. The box on the right contains examples of the behavioural tendencies.

Since this model specifies how stereotypes predict behavioural tendencies, it can potentially elucidate the role of accents, as markers of group membership, in discriminatory behaviours in the real life settings[1].

The Context of the Present Study

The present study extends the Stereotype Content Model from understanding how people react to labels of groups to how people react to accented speech by focusing on the Chinese immigrant community in Canada. More specifically, this study will examine how Anglo-Canadians of European descent, the ethnic and linguistic majority in Canada, evaluate speakers of Mandarin-accented English speech on warmth and competence traits and whether these evaluations are linked to socio-structural variables and emotional and behavioural variables in the manner hypothesized by the SCM and BIAS Map frameworks. Chinese immigrants in Canada are selected as the focal population because Chinese is the largest nonofficial-language minority group in Canada (Statistics Canada, 2013). Further, prejudice and discrimination directed at speakers with non-native accents in Canada have been identified as an increasingly important challenge (Munro, Derwing, & Sato, 2006; Munro, 2003). Thus, understanding how Chinese accented English is evaluated is relevant to a significant portion of the Canadian population.

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[1] It is important to note that data that supports the theoretical link (represented by arrows) between the stereotypes and behavioural tendencies are analyzed at the group level, such that mean aggregates across several stereotyped groups in each warmth and competence are clustered and compared. It is entirely possible that relations between stereotypes and behaviour at the individual level can deviate from the general tendency in the cluster to which the group belongs.

The "Asian American" stereotype has received some empirical attention within the Stereotype Content Model (Cuddy et al, 2007; Fiske et al., 2002; Lin, Kwan, Cheung & Fiske, 2005; Maddux, Galinsky, Cuddy, & Polifroni, 2008), and this work informs my predictions for the Chinese immigrants in Canada. Asians, together with Jews and non-traditional women (e.g. career women, feminists, lesbians, athletes), are outgroups that European American associated with *envious stereotypes*—defined as receiving higher ratings on the competence dimension than on the warmth dimension (Fiske et al, 2002, Study 1). Elsewhere, Chinese immigrants have been conceptualized as an outgroup that is highly competent and low in warmth. In a study involving Italian participants that examined the effect of changing stereotype content through mental imagery used Chinese immigrants as the envied outgroup (Brambilla, Ravenna, & Hewstone, 2012). Notably, Lee & Fiske's study of immigrant stereotypes held by American undergraduates found that Chinese immigrants were perceived to be low in warmth and high in competence, compared to other immigrant groups such as Mexican Americans. It was also found that stereotypes of Asian immigrants are resembles the stereotype of Asian Americans. Relatedly, Asians-Americans (who may no longer be immigrants) are viewed in the United States as the "model minority", a group perceived to do well educationally and socioeconomically (compared with Blacks and Hispanics), and one that "stays out of trouble" (Maddux et al. 2008). This stereotype also comprises connotations of being too competent, too ambitious, too hardworking, and, simultaneously, not sociable (Hurh & Kim, 1989; Kitano & Sue, 1973). Although there are national differences

in how much influence this "model minority" stereotype has on its members (Shih, Pittinsky, & Ambady, 1999), several of the overarching themes in this stereotype, for example, high parental expectations in achievement, are common across the USA and Canada (Costigan, Hua, & Su, 2010). Past research based on national surveys has shown that Canadians are relative comfortable with Chinese immigrant and ethnic groups—ranked immediately after their comfort levels with Canadians and immigrants of European ethnic groups (Berry & Kalin, 1995; Kalin & Berry, 1996) Hence, findings stemming from these largely American studies could still be useful for generating predictions in the Canadian context.

Review of Hypotheses

There are two main objectives to this study. The first objective is to explore Canadians' stereotypes of Chinese immigrants to Canada and to understand the antecedents and outcomes of warmth and competent judgements: what these two dimensions predict (that is, emotions and behavioral tendencies) and are predicted by (socio-structurally based status and intergroup competition dimensions). Accordingly, my hypotheses for this objective are:

Hypothesis 1: Chinese immigrants, as a group, will be evaluated as relatively high on competence and low on warmth.

Hypothesis 2a: Competence trait evaluations will be predicted by high ratings on status-based attributes, whereas warmth trait evaluations will be predicted negatively by high ratings on competitiveness-based attributes.

Hypothesis 2b: Based on the combination of high competence and low warmth (specified in Hypothesis 1), Chinese immigrants are most likely to elicit emotions that are consistent with personality evaluations. That is, the highest levels of emotions elicited will be observed in envious type emotions (envy and jealousy).

Hypothesis 2c: Based on the combination of high competence and low warmth (specified in Hypothesis 1), and envious emotions elicited (specified in Hypothesis 2b) Chinese immigrants are most likely to elicit behaviours that are passively facilitating (associate with, cooperate with, tolerate) and actively harming (compete with, fight, attack).

The second objective of the study is to examine the notion that accents can cue stereotype content consistent with the ethnic category. Thus, this set of hypotheses concerns evaluations of Mandarin-accented speech samples. These hypotheses pertain to whether accents are effective in signalling ethnicity, and whether the personality judgments (warmth and competence) from listening to accented speech are consistent with personality judgments based on ethnic stereotypes. I expect personality judgments based on listening to accented speech to be consistent with those spelt out in Hypothesis 1, such that the speakers will be evaluated as higher on competence than on warmth.

Hypothesis 3: Personality evaluations —in competence and warmth— of the accented speakers will be consistent with personality evaluations of Chinese immigrants as a group—higher on competence and lower on warmth.

Methods

Participants

The participants were 330 Anglo-Canadians (88 males, 227 females, 15 did not indicate their sex; M_{AGE}=20.00**,** SD=6.11) who were native speakers of English and born in Canada. None of them were of Chinese. They were undergraduates in a large university in Alberta, Canada. Recruited from a subject pool consisting of students taking introductory psychology courses, all of them received partial course credits for their participation.

Procedure

Each participant listened to 20 speech samples collected from Chinese immigrants who have arrived in Edmonton, Canada ranging from less than 6 months to 3 – 4 years. These speech samples were collected as part of a larger study. Two instructional conditions were included to account for potential effects of stereotype-based expectancies (Hamilton, Sherman, & Ruvolo, 1990) during speech evaluation:133 of them were informed that the speech samples belonged to Chinese immigrants before they began the study ("you will be listening to a series of audio clips**.** In each audio clip, you will hear a short story *narrated by a Chinese immigrant*."), and 197 of them were not ("you will be listening to a series of audio clips**.** In each audio clip, you will hear a short story.").

The experimental sessions were run in small groups of not larger than 16 in a multimedia computer lab. At the beginning of each session, the experimental would inform the participants that they would be listening to a series of audio

clips, in which a short story will be told. Participants were seated at individual computer terminals and were randomly assigned to listen to and evaluate a group of speech samples on the measures elaborated below. Each group of stimuli contained 14 to 20 speech samples. After evaluating the speech samples, participants filled in a series of questions with regards to the Chinese accents and attitudes related to perception of Chinese immigrants in Canadian society. After participants completed the questionnaire, they were debriefed and thanked for their participation. The entire session concluded within 40 minutes.

Stimuli

Speech Samples The stimuli used for this study are collected as a part of a larger study of Mandarin-speakers, who were recent immigrants originating from mainland China (36 males, 53 females, 3 did not indicate their sex, M_{AGE}=36.81**,** SD=7.30). At the time of speech recording, 20 of them lived in Canada for half a year or less, 14 lived in Canada between 6 months and one year, 5 had been in Canada for 2-3 years, 53 had been in Canada for 4-5 years (M=2.75 years, SD = 1.6 years). Every immigrant narrated in English from an 8-panel comic strip depicting a storyline revolving around two strangers who switched suitcases by mistake (Derwing, Munro, Thomson, & Rossiter, 2009). 51 of the speakers were assessed by a language assessor on the research team on their narration task and were each given an oral proficiency score (based on the Canadian Language Benchmark; CLB; M=Level 6.04, SD = 1.54). Among the 41 speakers were not assessed, 27 reported their most recent CLB scores the speaking component (M = Level 5.56, SD = 1.53) These narratives were audio-recorded and the first 30

seconds-long segment of continuous speech, with no interjection and minimal fillers, was used to create the speech stimuli. There were 92 speech stimuli in total[2]. To minimize rater fatigue, the speech samples were arranged into five blocks, and each participant rated a maximum of 20 speech samples.

