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Development of a Three-Factor Model of Psychological Ownership of Country: Applications for Outgroup Attitudes and Citizenship Behaviors

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Abstract

Mechanisms linking social identification to negative outgroup attitudes is a prevailing inspiration for research in intergroup relations. Psychological ownership—the possessive feeling that some object is 'mine' or 'ours'—has been proposed as one possible mechanism. Social identification is a precursor to developing feelings of ownership over ideological spaces, such as countries or territories. Subsequently, ownership may drive negative outgroup attitudes through exhibition of one's right to control the use of the ingroup's space. Psychological ownership may also have positive roles in developing citizenship behaviors, such as through voting or buying ingroup national products. The following program of research tests these ideas. Study 1 provides preliminary evidence of psychological ownership's plausible role as a mediator between southern identification and negative outgroup attitudes toward Blacks in the Southern United States. A comprehensive measure of psychological ownership of country is developed in studies 2 and 3 with evidence of validity and reliability presented in studies 2-4. Test-retest reliability is demonstrated in study 5 and predictive validity is demonstrated in studies 4 and 7. Study 6 examines a longitudinal mediation model and study 7 examines how psychological ownership predicts decisions to buy national versus foreign products. Emerging from this program of research is a reliable and valid measure of psychological ownership of territorial spaces, evidence that social identification is a precursor to psychological ownership, evidence for psychological ownership as a predictor of positive citizenship behaviors, and conflicting findings over psychological ownership mediating the positive relationship between social identification and more negative outgroup attitudes. Across studies, social identification was linked to more negative outgroup attitudes. In some cases, psychological ownership was a plausible mediator wherein it was linked to more negative attitudes (Studies 1 & 6), in some cases this was specific to the immersion factor (Study 4) or self-identity and efficacy factors (Study 7); however, efficacy appears associated with more positive attitudes (Study 7). There was no evidence of mediation in the longitudinal model (Study 6). This research initiates the systematic study of psychological ownership in the intergroup domain and refines our understanding of possession of non-physical entities.

Keywords

Psychological ownership, social identity, self-identity, efficacy, sense of belonging, outgroup attitudes, citizenship behaviors, consumer behavior

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Chapter 1

1 Introduction

Humans have a pervasive drive to join and maintain groups of various sizes (Forsyth & Burnette, 2010). Groups have evolutionary roots in survival (Neuberg, Kenrick, & Schaller, 2010), act as sources of information during times of uncertainty (Schacter, 1959), and satisfy specific needs, such as the need to belong (Baumeister & Leary, 1995; Maslow, 1943; Moreland, 1987). Through evolutionary history group membership acted as an insurance policy for mate selection, reproduction and defense against external threats (Yzerbyt & Demoulin, 2010), as well as defense against existential terror that results from an instinctual self-preservation drive and the cognitive awareness of inevitable mortality (Greenberg, Pyszczynski, & Solomon, 1986). Identifying with a group acts as a source of support by reaffirming individuals' cultural worldviews (Pyszczynski, Solomon, & Greenberg, 2015). The usefulness of studying groups is not only predicated on the evolutionary history of group development but in the role that groups play in guiding and constraining individual cognition, affect, and behavior (Yzerbyt & Demoulin, 2010).

Group identities play an important role in inciting protective behaviors on behalf of the ingroup and atrocities against certain outgroups, which begin with more subtle dispositions toward these groups (Brewer, 2010). The universal propensity to differentiate the world into "us" and "them" categories can initially be understood through social identity theory (SIT; Tajfel & Turner, 1979) and self-categorization theory (SCT; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). The social identity approach departed from the individual difference approach promulgated by Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950). Emphasis on the functional relations between social groups was first articulated within realistic group conflict theory (RCT; Campbell, 1965; Sherif, Harvey, White, Hood, & Sherif, 1961; Sherif & Sherif, 1953). The position of RCT was that intergroup conflict resulted from real or perceived competition over scarce resources between groups, which further promoted ingroup identification (Tajfel & Turner, 1979). However, ingroup identification was simply seen as a byproduct of

intergroup competition, ignoring autonomous effects of ingroup identification on either the ingroup or on attitudes and behavior toward outgroups.

Social identity theory (Tajfel & Turner, 1979) extended RCT to incorporate the independent role of ingroup identification. While early studies demonstrated the ease with which groups could be formed along arbitrary categories, and intergroup hostilities could be created by the mere inclusion of competitive goals (Sherif et al., 1961), Tajfel and Turner (1979) argued that many situations could not be explained adequately by competing group interests. Tajfel and Turner (1979) viewed group competition as sufficient for inducing intergroup conflict but not necessary. In one experiment, researchers artificially divided boys into two groups and subsequently individually provided each boy with a set of matrices (Tajfel, 1970). In each matrix were two rows, each with numbers such that a single column consisted of two numbers. In one condition, boys were asked to allocate each of the numbers from each column to either of two unknown members of Group A. In a second condition, the boys were asked to allocate each of the numbers from each column to either of two unknown members of Group B, and in a third condition, the boys were asked to allocate each of the numbers from each column to either of two unknown members, of which one belonged to Group A and one belong to Group B. In the first two conditions, the boys allocated the numbers around the point of maximum fairness; however in the intergroup condition the boys allocated the larger value to the member of their own arbitrary ingroup, despite not knowing the individual member and despite there being no group competition within the experiment. Subsequent studies further demonstrated the ability of arbitrary categorization to result in discrimination in favor of the ingroup absent any competition between the two groups and that group members were willing to increase maximum differentiation even at the cost of maximizing in-group profit (Billig & Tajfel, 1973; Tajfel, Billig, Bundy, & Flament, 1971).

Tajfel and Turner (1979) suggested that within intergroup situations, individuals would act on the basis of group membership rather than on the basis of individual characteristics and that the mere categorization of minimal differentiated groups could result in ingroup bias even at the expense of ingroup gain. The theory further developed

principles of developing social identity, specifically that individuals strive to maintain a positive ingroup identification, that this positive identification is based upon favorable social comparisons between groups, and that when social identity is unsatisfactory, individuals will engage to increase the maximum distinctiveness between one's own group and relevant outgroups. Social identity itself is not "mere" identification but is most clearly described by one's positive evaluation of the ingroup (Cameron, 2004; Leach et al., 2008; Luhtanen & Crocker, 1992; Tajfel & Turner, 1979). Self-categorization theory extended the basis of SIT to suggest that the "intergroup" orientation is not activated simply through group membership. It is activated through the process of self-categorizing, whereby one's sense of self is extended to the ingroup as a whole (Brewer, 2010) such that the self is an interchangeable exemplar of the social category (Turner et al., 1987). Self interest and ingroup interests become interchangeable (Brewer, 2010). Self-categorization theory emphasized the salience of the category in any given intergroup context and suggested that strength of a person's social identification with the category influenced salience and had effects on ingroup and outgroup attitudes (Yzerbyt & Demoulin, 2010).

The hallmark of ingroup identification is ingroup positivity (Brewer, 2010). Strength of ingroup identification (i.e., social identification) has been widely associated with ingroup favoritism (Brewer, 2010; Brewer, 1999; Brown, 2000; Tajfel & Turner, 1986; Yzerbyt & Demoulin, 2010), with the assumption that ingroup favoritism and outgroup derogation were reciprocally related. Sumner (1906) argued that ingroup favoritism and outgroup derogation were reciprocal but later theorizing separated the two, suggesting that ingroup identification should necessarily relate to ingroup favoritism but need not relate to outgroup derogation (Allport, 1954). While early research in social identity theory focused on ingroup favoritism (Billig & Tajfel, 1973; Tajfel, 1970; Tajfel et al., 1971), later research suggested that ingroup bias disappeared when participants were asked to allocate negative outcomes (e.g., punishments) rather than allocation of positive outcomes (Mummendey et al., 1992).

While minimal intergroup differentiation, as described in both SIT and SCT, seemed sufficient to produce ingroup favoritism it did not seem sufficient to produce

outgroup derogation (Brewer, 1999), and SIT never specified a direct correlation between ingroup identification and negative outgroup attitudes (McGarty, 2001). However, research using the social identity approach honed in on this link anyway and countless studies did identify this relationship across a multitude of contexts, even in the absence of what social identity theorists saw as necessary moderators such as social comparison (McGarty, 2001; Tajfel & Turner, 1979) or perceived threat from the outgroup (Brewer, 1999). For example, research by Mummendey, Klink, and Brown (2001) found strong associations between British national identification and outgroup derogation regardless of whether participants were subjected to an intergroup comparison or not. Aggregated data across four studies found that ingroup identification and outgroup derogation were highly correlated regardless of whether participants were prompted to evaluate their nation compared to other unspecified nations (intergroup comparison) or were asked to evaluate their nation without any stated comparison standard (control condition).

Emphasis on the relationship between ingroup identification and outgroup derogation has been persistent. National identification has been one of the most consistent predictors of negative outgroup attitudes (Brown, 2000) despite earlier reviews suggesting that ingroup identification in general was only marginally related to outgroup attitudes (Hinkle & Brown, 1990). Part of this disparity may be the influence of clear intergroup contexts with high segmentation (Brewer, 1999; Hunter et al., 2015). Ingroup identification has been associated with outgroup attitudes across multiple measures of social identification and across a range of groups when intergroup contexts are clear (Jackson, 2002; Jackson & Smith, 1999; Voci, 2006). Two influential and highly segmented intergroup contexts are the national ingroup-immigrant context in the United States and Black-White relations in the Southern region of the United States. Under these contexts, those most strongly identified with the majority groups seem likely to be the most ardent proponents of negative outgroup attitudes (Brown, 2000).

1.1 National Identification and Outgroup Attitudes

From the majority perspective, perceiving outgroup members negatively is one way of maintaining positive distinctiveness (Licata, Sanchez-Mazas, & Green, 2011). Strong national identification at the individual level is positively correlated with prejudice across countries regardless of how national identity is defined (e.g., citizenship, language, or ancestry; Pehrson, Vignoles, & Brown, 2009). Other research has found that national identification is associated with more prejudice against asylum seekers but that this relationship becomes stronger the more an essentialist definition of national identity is used (Pehrson, Brown, & Zagefka, 2009). Stronger Dutch national identity has been associated with rating Muslims more negatively (Velasco González, Verkuyten, Weesie, & Poppe, 2008) and stronger Swiss national identification has been associated with perceiving immigrants as more threatening and with more prejudice toward immigrants (Falomir-Pichastor & Frederic, 2013). Stronger national identification in the United States is associated with more negative attitudes toward undocumented Latino immigrants (Lyons, Coursey, & Kenworthy, 2013) and Arab immigrants (Lyons, Kenworthy, & Popan, 2010).

Some research has focused on a distinction between two expressions of national identification: nationalism and patriotism (e.g., Blank & Schmidt, 2003; Kosterman & Feshbach, 1989). However, the distinction between nationalism and patriotism fails to explain the "why" of national identification's link to prejudice. The distinction, explained as one of social comparison (Barnes, 2015) simply defines the "intergroup context" necessary for the relationship to exist (Dru, 2007; Hunter et al., 2015; Tajfel & Turner, 1979). Nationalism is akin to an individual difference measure of ingroup identification wherein the segmented intergroup context is accentuated (Brewer, 1999). When the link between national identification (in either form) and prejudice is tested within contexts without clear intergroup segmentation, these effects seem to disappear (Barnes, 2015). The current research focuses on the "why", that is one possible mechanism linking national identification to negative outgroup attitudes within real intergroup contexts with clear intergroup segmentation.

1.2 Southern Identification and Outgroup Attitudes

Due to a distinct history and other determinants, the Southern United States is a region that reflects its own consciousness, its own ideological borders, and its own "national" identity (Cooper Jr & Terrill, 2009; Reed, 2008). It has been argued that this regional identity of Southerners is somewhat analogous to an ethnically rooted form of national identity, predicated on ancestry (Reed, 1982; Reed, 2008; Thompson, 2007). Most research within the social identity tradition examining racial prejudice within the United States has concentrated on the White racial ingroup identification (Richeson & Sommers, 2016). However, Whites in the South identify more with their Southern identity than their White racial identity (Thompson, 2007). There is little research examining Southern identification (the parallel of national identification for this regional context) specifically. One study did find Southern identification among White Southerners was associated with increased racial prejudice toward Blacks (Reingold & Wike, 1998), and other studies have found that Southerners exhibit more racial prejudice toward Blacks than do non-Southerners (Kuklinski, Cobb, & Gilens, 1997; Oliver & Mendelberg, 2000).

1.3 Psychological Ownership

Why does ingroup identification relate to negative outgroup attitudes, specifically within national and regional contexts that have clear intergroup segmentation? I suggest psychological ownership to be one such mechanism. Given the emphasis of maintaining positive distinctiveness and protecting high in-group status (Hewstone, Rubin, & Willis, 2002), I suggest that feelings of ownership for an ideological space can be used to protect identification. Subjective uncertainty reduction theory converges on the same proposition, wherein psychological ownership could remove uncertainty by bolstering control of one's ideological space (Hewstone et al., 2002). This mechanism links ingroup identification to negative outgroup attitudes because ingroup identification is a necessary precusor to developing ownership of non-physical ideological entities such as nations or regions (Brylka, Mahonen, & Jasinskaja-Lahti, 2015; Tyler & Blader, 2003) and it is the perception that one's ingroup owns an ideological space that is primarily associated with negative outgroup attitudes, not ingroup identification per se.

The study of psychological ownership is not new. It has been studied within the context of business organizations for decades with a general focus on work performance, organizational commitment, and job satisfaction (Avey, Avolio, Crossley, & Luthans, 2009; Pierce, Kostova, & Dirks, 2001, 2003; Van Dyne & Pierce, 2004). Brylka et al. (2015) adapted the theoretical positions of psychological ownership from the organizational domain and applied this perspective to the national intergroup context. Recent conceptual work has called for examining psychological ownership in intergroup relations (Verkuyten & Martinovic, 2017).

