

Orientations to Learning German: Heritage Language Learning and Motivational Substrates

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Abstract: This study examined how two motivational substrates may be differentially important depending upon the learner's language background. Students registered in German classes ($N = 99$) completed a questionnaire that assessed (a) their intrinsic, extrinsic, integrative, and instrumental reasons for learning German; (b) their feelings of autonomy, competence, and relatedness; and (c) their engagement in language learning and intergroup contact variables. The results show that heritage language learners were more likely than non-heritage learners to learn German because it was an important aspect of their self-concept. Moreover, although intrinsic and self-determined extrinsic orientations fostered motivation both for heritage and non-heritage learners, aspects of contact with the German community also played a role in motivated learning, particularly for heritage language learners.

Résumé : La présente étude avait pour but de déterminer l'importance relative de deux éléments de motivation selon le patrimoine linguistique de l'apprenant. Des étudiants inscrits à des cours d'allemand ($N = 99$) ont rempli un questionnaire visant à évaluer : (a) les raisons intrinsèques, extrinsèques, intégratives et instrumentales pour lesquelles ils apprenaient l'allemand ; (b) leurs sentiments en matière d'autonomie, de compétence et d'appartenance ; (c) leur engagement dans l'apprentissage de la langue, ainsi que les variables relatives au contact entre les groupes. Les résultats révèlent que les étudiants ayant un patrimoine linguistique dans cette langue apprenant plus fréquemment l'allemand parce que c'est un aspect important de leur conception de soi. Par ailleurs, bien que leurs orientations intrinsèques et extrinsèques aient suscité de la motivation chez les apprenants quel que soit leur patrimoine linguistique, des aspects liés à leur contact avec la communauté allemande ont également joué un rôle dans la motivation des étudiants en particulier pour les apprenants ayant un patrimoine linguistique dans la langue étudiée..

The social context within which language learning takes place has substantial implications for language learning motivation (Clément, 1980; Landry, Allard, & Bourhis, 1997; Gardner, 1985; Giles & Byrne, 1982). The present study examines heritage and non-heritage language learners' motivation by integrating a theory of intrinsic and extrinsic motivation, Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2000a), with current approaches to second language (L2) motivation that emphasize the importance of the social context and intergroup factors for motivation (e.g., Clément, 1980; Gardner, 1985). In so doing, it addresses how two motivational substrates may be more or less important for language learning depending on whether or not the student is learning a heritage language.

Orientations and second language motivation

Gardner defines second language (L2) motivation as 'the combination of effort plus desire to achieve the goal of learning the language' (1985, p. 10). He characterizes motivation as goal-orientated behaviour that is promoted by the learner's specific reasons, or orientations, for learning the L2. Initially, two classes of reasons were of interest: first, the *integrative orientation*, or a desire to learn the L2 in order to interact and identify with members of the L2 community; and, second, the *instrumental orientation*, or a desire to learn the L2 to achieve some pragmatic goal (Gardner & Lambert, 1959, 1972). Although these two orientations were not considered to be necessarily oppositional, Gardner and Lambert (1972) did suggest that the individual with an integrative orientation would exert greater effort in learning the L2, and thus achieve greater competence, because of its link with positive attitudes toward the L2 community.

A complementary approach to understanding orientations distinguishes between intrinsic and extrinsic orientations (e.g., Benson & Voller, 1997; Brown, 1994; Dörnyei, 1990, 1994; Dickinson, 1995; Ehrman & Dörnyei, 1998; Schmidt, Boraie, & Kassabgy, 1996; Williams & Burden, 1997). Recently, Noels and her colleagues (see Noels, 2001a, for review; see also Dörnyei, 1994, 2001, 2005) have outlined a framework for understanding intrinsic and extrinsic orientations based on Self-Determination Theory (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000a, 2000b). *Intrinsic motivation* is the form of motivation by which 'a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards' (Ryan & Deci, 2000a, p. 56). Intrinsically motivated language learners are expected to approach the learning situation in an exploratory, playful,

creative, curiosity-inspired manner, immersed in the satisfying feeling of 'flow' associated with being completely absorbed in the process of exercising and extending their capacities (Csikszentmihalyi, 1990).

This form of motivation can be contrasted with *extrinsic motivation*, which comprises at least three sub-types of motivation that vary along a continuum of self-determination (the extent to which the individual has voluntarily decided to engage in the activity). *External regulation* is the least self-determined form of extrinsic motivation. Students who are externally regulated carry out an activity because it will eventuate in some type of reward or because it will help them to avoid some kind of negative consequence. In other words, the activity is conducted for some practical, utilitarian reason, apart from any intrinsic interest in the task per se. *Introjected regulation* represents a category of reasons that are more internal to the self-concept. Again, pressures external to the pleasure of the task per se underlie the student's effort at the task. These pressures, however, are in a sense self-inflicted. For instance, the learner might engage in the task to avoid the guilt and anxiety of a job poorly done. As with external regulation, however, once this incentive for performing the task disappears, it is unlikely that the person will continue to exert effort; these two categories of reasons are thus inconsistent motivators. A third type of extrinsic motivation is *identified regulation*, which represents a more self-determined form of extrinsic motivation. In this case, the learner has identified a goal as important because it is valuable to her or his self-concept or personal development. As long as this aspect of the self is salient, the learner will presumably continue to put effort into the activity.