Materials

Judgment of speech attributes. After listening to each speech sample (stimulus), participants were asked to rate the speech on *comprehensibility* (the ease or difficulty with which a listener understands L2 accented speech; Derwing, Munro, & Thomson, 2008; 1=impossible to understand and 9 = extremely easy to understand), *accentedness* (degree of difference from native variety of speech; 1=very strong foreign accent and 9 = no foreign accent), *clarity* (1=not at all clear and 9 = perfectly clear), *fluency* (the automatic procedural skill on the part of the speaker; Schmidt 1992; 1=extremely dysfluent and 9 = extremely fluent), *ease of expression* (1=not at all comfortable and 9 = very comfortable).

Evaluation of speakers on warmth and competence For every speech sample, participants gave ratings on the speakers' personality traits of warmth and competence, on a scale from 1 (not at all) to 5 (very [warm]/very [competent]). The warmth traits were "good-naturedness, warmth, friendliness, trustworthiness"

[2] In the beginning, speech samples were collected from 96 speakers. However, 4 speakers did not make substantial attempt (possibly due to severely lacking in proficiency or confidence) at describing the comic strip, and cutting a 30s long segment of speech that centered on the comic strip was impossible. Hence, only 92 speech stimuli were included in this study, eventually.

and the competence traits were “intelligence, competence, efficiency, and capability”.

After completing these ratings for each speaker, the participant made up to two guesses about the native language of the speaker.

Attitudes Questionnaire After evaluating all 14-20 speech samples, participants answered a series of questions about how Chinese immigrants are perceived by Canadian society, following the approach used by Fiske, Cuddy and their colleagues in their works on the Stereotype Content Model and the BIAS Map (Cuddy et al., 2007; Fiske et al., 2002) First, they answer questions on how Canadians in general perceive Chinese immigrants in warmth and competence traits , socio-structural relations that concerns group-based and intergroup competition. Then, they reported the emotions that they believed were felt by Canadians toward Chinese immigrants, including contempt and disgust, admiration and pride, pity and sympathy, envy and jealousy. As well, they reported the behaviors in which Canadians tend to engage toward Chinese immigrants: active facilitation (help, protect, assist), active harm (fight, attack, compete with), passive facilitation (cooperate with, associate with, tolerate), passive harm (exclude, demean, ignore). The Cronbach’s alpha, mean, and standard deviations for each scale are presented in the table below. Most scales have reasonable reliability (Cronbach’s $\alpha \geq .70$). It can be observed that scales with lower internal consistency tend to have lower number of items (two to three). The inter-correlations among these variables are presented in Table 5, Appendix C.

Table 1.

Means, Standard Deviations, and Cronbach Alphas of SCM and BIAS Map Variables

	α	N of items	M	SD
Warmth, competence, and socio-structural variables				
1. Warmth (societal)	.87	4	3.05	.84
2. Competence (societal)	.82	4	3.59	.88
3. Status (societal)	.69	3	3.53	.71
4. Competition (societal)	.80	3	3.04	1.09
Emotions				
1. Contempt (contempt, disgust)	.52	2	2.59	.80
2. Admiration (admire, proud)	.55	2	2.39	.78
3. Pity (pity, sympathize)	.56	2	2.39	.78
4. Envy (envious, jealous)	.85	2	2.44	1.07
Behavioral tendencies				
1. Active Harm (fight, attack, compete)	.54	3	2.62	.67
2. Active Facilitation (help, assist, protect)	.75	3	2.86	.75
3. Passive Harm (demean, exclude, ignore)	.76	3	2.84	.88
4. Passive Facilitation (associate with, cooperate, tolerate)	.55	3	3.46	.67

Results

The analyses were conducted with the two main objectives in mind. First, they tested whether the stereotype of Chinese immigrants in Canada corresponded to a mixed combination of relatively high competence and low warmth. Second, they examine whether *competence* is predicted by societal status (occupational, economic, and educational), and *warmth* by the degree of competition recognized between Chinese immigrants and Canadians. Further, the analyses examined whether levels of warmth and competence could jointly predict emotions felt and behavioural tendencies toward Chinese immigrants. Analyses fulfilling the second objective shift the focus from the raters (participants) to the speakers (Chinese immigrants), whose speech and personality traits were rated on the host of attributes previously explained. The analyses examined the raters' judgment on the speech attributes, and how speakers are perceived by the raters on warmth and competence.

Hypothesis 1: Chinese immigrants, as a group, will be evaluated as relatively high on competence and low on warmth.

The analyses began by focusing on the hypothesis that the Chinese immigrant stereotype is mixed in valence, such that it is characterized by high competence and low warmth. A mixed stereotype is defined as "low ratings on one dimension coupled with high ratings on the other" (Fiske et al, 2002). When examining a single target group, this hypothesis can be supported by significant differences in scores on warmth and competence. To examine this hypothesis, a matched pair t-test was conducted to compare how participants think Canadians in

general view Chinese immigrants in terms of competence and warmth. As expected, competence perceptions (M=3.59, S.D.=.88) were significantly higher than warmth perceptions (M=3.05, S.D.=.84), $t(320) = 9.36$, $p<0.001$. This shows that Chinese immigrants are perceived by Canadians as higher in competence than in warmth, a mixed stereotype in Fiske et al (2002)'s definition.

I also compared the mean scores of warmth and competence to the mid-point of their respective scales, that is, 3 on a 5-point scale. While competence, $t(320)$, = 12.05, $p<0.001$) was significantly higher than the scalar midpoint, warmth was not, $t(320) = .99$ $p=.324$) indicating that, on absolute terms, the Chinese immigrant group is perceived as high in competence, and neither high nor low in warmth.

Hypothesis 2a: Relations between Trait Dimensions and Socio-structural Variables

To test whether competence and warmth are predicted by status and competition respectively, bivariate correlational analyses revealed a positive correlation between competence and status ($r=.31$, $p<.001$) and a negative correlation between warmth and competition ($r= .29$, $p<.001$). The former suggests that more positive perceptions of Chinese immigrants' occupational, economic, and educational achievement were related to a tendency to perceive the group as higher in competence-related personality traits, whereas the latter suggests that more intense intergroup competition perceived between Chinese immigrants and Canadians was related to a tendency to perceive the group as higher in warmth-related personality traits. This finding replicated the

relationships between social structural predictors and warmth and competence ratings demonstrated in previous research (Fiske et al, 2002; Cuddy et al, 2008).

To offer a stronger test of the hypothesis in a way that has not been previously done in literature, I conducted a path analysis using Mplus Version 7 (Muthén & Muthén, 2012). The model presented in Figure 1 was tested, such that competition predicts warmth (negatively) and status predicts competence (positively). Among the different fit statistics that give information about how well a specified model represents the data, I used the chi-square Goodness-of-Fit Index (GFI), and Root Mean Square Error of Approximation (RMSEA), comparative fit index (CFI), and standardized root mean square residual (SRMR) to assess model fit to data. Following the guidelines suggested by Hu & Bentler (1999), the benchmark values I used were p>0.05 for chi-square test for GFI, >= 0.90 for CFI (Hu & Bentler, 1999), and =<0.06 for RMSEA, and =<.08 for SRMR. The results of the analysis indicated that the hypothesized model did not achieve a satisfactory fit to the data ($\chi^2(2) = 18.02$, $p < .001$; RMSEA=.16; CFI = .80; SRMR = .07).

An examination of the residuals indicated that the addition of covariances between some variables, as indicated in Figure 4, would significantly improve the model fit. The chi-square fit-test of this revised model was only marginally significant**,** $\chi^2(2) = 4.13$, $p = .054$. Although the RMSEA (.08) did not quite meet the desired criterion, the CFI (.97) and SRMR (.04) indicated a reasonable level of model-to-data fit. In the predicted model (Figure 4), perceived competitiveness

between Chinese immigrants and Canadians was a negative predictor of participants' ratings of warmth of Chinese immigrants as a group (β=-.22, p<.001), whereas perceive occupational, educational, and economic status attained by Chinese immigrants was a positive predictor of ratings of their competence (β=-.34, p<.001). These two directional paths supported the fundamental theoretical relationship of SCM: status gives rise to competence, and competition leads to low warmth. In addition, adding two correlational paths that had not been hypothesized significantly improved the model fit. First there was a significant positive non-directional path (correlation) between warmth and competence (r=.12 p=.001). This correlation is not surprising, given that the traits included in warmth and competence scales are positive traits that people tend to assign to others together, which might explain the covariance (Cooper, 1981). More-surprisingly, there was a significant negative correlation between Chinese immigrants' competence ratings and competition with Canadian groups (r=-.18 p<.001). In fact, negative correlation between these variables had appeared in some but not all past studies in SCM (Fiske et al., 2002, Study 1, cf. Caprariello, Cuddy, & Fiske, 2009). Since the path model with the two additional correlation paths specified fit the data significantly better than the path model that contained only the two directional paths between status and competence and competition and warmth, it was determined to be the best fitting model to the data.