1.3.1 Conceptual core of psychological ownership. Psychological ownership builds on the foundation of the psychology of possession, which indicates feelings of possession of objects mean two primary things: a person has the right to use an object and a person has the right to control the use of the object (Furby, 1978). Furby (1978) further indicated the primary motivations of engaging in possessive behavior: objects of possession provide value and worth and they provide enjoyment and comfort. Feelings of possession can also enhance positive feelings about the target (Beggan, 1992), cognitively link the target to the self-concept (Dittmar, 1992; Furby, 1978), and create a sense of responsibility for the target (Furby, 1978). These feelings of possession have been described more fully as psychological ownership (Pierce et al., 2001), which is succinctly defined as "the possessive feeling that some object is 'MINE' or 'OURS'" (Van Dyne & Pierce, 2004, p. 39). Pierce et al. (2001) argued that psychological ownership not only applies to physical possessions; it can be felt toward "ideas, artistic creations, and other people" (p. 299). Psychological ownership also moves beyond 'mere ownership' in that legal ownership of something is distinct from psychological ownership, which entails a symbolic, living, and knowledgeable relationship with the object of ownership (Beaglehole, 2015; James, 1890).

1.3.2 Fulfilling needs. Psychological ownership is distinct from other constructs via the centrality of possessiveness and the three motivational bases that drive it (Pierce et al., 2001; Van Dyne & Pierce, 2004). The first motivational base of psychological ownership, *immersion*, derives from the basic human need of belonging (Baumeister & Leary, 1995). Having a place to which one belongs and can satisfactorily immerse

oneself in provides the context necessary for security, enjoyment, and comfort (Heidegger, 2008; Van Dyne & Pierce, 2004). Belonging enhances one's intimate connection to larger movements. Immersion includes the investment of energy and resources into one's ideological space (Brylka et al., 2015). Within the context of the nation (or region), immersion describes a sense of belonging to one's ideological space and the culture that is embedded within it. It also describes the investment of time, energy, and resources into the community. This might be in the form of voting, displaying of national flags and other symbols, military service, or generally being interested in events that affect the nation as a whole.

The second motivational basis, *efficacy*, describes the need to feel capable and the need to have control in certain areas or over certain aspects of one's life (Bandura, 1977). This includes the ability to feel capable in interacting with one's environment and the people within one's environment. In the context of nation, this may translate to control over and ability of one's group to change policy within the nation (Brylka et al., 2015). Feelings of possession facilitate feelings of control and influence, which should be reflected within the national context (Van Dyne & Pierce, 2004).

Self-identity, the third motivational base, describes the need for uniqueness (Pierce et al., 2001). This uniqueness is demonstrated through one's possessions, including symbolic possessions and corresponding descriptors that reaffirm one's values (Avey et al., 2009). Within the national context, self-identity incorporates identification with a nation's values, social mores, and symbols. Identification with the target (i.e., the nation) implies that one is personally affected, via attachment, by forces that affect the nation as a whole. Psychological ownership then is conceptualized as the extent to which a nation or territorial region is "owned" by one's ingroup, which encapsulates a sense of belonging and investment in the space (i.e., immersion), a sense of control over the political, cultural, and ideological direction of the territorial community (i.e., efficacy), and a cognitive identification with the resulting values, norms, and symbols of this "owned" space (i.e., self-identity). It is the specificity of possessiveness and the fulfillment of specific needs that differentiates psychological ownership from other

conceptually similar constructs such as autochthony, place attachment, and social identity itself.

1.4 Similarity to Other Constructs

Autochthony implies a natural origin, a direct claim to territory, and thus an implied sense of belonging (Geschiere & Jackson, 2006). It is conceptually related to psychological ownership primarily through a sense of belonging. However, it distinguishes itself from psychological ownership because autochthony implies a more specific form of belonging, specific to "origin 'of the soil itself'" (p. 2). Thus autochthony has the limitation that it cannot be applied to non-native groups. Psychological ownership is self-defined with no specified or necessary origin of ownership or perception of being the primary occupant of a national space (Brylka et al., 2015), such that psychological ownership could be had and maintained even by a numerical minority or a group non-native to the land. Gausset, Kenrick, and Gibb (2011) further note the narrowness of the concept of autochthony when they state that its use is generally limited to reference of "agricultural or industrial populations, who are not necessarily marginal, but rather believe that their resources, culture, or power are threatened by 'migrants'" (p. 139). In contrast, psychological ownership is a complex, multifaceted concept that is not limited by this narrow specificity, having use in both native and non-native populations, and within nations or other ideological spaces. While discourse of autochthony emphasizes a claim to having been the first (Geschiere & Jackson, 2006) and raises questions over authenticity of claims (Ceuppens & Geschiere, 2005), psychological ownership emphasizes psychological feelings of possession and the fulfillment of psychological needs. These needs are met through an affective experience rising from possession of a target and the cognitive process of internalizing the fulfillment of needs (Pierce et al., 2003).

Place attachment is defined as "an affective bond or link between people and specific places" (Hidalgo & Hernandez, 2001, p. 274). Others have argued that it also includes a cognitive link to the space (Low, 1992). The place of attachment can range in spatial dimension (e.g., house, city, nation). Place attachment and psychological

ownership differentiate primarily in their respective conceptual cores. Place attachment is defined by the main characteristic of a desire to maintain closeness with the target (Bowlby, 1969; Hidalgo & Hernandez, 2001), which is not necessary in psychological ownership. While some conceptions of place attachment incorporate both cognitive and affective elements in complex structures (e.g., Scannell & Gifford, 2010), elements such as efficacy are not represented at all. While a complementary construct, "place identity" is related to self-identity in that it involves relatedness of personal experiences with one's environment (Hernández, Hidalgo, Salazar-Laplace, & Hess, 2007; Lalli, 1992), psychological ownership sets itself apart by fulfilling particular psychological needs, rather than specific functions such as goal-support, self-regulation, and sense of continuity (Brylka et al., 2015; Scannell & Gifford, 2010).

Psychological ownership also distinguishes itself from social identity (or collective identity; Cameron, 2004; Luhtanen & Crocker, 1992) in the social psychological literature. Social identity is primarily concerned with the positive distinctiveness that is derived from membership in social groups (Tajfel & Turner, 1979; Tajfel & Turner, 1986). Although psychological ownership and social identity both link to the self-concept, social identity is concerned with the emotional significance of membership. Social identity theory suggests that favorable social comparisons to other social groups develop positive self-esteem in an individual. Psychological ownership is not concerned with self-esteem or comparative group processes but primarily with feelings of possessiveness. This possessiveness serves the purpose of fulfilling specific fundamental human needs.

1.5 Ownership and Anti-Immigrant Attitudes

Psychological ownership is presumably linked to outgroup attitudes through the perceived right to use and control the use of the object of ownership (Verkuyten & Martinovic, 2017). Disputes over territory among nations are a prominent precursor to war (Toft, 2014), conflict between teenagers is often the result of disputes over space (Childress, 2004), and gang wars are fought over territorial ownership disputes (Kintrea, Bannister, Pickering, Reid, & Suzuki, 2008; Venkatesh, 1997). In two studies, feelings of

ownership among the native Dutch population in the Netherlands were associated with aggregated outgroup prejudice (Turks, Moroccans, Surinamese, Antilleans; Martinovic & Verkuyten, 2013) and when ownership was included as a mediator, national identification (a specific social identification with the nation) was no longer associated with outgroup prejudice. Likewise, Brylka et al. (2015) found that psychological ownership of Finland among majority Finns was associated with negative attitudes toward the Russian-speaking minority and that psychological ownership mediated the association between national identification and outgroup attitudes among majority Finns.

1.6 Ownership and Racial Prejudice

Whites in the American South maintained exclusive ownership of the Southern region for the first hundred years of the nation's founding and the cataclysmic event of emancipation severely threatened White control (Cooper Jr & Terrill, 2009). Some research suggests that the historical ownership of the Southern region by White southerners still impacts prejudice against Blacks today (Acharya, Blackwell, & Sen, 2016). This historical persistence of negative racial attitudes toward Blacks can be partially understood through a persistence of White's feelings of ownership over "their" territory from which the Southern identity developed. The link between southern identification and racial prejudice then is through the mechanism of perceived ownership over a region that historically belonged exclusively to Whites and of which Whites' began losing political control in the post-reconstruction era (Kousser, 1974) and may still be losing control of today (Bidgood, Bloch, McCarthy, Stack, & Andrews, 2017; Collins, 2017).

1.7 Ownership in Multicultural Societies

Ingroup identification and outgroup prejudice should be seen in highly segmented societies with clear intergroup boundaries (Brewer, 1999; Hunter et al., 2015). This theoretical proposition combined with research suggesting that the national identification and prejudice link is absent within Canada (Barnes, 2015), suggests that this model of psychological ownership as a mediator between ingroup social identification and prejudice should be absent within highly multicultural societies. Multiculturalism does

not simply mean highly diverse societies, such as the United States, but societies where disparate cultures are both accepted and celebrated by the majority group. Countries such as Canada, with a combination of multiculturalism policy, population growth driven by immigration and a large immigrant population (Drolet, Hamilton, Esses, & Wright, 2016) may be immune to the identification—ownership—prejudice link.

1.8 Positive Aspects of Psychological Ownership

While little research has been conducted specifically on psychological ownership of ideological spaces to date, possible positive correlates of psychological ownership can be drawn from the literature on psychological ownership of organizations. Since behavior is partly a function of identity, psychological ownership of an ideological space may relate to citizenship behaviors (Pierce et al., 2003). Citizenship behaviors include voluntary contributions to the community that provide for the well being of the community. For example, in an analysis of psychological ownership in a community housing cooperative, psychological ownership was related to engaging in extra-role behaviors, such as voluntarily orienting newcomers to the community and helping other residents when needed (Vandewalle, Van Dyne, & Kostova, 1995). Pierce et al. (2003) argue that psychological ownership results in greater willingness to make sacrifices for the good of an organization that one has much stake in. For example, when people feel they have power to make a difference (i.e., efficacy), they are more likely to make a collective sacrifice for the good of the organization (Wiener, 1993). The sense of responsibility embedded in the ownership construct (Furby, 1978) suggests that people with high psychological ownership of a national space should be more likely to vote—an expression of responsibility and control. Psychological ownership has also been positively related to commitment to one's organization (Mayhew, Ashkanasy, Bramble, & Gardner, 2007). It is the conceptual core of psychological ownership that likely drives these outcomes. High psychological ownership should relate to willingness to invest resources into one's country (e.g., voting), to protect one's country (e.g., military service), to give back to one's community through volunteer work and donations, and to engage with the symbols of one's nation.

1.9 Measurement of Psychological Ownership

No validated measures of psychological ownership for the intergroup context exist. Measures within the organizational domain focus on work contexts (e.g., "Most of the people that work for this organization feel as though they own the company"; Van Dyne & Pierce, 2004). Of two papers examining psychological ownership within the intergroup context, Brylka et al. (2015) used two items ("I feel that Finland is my country" and "I feel that Finland is our country"), and Martinovic and Verkuyten (2013) used items that focused heavily on primo-occupancy (e.g., "Every country belongs to its original inhabitants" and "The original inhabitants of a country have the most right to define the rules of the game"). Additionally, items do not conform to the three conceptual domains previously discussed within the psychological ownership literature (Brylka et al., 2015).

1.10 The Current Research

The current research has two goals: to develop and validate a measure of psychological ownership of country and to examine the following hypotheses:

1) Social identification should be positively associated with psychological ownership of territory associated with the social group.
2) Psychological ownership of territory should be associated with negative outgroup attitudes within clearly segmented intergroup societies.
3) Psychological ownership of territory should mediate the relationship between social identification of majority groups and negative outgroup attitudes within clearly segmented intergroup societies.
4) Psychological ownership of territory should be associated with attitudes and behaviors that display responsibility for the ingroup, such as supporting ingroup symbols, engaging in voting and government service, and buying national products over international products.

Chapter 2

2 Study 1

Study 1 evaluates the four hypotheses within the context of White-Black relations in the Southern United States.

2.1 Method

Mechanical Turk (Mturk) was used to collect data on 475 White Southerners from three states in the American South: Mississippi, Georgia, and South Carolina. These states were chosen because they contain high percentages of Blacks and because they have experienced considerable intergroup conflict between Blacks and Whites, suggesting high segmentation of intergroup divisions. Participants were invited to participate in a study on "Symbols and Identity" and were told that the study was about how people think and feel about various symbols and in understanding how symbols affect the way people understand and construct their identities. Each participant provided informed consent and was compensated $0.50 USD for their anonymous participation. The Western University Non-Medical Research Ethics Board approved this study with approval number 107036. Participants reported their age, sex, and political ideology rated on a scale from 1 "extremely liberal" to 7 "extremely conservative", followed by the following measures.

2.1.1 Southern identification. Participants completed a measure of Southern identification, conceptualized as the extent to which one identifies with and feels proud of being from one's homeland (Brylka et al., 2015) or simply a positive affective bond with the Southern region (Blank & Schmidt, 2003; Reed, 2008). I measured Southern identification via the following three items: "To what extent do you feel pride in being from the South", "To what extent do you define yourself as a Southerner", and "How important to you is living in the South". Items were measured on a 5-point scale with higher scores indicative of greater identification.

2.1.2 Psychological ownership of the South. Participants then completed a 4-item measure of psychological ownership of the South, which tapped into the three motivational bases of psychological ownership anchored by a general ownership item. The following items were used: "I feel that the South is our territory", "I feel that we have control over policy in the South", I feel that my identity is tied to our history in the South", and "Our people belong in the South". Because psychological ownership includes the "Mine" or "Our", indication of the social group of interest was accomplished by supplying the following instructions:

> *"Now I want you to think about the South, your Southern heritage, your Southern roots, your racial group, and the experiences and feelings associated with the statement "This is my home". The following statements deal with the sense of ownership that you feel for the Southern region."*

Items were measured on a 5-point scale with higher scores indicative of greater psychological ownership.