Both intrinsic and extrinsic motivation can be contrasted with *amotivation*, a condition in which a person has no intentional reason, extrinsic or intrinsic, for performing an activity. In such a case the person feels unable to regulate behaviour so that it will have the desired results; 'the person tends to lose control to unmanageable forces' (Deci & Ryan, 1985, p. 150). Consequently, the person would be expected to discontinue the activity.

For an individual to engage in behaviour for intrinsic and self-determined reasons, Deci, Ryan, and their colleagues argue that three fundamental needs must be met (Ryan & Deci, 2000b; Deci, Eghrari, Patrick, & Leone, 1994). The first, and arguably the most important for defining the relations between various orientations (Deci & Ryan, 1985), is a sense that one is an autonomous actor. Autonomy is the need 'to have one's behavior emanate from the self, for example, to feel volitional and self-determined' (Ryan & Solky, 1996, p. 251). The autonomous learner does not feel like the pawn of external circumstances or other

individuals. The second is the perception that one is competent and efficacious in conducting the activity (see Harter, 1978; White, 1963). To achieve this sense of competence, individuals seek out challenges that help them to develop their abilities. These capabilities contribute to the first need in that they enable the learner to act in an autonomous manner. The third, less well studied, need is a feeling of relatedness, which reflects a sense of secure belonging to and esteem from significant others (Ryan & Solky, 1996). As documented in the work of attachment theorists (e.g., Ainsworth, 1989; Ainsworth, Blehar, Waters, & Wall, 1978), the feeling that people can trust relevant others, who ostensibly accept and value them, creates the security necessary to explore unfamiliar avenues. The fulfilment of these three needs is essential for the integration of the activity into the self-concept.

Motivational substrates

Although there is a similarity in the definitions of the instrumental orientation and less self-determined extrinsic motivation (especially external regulation), the integrative orientation should not be equated with the intrinsic or more self-determined orientations. The integrative orientation refers to issues of social identity and sociopolitical relations between ethnolinguistic groups that are not explicitly addressed by any of the intrinsic/extrinsic orientations. Moreover, the two sets of orientations differentially predict relevant variables. Noels (2001b) found that the intrinsic orientation was more strongly linked to positive attitudes toward L2 learning but the integrative orientation was more strongly linked to various intergroup contact and ethnolinguistic identity variables. On the other hand, both the intrinsic and integrative orientations (as well as some extrinsic orientations) were associated with variables such as motivational intensity and the intention to continue learning the L2. These findings suggest that the integrative orientation and the intrinsic/extrinsic orientations represent relatively distinct motivational substrates (for further discussion of motivational subsystems, see Dörnyei, 1990, 1994; MacIntyre, Clément, Dörnyei, & Noels, 1998).

Not unlike several other models of language learning motivation (see Clément, 1980; Clément, Dörnyei, & Noels, 1994), Noels (2001a) suggests that one motivational substrate, the 'intergroup' motivational substrate, pertains to the fundamental need for a positive social identity (Tajfel, 1978; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). This substrate may be most evident in situations where there is an opportunity for contact with the L2 group. To the extent that one has a secure, positive ethnolinguistic identity and does not fear, dislike, or resent the other

language group (see 'fear of assimilation'; Clément, 1980), one should adopt an integrative orientation, whereby the learner is interested in identifying with and interacting with the language community.

Other needs, such as autonomy, competence, and relatedness, are ostensibly more central to a second motivational substrate. This substrate, which is argued to be important for motivation across most contexts (e.g., L2, foreign language), can be described as 'interpersonal' relative to the one described above, in that its dynamics are interwoven with the dynamics of the interpersonal relationships between the learner and significant others (e.g., teachers, family members, classmates) in their immediate environmental substrate (although some interactions may also be 'intergroup' if they relate to interactions with individuals from the L2 community on that level; see Grouzet & Vallerand, 2001). Noels maintains that both these motivational substrates should independently predict how engaged the learner is in the L2 process, including effort and engagement, persistence, and willingness to use the L2 (see MacIntyre et al., 1998). The integrative orientation, however, should be more relevant to intergroup contact and ethnic identity processes.

The social context: Language heritage and motivation

Implicit in the preceding discussion is the notion that aspects of the learning context have an impact on motivation. Clément and Kruidenier (1983) identify two aspects of context that affect the emergence and predictive power of orientations. The first is the opportunity for immediate contact with members of the target language (TL) community. The second is the dominance or non-dominance of the language learner's group relative to that of the target language group (see 'ethnolinguistic vitality'; Harwood, Giles, & Bourhis, 1994). Noels and Clément (1989) identify a third aspect of context: the ethnolinguistic background of the learner. In some cases, individuals desire to learn an ancestral language that is not the language of the dominant society, that is, they are heritage language learners (Cummins, 1998; Cummins & Danesi, 1990). For the purposes of the present study, heritage language learners are defined broadly to include learners of a language that was spoken by previous generations of their families (parents, grandparents, great-grandparents, etc.). This ancestral language may or may not currently be used regularly in the home and community (see Fishman, 2001).