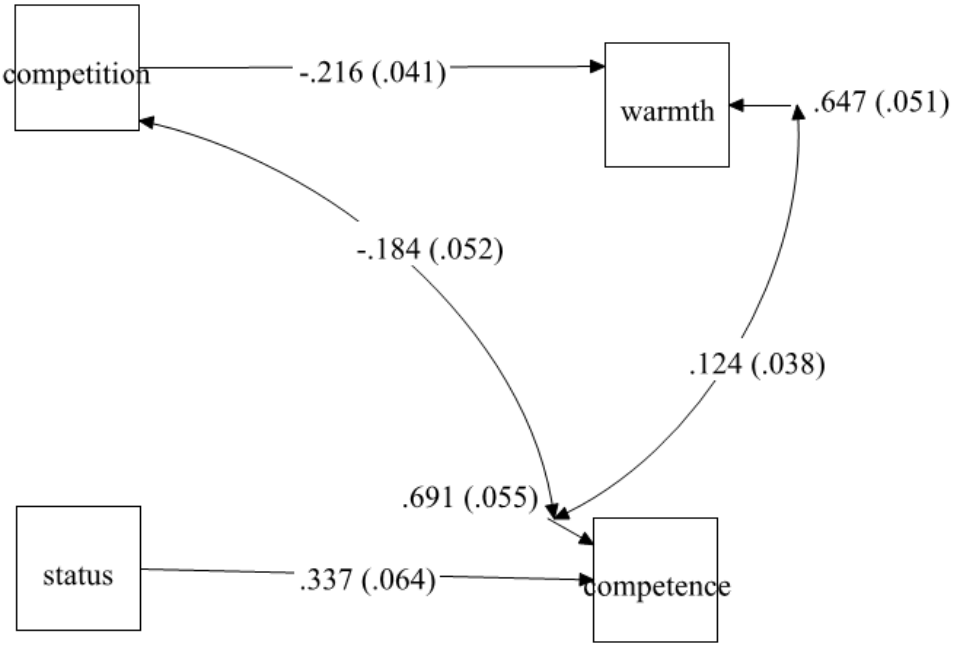

Figure 4: A path model representing the relationships among *warmth, competence, status,* and *competition*. Values on path indicate beta estimates. Values in brackets indicate standard error of the estimate

Hypothesis 2b: Relations between Trait Dimensions and Emotions

Having ascertained that competence and warmth were predicted by status and competition, respectively, I turned my attention to the hypotheses on emotions felt towards Chinese immigrants, since Chinese immigrants on average were found to be higher in competence than warmth (the SCM would predict that this mixed content stereotype would correspond with high levels of envious emotions (envy, jealousy). Since prior research (Brambillia et al., 2012; Lee & Fiske, 2006) provides evidence that Chinese immigrants were most closely associated with the 'high competence, low warmth" ambivalent stereotype within

the SCM typology in studies conducted in the USA and Italy, it is reasonable to expect that the stereotype of this group in Canada conforms to the same pattern. Therefore, the level of envious emotions (envy, jealousy) was expected to be higher in comparison to the three other categories of emotions: contempt, admiration, and pity. A repeated measures ANOVA did not support this analysis: the effect of 'category' of emotion is significant, $F(3,316)= 5.07$, $p=0.002$, partial $eta^2=.05$, but the highest intensity is observed in contemptuous emotions (M=2.59, SD=.80), rather than admiring emotions (M=2.39, SD=.78.), pity emotions (M=2.39, SD=.78.), or envious emotions (M=2.45, SD=1.07). To understand the intensity of perceived envious emotions in relation to the other three categories of emotions, a within subject contrast analyses was conducted. It revealed that envious emotions perceived is significantly weaker than contemptuous emotions, $F(1,318)=5.14$, $p=.02$, partial $eta^2=.02$) and equivalent to admiring emotions ($F(1,318)=.80$, $p=.37$), and pitying emotions, $F(1,318)=.73$, $p=.40$). Hence, the hypothesis that envious emotions would be the highest among the four categories of emotions was not supported.

The next analysis examined the relation between warmth and competence on the one hand, and the four categories of emotions, on the other. Specifically, I expected envious emotion to be a function of relatively high competence and low warmth. As well, pitying emotions were expected to be a function of relatively low competence and high warmth, whereas admiring emotions were expected to be a function of relatively high competence and high warmth, and contemptuous emotions a function of relatively low competence and low warmth. These

hypotheses were tested through regression analyses, by regressing one emotion category on warmth perceptions (centered), competence perception (centered), and their interaction term. This regression was repeated for all four categories of emotions.

For admiring and contemptuous emotions, there was no evidence that warmth or competence predicted these two emotions any differently at different levels of the other variable. That is, there were no interaction of warmth and competence for either emotion (ps>.12). However, the results did show a significant interaction between warmth perception and competence perception in predicting envious emotions, β=-.20, t(315)=-2.46, p=.01. Simple slopes analyses probed the interaction (Aiken & West, 1991) and showed that whereas competence was not associated with envious emotions at higher levels of warmth, t(315) = 1.21, p= .23, they were associated at lower levels of warmth, t(315) = 5.03, p<.001. This suggested that competence did not predict envy when warmth was high, but does predict envy when warmth was low, such that envy was particularly strong when warmth was low and competence was high.

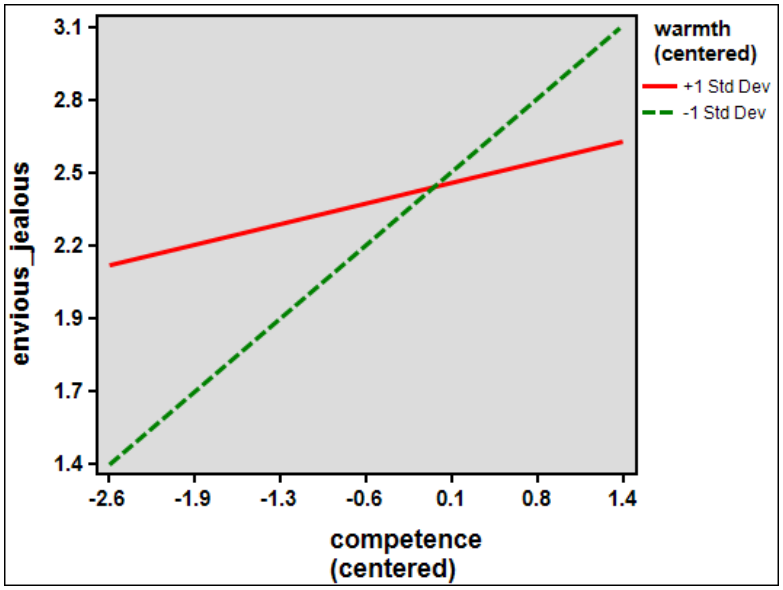

Figure 5: Interaction of perceived competence and warmth on perceived levels of *envying* emotions Canadian felt toward Chinese immigrants. The slope of the broken line is significant, $p<.001$, the slope of the solid line is nonsignificant, $p=.23$.

The analyses also revealed a marginal warmth x competence interaction on pitying emotions, $\beta=-.11$, $t(315)=-1.88$, $p=.06$). Probing this interaction, simple slopes showed that whereas warmth was not associated with pitying emotions at higher levels of competence, $t(315) = .06$, $p= .36$, they were associated positively at lower levels of competence, $t(315) = 3.13$, $p= .002$. This suggests that warmth did not predict pity when competence is high, but did predict pity when competence was low, such that pity was particularly strong when warmth was high and competence was low.