2.1.3 Outgroup attitudes. Both overt prejudice (Brigham, 1993) and symbolic prejudice (Orey, 2004) toward Blacks were measured. Overt prejudice exhibits explicit preference for Whites over Blacks, while symbolic prejudice represents resentment due to the belief that Blacks violate values of individualism and self-reliance (Orey, 2004). Items are included in Table 1. Both scales were measured on a 5-point scale with higher scores indicative of more racial prejudice.

2.1.4 Southern cultural symbol. The Confederate battle flag has been a White Southern cultural symbol and pop-culture icon for decades. Thus, I tested whether psychological ownership would be associated with more positive attitudes towards this territorial symbol of the South. I measured attitudes toward the Confederate battle flag using two items: "To what extent do you support Southern states' maintaining the Confederate battle flag on government premises" and "To what extent do you support Southern states' maintaining the Confederate battle flag as a part of the official state flag (e.g., in Mississippi)". Each was measured on a 5-point scale ranging from "strongly

oppose" to "strongly support". Higher scores indicate more positive attitudes toward the flag.

2.1.4 Control variables. People may be incentivized to temper their overt and symbolic prejudice so I included measures of social desirability and motivation to control prejudice. Social desirability was measured via 16-items (Stöber, 2001). Items are True-False and total scores are the sum of True responses. Motivation to control prejudice was measured via 17 items (Dunton & Fazio, 1997) on a 5-point scale. Items were averaged to create total scores with higher scores indicating a greater motivation to control prejudice.

I eliminated data from 31 participants who identified as mixed race and data from an additional 27 participants who either started but never completed the survey or who were missing necessary demographic information. Following these exclusions, a total of 417 surveys were analyzed.

2.2 Results

An a priori power analysis for a structural equation model suggested that the study had 80% power to detect an effect as small as ß = .18, a small to medium effect (Soper, 2017). Descriptive statistics and bivariate correlations are reported in Table 2.

Table 1. Symbolic and Overt Racial Prejudice Items

	Symbolic Prejudice	Overt Prejudice
Item 1	Over the last few years, Blacks have gotten less than they deserve. (R)	To live in a neighborhood with black people creates problems.
Item 2	Irish, Italians, Jewish, and other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors.	I enjoy having friends who are black (R).
Item 3	It's really just a matter of some people not trying hard enough. If Blacks would only try harder they could be just as well off as Whites.	It would bother me to have a supervisor/employer who is black.
Item 4	Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class. (R)	In my everyday life, I find black people disturbing.
Item 5		I would prefer that my white children would marry a white person.
Item 6		If a black family, with about the same income and education as I have, moved next door, I would mind it a great deal.
Item 7		When a black person is near me at night, it makes me concerned for my safety.

2.2.1 Confirmatory factor analysis. A confirmatory factor analysis using maximum likelihood estimation with robust standard errors demonstrated that southern identification and psychological ownership are empirically distinct constructs. A two-

factor model produced significantly better fit than a one-factor model, $\chi^2_{diff}(1) = 190.58$, $p < .001$. The two-factor model fit the data well, $\chi^2(13) = 79.79$, CFI = .96, TLI = .93, SRMR = .05, RMSEA = .11 (.09, .14), whereas the one-factor model did not, $\chi^2(14) = 270.37$, CFI = .84, TLI = .76, SRMR = .09, RMSEA = .210 (.188, .232). While the RMSEA is above threshold values for good fit, this is because the RMSEA falsely indicates poorly fitting models when degrees of freedom are low (Kenny, Kaniskan, & McCoach, 2014). Thus, the CFI, TLI, and SRMR are more instructive in this case. To further assess the discriminant validity of Southern identification and psychological ownership, I used a common procedure to compare the square root of the average variance extracted (AVE) for each construct to the inter-construct correlation (Fornell & Larcker, 1981; Hair, Black, Babin, Anderson, & Tatham, 2006; Maxwell-Smith, Conway, Wright, & Olson, 2016). If this value is higher for each construct than the corresponding latent variable correlation ($r = .71$) then discriminant validity is demonstrated (see Table 2 for comparison values). Using this method, I demonstrate discriminant validity between Southern identification and psychological ownership. Additionally, I examined the variance inflation factor, which was well within acceptable thresholds (VIF = 2.02).

Table 2. Descriptive Statistics and Bivariate Correlations

	Male	Age	Political Conservatism	Social Desirability	Motivation to Control Prejudice	Southern Identity	Psychological Ownership	Overt Racism	Symbolic Racism	Symbol Support
Male										
Age	.02									
Political Conservatism	.08	.14**								
Social Desirability	-.01	.17***	.010							
Motivation to Control Prejudice	.20***	-.01	-.18***	.05						
Southern Identity	.08	.24***	.45***	.08	-.16**					
Psychological Ownership	.03	.11*	.46***	.034	-.22***	.64***				
Overt Racism	-.06	.10*	.31***	-.12*	-.34***	.23***	.47***			
Symbolic Racism	.05	.14**	.51***	.01	-.36***	.43***	.47***	.54***		
Symbol Support	.09	.02	.55***	.06	-.28***	.49***	.58***	.43***	.64***	
M	n = 121	35.49	3.96	9.63	3.21	3.57	2.97	1.86	3.17	2.96
SD		11.56	1.68	3.07	.60	1.20	.88	.75	1.17	1.53
α				.70	.83	.90	.77	.85	.86	.95
SQRT (AVE)						.93	.82			

2.2.2 Structural mediation model. I tested hypotheses using a latent variable modeling approach to mediation in MPLUS v. 7.4 using full information maximum likelihood (FIML). Indicators of the latent variables were the items of the corresponding measures. The significance of indirect effects was tested using bias corrected bootstrapped confidence intervals with 10,000 bootstrapped samples (Jose, 2013).

The fit of the model (see Figure 1) was good, χ^2 (129) = 373.28, p <.001, RMSEA = .07 (.06, .08), CFI = .94, TLI = .93, SRMR = .07. The model demonstrated that southern identification and psychological ownership were highly related, β = .70 [.61, .79], that southern identification was associated with *less* overt racism, β = -.22 [-.38, -.06], but associated with *more* symbolic racism, β = .28 [.12, .44], and that psychological ownership mediated the relation between southern identification and overt racism, β = .42 [.34, .52], and between southern identification and symbolic racism, β = .20 [.17, .24]. I further tested the model controlling for the effects of age, political orientation, social desirability and motivation to control prejudice. All relations held under this model (see Figure 2). The indirect effect of southern identification on symbolic prejudice accounted for 41% of the total effect, while accounting for the explained variance of psychological ownership on overt prejudice reversed the otherwise positive bivariate correlation between southern identification and overt prejudice.

2.2.3 Southern cultural symbols. To examine the association between psychological ownership and support for the Confederate battle flag, I conducted another latent variable model with support for the Confederate battle flag regressed onto southern identification, psychological ownership, overt and symbolic racism, and all controls (motivation to control prejudice and political ideology; see Table 3). Age and social desirability were excluded because they are not associated with support for the Confederate battle flag (see Table 2). I used FIML with 10,000 bootstrapped samples and bias corrected confidence intervals.

Table 3. Association Between Psychological Ownership and Support for the Confederate Battle Flag

	β	Bias Corrected Confidence Interval
Political Conservatism	.25	.15, .35
Motivation to Control Prejudice	-.04	-.12, .05
Overt Prejudice	-.05	-.16, .06
Symbolic Prejudice	.50	.36, .63
Southern Identification	-.01	-.18, .15
Psychological Ownership	.32	.15, .51
R^2	.53	

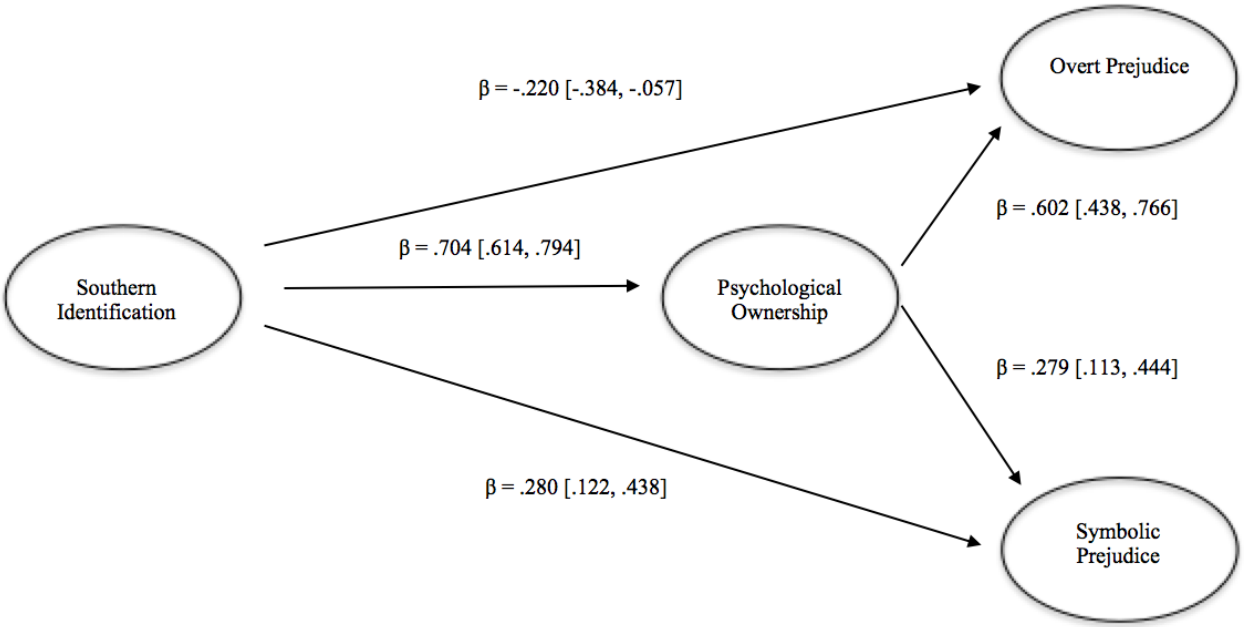


Figure 1. Structural model depicting psychological ownership as a mediator between southern identification and overt prejudice and between southern identification and symbolic prejudice

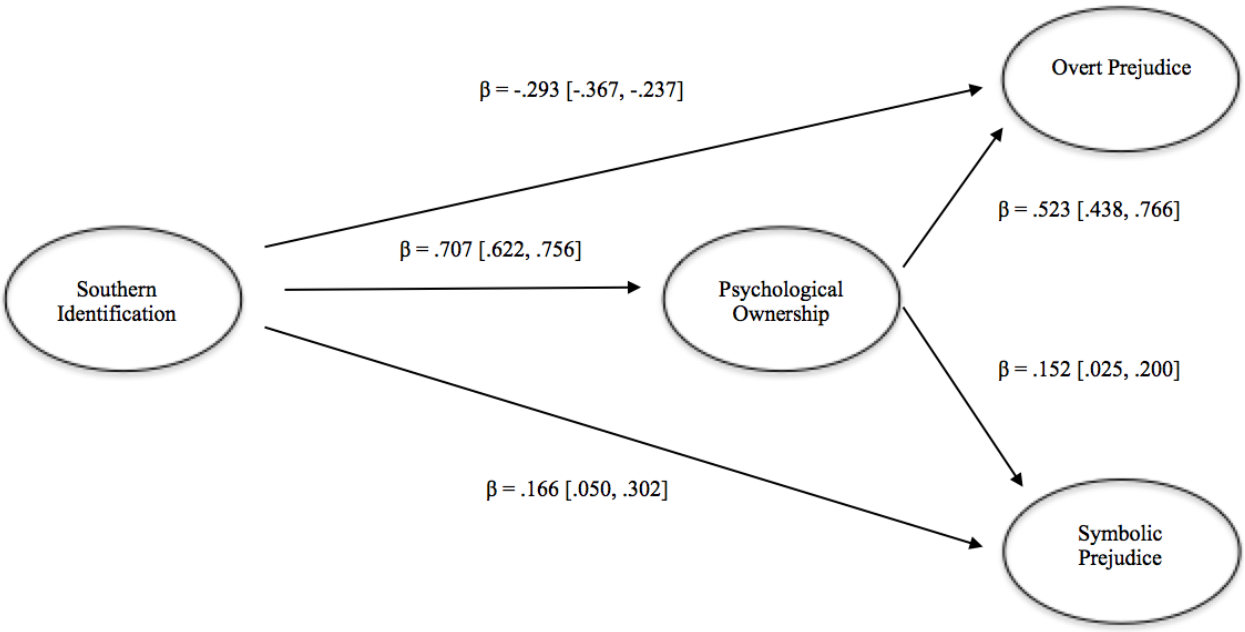


Figure 2. Structural model depicting psychological ownership as a mediator between southern identification and overt prejudice and between southern identification and symbolic prejudice with controls

2.3 Discussion

Study 1 provides the first evidence that social identification and psychological ownership are distinct constructs with good discriminant validity. In testing each of the specific hypotheses, study 1 provides evidence that social identification and psychological ownership are associated in the predicted direction, that psychological ownership and outgroup attitudes are associated in the predicted direction, that psychological ownership is a plausible mediator of the association between social identification and outgroup attitudes, and that psychological ownership is associated with ingroup symbols. This extension of the psychological ownership model of outgroup prejudice suggests that its explanatory power extends beyond national contexts (e.g., Brylka et al., 2015) and to issues of racial prejudice specifically. In the case of overt prejudice, I find that southern identification is actually related to lower prejudice toward Blacks once psychological ownership is accounted for. When the shared variance between southern identification and psychological ownership is accounted for in the model, the analysis reveals that southern identification can be linked to more positive

attitudes towards Blacks in the American South, when southern identification is detached from possessive ownership claims. I also provide the first evidence within the territory of a regional space (i.e., the American South) that support for relevant symbols are associated with psychological ownership. However, it would be useful to construct a comprehensive measure of psychological ownership in the intergroup context with wording that is easily interchangeable across contexts. A more comprehensive measure will also allow for examining the individual domains of psychological ownership (e.g., immersion, efficacy, and self-identity).