Despite the recent surge of interest in heritage language learning (see Brecht & Ingold, 1998; Peyton, Ranard, & McGinnis, 2001), there has been relatively little research on the motivation of heritage learners

(Lynch, 2003). Some scholars provide anecdotal and case-study evidence that heritage learners study the language to develop or re-establish their linguistic, communicative, and literacy skills; preserve or deepen their understanding about the language and culture; enhance career opportunities; or fulfil an academic requirement (e.g., Campbell & Rosenthal, 2000; Peyton, Lewelling, & Winke, 2001; Webb & Miller, 2000). Other research indicates that a connection with the ethnic group, in terms of frequent contact, acceptance of cultural values, and/or a strong ethnic identity, is associated with greater proficiency (e.g., Cho, 2000; Kondo, 1997; Kondo-Brown, 2000).

Theoretically driven research has focused primarily on the instrumental and integrative orientations (e.g., Feuerverger, 1989, 1991, 1993; Sung & Padilla, 1998). This research has not yielded a straightforward answer with regard to the relative predictive power of these orientations. Anisfeld and Lambert (1961) found that instrumentally oriented Jewish learners of Hebrew were more likely to become competent in the language. They speculated that the 'instrumental' orientation of gaining employment may, in fact, reflect a desire to integrate into the target language group's labour force and, by extension, into the group's culture. Teitelbaum, Edwards, and Hudson (1975), however, reported that Spanish-heritage students who desired to use the language in order to work in the local Spanish community were less proficient than those who wanted to learn Spanish for other reasons.

The present study aims to better understand heritage learners' orientations through an examination of learners of German. According to the 2001 Canadian Census (Statistics Canada, 2001), German is the second most common non-official mother tongue. It is the most common non-official mother tongue in the city of Regina, SK, and the second most common in the city of Edmonton, AB, where the present study took place. Although the German community remains relatively large in this part of Canada, the major waves of migration occurred primarily in the late 1800s and the early to mid-1900s, particularly following World War II (Publicover & Frank, 1999; M. Prokop, personal communication, June 28, 2004). Hence, current heritage learners of college age are most likely second- or later-generation immigrants (M. Prokop, personal communication, June 28, 2004).

Previous research on motivations for learning German has yielded somewhat contradictory results. Bausenhart (1971) reported that many students enrolled in German language schools were instrumentally oriented but found in a later study that more integratively oriented students were enrolled in university German courses (Bausenhart, 1984). Kuhlemeier, van den Bergh, and Melse (1996) found that both instru-

mental and integrative orientations related to a positive attitude for learning, and this attitude was related to higher achievement at the beginning and end of the year. Prokop (1975) observed that students who had positive attitudes toward German speakers obtained higher grades than those who had poor perceptions of Germans and other foreigners and who had only utilitarian purposes for learning German.

With regard to heritage learners of German, Prokop (1974) has reported that German heritage students who are either monolingual English or German-English bilingual differ on neither orientation and that only the integrative orientation predicts achievement for both groups. Noels and Clément's (1989) research revealed that German students with a heritage language background are more likely than students without this background to learn the language in order to identify with the German community and to influence members of the German community. In light of such findings, it seems possible that a consideration of intrinsic/extrinsic orientations in addition to integrative/instrumental orientations could provide greater insight into the inconsistent findings regarding heritage and non-heritage learners' motivation.

Objectives

The present study has two objectives. The first is to examine the motivations of learners of German with a view to understanding whether the two sets of orientations, integrative/instrumental and intrinsic/extrinsic, differ across heritage and non-heritage learners. The second is to explore the interrelations between orientations and other relevant variables in order to determine whether different motivational processes may be more or less important for the two groups. Past inquiries provide a basis for hypothesizing that the interpersonal motivational substrate (i.e., intrinsic and extrinsic motivation) should be relevant to both types of learners, whereas the intergroup substrate (including the integrative orientation and other intergroup variables) should be more relevant to heritage language learners.

Method

Participants

The participants were university-level students registered in German classes. Heritage language status was determined by means of a multiple-choice question that asked students to identify whether their

mother, their father, both their parents, or neither parent had a German-speaking background.¹ Those who indicated that one or both of their parent(s) had such a background were classified as heritage language learners and the rest as non-heritage language learners.

This classification of students as heritage or non-heritage learners was validated by asking a second question: 'Would you consider yourself a heritage language learner (that is, is German a part of your cultural background)?' A chi-square analysis indicated a strong correspondence between this question and the question regarding parental cultural background ($\chi^2 = 38.45$, $p < .001$). Those students whose parent(s) had a German-speaking background were more likely to say they considered themselves to be heritage language learners (86.2% of the heritage language group), and those whose parents did not have a German-speaking background were more likely to indicate that they did not consider themselves heritage language learners (75.6% of the non-heritage language group).²

Non-heritage language learners

Twenty male and 35 female students whose parents had no German language background made up the non-heritage-language group, as well as three people who did not indicate their sex. All claimed English as their mother tongue and used English most often. Almost all respondents (96.6%) claimed a Canadian ethnic identity. They ranged in age from 18 to 52 years, with a mean age of 22.64 ($SD = 5.95$). They began to learn German between the ages of 14 and 44 years ($M = 20.65$; $SD = 6.52$). They were fairly evenly distributed across year in university (first: 25.9%; second: 24.1%; third: 19%; fourth: 25.9%; 5% were graduate students). With regard to the level of their current German course(s), 56.1% indicated that it was at the elementary level, 15.8 intermediate, and 26.3 advanced. Of the 70.7% who had to study a second language as a program requirement, 58.5% had already done so. The length of time the students spent learning German varied from 0 to 25 years, with a mean length of 2.48 years ($SD = 3.60$). All originated from Western Canada (22.4% from Alberta, 70.7% from Saskatchewan, and 3.4% from British Columbia).