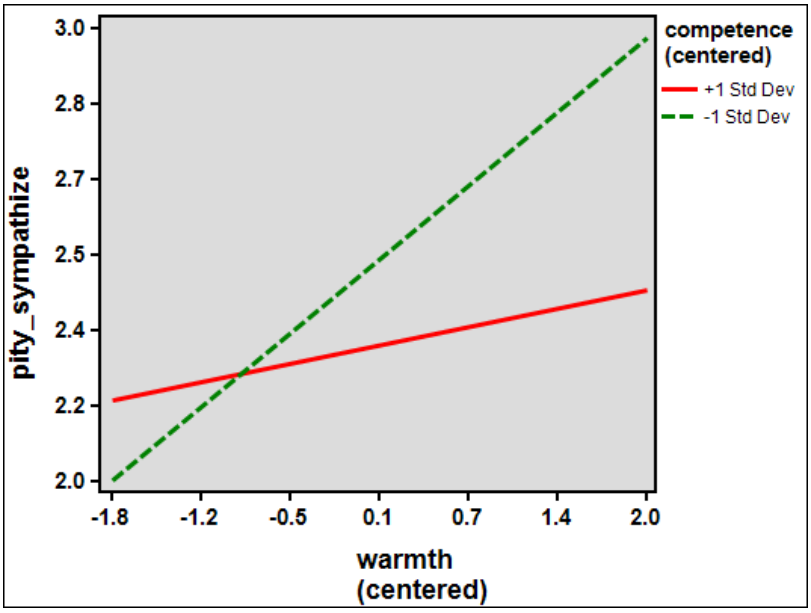

Figure 6: Interaction of perceived competence and warmth on perceived levels of *pitying* emotions Canadian felt toward Chinese immigrants. The slope of broken line is significant, p=.002, the slope of the solid line is nonsignificant, p=.36.

Hypothesis 2c: Relations between Trait Dimensions and Behavioral Tendencies

Given that Chinese immigrants were stereotyped to be relatively high in competence and low in warmth, and that the warmth dimension was positively related to active behavioral tendencies (facilitation or harm) the competence dimension is positively related to passive behavioral tendencies (facilitation or harm), passive facilitation and active harm were expected to be higher than passive harm and active facilitation. A repeated measures ANOVA revealed a significant effect of the type of behavioral tendency, $F(3,316)=69.86$, $p<.001$, partial eta^2 = .18. Within-subject contrast analyses revealed that the level of "passive facilitation": cooperate with, associate with, tolerate (M=3.46; SD=.67) was higher than all three other levels behavioural tendencies: "active facilitation": help, protect, assist ($F(1,318)=250.35$, $p<.001$, partial eta^2= .44, M=2.86,

SD=.75,), "active harm": fight, attack, compete with (F(1,318)=198.65, p<.001, partial eta^2 = .38, M=2.62, SD=.67), "passive harm": exclude, demean, ignore (F(1,318)=65.65, p<.001, partial eta^2 =.18, M=2.84, SD = .88). This suggested that Canadians were perceived by undergraduate students to engage in passive facilitation with Chinese immigrants at a higher level than other types of behaviors. Contrast analyses among the three remaining emotions revealed that "active harm" was significantly lower than the two types of behavioral tendencies, "passive harm" (F(1,318)=22.18, p<.001, partial eta^2= .07) and "active facilitation" (F(1,318)=.16.28, p<.000, partial eta^2= .05), whereas these two behavioral tendencies are not significantly different from each other (F(1,318)=.07, p=.79).

The BIAS Map proposes that the warmth dimension was associated with active behavioral tendencies (facilitation or harm), and the competence dimension to be associated with passive behavioral tendencies (Cuddy et al, 2007). That is, groups stereotyped to be high (low) in warmth are expected to elicit active facilitation (harm). As predicted, active behavioral tendencies were predicted by warmth ratings, and passive behavioral tendencies were predicted by competence ratings (see Table 2). Specifically, active harm was negatively correlated with warmth ratings, whereas active facilitation was positively correlated with warmth ratings. Likewise, passive harm is negatively correlated with competence ratings, whereas passive facilitation was positively correlated with competence ratings. Thus, the linear relationship between warmth and active behavioural tendencies as well as competence and passive behavioural tendencies was supported.

Table 2. Correlations between Trait Dimensions in SCM and Behavioural Tendencies		
	Warmth	Competence
Active facilitation	**.34****	.26**
Passive facilitation	.26**	**.29****
Active harm	**-.15***	-.13*
Passive harm	-.29**	**-.24****

**p < .05; **p < .01*

Since it has been suggested in past research that behavioural tendencies are predominantly predicted by emotions felt (e.g., admiration, pity, contempt, envy) rather than trait perceptions directly (e.g., competence, warmth; Cuddy et al., 2007), I conducted a series of analyses that regressed each predictor behavioural tendency on trait dimensions and theoretically relevant emotions. To find out whether trait perceptions or emotions take priority over the other, relative boosts to the percentage variance explained using these two approaches are compared: (1) adding the two emotion predictors to the two trait predictors vs. (2) adding the two trait predictors to the two emotion predictors. Contrary to past findings that R^2 of models improved when adding emotions to traits, but not when traits were added to models (hence supporting the emotion priority hypothesis), I found that both approaches improved the R^2: range of improvement in R^2 for method (1) was .02 to .13, and range of improvement for method (2) in R^2 was .01 to .13. Detailed statistics showing both regression models using both approaches for each behavioral tendency are presented in Table 4a and 4b (Appendix D). Hence, there is no evidence to support the claim that emotions are stronger than trait dimensions in as predictors of behavioral tendencies. Rather, both cognition and emotions would seem to predict behavioural intentions.

Hypothesis 3: Relations between Trait Dimensions and Speech Samples

After examining hypotheses related to antecedents and outcomes of warmth and competence perceptions, I moved on to the third objective of the analyses – perceptions of accented speakers, and focused analyses of the speech samples. To briefly recap, every participant rated one of five blocks of 14-20 speech samples. Speech samples in each block were distinct from the other blocks. In total, 92 speech samples were rated. To assess Hypothesis 3 directly, I have used "speakers" (who each produced one speech sample), as the unit of analysis, instead of "raters", as has been done so far in testing previous hypotheses, because the focus is shifted to *how speakers are perceived*, rather than *how listeners perceive.* In turn, the attributes on which the speech samples are rated in the two ethnicity specification conditions are traced to the same speaker. Hence, paired samples t-test, instead of independent samples t-test, will be used for testing the hypothesis that relates to the means comparisons between the two ethnicity specification conditions.

Before testing the core hypotheses, I examined whether accents can facilitate the identification of ethnicity, which happens implicitly before stereotypic impressions are formed. To quantify correct identification of speakers' language as Chinese among raters who were not informed beforehand of the speakers' ethnicity, a metric is computed by dividing the total number of correct guesses (a Chinese language) by the total number of guesses, summed across all participants who made ratings of the speech samples. In other words, the *hit ratio*, is the percentage of "Chinese" guesses out of all guesses at the native language. On average across the speakers, the hit ratio is 52%, which means that 69% of the

total guesses (each rater could make up to two guesses), fell into one of the Chinese languages (e.g. "Chinese", Mandarin, Cantonese, Taiwanese). In addition, 37% of the guesses were East Asian languages other than Chinese (e.g. Japanese, Korean, Vietnamese), and 10% of the guesses were languages located outside of East Asia (e.g. Arabic, Russian, Czech, Hindi). Bivariate correlational analyses examined the relations between accentedness ratings[3] and hit ratio (proportion of "Chinese" guess out of the total number of guesses). Supporting the hypothesis that accents are used by raters to identify the native language of the speakers, analyses yielded a positive correlation between accentedness and hit ratio (r=.21, p=.05). This suggests that speakers with more accented speech are more likely to be identified as native speakers of a Chinese language, which is consistent with the presumption that accents facilitate detection of ethnicity.