The results in Study 1 illuminate the basis of debates over "Southern" symbols such as the Confederate battle flag. Those protesting the removal of these symbols may see the South as "owned" by the White majority. However, there are still positive and partly shared aspects of a Southern identity (e.g., honor, collectivism, traditionalism, and hospitality; Cohen, Nisbett, Bowdle, & Schwarz, 1996; Megehee & Spake, 2008; Reed, 2008; Vandello & Cohen, 1999), that may not be associated with overt racism, and this may explain why southern identification is associated with *less* overt prejudice once psychological ownership is accounted for. There are numerous potential positive outcomes of psychological ownership that should not be overlooked (e.g., citizenship behaviors; Avey et al., 2009). While psychological ownership among the White majority in the Southern United States may have the negative effect of increasing prejudice against the Black minority, it may also have positive ramifications unrelated to intergroup relationships.

Chapter 3

3 Study 2

A more comprehensive measure of psychological ownership of country or region is necessary to ensure that the three different needs fulfilled through psychological ownership are being measured and that fulfillment of these three needs via possession of one's territory adequately merge to form the general construct of psychological ownership. Study 2 begins the scale development process. The goal during development of the scale was to remain true to the core of psychological ownership (e.g., possession; Brylka et al., 2015; Pierce et al., 2001; Vandewalle et al., 1995), while adequately adapting it to the broad nature of the structure of nations and other ideological territories. While developing the scale, I ensured that items were easily adaptable to different nations and regions, and that the items adequately addressed the three content domains of psychological ownership—*immersion*, *efficacy*, and *self-identity* via a self-report scale. I made specific efforts to include reverse worded items in the original item pool.

3.1 Scale Development

I followed guidelines of scale development as expressed by Simms and Watson (2007) consisting of the initial item development and selection, demonstration of structural validity, followed by examination of external validity. During the item-selection phase, I actively aimed for over-inclusiveness.

3.1.1 Initial item development. In line with Brylka et al. (2015), I incorporated two general items reflecting general possessiveness of one's country. To develop the scale further and incorporate adequate measurement across the three conceptual domains, I consulted scales from psychological ownership in the organizational psychology literature (Avey et al., 2009), models of social identity (Cameron, 2004; Luhtanen & Crocker, 1992), and efficacy scales (Sherer et al., 1982). In line with recommendations for writing items to specifically address the same construct (Comrey, 1988), items were further generated from discussions with two experts on national identity (an historian and

an anthropologist) and two experts on psychometrics and scale construction. A total of 57 items were generated. These 57 items are reflected in Table 4.

3.1.2 Q-sort task. A Q-sort task with four undergraduate research assistants was used to evaluate the perceived correspondence between the conceptual domains and the scale items (Nahm, Rao, Solis-Galvan, & Ragu-Nathan, 2002). As a result, one efficacy item was removed, five immersion items were reconfigured as efficacy items, and two self-identity items were reconfigured as immersion items. These items were reworded for clarity and parsimony based upon participant feedback. The preliminary scale was further evaluated via a Q-sort task with three intergroup relations scholars (one faculty member and two graduate students) and one faculty member in psychometrics. The resultant scale comprised 56 items.

3.2 Structural Validation

Following a construct validation approach (Simms & Watson, 2007), the 56-item measure was first administered in person to 256 students at an Ontario university who participated for course credit. A Canadian sample was used for the scale construction for convenience, not for any theoretical reason. Participants were invited to participate in a study on the social and political attitudes of Canadians. The Western University Non-Medical Research Ethics Board approved this study with approval number 106546. Following informed consent, participants completed basic demographic items (age, gender, immigration status, and ethnicity), and measures of Canadian social identity (Luhtanen & Crocker, 1992), nationalism and patriotism (Blank & Schmidt, 2003), and social dominance orientation (Pratto, Sidanius, Stallworth, & Malle, 1994).

3.2.1 Canadian social identity. I assessed Canadian social identity using the 16 item scale developed by Luhtanen and Crocker (1992). Items were reworded for Canadians and were measured on a 7-point scale with higher scores indicating greater identification with Canadian social identity.

3.2.2 Nationalism and patriotism. I assessed nationalism (7-items) and patriotism (6-items) using the scale developed by Blank and Schmidt (2003). Items were measured on a 5-point scale with higher scores indicating more nationalism or patriotism.

3.2.3 Social dominance orientation. I measured SDO using 16 items (Pratto, Sidanius, Stallworth, & Malle, 1994) measured on a 7-point scale with higher scores indicating more socially dominant attitudes.

Four responses were eliminated for failure to correctly answer the attention check, leaving 252 for analysis. The sample reflected a mean age of 18.27 (SD = .92), was predominantly female (n = 169), and consisted of the Canadian born (n = 166) and immigrants (n = 86). Immigrants consisted of Canadian citizens (n = 57) and non-citizens (n = 29). Ethnicity data was coded for non-visible (n = 125) and visible minority (n = 127) status.

Following Brylka et al. (2015)'s use of psychological ownership in an intergroup domain, I facilitated an intergroup framework with the following instructions: "Think of yourself as a member of your racial group." Participants were then instructed to enter their racial group into the statement "I am…" Following, participants were instructed,

> *"Now think about how you and others who identify in this way interact in and experience Canadian society. Please respond to the following series of statements with the extent to which you agree or disagree with each one."*

Statements were rated on a scale of 1, "strongly disagree", to 7, "strongly agree". Each proposed domain of psychological ownership was individually subjected to principal axis factoring. Items with factor loadings < .50 were considered for elimination.

For Factor I, 9 items were eliminated for low factor loadings. One additional item was eliminated as redundant. In all cases of redundancy I retained the item with the larger factor loading. Six of the original 16 items representing *immersion* were retained. One factor explained 60.20% of the variance in the retained items. These items are reflected in Table 5.

Table 4. General Pool of Items for Psychological Ownership of Country

Original Items		
1. Our people helped make Canada what it is.	20. We have control over policy in Canada.	39. My identity is tied to being Canadian.
2. We will do our part to make Canada a great country.	21. I feel bad about the social policies that we have enacted in Canada.	40. Our people are a reflection of Canada.
3. We are more dedicated to making Canada great than others.	22. We have the ability to change policies in Canada.	41. I feel this country's success is my success.
4. We belong in Canada.	23. I am satisfied with our Canadian social policies, which we helped create.	42. Being Canadian defines who I am.
5. We are comfortable being in Canada.	24. We have the ability to contribute to Canada's success.	43. I think of myself as Canadian.
6. Canada is our country.	25. We can make a positive difference in Canada.	44. The values of Canada are my values.
7. We are immersed in Canadian culture.	26. We are powerless to change Canadian policy.	45. Being Canadian forms a large part of who we are.
8. Canada is our home.	27. Despite our best efforts, nothing we do makes a difference.	46. When Canada is insulted, I feel personally insulted.
9. Canada is ours to develop the way we see fit.	28. We can make a difference in Canada's future.	47. I have strong ties to Canada.
10. We will invest all we have into Canada.	29. At times we are powerless against others within Canada.	48. Canada generally reflects my values.
11. We care deeply about Canada.	30. Our votes do not matter in the grand scheme of things.	49. When Canada is recognized internationally, I experience this recognition personally.
12. I feel that Canada is our country.	31. In spite of our efforts, nothing will change for the better.	50. I'm glad to be in Canada.
13. We are influenced by Canadian culture.	32. Our votes are important.	51. I do not feel Canadian.
14. We participate in community building.	33. I feel insecure about our ability to succeed in Canada.	52. I find it difficult to identify with Canada.
15. The media reflects our views when discussing Canadian society.	34. It is generally easy for us to navigate the Canadian bureaucracy (e.g., completing the paperwork for permanent residency or completing the paperwork to renew one's Canadian passport) compared to other groups.	53. Overall, I do not consider myself Canadian.
16. We do not belong here.	35. We influence Canadian culture.	54. We do not represent Canada's values.
17. Generally, we do not care to be too involved in Canadian society.	36. Our views are considered when our Government makes policy decisions.	55. I never think about what it means to be a Canadian.
18. We gain value from our involvement in Canadian society.	37. We experience impediments to navigating Canadian bureaucracy compared to others.	56. Canada is an important part of my self-image.
19. We do not really "fit in" in Canada.	38. We contribute in novel ways to Canadian society.	57. We have a lot in common with other groups in Canada.

Table 5. Factor Loadings of Retained Items on Factor 1

Items	Factor Loading
We belong in Canada.	.771
We are comfortable being in Canada.	.649
Canada is our country.	.668
Canada is our home.	.829
We care deeply about Canada.	.718
I'm glad to be in Canada.	.698

For Factor 2, 15 items were eliminated for low factor loadings. Two additional items were eliminated for redundancy. One factor explained 54.18% of the variance in the retained six items. These items are reflected in Table 6.

Table 6. Factor Loadings of Retained Items on Factor 2

Items	Factor Loading
We have control over policy in Canada.	.613
We have the ability to change policies in Canada.	.769
We have the ability to contribute to Canada's success.	.725
We can make a difference in Canada's future.	.667
We influence Canadian culture.	.641
We gain value from our involvement in Canadian society.	.606

For Factor 3, five items were eliminated for low factor loadings. Four additional items were eliminated for redundancy. Eight of the original 17 items representing *self-identity* were retained. One factor explained 60.2% of variance in the retained 8 items. These items are reflected in Table 7.

Table 7. Factor Loadings of Retained Items on Factor 3

Items	Factor Loading
My identity is tied to being Canadian.	.817
I feel this country's success is my success.	.655
Being Canadian defines who I am.	.803
The values of Canada are my values.	.749
Being Canadian forms a large part of who we are.	.760
I have strong ties to Canada.	.725
Canada generally reflects my values.	.653
Canada is an important part of my self-image.	.735

Next, I submitted the retained 20 items to principal axis factoring with promax rotation. I used the scree plot to determine the factor structure (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The scree-plot indicated a three-factor solution. Eigenvalues of the three factors retained were 8.39, 2.09, and 1.46, and the percentage of variance explained by each was 41.69, 10.45, and 7.28, respectively, for a total of 59.42%.

For Factor 1, all six items had factor loadings > .50 and were retained. As shown in Table 8, all six items pertain to belongingness or involvement (i.e., *immersion*). For Factor 2, all six factor-loadings were above .50 and retained. As shown in Table 8, all six items pertain to control, sense of contribution, and satisfaction with contributing to one's nation, or *efficacy*. For Factor 3, all eight items had factor loadings over .50. One of these items was eliminated for a high cross loading (.296) with Factor I and was considered redundant. A second other item was considered redundant. Thus I retained 6 items for Factor 3. All six retained items are presented in Table 8. These items reflect identification with one's nation as a whole, and attachment to national institutions, implying an inherent connection between the personal and the collective, labeled *self-identity.* This resulted in a three-factor structure with the following eigenvalues: 7.46, 2.01, 1.41. The percentage of variance explained by each was 41.41, 11.19, and 7.85, for a total of 60.45%. Internal consistency reliability was calculated for each of the subscales described above. The coefficient alphas are as follows: Immersion = .86, Efficacy = .82, and Self-identity = .89. The full 18-item scale has a coefficient alpha of .91.

3.3 Convergent Validity

Correlations between the factors ranged from $r(250) = .46$ (Efficacy and Self-identity; $p < .001$) to $r(250) = .62$ (Immersion and Self-identity; $p = .001$). The total 18-item Psychological Ownership Scale correlated highly with the Luhtanen and Crocker (1992) Collective Self-Esteem scale, reworded for Canadian identity, $r(220) = .62$, $p < .001$, sharing 38% of their variance. Self-identity is most similar to collective self-esteem [$r(220) = .63$, $p < .001$], while efficacy shares the least variance [$r(220) = .37$, $p < .001$]. Likewise, psychological ownership was related to both nationalism [$r(220) = .48$] and patriotism [$r(220) = .35$]. All bivariate correlations are included in Table 9. Additionally, the average variance extracted from the items corresponding to each factor are generally above the threshold of .50 to demonstrate convergent validity of the items on their respective factors ($AVE_{Immersion} = .53$, $AVE_{Efficacy} = .45$, $AVE_{Self\text{-}identity} = .58$) and the average variance extracted from the factor scores ($AVE_{psychological\ ownership} = .54$) is above the threshold to show convergent validity on the psychological ownership construct.

Table 8. Factor Loadings of Psychological Ownership of Country Scale

	Factor Loading Pattern Matrix		
Items	Factor 1	Factor 2	Factor 3
We belong in Canada	.792	-.036	-.002
We are comfortable being in Canada.	.516	.102	.093
Canada is our country.	.708	.044	-.069
Canada is our home.	.916	-.047	-.057
We care deeply about Canada.	.626	.024	.095
I'm glad to be in Canada.	.560	-.016	.192
We have control over policy in Canada.	.113	.584	-.079
We have the ability to change policies in Canada.	.004	.818	-.125
We have the ability to contribute to Canada's success.	-.035	.753	-.007
We can make a difference in Canada's future.	-.071	.691	.041
We influence Canadian culture.	.105	.603	-.032
We gain value from our involvement in Canadian society.	-.093	.531	.280
My identity is tied to being Canadian.	.073	-.008	.769
I feel this country's success is my success.	.044	.141	.552
Being Canadian defines who I am.	.044	-.122	.845
The values of Canada are my values.	.094	-.003	.634
Being Canadian forms a large part of who we are.	.134	.194	.571
Canada is an important part of my self-image.	-.143	-.085	.931

3.4 Concurrent Validity

As would be expected, self-identified Canadians and non-Canadians scored differently on the Psychological Ownership of Country Scale, t (250) = 4.51, $p < .001$, with self identified Canadians (M = 5.52, SD = .78) scoring higher than non-Canadians (M = 4.81, SD = 1.04; g = .87).[1] An ANOVA revealed that differences existed across Canadian-born citizens, non-Canadian born citizens, and non-citizens. The overall ANOVA was significant, F (2, 249) = 14.75, $p < .001$. Pairwise comparisons demonstrated that Canadian born citizens scored higher (M = 5.60, SD = .98.) than non-Canadian born citizens (M = 5.31, SD = 1.68, p = .021, g = .24)[2] and non-citizens (M = 4.75, SD = 2.37, p <.001, g = .67). Likewise, non-Canadian born citizens scored statistically higher than non-citizens, p =.002, g = .29. Further, White Canadian citizens (M = 5.62, SD = .75) scored statistically higher than visible minority citizens (M = 5.40, SD = .80), p = .037, g = .28. Thus, the scale appears to discriminate between groups in a predictable fashion. Since I argue that psychological ownership should be useful in both immigrant and non-immigrant contexts, I evaluated the relationship between time in country and psychological ownership. The correlation between immigrant participants' length of residency in Canada and psychological ownership of country scores, r (84) = .27, is consistent with the position that immigrants can develop psychological ownership over time, and that development of psychological ownership is not constrained to majority group members.