Heritage language learners

Seven male and 34 female students whose parents had a German-speaking background made up the heritage language group.³ Almost all (92.7%) claimed English as a mother tongue; the rest indicated German,

and 97.6% indicated that they used English most often (although one person claimed to speak German and English with equal frequency). They ranged between 18 and 48 years of age ($M = 22.28$; $SD = 6.30$), began to learn German between birth and age 45 ($M = 15.89$; $SD = 8.62$), and had spent between 0.25 to 47 years learning German, with a mean of 5.95 years ($SD = 9.51$). Of the 73.2% who were enrolled in a program with a language requirement, 70% had completed it. With regard to ethnic identity, 80% claimed a Canadian identity, 10% a German-Canadian identity, and 7.5% a German identity. All originated from either Alberta (19.5%) or Saskatchewan (80.5%).⁴ Just under 27% (26.8%) were in first year, 29.3% in second year, 12.2% in third year, 26.8% in fourth year, and 4.9% were graduate students, and 46.2% indicated that the level of their German course was elementary, 28.2% intermediate, and 23.1% advanced.

Materials

The instruments used in the present study have been widely used in research in educational psychology, applied linguistics, and social psychology. They were adapted to the German language context. A description of the measurement instruments follows, along with Cronbach's alpha indices of internal consistency for each (sub-)scale.

Motivational orientations

Intrinsic motivation, extrinsic motivation, and amotivation (adapted from Noels, Pelletier, Clément, & Vallerand, 2000). Twenty-five randomly ordered items assessed students' reasons for learning German (see Table 1 for examples). These included five items to assess intrinsic motivation ($\alpha = 0.89$), eight items to assess identified regulation ($\alpha = 0.89$), four items to assess introjected regulation ($\alpha = 0.59$), four items to assess external regulation ($\alpha = .64$), and four items to assess amotivation ($\alpha = 0.87$). The students indicated on a seven-point scale the extent to which a proposed reason for language learning corresponded with their reason for language learning, from 1 = 'Does not correspond' to 7 = 'Corresponds exactly.' A high mean score indicates a high level of correspondence between the proposed reason and the student's reason for language learning.

Integrative orientation (Gardner, 1985). Interspersed among the above items were four items that assessed students' integrative orientation on the same seven-point scale. A high mean score suggests a strong integrative orientation ($\alpha = 0.79$)

TABLE 1
Examples of items from the motivational orientations sub-scales

Orientation	Example of item
Amotivation	Off hand, I can't think of any good reason for why I study German.
External regulation	To gain the benefits (e.g., job, money, course credit) which knowing German will provide me.
Introjected regulation	Because I would feel embarrassed or ashamed if I didn't know the language.
Identified regulation	Because I think that it is good for my personal development.
Intrinsic orientation	For the 'high' I feel when learning German.
Integrative orientation	Because it will allow me to feel more at ease with fellow Canadians who speak German.
Instrumental orientation	Because I think it will someday be useful in getting a good job.

Instrumental orientation (Gardner, 1985). Mixed with the other orientation items were the four items of Gardner's (1985) instrumental orientation scale. A high mean score indicates a strong instrumental orientation ($\alpha = 0.66$)

Antecedent variables: Self-perceptions of autonomy, competence, and relatedness

Self-perceptions of autonomy, competence, and relatedness were assessed because these constructs are hypothesized to underlie the motivational orientations described in Self-Determination Theory. The instruments were adapted from earlier studies by Noels et al. (Noels, 2001b; Noels, Clément, & Pelletier, 1999); the results of factor analyses revealed a three-dimensional solution, corresponding to the three hypothesized self-perceptions.⁵ For each sub-scale, a high mean score (on a seven-point scale) indicates strong feelings of autonomy, competence, and relatedness.

Four items tapped the participants' feelings that they were learning German voluntarily, not because of any external pressure (e.g., 'I freely chose to learn German; nobody forced me to do it' and 'I feel that learning German is imposed on me rather than chosen by me' [reverse coded]; $\alpha = 0.72$). Eight items related to the participants' perceptions that they were competent language learners (e.g., 'Learning German is quite easy for me' and 'I don't feel I have the ability to learn German' [reverse coded]; $\alpha = 0.89$).

Because relatedness has not been widely examined, particularly in the language learning context, a four-item 'relatedness index' was devel-

oped based on a review of theoretical frameworks, some empirical work (Noels, Adrian-Taylor, & Johns, 1999), and measures used in other contexts (Senécal, Vallerand, & Vallières, 1992; LaGuardia, Ryan, Couchman, & Deci, 2000; Lösier & Vallerand, 1995; Richer & Vallerand, 1998). The items reflect feelings of acceptance from and connectedness to the German culture and language (e.g., 'I feel I can relate to the German culture' and 'I have a sense of belonging to the German community'; $\alpha = 0.88$).

Outcome variables: L2 engagement, self-evaluation, and intergroup variables

Six variables were postulated as following from different motivational orientations.

Engagement in learning (adapted from Stipek & Gralinski, 1996). To measure effort expended in learning, 10 items assessed students' active and passive engagement in language learning. For each item, participants indicated the extent to which they used the strategy, from 1 = 'Never' to 7 = 'Always.' The five passive items involved were reverse coded, so that a high mean score indicates that the student extensively used active learning strategies while studying German ($\alpha = 0.74$).