To examine hypothesis 3, a paired samples t-test was conducted between the mean ratings of warmth and competence of all speech samples. Means and standard deviations of the variables are presented in Table 6 (Appendix D).Contrary to expectations, warmth ratings were significantly higher than competence (Cohen's d=.63, t(91)=6.07, p<.001). This pattern holds regardless of whether or not of the speakers' ethnicity was specified beforehand (Cohen's d=.68, t(91)=6.49, p<.001), or not (Cohen's d=.55, t(91)=5.28, p<.001). This finding is in the opposite direction of what is found for cognitive stereotypes. I

[3] Accentedness ratings are coded in reverse to facilitate more intuitive interpretation. After the reverse coding, a higher score on accentedness correspond to a rating of stronger accent.

performed additional analyses to examine the potential explanations of this surprising finding. I also examined the bivariate correlation between the warmth and competence ratings of the speakers. Similar to the perceptions of the stereotypes, warmth and competence perceptions are positively correlated with each other (r=.53, p<.001)

First, a series of paired samples t-test is performed to examine whether informing raters beforehand of the speaker's ethnicity had any effect on how speech samples are rated. It was revealed that specifying the speakers as Chinese immigrants did not induce significant differences on the judgment of comprehensibility (t(91)=1.38, p=.17), fluency (t(91)=.-.78, p=.44), ease of expression (t(91)=.26, p=.79), and competence ratings (t(91)=.92, p=.36). However, specifying the ethnicity/immigration status led to lower ratings on clarity (t(91)=-2.56, p=.01), and notably, on accentedness (t(91)=-3.46, p=.001). As well, it led to significantly higher ratings on warmth ratings (t(91)=5.22, p<.001), and marginally higher ratings on competence ratings (t(91)=1.71, p=.09). This pattern of results suggests that specifying ethnicity/immigration status beforehand did not lead to the predicted stereotype (i.e., higher competence than warmth). In fact, doing so appeared to have accentuated the unexpected pattern, suggested by the significant increase in warmth ratings in the specified condition.

To examine how specification of speaker as a Chinese immigrant influenced the warmth vs. competence ratings received by the speakers, a 2 (unspecified vs. specified) x 2 (warmth vs. competence) within subjects repeated measures ANOVA was performed. A significant interaction was found,

$F(1,91)=14.92$ $p<.001$, partial $eta^2=.14$). Breaking down this interaction, repeated measures ANOVA was performed separately for warmth ratings (specified vs. unspecified) and competence ratings (specified vs. unspecified). The analyses revealed that the interaction occurred in the warmth ratings given to the speakers: specifying the ethnicity of the speakers significantly upgraded the speakers on warmth ($F(1,91)=27.2$, partial $eta^2=.23$, $p<.001$, $M_{specified}= 3.61$, $SD_{specified}= .28$, $M_{unspecified}=3.38$, $SD_{unspecified}=.39$), but not on competence ($F(1,91)==2.91$, $p=.09$, $M_{specified}= 3.35$, $SD_{specified}= .36$, $M_{unspecified}=3.38$, $SD_{unspecified}=.39$). This result confirmed that specifying the ethnicity of speakers beforehand caused speakers to evaluate them as more warm.

More analyses were conducted to investigate other possible factors underlying the scores speakers received on trait dimensions. One likely explanation is that the stereotype of high competence and low warmth is only observable in speakers who sounded considerably "Chinese", rather than not. To test this explanation, I sorted the speakers into two groups, "high" and "low", according to the likelihood of being guessed to have Chinese as native language, using the median score on hit ratio (proportion of "Chinese" guesses over total number of guesses on native language) as the criterion for sorting. Then, I conducted a 2 (between subject factor: high hit ratio vs. low hit ratio) x 2 (within subject factor: warmth vs competence) mixed ANOVA. No significant interaction was found, $F(1,90)=. 1.23$, $p=.27$, partial $eta^2=.01$), suggesting that the warmth-competence relationship did not vary systematically with how likely raters are in

correctly guessing the speakers' native language as Chinese (i.e., how "Chinese" speakers sounded).

Next, I explored another possible explanation that accent strength may influence the warmth-competence relationship. Similar to the previous analyses, speakers were sorted into two groups, "high" and "low", according to how strong their accents were rated, using the median score on "accentedness" as the criterion for sorting. Then, I conducted a 2 (between subject factor: stronger accent vs. weaker accent) x 2 (within subject factor: warmth vs. competence) mixed ANOVA. A significant interaction was found, $F(1,90)=40.95$, $p<.001$, partial $eta^2=.313$). To breakdown this interaction, independent samples t-tests were conducted to compare warmth scores and competence scores in high vs. low accent groups. Scores were lower in the stronger accent group for warmth ($t(90)=-.276$, $p=.007$) and competence ($t(90)=-9.12$, $p<.001$). From the t-values, it appears that stronger accents compromised not only warmth but also competence perceptions. Examining the same interaction yielded by the ANOVA previously, a paired-sample t-test between warmth and competence rating was computed separately within each accent group (strong and weak). Analysis revealed that perception of speakers' warmth was significantly higher than competence only in the strong accent group (diff=.38, $t(45)=.9.94$, $p<.001$), but not in the weak accent group (diff=.02, $t(45)=.61$, $p=.55$). Taken together, these analyses suggest that, among Chinese speakers with weaker accents, there is no difference in perception on warmth and competence. Among speakers with stronger accents, however, perception on competence is lower than warmth. This appears to be driven by a

larger penalty on competence than on warmth, brought about by speaking with stronger accents.

Table 3.

Competence and Warmth Ratings for speakers with Weaker vs. Stronger accents

	Weaker Accents		Stronger Accents	
	M	SD	M	SD
Competence	3.62	.28	3.12	.24
Warmth	3.64	.26	3.49	.26

Discussion

The objectives of this study were twofold. The first concerned Canadians' stereotypes of Chinese immigrants in light of the two fundamental dimensions of warmth and competence in social perception described by the Stereotype Content Model. The second concerned the correspondence between stereotypes and impressions formed from immigrants' speech. I will now summarize the findings, and discuss them in relation to these two objectives.

I start with the findings from the attitudes questionnaire to lay the foundations for interpreting the findings from the speech assessment task. To begin, it was found that the stereotype of Chinese immigrants that the participants felt were held by Canadians in general is mixed in valence demarcated along the two fundamental dimensions of social perception: As a group, Chinese immigrants are stereotypically perceived to be higher in competence than in warmth. This finding is consistent with research based in the USA and Italy,

which suggest that Asian immigrants and minorities are perceived as competent but less warm. However, it is important to note that evaluations on both warmth and competence are equal to or above the midpoint of the scale, suggesting that on average Canadians are perceived to have relatively positive perceptions of Chinese immigrants. However, it is possible that participants were unwilling to evaluate an ethnic outgroup (or this particular ethnic group) negatively (i.e., the midpoint is the lowest point they are willing to give). Future research that compares different ethnic groups on these dimensions could help to disambiguate these possibilities (see Kil & Noels, 2013).

Perceptions of warmth and competence were hypothesized to be predicted by two socio-cultural variables—*status* (occupational, economic, and educational attainment) and *competition* (degree of competition posed to ingroup members). Correlational and path analyses replicated past findings: as far as perceived Canadians' stereotypic impressions of Chinese immigrants are concerned, competence is positively predicted by status, and warmth is negatively predicted by competition. Further, the path analytic model revealed two non-directional paths between competition and competence, and between competence and warmth. The non-directional paths found in the path analytic model suggest a possibility of examining this direction further. The positive correlation between warmth and competence might reflect a tendency for multiple positive traits to be bestowed concurrently to positively perceived targets (Cooper, 1981). The negative correlation between competitiveness and competence calls for a need for further probing. This relationship has been reported (sometimes positive and sometimes

non-existent) in a handful of correlational studies (Fiske et al., 2002, Study 1, Lee & Fiske, 2006). While Caprariello et al. (2009)'s study found that manipulating the competitiveness of the target group experimentally did not influence the perception of the group's competence, observing the effect on competitiveness by manipulating competence perception has yet to be done. Such inquiry can clarify whether the relationship between these two variables is causal or dependent on other variables.

Next, I moved on to the predicted consequences of warmth and competence evaluations with regards to emotional and behavioural tendencies. Although the statistical snapshot provided by the mean comparison suggested that the stereotype of Chinese immigrants was more competent and less warm, the same participants did not find Canadians felt greater envy, relative to other types of emotions (admiration, contempt, pity) toward Chinese immigrants. This was contrary to the findings with the low warmth, high competence cluster in the United States. In fact, on average, the most strongly perceived emotion was contempt. It is unclear why Canadians were perceived to feel contempt towards Chinese immigrants more so than any other emotion. It is unclear why Canadians were perceived to feel contempt towards Chinese immigrants more so than any other emotion. Putting the effect size, .05 in partial eta-squared, in context, it is equal to approximately .23 in "f" (Cohen, 1988), which is a small-medium effect size , according to guidelines laid out in Cohen 1992 for one-way ANOVA. On the other hand, competence might need to be extremely high to elicit envy.