3.5 Discriminant Validity

I tested the discriminant validity of psychological ownership from national identification (nationalism and patriotism), collective self-esteem, and social dominance orientation using the common Fornell and Larcker (1981) method (see Hair et al., 2006). This method compares the square root of the average variance extracted for a given latent construct to the inter-correlation with other latent constructs. If the square root of the average variance extracted is larger than a given inter-correlation between latent constructs then the constructs can be said to be statistically discriminant. In order to accomplish this, I used MPLUS v. 7.4 with full information maximum likelihood. I built

[1] Canadian, n = 222, non-Canadian, n = 30
[2] Canadian born, n = 166, non-Canadian born, n = 86

a measurement model that included SDO, nationalism, patriotism, factors of collective self-esteem, and factors of psychological ownership. I loaded each respective item onto its respective factor and calculated the variance extracted from each item. Latent variable correlations are included in Table 10.

In terms of psychological ownership, what becomes apparent is that immersion may not be distinct from private collective self-esteem, efficacy is clearly distinct from all other constructs, and self-identity may not be distinct from identity collective self-esteem. The distinct feature of ownership from other constructs may be the inclusion of efficacy, or the perceived control of one's ideological space.

Table 9. Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Female															
2. Age	-.06														
3. Residency	.06	-.09													
4. Ownership	-.13*	-.13*	.30***												
5. Immersion	-.10	-.10	.40***	.84***											
6. Efficacy	-.14*	-.05	.19***	.77***	.51***										
7. Self-Identity	-.08	-.15*	.18**	.87***	.62***	.46***									
8. CSE	.01	-.03	.11	.62***	.46***	.37***	.63***								
9. CSE	-.11	.08	.02	.35***	.23***	.32***	.29***	.69***							
Membership															
10. CSE Private	.04	-.08	.10	.54***	.58***	.26***	.48***	.71***	.27***						
11. CSE Public	.05	-.02	.04	.30***	.22***	.21***	.29***	.63***	.29***	.45***					
12. CSE Identity	.06	-.10	.15*	.56***	.36***	.26***	.67***	.80***	.30***	.52***	.27***				
13. Nationalism	.01	-.12	.16*	.48***	.45***	.17*	.53***	.57***	.21**	.52***	.32***	.58***			
14. Patriotism	-.11	.08	-.08	.35***	.25***	.28***	.32***	.39***	.26***	.26***	.26***	.32***	.41***		
15. SDO	-.17**	.04	-.10	-.17**	-.22***	.09	-.13*	-.11	.03	-.18**	-.12	-.10	-.05	-.15*	
Mean		18.27	15.27	5.43	5.99	5.35	4.96	5.37	4.86	6.40	5.52	4.70	4.05	3.87	2.51
SD		.92	5.36	.84	.91	.92	1.21	.64	1.00	.59	.74	1.25	.50	.45	.99
α				.91	.86	.82	.89	.81	.67	.74	.50	.82	.69	.58	.91

Note: N = 252 except for correlations with PAT and NAT where N = 222.

CSE = Collective Self-Esteem; SDO = Social Dominance Orientation

Table 10. Correlations Between Latent Constructs

	1	2	3	4	5	6	7	8	9	10
1. SDO										
2. Nationalism	-.12									
3. Patriotism	-.24	.58								
4. CSE: Membership	.03	.23	.30							
5. CSE: Private	-.29	.77	.40	.24						
6. CSE: Public	-.19	.51	.50	.31	.59					
7. CSE: Identity	-.19	.79	.53	.34	.68	.40				
8. Immersion	-.26	.66	.38	.25	.78	.33	.52			
9. Efficacy	-.14	.28	.43	.36	.39	.43	.35	.58		
10. Self-Identity	-.16	.72	.44	.29	.64	.43	.82	.71	.51	
SQRT (AVE)	.64	.53	.45	.64	.68	.53	.74	.73	.67	.76

Note: CSE = Collective Self-Esteem; SDO = Social Dominance Orientation

3.6 Discussion

In general, I have demonstrated good convergent validity and good concurrent validity for the psychological ownership of country construct. The assessment of discriminant validity suggests that the unique component of psychological ownership of country relative to other similar constructs is the inclusion of efficacy. This is line with the theoretical underpinnings of ownership (e.g., Furby, 1978). Psychological ownership and its respective factors showed good internal consistency. Some measures included in this study were problematic. Public collective self-esteem, membership self-esteem, nationalism, and patriotism all had poor internal consistency reliability and had substantially more measurement error than variance explained. Study 3 will further test the structure, reliability, and validity of the psychological ownership construct in a second Canadian convenience sample.

Chapter 4

4 Study 3

While study 2 provided the initial scale structure and preliminary evidence of its reliability and validity, study 3 attempted to confirm the factor structure and compare possible models of psychological ownership of country. I suggest that the three bases of psychological ownership form distinct factors and compared this model to a single factor model, and two two-factor models. I further address convergent, concurrent, and discriminant validity using the same measures included in study 2.

The 18-item measure initially developed in study 2 was administered in person to a second sample of 263 students from the subject pool of Western University, who participated for course credit. The Western University Non-Medical Research Ethics Board approved this study with approval number 106546. Following informed consent, all participants completed the same measures as in study 2. Participants were invited to participate in a study on the social and political attitudes of Canadians. I dropped data from 7 participants because they failed the attention check, leaving 256 cases for analysis. This sample had a mean age of 18.46 (SD = .94), was predominantly female (n = 185), and consisted of the Canadian born (n = 153) and immigrants (n = 103). Immigrants consisted of Canadian citizens (n = 58) and non-citizens (n = 45). I used ethnicity to code for White Canadians (n = 107) and visible minority status (n = 149), and average length of residency among immigrants was 8.71 years (SD = 5.54).

4.1 Confirmatory Factor Analysis

I conducted a confirmatory factor analysis using maximum likelihood estimation with robust standard errors on participant's responses to the 18-item psychological ownership of country scale. I tested the fit of four models: the first specified all items loading onto one latent factor, the second specified that the immersion and self-identity items load onto one factor and the efficacy items load onto a second factor, the third model specified that the immersion and efficacy items load onto one factor and the self-identity items load onto a second factor, and the fourth model specified that the immersion, efficacy, and self-identity items load onto their three respective latent factors. The Satorra-Bentler scaled chi square test supports that the three-factor

model yielded better fit than the two-factor model, χ^2_{diff} (2) = 60.87, better fit than the alternative two factor model, χ^2_{diff} (2) = 39.33, and better fit than the one-factor model, χ^2_{diff} (3) = 104.97. Factor loadings are displayed in Figure 3. The model fails the chi-square test of model fit, but this test is an exact fit test, determining whether the fit of the model is perfect (Kline, 2011) and this almost always fails (Steiger, 2007). Thus, Steiger (2007) suggests assessing the overall fit of the model based upon the absolute fit indices (RMSEA & SRMR), which are acceptable based upon suggested values of < .08 for SRMR and < .08 for RMSEA (Hu & Bentler, 1999; Steiger, 2007). Hu and Bentler (1999) also suggested a two-fit index of RMSEA < .06 and SRMR < .09 for good fit. The estimate of RMSEA rejects the poor-fit hypotheses but fails the close-fit hypothesis (MacCallum, Browne, & Sugawara, 1996; Steiger, 2007). The CFI and TLI estimates are in line with acceptable fit >.90 but good fit would be considered > .95 (Hu & Bentler, 1999). Thus, the model shows acceptable fit and supports a three-factor structure of psychological ownership of country. I now turn to issues of validity and reliability of the measure.

Table 11. Goodness-of-Fit Indicators of Models for Psychological Ownership of Country

Model	χ^2	*df*	χ^2_{diff}	CFI	TLI	RMSEA	SRMR
Single Factor	481.90***	135		.81	.78	.10 (.09, .11)	.07
Two Factor	420.99***	134	60.31***	.84	.82	.09 (.08, .10)	.06
Two Factor$_{Alternative}$	310.14***	134	44.71***	.90	.89	.07 (.06, .08)	.06
Three Factor	261.03***	132	104.97***	.93	.92	.06 (.05, .07)	.06

Note: Chi-square difference values are reported with the satorra bentler correction and χ^2_{diff} represents the difference compared to the single factor model.

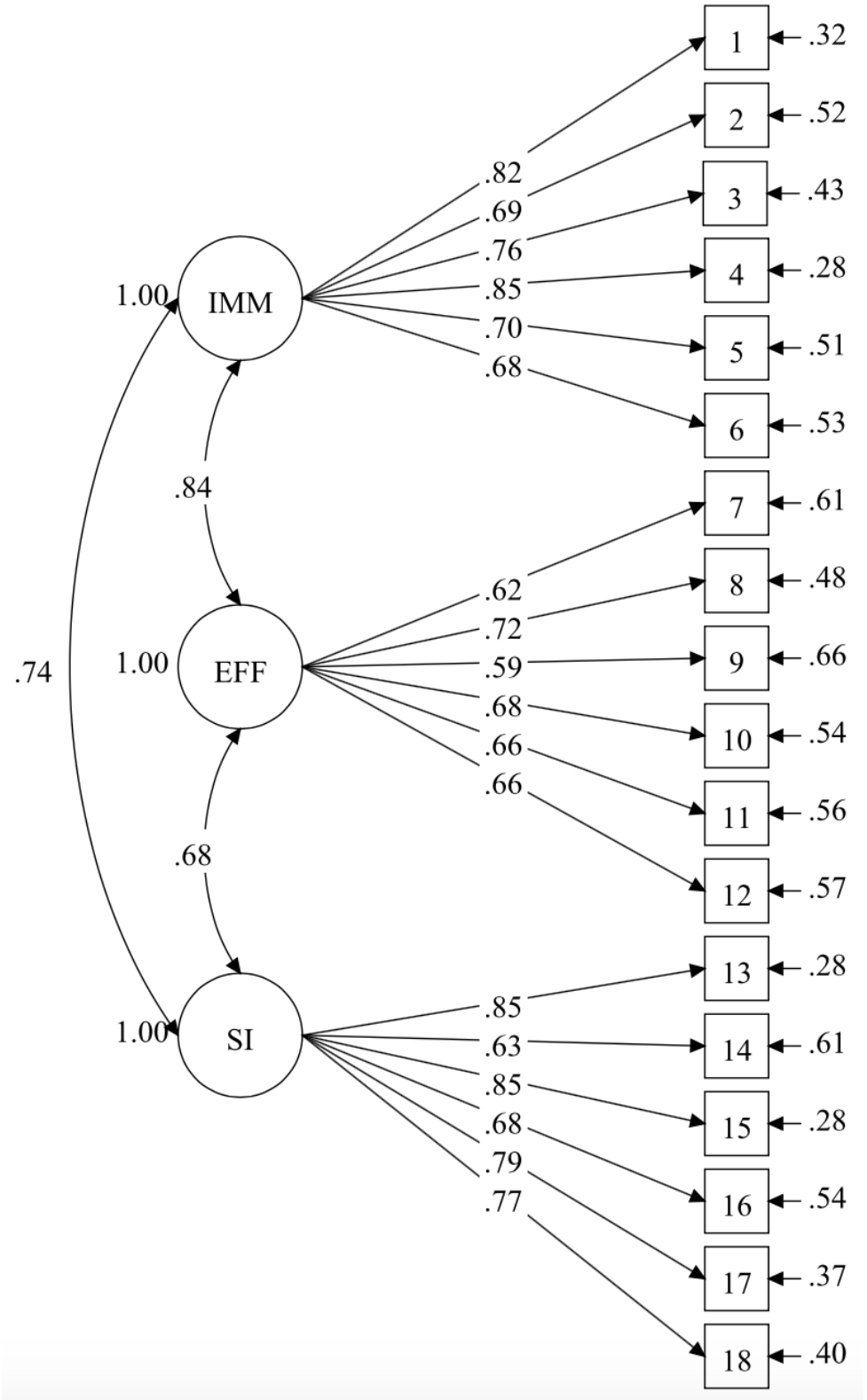


Figure 3. Factor loadings of the three-factor model of psychological ownership (Canadian). IMM = Immersion; EFF = Efficacy; SI = Self-identity

4.2 Convergent Validity

Bivariate correlations between the factors ranged from $r(254) = .59$ (Efficacy and Self-identity; $p < .001$) to $r(254) = .71$ (Immersion and Efficacy; $p = .001$). The total 18-item Psychological Ownership of Country Scale correlated highly with the Luhtanen and Crocker (1992) Collective Self-Esteem scale, reworded for Canadian identity, $r(209) = .64$, $p < .001$, sharing 41.5% of their variance. Self-identity is most similar to collective self-esteem [$r(209) = .65$, $p < .001$], while efficacy shares the least variance [$r(209) = .44$, $p < .001$]. Additionally, self-identity is highly related to the identity subscale of the CSE [$r(209) = .71$, $p < .001$], as it should be. Likewise, psychological ownership was related to both nationalism [$r(209) = .61$] and patriotism [$r(209) = .37$]. All bivariate correlations are included in Table 12. Additionally, the average variance extracted from the items corresponding to each factor are generally above the threshold of .50 to demonstrate convergent validity of the items on their respective factors ($AVE_{Immersion} = .57$, $AVE_{Efficacy} = .43$, $AVE_{Identity} = .59$) and the average variance extracted from the factor scores ($AVE_{psychological\ ownership} = .67$) is above the threshold to show convergent validity on the psychological ownership construct.