Intention to continue learning German (adapted from Noels, Clément, et al., 1999). Six items constituted the measure of students' intention to continue learning German. For each item respondents indicated on a seven-point scale the extent to which they agreed or disagreed with the item, from 1 = 'Strongly disagree' to 7 = 'Strongly agree.' Negative items were reverse coded, such that a high mean score indicates a strong intention to continue learning German ($\alpha = 0.94$).

Self-evaluation of German competence. Based on Clément and Baker's (2001) measure, participants indicated, on a seven-point scale from 'not at all' to 'very well,' the extent to which they could read, write, speak, and understand German. A high mean score indicates strong perceptions of competence in German ($\alpha = 0.87$).

Ethnic identification. Using an adaptation of Clément and Noels's (1992) situated ethnic identity scale, the participants indicated on two five-point scales the extent to which they identified with the German and the English (or their original ethnic group) communities across six situations (at school, with friends, with family, in public, at work, and in leisure

activities). A high mean score suggests strong identification with that ethnolinguistic group (German: $\alpha = 0.79$; English: $\alpha = 0.95$).

Contact with members of the German community. The participants indicated on a five-point scale the amount of contact they had with members of the German community across five situations (at school, with friends, with family, in public, and in leisure activities). A high mean score implies very frequent contact ($\alpha = 0.77$).

German language use. Referencing the same five situations, the respondents again indicated on a five-point scale how often they spoke German with members of the German community. A high mean score indicates that very frequent use of German in these contacts ($\alpha = 0.80$).

Procedure

The participants were recruited from German classes at two universities in Alberta and Saskatchewan. At the first university, they came to group testing sessions at prearranged times, where upon they completed the questionnaire with the researcher present. At the second university, the instructors distributed questionnaires in their German classes and the participants returned the completed forms in sealed envelopes. The volunteers were informed about the confidential nature of the study and specifically told that their instructors would not have access to the information provided.

Results

The data allowed for two sets of analyses.⁶ First, analyses of variance (ANOVAs) determined the significance of the mean differences between learner groups with regard to the orientations, as well as antecedent and outcome variables. Second, a factor analysis served to indicate how language background was associated with the orientation and the antecedent and outcome variables. These analyses are discussed in greater detail below.

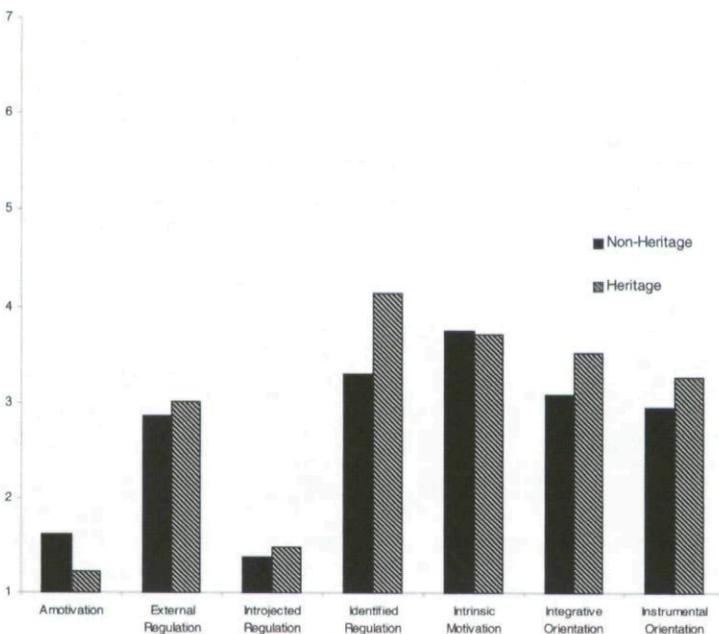
Means analyses of orientations, antecedents, and outcomes

To examine differences between the two groups with respect to the degree of endorsement of each orientation, a 2×7 ANOVA was computed with learner type (heritage vs. non-heritage) as a between-subject factor and orientation (intrinsic vs. identified regulations vs. introjected

regulation vs. external regulation vs. amotivation vs. integrative orientation vs. instrumental orientation) as a within-subject factor. The results yielded a non-significant main effect for learner type ($F(1,97) = 1.92, p = 0.17, \eta^2 = 0.02$). There was, however, a significant orientation main effect ($F(3.23, 313.45) = 91.14, p < 0.001, \eta^2 = 0.48$) as well as a significant interaction effect ($F(3.23, 313.45) = 3.42, p = 0.02, \eta^2 = 0.03$; see Figure 1). Post-hoc Tukey tests indicated that for both learner types, intrinsic motivation, identified and external regulation, and instrumental and integrative orientations were equivalent, with the exception that external regulation was significantly lower than the intrinsic motivation for the non-heritage learners and significantly lower than identified regulation for heritage learners. All of these orientations were significantly stronger than amotivation and introjected regulation, which were equal to each other. The groups were equivalent in their endorsement of each orientation, with the exception that heritage learners more strongly felt that they were learning German for identified reasons than did the non-heritage learners.