The unexpected finding that contempt, rather than envy, was the strongest emotion that our sample thought Canadians felt toward Chinese immigrants is that subgroups stereotypes likely exist within the larger stereotype of Chinese immigrants. To some people, Chinese immigrants might be the professionals who relocate to Canada for further career advancement, or international students who come to Canada to seek higher education (high in competence and low in warmth), whereas others may conjure up images of minimum wage workers who send money back to their home country to help with the subsistence of their family (low in competence and not necessarily high in warmth; Lee & Fiske, 2006). Moreover, at the time of data collection, participants' perception of Chinese immigrants might be coloured by reports of current events in the news media. For instance, since late 2012, workers' unions have claimed that a mining company based in the British Columbia hired 200 migrant workers[4] from China in favour of Canadian miners qualified for these positions. This news might have inadvertently painted unfavourable pictures of "Chinese immigrants" as competitors who snatch jobs away from Canadians. Similarly, although our participants are from Alberta, there is an awareness that property prices elsewhere in Canada, such as Vancouver, are kept too high to be affordable by Canadians with modest incomes due to purchasing demands from wealthy immigrants, many of whom are Chinese. With these subgroups in mind, finding relatively high level contemptuous emotions is not surprising.

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[4] The participants, who are undergraduate students in 100 level course, may not have been able to distinguish immigrants from migrant workers.

Although the means comparison of different types of emotions yielded unexpected results, the regression analyses yielded findings that corroborated theoretical predictions. Envy was driven by stereotypes of Chinese immigrants that combined relatively low levels of warmth and relatively high levels of competence. This suggests that envy, an upward contrastive emotion, is a product of respect, but not liking. Findings on behavioural tendencies also replicated previous findings: warmth predicted active orientations, whereas competence predicted passive orientations. That is, participants who believe that Canadians perceive Chinese immigrants to be high (low) in warmth are more likely to actively facilitate (harm) them. Likewise, participants who perceive Canadians to perceive Chinese high (low) in competence are more likely to passively facilitate (harm) them.

The driving question of this study was whether the evaluation of Chinese immigrants on warmth and competence formed from listening to speech samples corresponds with evaluations based on their stereotypic impressions. The results suggested the two did not correspond. Whereas the stereotypical impressions of Chinese immigrants are higher in competence than in warmth, the overall impression formed from listening to Mandarin accented speakers were higher in warmth than in competence. Therefore, under the current experimental paradigm, warmth and competence perception of Chinese immigrant stereotypes and Chinese immigrant speakers are incongruent with each other.

Comparing speakers with stronger accents to speakers with weaker accents revealed that competence was lower than warmth perception only for the former,

but not for the latter. Speakers with stronger accents are also rated as less competent *and* less warm than speakers with weaker accents, hence suggesting that stronger accents penalize *both* competence and warmth perceptions, and the penalty is heavier for competence than for warmth. Although this effect was not anticipated by an a priori hypothesis, it is a novel finding in the social psychological consequences of nonstandard speech. Stated in the vocabulary in language attitudes researchers, nonstandard speakers might be compromised more on status-related attributes, such as respect, than solidarity-related attributes, such as likeability.

To investigate whether the speech judgment task was influenced by stereotype-based expectancies, I examined whether informing raters ahead of time that the speakers are Chinese immigrants leads to more stereotypic judgments (that is, a larger "competent over warm" gap) The findings were surprising: knowing that the speakers are Chinese immigrants led to significantly higher warmth ratings, and marginally higher competence ratings. This suggests that the act of informing participants might have induced participants to respond in socially desirable manners to avoid appearing prejudiced, to imagined others, or to self (Paulhus, 1984). Alternatively, the warmth attributes might be upgraded because raters expected newcomers to be more accommodating. In all, the reasons for the differences between the two specification conditions are inconclusive.

Limitations and Future Directions

I will now explore the possible explanation for the unexpected findings in this study, and modifications to the current study that make future exploration of

the same research questions more fruitful. Then, I will discuss the implications, applied and theoretical, suggested by the findings of this study.

Although the findings from the two channels of impression formation, cognitive stereotype and evaluation of speakers, diverged, I argue that this divergence could be reconciled. Evaluating speakers who are Chinese immigrants based on their actual speech and evaluating one's stereotypic impressions of Chinese immigrants involved distinct processes. The former makes a multitude of individuating information (such as laughter, pitch variation, and individual creativity in narrating the comic strip) available for impression formation of every speaker, whereas the latter is an assessment of an abstract representation of "Chinese immigrants" as a group in Canada. Social psychologists have proposed that impression formation occurs on a continuum: it begins with processes oriented to detecting categories (that is, social groups) that targets under evaluation belong to, and then move on to processes that seeks out information about the targets as individual (Fiske & Neuberg, 1990, Fiske et al, 1999). After initial categorization of target (in this study, accent is the earliest usable information for ethnic categorization), perceivers who are still motivated to form impressions would continue to utilize additional information available to engage in "piecemeal" integration of attribute-by-attribute analysis of target person, as long as such individuating information is available. More often than not, the "piecemeal" integration would result in impressions that are not fully consistent with the prototype in the categories or subcategories detected at the outset

When participants listened to speech samples in this study, additional information for attribute-by-attribute analyses of the target person on warmth and competence were available. For instance, accommodative intentions inferred from the speakers' efforts to speak in a non-native tongue are possible grounds for higher ratings on warmth attributes. Ratings on competence attributes, on the other hand, might have been compromised by the framework set up by the channel and format of the evaluation: obtaining information about a person entirely through listening to him or her speak would make competence-related attributions with respect to language and speech especially salient, and encourage listeners to overweigh linguistic competence in judging the speakers' competence (presumably, in their everyday functioning in the immediate English-speaking Canadian social environment). Including other aspects of competence that are imperceptible through the verbal channel (e.g., social and technical competence in non-linguistic domains) would have been impossible.

Still, I do not mean to suggest that examining the stereotype suggested by an accent will be a futile endeavour. The experimental paradigm in this study can be tweaked to allow systematic examination of this research question. Even though the content of the speech samples used in the present study were designed to be similar across speakers, the extemporaneous nature of the speeches contained additional information that can influence warmth and competence judgments. Hence, minimizing the individuating information available for impression formation would permit a systematic examination of stereotypes elicited by accents. Since Lambert and his colleague's (1960) original matched

guise study, many researchers in language attitudes have employed standardized tests in their research paradigm that involved listening to multiple speakers. To improve upon the current design, speech stimuli can be prepared following the procedures in Rakic et al. (2011). Nonnative speakers who speak English fluently with a highly discernible Mandarin accent could be trained to make statements neutral in meaning at the same pace and intonation to create speech samples that preclude influence of extraneous individuating information. The controlled quality of such speech samples will be preferred to the extemporaneous nature of the stimuli used in the current study. Conducted this way, it would be feasible to examine the stereotype contents elicited by a recognizable accent in isolation, and perform a systematic test of the hypothesis that trait evaluation of Chinese immigrant speakers and cognitive stereotype of Chinese immigrants in warmth and competence are consistent with each other. Still, this approach has its downsides. The ecological validity of such an experiment might be compromised by the simulated nature of the speech stimuli. As the naturalistic quality of the current speech samples will be lost, interaction between accent and other features of the speech would be impossible to examine.

Further, comparing speech samples produced by both non-native accented speakers to that produced by native speakers would provide a reference group against which evaluations of Chinese immigrant speakers can be made. Further, this approach makes it possible to map out group-level impressions driven by accents on the two-dimensional space, an important feature of the Stereotype Content Model. Doing so enables direct comparison between impressions formed

from accent detection and recognition, and stereotypical evaluations of social categories. Both groups of speech stimuli (native accented and non-native accented) would be pretested to ensure they are equivalent to each other on all diagnostic qualities, especially on comprehensibility, except for accentedness. Also, including questions on socio-structural variables (antecedents of trait evaluations) after the raters have listened to each speech sample can clarify the underlying bases of the competence and warmth evaluations given to the speakers.

Applied Implications

What can these findings tell us about how Canadians react to Chinese immigrants in Canada? Findings on behavioural inclination would, therefore, be most relevant to understanding how mainstream Canadian society interacts with Chinese immigrants. Perceived discrimination, consisting of unjust treatment of people based on the social groups they belong to, is a critical determinant of immigrants' acculturative experience in the receiving society (Noh & Kaspar, 2003). Fortunately, the relatively high level of contemptuous emotions does not correspond with active harm behavioural tendencies, predicted by Cuddy et al. (2007). The higher level of passive facilitation (associate with, cooperate with, tolerate), in comparison to three other types of behavioural tendencies, suggest that Chinese immigrants, at the group level, can potentially attain favourable outcomes as long as they possess reasonable levels of agency and means to move themselves toward these ends. Such agency and means tend to be afforded by socio-economic status. At the same time, these findings suggest that Canadians

might be lukewarm in helping Chinese immigrants, to the detriment of those who are ill-equipped to help themselves.