Table 12. Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Female															
2. Age	.06														
3. Residency	.07	-.16*													
4. Ownership	.05	-.15*	.34***												
5. Immersion	.04	-.18**	.41***	.90***											
6. Efficacy	-.02	-.14*	.33***	.85***	.71***										
7. Self-Identity	.09	-.09	.27***	.89***	.69***	.59***									
8. CSE	.17*	.14*	.040	.64***	.52***	.44***	.65***								
9. CSE Membership	-.07	.11	-.09	.37***	.30***	.35***	.29***	.69***							
10. CSE Private	.17*	.05	.17*	.59***	.61***	.41***	.49***	.73***	.38***						
11. CSE Public	.14*	.07	.06	.28***	.27***	.24***	.21**	.60***	.27***	.40***					
12. CSE Identity	.24**	.15*	.01	.54***	.32***	.25***	.71***	.75***	.26***	.40***	.20**				
13. Nationalism	.20**	-.02	.10	.61***	.50***	.42***	.61***	.65***	.24***	.67***	.38***	.55***			
14. Patriotism	-.02	.05	-.08	.37***	.24***	.26***	.40***	.42***	.32***	.28***	.14*	.38***	.39***		
15. SDO	-.07	.04	-.14*	-.18***	-.20**	-.19**	-.10	-.18**	-.16*	-.22**	-.13	-.04	-.03	-.10	
Mean		18.46	14.58	5.34	5.80	5.25	4.96	5.39	4.95	6.31	5.59	4.72	4.04	3.85	2.48
SD		.94	5.90	.92	.96	.93	1.23	.59	.91	.67	.68	1.13	.58	.46	.88
α				.93	.88	.81	.89	.79	.60	.76	.46	.79	.82	.57	.88

Note: *** $p < .001$, ** $p < .01$, *$p < .05$

$N = 256$ except for correlations with PAT, NAT, and CSE where $N = 211$

4.3 Concurrent Validity

As expected, self-identified Canadians and non-Canadians scored differently on the Psychological Ownership of Country Scale, t (254) = 7.46, $p < .001$, with self identified Canadians (M = 5.52, SD = .80) scoring higher than non-Canadians (M = 4.50, SD = .95), g = 1.23. An ANOVA demonstrated that differences exist across Canadian-born citizens, non Canadian-born citizens, and non-citizens. The overall ANOVA was significant, F (2, 253) = 18.12, $p < .001$. Pairwise comparisons demonstrated that Canadian born citizens scored higher (M = 5.57, SD = .98.) than non-Canadian born citizens (M = 5.23, SD = 1.68, p = .012, g =.28) and non-citizens (M = 4.70, SD = 2.37, $p < .001$, g = .61). Likewise, non-Canadian-born citizens scored significantly higher than non-citizens, p = .002, g = .26. Further, White Canadian citizens (M = 5.69, SD = .79) scored significantly higher than visible minority citizens (M = 5.27, SD = .87), $p < .001$, g = .50. In line with study 2, the scale discriminates between groups in a predictable fashion. Likewise, the relationship between time in country and psychological ownership among immigrants was statistically significant with a moderate effect size [$r(97) = .37$, $p < .001$], supporting the position that immigrants develop psychological ownership over time.

4.4 Reliability

Internal consistency reliability was calculated for each of the subscales described above. The coefficient alphas are as follows: Immersion = .88, Efficacy = .81, and Self-identity = .89. The full 18-item scale has a coefficient alpha of .93.

4.5 Discriminant Validity

I tested the discriminant validity of psychological ownership from national identification (nationalism and patriotism), collective self-esteem, and social dominance orientation using the common Fornell and Larcker (1981) method (see Hair et al., 2006) This method compares the square root of the average variance extracted for a given latent construct to the inter-correlation with other latent constructs. If the square root of the average variance extracted is larger than a given inter-correlation between latent

constructs then the constructs can be said to be statistically discriminant. In order to accomplish this, I used MPLUS v. 7.4 with full information maximum likelihood. I built a measurement model that included SDO, nationalism, patriotism, factors of collective self-esteem, and factors of psychological ownership. I loaded each respective item onto their respective factor and calculated the average variance extracted from each item. Table 13 displays latent variables correlations.

In terms of psychological ownership, immersion may not be distinct from private collective self-esteem, efficacy is clearly distinct from all other constructs, and self-identity may not be distinct from identity collective self-esteem. The distinct feature of ownership from other constructs may be the inclusion of efficacy, or the perceived control of one's ideological space. This confirms what was found in study 2.

In confirmatory factor analysis, the assumption that cross-loadings are zero can result in inflation of the estimated factor correlations. As an additional test of discriminant validity, I pooled the data from studies 2 and 3 and conducted an exploratory structural equation model to determine if cross-loadings are all lower than the target loadings. This would confirm discriminant validity of the factors (see Table 14).

Table 13. Latent Variable Correlations

	1	2	3	4	5	6	7	8	9	10
1. SDO										
2. Nationalism	-.12									
3. Patriotism	-.17	.66								
4. CSE: Membership	-.30	.38	.45							
5. CSE: Private	-.25	.89	.56	.54						
6. CSE: Public	-.11	.67	.51	.45	.65					
7. CSE: Identity	-.12	.72	.64	.43	.60	.44				
8. Immersion	-.22	.66	.48	.45	.80	.53	.49			
9. Efficacy	-.23	.58	.48	.57	.67	.48	.43	.84		
10. Self-Identity	-.09	.72	.60	.44	.67	.49	.85	.74	.68	
SQRT (AVE)	.58	.66	.45	.58	.71	.33	.71	.75	.66	.77

Note: CSE = Collective Self Esteem; SDO = Social Dominance Orientation

Table 14. Factor Loadings of Psychological Ownership of Country from an Exploratory Structural Equation Model

	Factor Loading		
Items	Factor 1	Factor 2	Factor 3
We belong in Canada.	.833	-.016	-.030
We are comfortable being in Canada.	.526	.128	.060
Canada is ours.	.771	-.030	-.024
Canada is our home.	.958	-.144	.005
We care deeply about Canada.	.466	.117	.198
I'm glad to be in Canada.	.539	.055	.121
We have control over policy in Canada.	.036	.600	-.002
We have the ability to change policies in Canada.	.024	.730	-.011
We have the ability to contribute to Canada's success.	-.017	.644	.035
We can make a difference in Canada's future.	.047	.666	-.023
We influence Canadian culture.	.031	.563	.108
We gain value from our involvement in Canadian society.	-.065	.521	.271
My identity is tied to being Canadian.	.001	.009	.837
I feel Canada's success is my success.	.057	.136	.519
Being Canadian defines who I am.	-.002	-.069	.876
Canadian values are my values.	.169	.078	.506
Being Canadian forms a large part of who we are.	.133	.144	.607
Canadian culture is an important part of my self-image.	-.180	-.017	.926

4.6 Discussion

In general, I have further demonstrated good convergent validity and good concurrent validity for the psychological ownership of country construct. The assessment of discriminant validity suggests that the unique component of psychological ownership of country relative to other similar constructs is the inclusion of efficacy. Psychological ownership and its respective factors showed good internal consistency reliability. Some measures included in this study were problematic. Public collective self-esteem, membership self-esteem, and patriotism all had poor internal consistency reliability and had more measurement error than variance explained.

As next steps in the development and validation of the psychological ownership of country scale, assessing the value of psychological ownership as a predictor of various outcomes predicted by national identity is necessary. For example, research demonstrates that strength of national identity is a good predictor of voting behavior and individuals' attention to politics (Huddy & Khatib, 2007). Psychological ownership should be tested as an explanatory variable in this and other citizenship behaviors. Second, structural validation is an ongoing process and to be highly valuable, psychological ownership should show structural validity across various majority-minority contexts. Study 4 examines the psychometric properties of psychological ownership within a general United States sample, examines the role of psychological ownership as a mediator between national identity and negative attitudes towards immigrants, and examines the predictive validity of psychological ownership on voting.

Chapter 5

5 Study 4

The purpose of study 4 was to confirm the factor structure of psychological ownership of country within a U.S. sample, further examine the reliability and validity of the scale within a new sample, and examine each of the four hypotheses discussed in the introduction: a) that social identification and psychological ownership should be positively associated, b) that psychological ownership and negative outgroup attitudes should be positively associated, c) that psychological ownership should be a plausible mediator between social identification and outgroup attitudes, and d) that psychological ownership should be positively associated with citizenship behaviors. The latter is evaluated specifically in the context of voting.

5.1 Method

I collected data in two phases using the Turk Prime platform (Litman, Robinson, & Abberbock, 2017). Participants were asked to participate in a two-part online study on the relationship between personality attributes and opinions about social issues. The Western University Non-Medical Research Ethics Board approved this study with approval number 108412. Participants were promised $1.00 in exchange for participating in phase I. All participants completed phase I between October 14th and October 16th, 2016. In phase one, I collected data from 459 individuals. I eliminated data from 24 participants for non-completion (i.e., starting but never completing the survey; participants who completed the survey but left items blank were still included) or for failing the attention check, leaving 435 for analysis. In phase one, and following informed consent, participants completed measures of psychological ownership of the United States, national identification, social dominance orientation, political orientation, attitudes towards immigrants, and basic demographic items including age, sex, immigrant status, and length of residency in the United States.

5.1.1 Psychological ownership. Psychological ownership of the United States was measured using the same 18 items from Study 3 adapted for a U.S. context. Items

were measured on a 7-point scale with higher scores indicating more psychological ownership of the United States. To ensure consistency with the mediation model in study 1, directions specified the following in the:

> *"Now think of yourself as a member of your racial group. Type your racial group into the following…I am _____. Now think about how you and others who identify in this way interact in and experience American society."*

5.1.2 National identification. National identification was measured using the same two questions that Brylka et al. (2015) used: "I am happy that I am American" and "I am proud that I am American". Items were measured on a 5-point scale with higher values indicating greater national identification.

5.1.3 Social dominance orientation. Social dominance orientation was measured using 16-items (e.g., "It is OK if some groups have more of a chance in life than others"; Pratto et al., 1994) on a 7-point scale. The overall scale had good internal consistency reliability ($\alpha = .95$).

5.1.4 Political orientation. Political orientation was measured using the single item " Please select the political orientation that you most align with", which ranged from 1, "Extremely liberal" to 7, "Extremely conservative".

5.1.5 Attitudes toward immigrants and immigration. I measured three different dimensions of attitudes toward immigrants. Each item and its corresponding end points are displayed in Table 15. For all items, participants responded on a 9-point scale. Dimensions reflected negative attitudes motivated by economic concerns regarding immigrants, cultural concerns regarding immigrants, and security concerns regarding immigrants.

Following phase I, all 435 participants who were retained were contacted to participate in phase II. Participants were contacted on November 9th. Of the 435 participants contacted, 360 accepted and completed the study between November 9th and November 12th (83% retention). Participants were paid $0.50 for phase II. Data from 6

participants was eliminated for failing the attention check. In phase II participants reported whether they voted in the 2016 U.S. presidential election, and responded to the same attitudes toward immigrants items as in phase I.

The sample was predominantly women (n = 260) and non-immigrants (n = 415), with a mean age of 39.26 (SD = 12.62), and below the midpoint of political orientation (*M* = 3.47, SD = 1.82). Among immigrants, the mean length of residency in the U.S. was 15.30 years (SD = 13.87).

Table 15. Dimensions of Attitudes Towards Immigrants

Scale	Item	End Points
Economic Attitudes (ρ = .80)	Do you believe that immigrants have gotten more or less than they economically deserve in the United States?	"Much less" to "Much more"
	Do you believe that immigrants mostly take jobs away from Americans or fill a needed employment gap?	"Mostly fill a needed employment gap" to "Mostly take jobs away from Americans"
Cultural Attitudes (ρ = .85)	Do immigrants mostly add positively to or negatively to the culture of America?	"Mostly negative" to "Mostly positive"
	How much effort do you think immigrants put into adopting American culture?	"Not much effort at all" to "A lot of effort"
Security Attitudes (ρ = .92)	Do immigrants create unnecessary risk to the security of the United States?	"Definitely not" to "Definitely"
	How concerned are you that immigrants arriving in the United States might be terrorists?	"Not concerned at all" to "Very concerned"

Note: The cultural attitude items were reverse scored such that higher scores across all attitudes toward immigrant scales represent more negative attitudes (i.e., more concern) and lower scores represent more positive attitudes (i.e., less concern).

5.2 Results

5.2.1 Confirmatory factor analysis of psychological ownership. I conducted a confirmatory factor analysis using maximum likelihood estimation with robust standard errors on participants' responses to the 18-item psychological ownership of country scale. I tested the fit of three models: the first specified all items loading onto one latent factor, the second specified that immersion and self-identity items load on one factor while efficacy items load on a second factor, and the third specified that the immersion, efficacy, and self-identity items load onto their respective latent factors. Using the Satorra Bentler scaled chi-square difference test, the three-factor model yielded better fit than the one-factor model, $\chi^2_{diff}(3) = 152.44$, $p < .001$ and better fit than the two-factor model, $\chi^2_{diff}(1) = 54.08$, $p < .001$. Factor loadings are displayed in Figure 4. The absolute fit indices (RMSEA & SRMR) are acceptable based upon suggested values of < .08 for SRMR and < .08 for RMSEA (Hu & Bentler, 1999; Steiger, 2007). Hu and Bentler (1999) also suggested a two-fit index of RMSEA < .06 and SRMR < .09 for good fit. The estimate of RMSEA rejects the poor-fit hypotheses but fails the close-fit hypothesis (MacCallum et al., 1996; Steiger, 2007). The CFI and TLI estimates are in line with acceptable fit >.90 but good fit would be considered > .95 (Hu & Bentler, 1999). Subsequent model fit was improved by allowing the residuals of items 7 ("We have control over policy in America") and 8 ("We have the ability to change policies in America") to correlate and by allowing the residuals of item 3 ("America is our country") and item 4 ("America is our home") to correlate. Thus the model shows acceptable fit and supports a three-factor structure of psychological ownership of country. All models are presented in Table 16. I now turn to issues of validity and reliability of the measure.