FIGURE 1

Endorsement of orientation as a function of orientation and learner type



To examine differences between the two groups for the antecedents, including self-perceptions of autonomy, competence, and relatedness, a one-way MANOVA comparing the learner type (heritage vs. non-heritage) was computed. A significant multivariate effect ($Pillai = .17$, $F(3,95) = 6.43$, $p = 0.03$, $\eta^2 = 0.17$) led to follow-up univariate tests showing significant effects for perceived competence ($F(1,97) = 4.86$, $p = 0.03$, $\eta^2 = 0.05$) and perceived relatedness ($F(1,97) = 15.24$, $p < 0.001$, $\eta^2 = 0.14$). Heritage learners scored higher than non-heritage learners on these indices (see Table 2).

To examine differences between the two groups regarding the hypothesized outcomes, a one-way MANOVA was computed comparing the learner type (heritage vs. non-heritage) involving the seven outcome variables (engagement, intention, self-evaluation, German and English identity, contact with German community, and German language use). A significant multivariate effect ($Pillai = 0.23$, $F(7,83) = 3.61$, $p = 0.002$, $\eta^2 = 0.23$) suggested the need for follow-up univariate tests, which showed significant effects for contact with members of the German community ($F(1,89) = 15.29$, $p < 0.001$, $\eta^2 = .15$), German language use ($F(1,89) = 19.65$, $p < 0.001$, $\eta^2 = 0.18$), and German identification ($F(1,89) = 11.34$, $p < 0.001$, $\eta^2 = 0.11$). Heritage learners scored higher than non-heritage learners on these variables (see Table 2).

TABLE 2

Means and standard deviations for hypothesized antecedents and outcomes as a function of learner type

Dependent variables	Learner type			
	Non-heritage ($n = 53$)		Heritage ($n = 38$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Antecedents				
Perceived autonomy	6.27	0.97	6.09	0.97
Perceived competence*	4.86	1.26	5.38	0.95
Perceived relatedness*	3.34	1.30	4.43	1.49
Outcomes				
Intention to continue	5.20	1.64	5.60	1.29
Self-evaluation	4.35	1.01	4.60	1.15
Active engagement	5.18	0.83	5.23	0.66
German language use*	1.64	0.63	2.36	0.93
Contact with German speakers*	1.76	0.67	2.42	0.94
German identification*	1.62	0.60	2.09	0.74
English identification	4.71	0.65	4.54	0.81

* The difference between group means for this variable is significant at $p < 0.05$.

In sum, heritage learners indicated that they were learning German for identified regulation reasons, experienced greater competence and relatedness, and evidenced more contact with the German community, German language use, and German identification than did non-heritage learners.

Factor analysis of orientation, antecedent, and outcome indices

To delineate the relationships between the orientations and the other constructs of interest, and particularly to assess whether different dimensions representing different motivational substrates would be evident, the correlation matrix of all variables was subjected to a principal components analysis, followed by Varimax rotation. German heritage background, coded as a dichotomous variable (non-heritage = 0, heritage = 1), was included in the analysis in order to determine whether certain motivational substrates were more relevant for heritage learners than for non-heritage learners. The results indicated that a three-factor solution was the most interpretable and parsimonious model, accounting for 59.26% of the variance (see Table 3).

The first factor had appreciable loadings (i.e., greater than $|0.30|$) for 11 items. This factor indicates that the intrinsic, identified regulation, integrative, and, to a lesser extent, instrumental orientations were associated with self-perceptions of autonomy, competence, and relatedness. Amotivation was negatively related to this dimension. These orientations and self-perceptions were also associated with more active engagement in learning, a stronger intention to persist in language study, and higher self-evaluations of German competence. Because of the emphasis on variables derived from Self-Determination Theory (Deci & Ryan, 1985), this dimension was termed 'a self-determined motivational substrate' and seemed to pertain to the immediate learning context, regardless of learner background.

The second factor demonstrated appreciable loadings from 11 variables. Those individuals who had a German heritage background were more likely to have contact with the German community, use German, evaluate their German competence highly, and feel that they had a stronger German identity and weaker English identity. They were more likely to be oriented to learn German because they felt it was an important part of their self-concept or because they wished to integrate into the German community. They were also more likely to intend to continue their study of German. This dimension also embodied items reflecting a sense of relatedness with the German community and a self-perception as a capable speaker of German. Because of the intergroup

TABLE 3

Varimax rotated component matrix, eigenvalues, and factor variance for the principal components analysis of orientation, antecedent, and outcome variables

Variables Component*	Components*		
	I	II	III
Amotivation	-0.78		
Intention to continue	0.76	0.31	
Perceived autonomy	0.74		
Intrinsic orientation	0.70		0.41
Active engagement	0.70		
Integrative orientation	0.56	0.42	0.43
Perceived competence	0.56	0.36	
German language use		0.84	
Contact with German speakers		0.83	
German identification		0.69	
Perceived relatedness		0.61	
Self-evaluation		0.61	
Learner type		0.56	
English identification		-0.41	
Instrumental orientation	0.34		0.82
External regulation			0.81
Introjected regulation			0.64
Identified regulation	0.54	0.44	0.55
Eigenvalue	4.20	3.86	2.62
Percentage of variance accounted for by component	23.32	21.42	14.53

* Suggested component labels: I = Self-determined motivational substrate; II = Intergroup motivational substrate; III = Orientations

contact and self-confidence variables that defined this factor, the term 'intergroup motivational substrate' seemed appropriate, with the nuance that this factor seems more relevant to heritage language learners.