This pattern of dynamics has implications for help-giving behaviour, especially in education settings, where teacher-to-student and peer-to-peer help is consequential upon students' academic engagement and outcomes. Chinese immigrant students might be perceived by teachers to need relatively little help due to their high ability and neglect students who are in true in need of help, in favour of spending additional time on students from ethnic groups that are stereotyped to be less competent. Weiner (1980) found that lending of class notes (a measure of help-giving behaviour) was judged most favourably when the cause of the need for help was perceived to arise from uncontrollable factors, such as ability or teacher shortcomings, and least favourably when the cause was perceived to be external to the actor and controllable (e.g. lack of effort). In the context of my findings, Chinese immigrants, who are stereotyped to be high in competence, might have the perception working against them because their need for help might be attributed to lack of effort. To attenuate these damaging consequences, teachers should be alerted to the automatic nature of stereotyping processes, and the stereotype contents that they might have learned but was not aware of. In other words, students, regardless of the stereotype of their ethnic groups, would receive attention most indicative of their real needs if teachers would attenuate the intrusion of stereotypes in their assessment and decision with regard to individual students. Besides, the likelihood for newcomers to be perceived and evaluated as individuals, rather than merely as a member of the

group they belong to, speaks positively to the integration of newcomers to receiving societies.

Conclusion

In sum, this study has made contribution to the research literature in two respects. First, it increased the understanding of how Chinese immigrants are stereotyped in Canada—how Canadians in general perceive, feel about, behave toward them. Second, it contributed to research in attitudes toward nonstandard accents using a novel theoretical framework—the Stereotype Content Model, which emphasizes on two dimensions of social perception: competence and warmth.

Understanding perceptions of competence in Chinese immigrants contributes to knowledge about immigrant integration at broader levels. Hiring decisions are influenced by applicants' professional qualifications as well as communicative competence (afforded by oral proficiency), often a prerequisite for leadership, influence, and interpersonal trust. Our findings reveal interesting directions for future research geared toward understanding these obstacles that immigrants and minorities face. Accents, in particular, can amount to substantial disadvantages for non-native speakers in competence-stressing situations due to the subtlety of their influence.

Although the research question (whether accents elicit stereotypes) could not be directly answered due to of the experimental stimuli used, the possibility that individuating information in naturalistic interactions is automatically sought

after in impression formation of outgroup members is reassuring. This goes to show that the detrimental effects of nonstandard speech can be mitigated by a myriad of factors in real life communication processes, and suggest a potential for reducing accent-based prejudice and discrimination through elucidating these mechanisms.

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Appendices

Appendix A. Attitudes Questionnaire

[Speech Evaluations, 14-20 in total)

Please assess the speech sample that you just heard using the following scales.

1. Comprehensibility

Impossible To understand								Extremely easy to understand
1	2	3	4	5	6	7	8	9

2. Accentedness

No foreign accent								Very strong foreign accent
1	2	3	4	5	6	7	8	9

3. Clarity

Not clear At all								Perfectly Clear
1	2	3	4	5	6	7	8	9

4. Fluency (rate of pauses and hesitations)

Extremely dysfluent								Extremely Fluent
1	2	3	4	5	6	7	8	9

5. Ease of oral expression

Not at all comfortable								Very Comfortable
1	2	3	4	5	6	7	8	9

Please provide your impression of the strength of the speaker's identity on the following two scales.

6. Ethnic Identity

Very weak Ethnic identity				Very strong Ethnic Identity
1	2	3	4	5

7. Canadian Identity

Very weak Canadian identity				Very strong Canadian Identity
1	2	3	4	5

Please give YOUR GENERAL IMPRESSION of the person you have just heard with regards to the following personality traits:

1. Good-naturedness

Not at all good-natured				Very good-natured
1	2	3	4	5

2. Intelligence

Not at all intelligent				Very intelligent
1	2	3	4	5

3. Warmth

Not at all warm				Very Warm
1	2	3	4	5

4. Friendliness

Not at all friendly				Very friendly
1	2	3	4	5

5. Competence

Not at all competent				Very competent
1	2	3	4	5

6. Efficiency

Not at all efficient				Very efficient
1	2	3	4	5

7. Capability

Not at all capable				Very capable
1	2	3	4	5

8. Trust-worthiness

Not at all trust-worthy				Very trust-worthy
1	2	3	4	5

9. What is this speaker's native language? You can have two guesses. Put your most confident one first.
Guess 1:_____
Guess 2:_____

Societal Impression

We are interested in how you think **people in Canada** view **Chinese immigrants** in general. We are not asking how you personally view this group, but how **Canadians in general** view them. Please circle the numbers that correspond to your impression.

1. Good-naturedness

Not at all good-natured				Very good-natured
1	2	3	4	5

2. Intelligence

Not at all intelligent				Very intelligent
1	2	3	4	5

3. Warmth

Not at all warm				Very Warm
1	2	3	4	5

4. Friendliness

Not at all friendly				Very friendly
1	2	3	4	5

5. Competence

Not at all competent				Very competent
1	2	3	4	5

6. Efficiency

Not at all efficient				Very efficient
1	2	3	4	5

7. Capability

Not at all capable				Very capable
1	2	3	4	5

8. Trust-worthiness

Not at all trust-worthy				Very trust-worthy
1	2	3	4	5

9. How prestigious are the jobs typically achieved by Chinese immigrants?

Not at all prestigious				Very prestigious
1	2	3	4	5

10. How economically successful have Chinese immigrants been?

Not at all successful				Very successful
1	2	3	4	5

11. How educated are Chinese immigrants?

Not at all educated				Very educated
1	2	3	4	5

12. If Chinese immigrants get special breaks (such as preference in hiring decisions), this is likely to make things more difficult for other Canadians.

Not at all true				Very true
1	2	3	4	5

13. The more power Chinese immigrants have, the less power other Canadians would have.

Not at all true				Very true
1	2	3	4	5

14. Resources that go to Chinese immigrants are likely to take away from resources that go to other Canadians.

Not at all true				Very true
1	2	3	4	5

Societal Impression

We are interested in how you think **people in Canada** *feel* about and *behave* toward **Chinese immigrants** in general. We are not asking about your personal feelings and behaviors in regard to this group, but **how Canadians in general** feel about and behave toward them.

To what extent do **people in Canada** tend to have to following **feelings** toward **Chinese immigrants**?

1. Contempt

Not at all				Extremely
1	2	3	4	5

2. Disgust

Not at all				Extremely
1	2	3	4	5

3. Admire

Not at all				Extremely
1	2	3	4	5

4. Proud

Not at all				Extremely
1	2	3	4	5

5. Pity

Not at all				Extremely
1	2	3	4	5

6. Sympathy

Not at all				Extremely
1	2	3	4	5

7. Envious

Not at all				Extremely
1	2	3	4	5

8. Jealous

Not at all				Extremely
1	2	3	4	5

To what extent do **people in Canada** tend to engage the following **behaviors** toward Chinese immigrants?