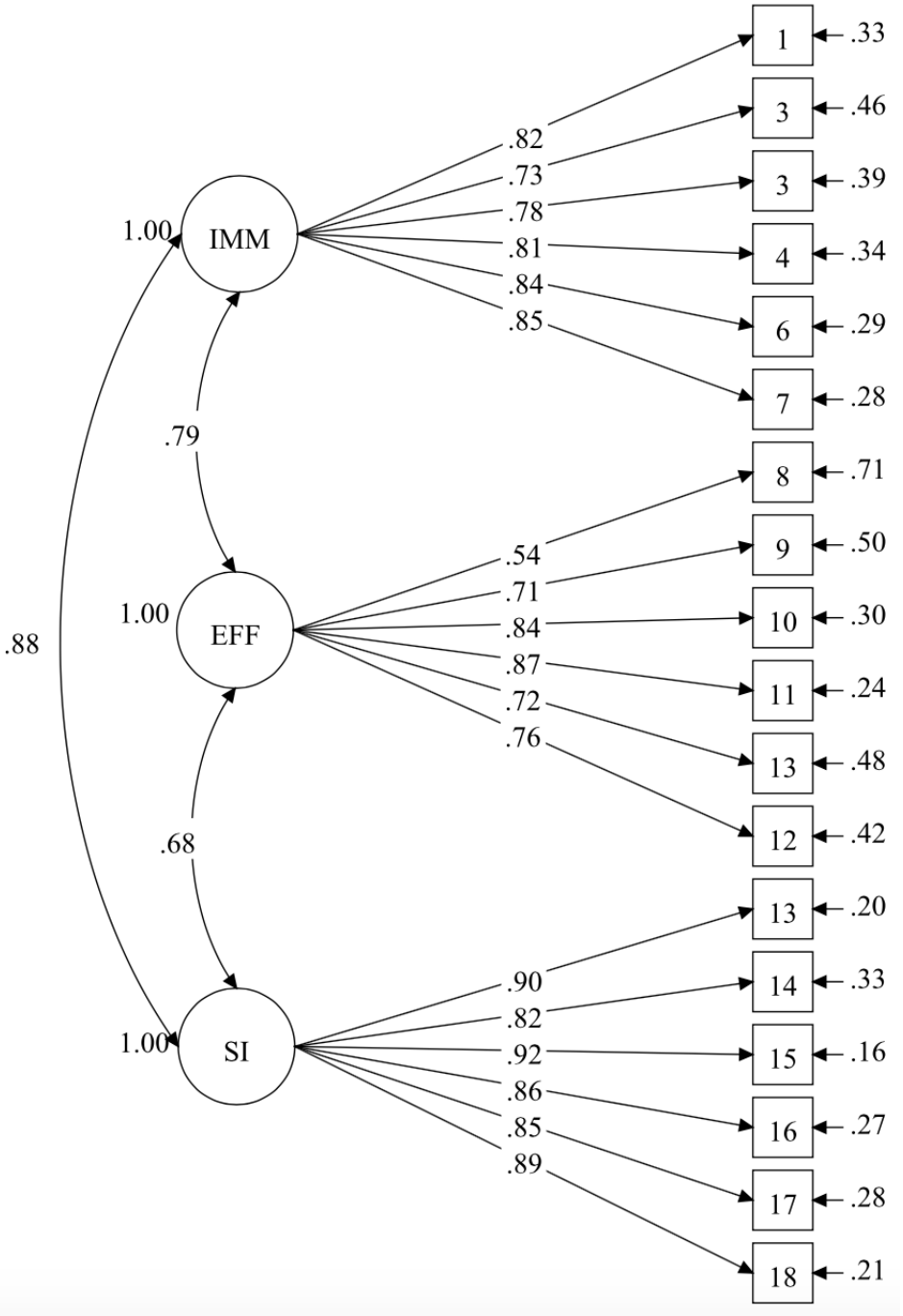


Figure 4. Factor loadings of a three-factor model of psychological ownership (American).

IMM = Immersion; EFF = Efficacy; SI = Self-identity

Table 16. Goodness-of-Fit Indicators of Models for Psychological Ownership of Country

Model	χ^2	*df*	χ^2_{diff}	CFI	TLI	RMSEA	SRMR
Single Factor	828.11***	135		.82	.79	.109 (.102, .116)	.08
Two Factor	573.22***	134	254.89	.88	.87	.087 (.080, .094)	.07
Three Factor	424.29***	132	148.93	.92	.91	.071 (.064, .079)	.06
POC7 WITH POC8	378.11***	131	46.18	.93	.92	.066 (.058, .074)	.06
POC3 WITH POC4	338.01***	130		.95	.94	.061 (.053, .069)	.06
			40.10				

5.2.2 Convergent validity. Correlations between the factors ranged from $r(433) = .62$ (Efficacy and Self-identity; $p < .001$) to $r(433) = .83$ (Immersion and Self-identity; $p = .001$). The total 18-item Psychological Ownership of Country Scale correlated highly with national identity [$r(402) = .71$, $p < .001$). Self-identity is most similar to national identity [$r(402) = .76$, $p < .001$), while efficacy shares the least variance [$r(402) = .39$, $p < .001$]. Additionally, the average variance extracted from the items corresponding to each factor are above the threshold of .50 to demonstrate convergent validity of the items on their respective factors ($AVE_{Immersion} = .65$, $AVE_{Efficacy} = .56$, $AVE_{Identity} = .76$) and the average variance extracted from the factor scores ($AVE_{psychological\ ownership} = .72$) is above the threshold to show convergent validity on the psychological ownership construct.

5.2.3 Concurrent validity. To evaluate whether psychological ownership was higher in non-immigrant versus immigrant participants I conducted a one-sided *t*-test. Non-immigrant participants ($M = 5.45$, SD = 1.16) scored significantly higher than immigrants ($M = 4.96$, SD = 1.20), $t\ (433) = 1.84$, $p = .03$, $g = .42$. Additionally, psychological ownership did not differ between White Americans ($M = 5.43$, $SD = 1.15$) and non-White Americans ($M = 5.40$, SD = 1.22), $g = .03$.

5.2.4 Reliability. Reliability data were obtained for each of the subscales described above. The coefficient alphas are as follows: Immersion = .92, Efficacy = .87, and Self-identity = .95. The full 18-item scale has a coefficient alpha of .96.

5.2.5 Discriminant validity. I tested the discriminant validity of psychological ownership from national identification and social dominance orientation using the common Fornell and Larcker (1981) method (see Maxwell-Smith et al., 2016). This method compares the square root of the average variance extracted for a given latent construct to the inter-correlation with other latent constructs. If the square root of the average variance extracted is larger than a given inter-correlation between latent constructs then the constructs can be said to be statistically discriminant. In order to accomplish this, we used MPLUS v. 7.4 with full information maximum likelihood. I built a measurement model that included national identity, SDO, and factors of psychological ownership. We loaded each respective item onto their respective factor and calculated the average variance extracted from each item.

All sub-scores of psychological ownership were discriminant from national identity and SDO; however, self-identity and immersion were not clearly discriminant from each other based upon the Fornell and Larcker (1981) method. However, a further comparison of the relations between the subscales and SDO show discrimination in the way the scales correlate with SDO. While immersion was unassociated with SDO, efficacy was negatively associated with SDO, and self-identity was positively associated with SDO. McCornack (1954) demonstrated that variables can be correlated very highly and still have distinct correlations with a third variable, indicating that they are not the same construct.

Table 17. Bivariate Correlations Between Variables at Time 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Female														
2. Age	.00													
3. Residency	-.00	.05												
4. Conservatism	.03	.02	-.07											
5. Ownership	.01	.13**	-.067	.25***										
6. Immersion	-.01	.17***	-.06	.24***	.93***									
7. Efficacy	.01	.05	-.08	.08***	.83***	.67***								
8. Self-Identity	.03	.12*	-.04	.31***	.93***	.83***	.62***							
9. National Identity	.06	.11*	.01	.41***	.71***	.69***	.39***	.76***						
10. SDO	-.08	-.10*	-.06	.48***	.04	.04	-.13**	.16***	.29***					
11. ATI	-.04	.04	-.09	.60***	.24***	.28***	.06	.23***	.35***	.54***				
12. Economic Attitudes	-.01	.00	-.07	.51***	.22***	.26***	.05	.28***	.33***	.49***	.90***			
13. Cultural Attitudes	-.12*	.07	-.08	.50***	.12*	.17***	-.04	.17***	.21***	.47***	.89***	.70***		
14. Security Attitudes	.00	.05	-.09	.60***	.29***	.30***	.12*	.34***	.39***	.48***	.91***	.72***	.71***	
Mean		39.26	3.01	3.47	5.42	5.74	5.49	5.04	4.12	2.27	4.53	4.63	4.10	4.87
SD		12.62	8.03	1.82	1.16	1.19	1.14	1.54	1.01	1.21	2.08	2.25	2.16	2.54
α					.96	.92	.87	.95	.90	.95	.91	.75	.81	.88

N = 435 except for correlations with National Identity where N = 404. Reliability for the two-item national identity scale and subscales of attitudes toward immigrants is the spearman brown coefficient.

Table 18. Latent Variable Correlations and Average Variance Extracted

	National Identity	SDO	Immersion	Efficacy	Self-Identity
National Identity					
SDO	.25				
Immersion	.79	.05			
Efficacy	.51	-.13	.79		
Self-Identity	.83	.18	.89	.68	
SQRT (AVE)	.91	.72	.81	.75	.87

Note: SDO = Social Dominance Orientaiton

5.2.6 Psychological ownership as mediator. I attempted to replicate the mediation model found in study 1 and as described by Brylka et al. (2015). Specifically, does psychological ownership mediate the relation between national identity and negative attitudes toward immigrants? In order to model these associations, I conducted a path analysis in MPLUS v. 7.4 using full information maximum likelihood with 10,000 bootstrapped samples. In order to assess the responses of the majority ingroup or "protypical" American, I selected only White Americans born in the U.S. from the sample (N = 332). There was an association between national identity and attitudes towards immigrants (β = .36, [.20, .50]) and between national identity and psychological ownership (β = .74, [.65, .79]); however, there was no association between psychological ownership and attitudes towards immigrants (β = .06, [-.10, .22]) and no indirect association between national identification and attitudes toward immigrants (β = .09, [-.07, .17]) through ownership.

Subsequently, I examined the factors as mediators. National identity had a direct association with attitudes toward immigrants (β = .22, [.05, .38]), as did immersion (β = .23, [.01, .42]) and efficacy (β = -.21, [-.35, -.08]). However, self-identity was unassociated with attitudes toward immigrants (β = .12, [-.09, .32]). National identity also had an indirect association with attitudes toward immigrants through both immersion (β = .16, [.01, .31]) and efficacy (β = -.08, [-.15, -.03]). I examined the variance inflation factors to confirm that multicollinearity was not a concern ($VIF_{Immersion}$ = 2.89; $VIF_{Self\text{-}identity}$ = 4.67; $VIF_{Efficacy}$ = 1.71; $VIF_{National\ Identity}$ = 2.89). Once social dominance

orientation and political ideology were controlled in the model, only the direct association between immersion and negative attitudes toward immigrants (β = .27, [.08, .43] and the indirect association between national identity and attitudes through immersion (β = .19, [.06, .31]) remained. Thus, the indirect effect through immersion accounted for the full effect of national identity on negative attitudes toward immigrants.

In a final model, I examined only the associations between immersion, efficacy, self-identity, and attitudes toward immigrants. Immersion was associated with more negative attitudes toward immigrants (β = .28, [.06, .47]), efficacy was associated with more positive attitudes toward immigrants (β = -.25, [-.40, -.10]), and self-identity was associated with more negative attitudes toward immigrants (β = .28, [.10, .47]).

5.2.7 Predictive validity of psychological ownership. In order test the predictive validity of psychological ownership I conducted two analyses. In the first, I examined the ability of psychological ownership to predict attitudes towards immigrants three-weeks later; in the second, I examined the ability of psychological ownership to predict whether individuals voted or not in the 2016 U.S. presidential election (i.e., a citizenship behavior). I conducted a path model using FIML and 10,000 bootstrapped samples with immersion, efficacy, and self-identity as predictors and attitudes toward immigrants as the criterion. All factors of psychological ownership predicted attitudes. Immersion predicted more negative attitudes towards immigrants (β = .26, [.03, .48]), efficacy predicted more positive attitudes towards immigrants (β = -.24, [-.40, -.082]), and self-identity predicted more negative attitudes toward immigrants (β = .38, [.18, .59]). In total, psychological ownership accounted for 24.5% of the variance in attitudes toward immigrants measured three-weeks later. Once SDO and political ideology were accounted for, only immersion remained a significant predictor of attitudes towards immigrants (β = .22, [.03, .41]).

5.2.8 Psychological ownership and voting. In a logistic regression model, I regressed vote (0 = Did not vote and 1 = Did vote) on psychological ownership. Results suggested no statistically significant relationship between ownership and voting, OR = 1.30 [.96, 1.75], p = .08; however, the sample size of non-voters was very small (n = 27)

and the effect size reflected by the odds ratio suggests a possible small effect (Chen, Cohen, & Chen, 2010).