All of the orientation sub-scales except amotivation loaded on the third factor. Because this factor was defined primarily by the instrumental and less self-determined orientations, followed by the more self-determined orientations, followed by the integrative orientation, it was labelled the 'orientations' dimension.

Discussion

This study had two goals: (1) to examine differences between heritage and non-heritage learners in their endorsement of intrinsic/extrinsic and integrative/instrumental orientations and (2) to examine the link between the two sets of motivational constructs and relevant antecedent and outcome variables, with an eye to identifying motivational processes specific to heritage language learners. The results pertaining to

each of these objectives are discussed below, followed by suggestions for future research.

Comparison of heritage and non-heritage learners

The results of the means analyses indicate that the two types of language learners endorsed the various orientations to the same extent, with the exception that heritage learners indicated that they wanted to learn German for reasons of identified regulation: learning German helps to achieve goals that are important for their self-concept. It seems reasonable that a sense of ancestral heritage makes salient the importance of language to one's ethnic identity, and the desire to develop this aspect of the self encourages acquisition of the heritage language. Although there are no statistically significant group differences in the level of integrative orientation, the direction of the means tends to support the idea that heritage learners may be more oriented to learn German to interact with the community than non-heritage learners. Further support for the claim that heritage students are more integratively oriented comes from the alternative analyses reported in endnote 2, whereby those students who self-identified as heritage language learners endorsed the integrative orientation significantly more strongly than non-heritage learners. It is essential to replicate this study in other groups of heritage language learners to buttress this tentative claim that heritage learners are indeed more integratively oriented than non-heritage learners (see also Noels, 2004; Noels, Adrian-Taylor, et al., 1999).

Context and motivational substrates

Although the orientations are interrelated (as indicated in the third factor), particular orientations were associated with different antecedent and outcome variables. The loadings for the first factor indicate that the intrinsic and more self-determined orientations are associated with greater perceived autonomy, competence, and relatedness. This is consistent with the premises of Self-Determination Theory, which posits that these fundamental needs must be met if a sense of enjoyment and self-involvement in the activity is to be fostered. These orientations were also associated with several motivational outcomes, including increased engagement in the learning activity and a greater interest in pursuing German study in the future. Language background was not a defining variable for this factor, and thus this set of motivational variables

represents a more general motivational substrate, one that is not related specifically to one group or the other.

The second factor reflects the possibility that the societal context outside the immediate classroom can have important implications for motivation, particularly for heritage language learners. Heritage language learners in this study were more likely to be oriented to learn German because it is important to their identity and because they wish to integrate into the German community. These learners were also more likely to claim that they were competent and to evaluate themselves as skilled in German. The integrative and identified regulation orientations are also related to several intergroup variables, as suggested by Noels's (2001a) model. Heritage students were more likely to have contact, in German, with the German community. They are also likely to feel a stronger German identity and a weaker English identity. This pattern is associated with feeling a sense of connectedness with the German community.

In sum, the findings are consistent with the arguments of Clément (1980), Noels (2001a, 2001b) and others (e.g., Dörnyei, 1990, 1994; MacIntyre et al., 1998) that at least two motivational substrates are relevant to language learning. Consistent with Clément's description of a motivational process specific to multicultural settings, the intergroup substrate identified in this study is associated with contact and self-confidence variables, suggesting that the opportunity for contact and communication with L2 group members is central to the operation of this motivational substrate. Consistent with Noels's (2001b) model, the self-determination substrate suggests that issues of autonomy, competence, and relatedness are important to learners regardless of the socio-political context in which their learning takes place.

This study also went beyond earlier work in this research program in considering the role of perceived relatedness, or attachment, in language motivation. Several scholars have suggested that group dynamics (e.g., Clément et al., 1994) and positive relations with the teacher are essential to language learning (e.g., Gardner, 1985; Dörnyei, 2003). The present study suggests that these feelings are relevant, along with feelings of autonomy and competence, for promoting intrinsic and more self-determined orientations, as predicted by Self-Determination Theory (Ryan & Deci, 2000b). At the same time, relatedness was also linked to the intergroup variables that characterized the integrative/self-confidence factor. Although it was intended to tap general feelings of affiliation, a review of the items suggests that they may have a particular focus on feelings of belonging with the German culture and community. It is not so surprising, then, that desiring contact and identification with

German speakers (i.e., the integrative orientation) would be related to these feelings. Future research might examine feelings of belonging with the various people involved in the language learning process (teachers, family members, etc.; see Noels, 2004).

Directions for future research

This study extends previous work by addressing how reasons related to self-determination and intrinsic interest contribute a second motivational dynamic in addition to the often-studied processes connected to interactions with the target language group. Moreover, these substrates may be differentially important depending upon the context in which language learning occurs. This work could usefully be followed up by longitudinal and/or experimental research to assess the hypothesized causal link between antecedents, orientations, and outcomes in different learning contexts, along with qualitative research to explore the phenomenology of representative learners from each of these contexts.

A potential limitation of this study is that the results may be restricted in their generalizability to other groups of heritage language learners. The participants in the present study are largely later-generation immigrants from a non-visible minority group who have minimal competence in the heritage language and are situated in a cultural context where multiculturalism is an officially espoused value. It is unclear whether the present findings would reflect the experiences of recent, visible-minority migrants with limited English proficiency in other societal contexts.