1. Help

Not at all				Extremely
1	2	3	4	5

2. Protect

Not at all				Extremely
1	2	3	4	5

3. Fight

Not at all				Extremely
1	2	3	4	5

4. Attack

Not at all				Extremely
1	2	3	4	5

5. Cooperate with

Not at all				Extremely
1	2	3	4	5

6. Associate with

Not at all				Extremely
1	2	3	4	5

7. Exclude

Not at all				Extremely
1	2	3	4	5

8. Demean

Not at all				Extremely
1	2	3	4	5

9. Assist

Not at all				Extremely
1	2	3	4	5

10. Compete with

Not at all				Extremely
1	2	3	4	5

11. Tolerate

Not at all				Extremely
1	2	3	4	5

12. Ignore

Not at all				Extremely
1	2	3	4	5

Appendix B. Supplementary analyses for Hypothesis 2b

Fiske et al. (2002) and Cuddy et al (2007) examined combinations of different levels of warmth and competence by clustering groups according to their given ratings on warmth and competence. Each cluster consisted of a number of groups. For example, the 'high competence low warmth' cluster consisted of groups such as Asians, Jews, rich people, and others, and yielding four cluster in total. Then, they made comparisons on key dependent variables--emotions and behavioral tendencies--by comparing the mean score of each cluster to the mean scores averaged across the other three (that is, contrast analyses). Given that the present study has only one target group, forming clusters of groups according to their rating is not possible. Still, we want to analyze the data in a way that is comparable to what has been done by previous researchers, in order to properly test the plausibility of this model in explaining the phenomenon of interest. To make my analysis comparable to what previous researchers have done, I created four distinct groups that corresponded to each cluster used by Fiske and her colleagues on the two-dimensional space. First, scores on societal perceptions of warmth and competence are split according to their median values, such that every participant can be identified by whether they rated Chinese immigrants above or below the median on these two scales. Next, four groups are created based on the information obtained in the previous step. Participants who rated below the median on both warmth and competence are sorted in to the low warmth, low competence group (LWLC); participants who rated above the median on both warmth and competence are sorted into the high warmth, high

competence group (HWHC); participants who rated above the median on warmth and below the median on competence are sorted into the high warmth, low competence group (HWLC); participants who rated above the median on warmth and below the median on competence are sorted into the low competence, high competence group (LWHC).

Following the analyses steps in Fiske et al. (2002) and Cuddy et al. (2007), planned contrast analyses, in addition to one-way analysis of variance, were performed to compare the four groups on the target emotions. The means and standard deviations of envious emotions felt in each group are presented in Table 5a. I focused on envious emotions (envy, jealousy), the target emotion for envious stereotypes. According to the predictions of the Stereotype Content Model, groups that are seen as competent but not warm would elicit envy and jealousy. As expected, highest ratings of envious emotions toward Chinese immigrants came from the LWHC group (M=2.79, SD=1.02), compared to the three other groups (M=2.33, SD=1.06), $t(315)=3.28$, $p=.001$). This suggest that participants, who, relative to other participants, see Chinese immigrants to be perceived as lower in warmth and higher in competence by other Canadians tend to agree that Canadians in general feel more envious emotions toward Chinese immigrants.

Table 4a. N, Means, Standard Deviations of Envious Emotions felt in each group.

Groups after **Median Split**	N	M	SD
1. Low Warmth, Low Competence	105	2.21	1.09
2. High Warmth, High Competence	91	2.55	.94

3. High Warmth, Low Competence	49	2.23	1.16
4. Low Warmth, High Competence	74	2.79	1.02

I also conducted one-way ANOVA and planned contrasts for envious emotions using an alternative way of grouping. Instead of sorting participants into four groups by following the same procedures as above, but using the mid-point of the rating scale (three, on a five-point scale) instead of the median score. The means and standard deviations of envious emotions felt in each group are presented in Table 5b. As expected, highest ratings of envious emotions toward Chinese immigrants came from the LWHC group (M=2.67, SD=1.05), compared to the three other groups (M=1.52, SD=1.07), $t(315)=3.16$, $p=.002$). This suggest that participants, who, relative to other participants, see Chinese immigrants to be perceived as lower in warmth and higher in competence by other Canadians tend to agree that Canadians in general feel more envious emotions toward Chinese immigrants.

Table 4b. N, Means, Standard Deviations of Envious Emotions felt in each group.

Groups after **Mid-point Split**	N	M	SD
1. Low Warmth, Low Competence	73	2.14	1.09
2. High Warmth, High Competence	116	2.52	1.00
3. High Warmth, Low Competence	24	2.06	1.12
4. Low Warmth, High Competence	106	2.67	1.05

Table 5. Inter-correlations between trait dimensions and hypothesized antecedents, emotional, and behavioral outcomes.

	1	2	3	4	5	6	7	8	9	10	11
Trait Dimensions											
5. Warmth (societal)											
6. Competence (societal)	.27**										
7. Status (societal)	.13*	.31**									
8. Competition (societal)	-.29**	-.22**	-.06								
Emotions											
9. Contempt (contempt, disgust)	-.32**	-.23**	-.021	.22**							
10. Admiration (admire, proud)	.32**	.38**	-.15**	-.27**	-.07						
11. Pity (pity, sympathize)	.13*	-.05	-.09	-.09	.22**	.26**					
12. Envy (envious, jealous)	.04	.24**	.42**	-.03	.25**	.37**	.11*				
Behaviors											
13. Active Harm	-.15**	-.13*	.10	.20**	.34**	-.05	.08	.24**			
14. Active Facilitation	.34**	.26**	.09	-.18**	-.22**	.39**	.23**	.05	-.14*		
15. Passive Harm	-.29**	-.24**	-.06	.16**	.45**	-.17**	.17**	.05	.44**	-.41**	
16. Passive Facilitation	.26**	.29**	.15**	-22**	-.20**	.28**	.10	.07	-.25**	.56**	-.46**

**p< .05; **p< .01*

Table 6. Mean and Standard Deviation of speech criteria and personality judgments across conditions.

	Unspecified			Specified (Chinese immigrants)			Difference [unspecified – specified]	
	M	SD	N	M	SD	N	t (df)	p
Evaluation of Speech Attributes (Scale:1-9)								
1. Comprehensibility	5.19	1.14	46	5.28	1.35	46	1.38 (91)	.17
2. Accentedness	6.78	.90	46	6.62	.98	46	- 3.46 (91)	.001
3. Clarity	5.05	1.36	46	4.90	1.39	46	-2.56 (91)	.01
4. Fluency	4.09	1.47	46	4.06	1.56	46	-.78 (91)	.44
5. Ease of oral expression	4.40	1.54	46	4.42	1.58	46	.26 (91)	.79
Evaluation of Speaker Attributes (Scale: 1-5)								
1. Warmth	3.49	.25	46	3.63	.39	46	5.22 (91)	001
2. Competence	3.38	.32	46	3.63	.38	46	.92 (91)	.36

Table7a. Model 1 – trait dimensions; Model 2 – trait dimensions, followed by relevant emotions

	R^2	**R^2 change**	F change (df)	Sig. of F change	Unstandardized Beta Coefficients
Active Facilitation					
1. warmth, competence	.15		27.38 (2,316)	.000	.15 (W), .17 (C)
2. warmth, competence **admiration, pity**	.23	**.08**	16.98 (2,314)	.000	.12(W), .14(C), .14(A), .14(P)
Passive facilitation					
1. warmth, competence	.12		21.16 (2,316)	.000	.15 (W), .17 (C)
2. warmth, competence, **envy, admiration**	.14	**.02**	3.73 (2,314)	.025	.12(W), .14(C), -.01(E), .14(A)
Active Harm					
1. warmth, competence	.03		4.84 (2,316)	.009	-.10 (W), -.06 (C)
2. warmth, competence, **envy, contempt**	.16	**.13**	23.72 (2,314)	.000	-.03(W), -.05(C), .10(E), .22(C)
Passive Harm					
1. warmth, competence	.11		19.78 (2,316)	.000	-.23(W), -.17 (C)
2. warmth, competence, **pity, contempt**	.16	**.04**	8.12 (2,314)	.000	-.14 (W), .-10 (C) .13(P), .38(C)

Table7b: Model 1 – emotions; Model 2 – emotion, followed by relevant trait dimensions

Models	R^2	**R^2 change**	F change (df)	Sig. of F change	Unstandardized Beta Coefficients
Active Facilitation					
1. admiration, pity	.17		32.28 (2,316)	.000	.33(A), .13(P)
2. admiration, pity **warmth, competence**	.23	**.06**	12.50 (2,314)	.000	.24(A), .14(P) .18(W), .07(C),
Passive facilitation					
1. envy, admiration	.08		13.23(2,316)	.000	-.01(E), .23(A)
2. envy, admiration, **warmth, competence**	.14	**.06**	11.16 (2,314)	.000	-.01(E), .14(A) .12(W), .14(C),
Active Harm					
1. envy, contempt	.14		26.58 (2,316)	.000	.14(E), .14(C)
2. envy, contempt, **warmth, competence**	.16	**.01**	2.43 (2,314)	.09	.14(E), .14(C) .12(W), .14(C),
Passive Harm					
1. pity, contempt	.03		4.84 (2,316)	.008	.47(P), .09(C)
2. pity, contempt, **warmth, competence**	.16	**.13**	23.27 (2,314)	.000	.13(P), .38(C) -.14(W), -.10(C),