A note regarding the definition of heritage language learners is in order (see Van Deusen-Scholl, 2003, for a more complete discussion of the definition of a heritage language). Some scholars have argued that, for pedagogical purposes, a heritage language learner should be defined as a native speaker of the target language or have been exposed to the language at home from an early age (e.g., Valdés, 2001; Wiley, 2001; Kondo-Brown, 2003). For the purposes of designing a language course or program to meet their language needs, it is certainly important that one address the varying levels of skill across modalities (e.g., aural, oral, literacy) that such students may have. But the fact that other students come to the classroom with no or very minimal competency in the ancestral language does not mean that their heritage background has no impact on their learning process.

Certainly, the learners in this study could not be considered to have a high degree of skill: virtually all spoke English as a mother tongue, rarely used German in their daily lives, and began to learn German

formally during their high school years; moreover, almost 50% were currently enrolled in elementary-level courses. Despite their low level of competence relative to heritage learners who were exposed to the language in the home, their interest in and commitment to the language differ from those of non-heritage learners, and other issues pertaining to intergroup relations and social identity are salient in their motivational profile. These students, therefore, cannot be classified as foreign language students from a social-psychological perspective. Like L2 students, the heritage learners are likely to sustain their motivation to the extent that autonomy, competence, and relatedness are fostered, which might be accomplished by incorporating strategies of self-regulated learning into the classroom (see Benson & Voller, 1997). Heritage learners would also likely benefit more than their L2 counterparts from the inclusion of sociocultural content that reflects their self-related interest in the language. This might include material that incorporates the activities of the local community, highlights stories of its migration and settlement experiences, or provides opportunities to explore the language and culture at the international level. Given also that heritage language learners are clearly learning the language for self-relevant reasons, one might reasonably expect that they will be more committed to an intensive, long-term learning experience.

Conclusion

There has been considerable discussion in the past 15 years regarding the theoretical paradigms and research methods best suited to understanding motivation and L2 learning (for a review, see Dörnyei, 2003, 2005). The present study has contributed to the growing body of scholarship on motivation by delineating how issues related to the intergroup context may be more or less prominent depending upon the learning context. It is also the first attempt to extend examination of the tenets of Self-Determination Theory outside the second/foreign language context and into the heritage language context. As scholarship on heritage language learning continues to grow, it is imperative to conduct theoretically driven research to guide the development of policies and programs for bilingual education that are effective across contexts (see Cummins, 2001). It is hoped that the theoretical framework presented here, which emphasizes the importance of self-determination and intergroup relations, will contribute usefully to this endeavour.

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Notes

- 1 I am grateful to Dr Werner Bausenhart for suggesting this manner of identifying heritage language learners.
- 2 All analyses were also conducted with the latter index as the grouping variable. There were very few differences in the patterns of results across the two sets of analyses. All mean differences were the same, with the exception that the difference between groups on perceived competence became non-significant and the non-significant difference between groups regarding the integrative orientation became significant, such that heritage learners were more likely to endorse this orientation than non-heritage learners. As well, for the non-heritage language group, identified regulation was significantly higher than all other orientations except intrinsic orientation. The factor analysis results were equivalent except that English identity had a 0.31 cross-loading onto the third factor.
- 3 The results of *t*-tests comparing the ages of the two groups showed no significant differences ($t_{(94)} = 0.29, p = 0.77$); however, a comparison be-

tween the two groups showed that they differed in terms of the age at which they began to learn German ($t_{(95)} = 3.10, p < 0.05$) and the number of years they had been learning German ($t_{(95)} = 2.52, p < 0.05$). The results of a chi-square analysis indicated no differences between the two groups in terms of the distribution across the year in university ($\chi^2_{(4)} = 0.94, p = 0.92$) or the level of the German course in which they were currently enrolled ($\chi^2_{(2)} = 2.26, p = 0.32$). Thus, the heritage learners in this study were at approximately the same academic level as the non-heritage learners, despite their lengthier exposure to German.

- 4 There were no differences between the heritage and non-heritage groups in the distribution of participants across Alberta and Saskatchewan ($\chi^2_{(1)} = 0.28, p = .60$). Based on information from the Canadian census (1996), the percentage of speakers of German and of English as a mother tongue in each participant's home town was calculated and compared across the groups. The results of a MANOVA showed no differences between the groups in terms of the demographic representation of German speakers in their home communities ($Pillai = 0.004; F_{(83,2)} = 0.16, p = 0.86, \eta^2 = 0.00$; German: $M = 2.76, SD = 0.27$; English: $M = 85.40, SD = 4.18$. Note: All η^2 reported in this paper are partial η^2 .)
- 5 The correlation matrix of the 16 variables for the autonomy, competence, and relatedness sub-scales was analyzed by means of principal axis factoring with oblique rotation. The results yielded three distinct factors with eigenvalues greater than 1.00, accounting for 54.62% of the variance in the matrix. All of the items hypothesized to reflect each factor substantially loaded on its respective factor ($> |0.5|$) with no cross-loadings, with the exception of one item on the autonomy sub-scale that had a loading of 0.29. The pairwise correlations were 0.41 between competence and relatedness, 0.33 between competence and autonomy, and 0.13 between relatedness and autonomy. More details regarding these analyses can be obtained from the author.
- 6 Prior to the analyses, the data were inspected for missing values. Five people in the non-heritage language group were missing scores for either one or both of the identification scales, and three people in the heritage group were missing scores for the German identification scale. To retain these individuals in the analyses, the missing identification scores were replaced with the sub-sample mean score.

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