5.3 Discussion

The American sample provided additional evidence of the three-factor structure of psychological ownership of country, and additional evidence of convergent, concurrent, and discriminant validity. It became clear that immersion, efficacy, and self-identity are distinct constructs with independent relations with other variables. For example, immersion appeared unrelated to SDO, efficacy was associated with lower SDO, and self-identity was associated with higher SDO. Despite a high correlation between immersion and self-identity, they do appear to be distinct constructs. McCornack (1956) demonstrated that even very highly correlated variables could have distinct relationships with other variables and this seems to be the case with immersion and self-identity. Study 4 also demonstrated preliminary predictive validity of the psychological ownership construct. Immersion remained a significant predictor of attitudes toward immigrants 3-weeks later after controlling for political orientation and SDO. Although the sample had far fewer non-voters than expected, there seemed to be preliminary suggestive evidence that psychological ownership may predict people's willingness to vote. The odds ratio of 1.30 suggests it may be worth examining the predictive validity of psychological ownership on voting with a more appropriate sample. The theoretical perspective that voting is an act of responsibility to one's country suggests that it should be more likely as feelings of ownership increase (Furby, 1978).

In terms of the role of psychological ownership as a mediator between national identity and outgroup attitudes, the American sample provided mixed results. There was support for hypothesis 1, that national identification should be positively associated with psychological ownership; however, there was no association between psychological ownership and outgroup attitudes nor an indirect effect of national identification on attitudes toward immigrants through psychological ownership as a unitary construct. However, the comprehensive development of the psychological ownership of country scale allowed for specific testing of mediation with each factor of psychological

ownership independently. These results suggested that the link between national identification and negative outgroup attitudes may be through immersion, or one's sense of national ingroup belonging and sense that one's country belongs to the ingroup. While only occurring within the model sans control variables, it is interesting that efficacy was associated with more positive attitudes towards immigrants. This finding is counter-intuitive when juxtaposed with others (i.e., Brylka at al., 2005; Martinovic & Verkuyten, 2013; Study 1 within this manuscript). Perhaps strong feelings of control over one's country and belief in the ability of one's social group to influence policy results in less outgroup prejudice by reducing concerns about loss of control. In essence, if the ingroup believes itself to be in power and the outgroup does not reflect a threat to the ingroup's control, high efficacy individuals may be inclined to view outsiders more positively. Both tests of the mediation effect of psychological ownership have been conducted on cross-sectional data. While cross-sectional data can provide information about the shared and unique variance across three (or more) variables and thus plausible models of mediation (Hayes, 2013; Jose, 2013), it cannot confirm theoretical causal pathways.

Additional psychometric information is still necessary to fully understand the psychological ownership construct. Study 5 will examine the test-retest reliability of psychological ownership to determine the extent to which psychological ownership is a trait-like construct.

Chapter 6

6 Study 5

The purpose of study 5 is to examine the test-retest reliability of the scale to determine its property as a state or trait measure. That is, can psychological ownership change overtime and to what extent does it change overtime without any specific intervention? This is important to examine because longitudinal mediation models assume that the mediator will change over time. If it does not, there would be no variance to predict between time points. Knowing the test-retest reliability also allows for estimating test intervals for longitudinal models. Additionally, I further examine convergent, concurrent, and discriminant validity similar to study 2 and study 3.

6.1 Method

133 participants from the subject pool of a Canadian University participated in study 5 for course credit following informed consent. The Western University Non-Medical Research Ethics Board approved this study with approval number 108448. This sample was predominantly female (n = 93) and consisted of the Canadian born (n = 75) and immigrants (n = 58). Immigrants consisted of Canadian citizens (n = 24) and non-citizens (n = 34). I also collected data on ethnicity, allowing coding for White Canadians (n = 63) and visible minority status (n = 70). Participants in this sample had a mean age of 19.41 (SD = 5.88) and were generally liberal (*M* = 3.38, SD = 1.33). Participants completed the psychological ownership of country measure approximately 4 weeks apart. I evaluated the stability of the construct by evaluating Pearson's *r* over the two time points.

6.2 Results

A confirmatory factor analysis using maximum likelihood estimation with robust standard errors suggested that the proposed three factor model showed good model fit, χ^2 (132) = 209.91, *p* <.001, CFI = .93, TLI = .91, RMSEA .067 (.049, .083), SRMR = .06. This model showed considerably better fit than a one-factor model, χ^2 (135)= 321.46, *p*

<.001, CFI = .82, TLI = .81, RMSEA .102 (.088, .117), SRMR = .075. A chi-square difference test using the Satorra-Bentler scaled chi-square supports that the three-factor model is superior to a one factor model, χ^2_{diff} (3) = 99.93, p <.001.

6.2.1 Concurrent validity. I conducted an ANOVA to determine if differences existed across Canadian-born citizens, non-Canadian born citizens, and non-citizens on psychological ownership of country and each subscale specifically. The overall ANOVA for the total score was statistically significant, F (2, 130) = 25.98, p < .001. Canadian born citizens (M = 5.76, SD = .80) scored higher than non-citizens (M = 4.59, SD = .88*; p* < .001), but not non-Canadian born citizens (M = 5.75, SD = .70; p = .55). Non-Canadian born citizens scored higher than non-citizens (p < .001). For immersion the overall ANOVA was statistically significant, F (2, 130) = 19.52, p < .001. Canadian born citizens (M = 6.14, SD = .85) scored higher than non-citizens (M = 4.98, SD = 1.12*; p* < .001), but not non-Canadian born citizens (M = 6.03, SD = .70; p = .62). Non Canadian born citizens scored higher than non citizens (p <.001). For efficacy the overall ANOVA was statistically significant, F (2, 130) = 13.23, p < .001. Canadian born citizens (M = 5.64, SD = .87) scored higher than non-citizens (M = 4.76, SD = .86*; p* < .001), but not non-Canadian born citizens (M = 5.53, SD = .68; p = .57). Non-Canadian born citizens scored higher than non-citizens (p = .001). For self-identity the overall ANOVA was statistically significant, F (2, 130) = 22.03, p < .001. Canadian born citizens (M = 5.51, SD = 1.08) scored higher than non-citizens (M = 4.03, SD = 1.15*; p* < .001), but not non-Canadian born citizens (M = 5.39, SD = 1.14; p = .65). Non-Canadian born citizens scored higher than non-citizens (p < .001).

6.2.2 Reliability. Internal consistency was good for all subscales and the total psychological ownership construct. Evaluating retest reliability at a four-week interval revealed that there is considerable variability across a short period of time. Finally, I examined the trajectory of psychological ownership over the four-week period, revealing that psychological ownership increased over the four-week period, as a result of efficacy and self-identity increasing. Only immersion remained stable in the aggregate (see Table 19). Table 20 shows the bivariate correlations between T1 and T2 for the total score and subscales.

Table 19. Stability of Psychological Ownership Over 4 Weeks

	t (df)	95% CI Difference (T2-T1)
POC	2.83(132)	.05, .26
IMM	1.40(132)	-.04, .21
EFF	2.20(132)	.02, .30
SI	3.14(132)	.08, .36

Table 20. Bivariate Correlations Between Variables at Time 1 and Time 2

	T1POC	T1SI	T1EFF	T1IMM	α
T2POC	.79				.95
T2SI		.79			.91
T2EFF			.61		.85
T2IMM				.76	.89
α	.93	.89	.79	.85	

6.3 Discussion

Study 5 further corroborates the factor structure of psychological ownership, corroborates the concurrent validity of the factors, and provides evidence of reliability of measurement over a brief period of 4 weeks. A psychological instrument can be said to be reliable when the test shows a similar score across short intervals. Acceptable range for trait stability is generally above $r = .70$, which indicates a low level of measurement error. Correlations over time that are too high (e.g., $r > .90$) might indicate a high enough level of stability that there is no rationale in attempting to predict changes over a short interval. The correlations ranging from .61 to .79 across time among the factor scores and .79 across the general construct suggest that even a short interval of approximately 4 weeks should be sufficient to evaluate the predictive validity of immersion, efficacy, and self-identity as mediators of the relation between social identification and outgroup attitudes over time, while still retaining a low level of measurement error.

Chapter 7

7 Study 6

Study 6 examines the possible role of psychological ownership as a mediator within a three-wave longitudinal design. Mediation models in longitudinal designs are difficult to conduct because of estimations about the proper test time between measurements of variables. Researchers may miss slowly developing relations by measuring variables too close together or miss more transient relations if variables are measured too far apart (Jose, 2013). Because the study of psychological ownership of territorial spaces within intergroup relations is a newly developing area of research (e.g., Brylka et al., 2015; Verkuyten & Martinovic, 2017), gauging the proper amount of time for these relations to develop is difficult; however, study 5 suggests that even a brief period of 4-6 weeks should allow for sufficient variability in psychological ownership over time in order to test the hypotheses. Study 6 was designed to evaluate the newly developed psychological ownership scale within a Southern U.S. sample and to test the mediation model from study 1 using longitudinal data.

7.1 Method

Using the Turkprime platform (Litman, Robinson, & Abberbock, 2016), I collected longitudinal data across three time points. Participants were asked to participate in a three-part online study on the relation between Southern identity and political attitudes. The Western University Non-Medical Research Ethics Board approved this study with approval number 110593. I used Turkprime's panel feature to allow only those identifying as White to participate. Participants were promised $0.20 for participation in phase I, which lasted approximately 5 minutes. All participants completed phase I between January 15, 2018 and January 27, 2018. In total, 539 individuals consented to participate in phase I. Participants reported their age, gender, race, education level, state of residence, political orientation, and measures of southern identification, psychological ownership of the South, overt racial attitudes, and symbolic racial attitudes at each time point.

7.1.1 Political orientation. I measured political orientation using the single item " Please select the political orientation that you most align with," which ranged from 1: "Extremely liberal" to 7: "Extremely conservative".

7.1.2 Southern identity. I measured Southern identity by combining the same three-item scale used in Study 1, with the two-item scale used in Brylka et al., 2015, which conceptualized identity as the extent to which one identifies with and feels proud of being from one's homeland (Brylka et al., 2015) or simply a positive affective bond with one's region (Blank & Schmidt, 2003; Reed, 2008). Thus, I measured Southern identification via the following five items: "To what extent do you feel pride in being from the South," "To what extent do you define yourself as a Southerner," "How important to you is living in the South," "I am happy that I am a Southerner," and "I am proud that I am a Southerner." Items were measured on a 5-point scale with higher scores indicative of greater identification (α_{T1} = .95, α_{T2} = .95, α_{T3} = .96).

7.1.3 Psychological ownership of the South. In Study 6 I adapted the scale developed through Studies 2 and 3 and used in Studies 4 and 5 to be relevant to U.S. Southerners. Prior to completing the items, participants were asked to think of themselves as a member of their own racial group (i.e., Whites) and to type their racial group into the provided blank space. Following, they were presented with these instructions:

> *"Now think about how you and others who identify in this way interact in and experience society in the American South. Please respond to the following series of statements with the extent to which you agree or disagree with each one."*

The presentation of items was randomized and each item was responded to on a scale from 1: "Strongly disagree" to 7: "Strongly agree." The general construct of psychological ownership showed good internal consistency reliability (α_{T1} = .97, α_{T2} = .96, α_{T3} = .97), as did immersion (α_{T1} = .93, α_{T2} = .91, α_{T3} = .93), efficacy (α_{T1} = .91, α_{T2} = .92, α_{T3} = .93), and self-identity (α_{T1} = .96, α_{T2} = .95, α_{T3} = .96).

7.1.4 Symbolic racial attitudes. I measured symbolic racial attitudes using the SR-2000 (Henry & Sears, 2002). The scale consists of 8 items that measure adherence to a belief system that does not see racial discrimination as the predominant factor inhibiting the success of Blacks and sees Blacks' continued disadvantage as self-inflicted (e.g., "It's really a matter of some people not trying hard enough; if Blacks would only try harder they could be just as well off as whites"). The scale had good internal consistency (α_{T1} = .88, α_{T2} = .90, α_{T3} = .89). Higher scores indicate a more negative attitude toward Blacks.

7.1.5 Overt racial attitudes. I measured overt racial attitudes toward Blacks using the same seven items from study 1 (see Table 1). The scale showed good internal consistency (α_{T1} = .87, α_{T2} = .87, α_{T3} = .87). Higher scores indicate a more negative attitude toward Blacks.

I used an iterative data screening procedure to determine who was invited to participate in phase II. This involved eliminating those who left more than 50% of any given scale blank (n = 29), those who did not exclusively identify as White (n = 16), and those who failed to correctly complete the fill-in-the-blank task as part of the psychological ownership scale instructions (n = 31). This left 463 participants who were invited to participate in phase II approximately 6 weeks later. These individuals were invited through an email message delivered through the Turkprime platform, inviting them to participate in phase II of a three-phase study on social identity and political attitudes. Participants were offered $0.30 for their participation. 335 individuals consented to participate in phase II. Participants completed phase II between February 26, 2018 and March 5, 2018. We conducted the same iterative data screening procedure as in phase I, which included removing those who left more than 50% of any scale blank (n = 20), those who did not exclusively identify as White (n = 3), and those who failed to correctly complete the fill-in-the-blank task as part of the psychological ownership scale instructions (n = 7). 305 participants were retained in phase II (65.9% retention).

All 463 participants retained in phase I were contacted to complete phase III. An invitation was sent out inviting participants to complete phase III of a study on social identity and political attitudes and were offered $0.45 for approximately 5 minutes of

their time. 329 participants consented. Using the same iterative data screening procedure as in phases I and II, those who left more than 50% of any scale blank (n = 12), those who did not exclusively identify as White (n = 2), and those who failed to correctly complete the fill-in-the-blank task as part of the psychological ownership scale instructions (n = 10) were removed. This left 305 participants for analysis (65.8%). 364 participants completed at least two time points (either T1 and T2 or T1 and T3), while 99 participants from phase I failed to complete either T2 or T3.

7.2 Results

The sample at Time One was diverse in age (*M* = 39.24, *SD* = 12.12) and political orientation (*M* = 3.95, *SD* = 1.82), was primarily female (n = 300, 64.8%), and reflected a highly educated sample from all 11 traditionally defined southern states (see Tables 21 and 22). Time Two and Three reflected a similar age (Time 2: *M* = 39.52, *SD* = 11.8; Time 3: *M* = 41.1, *SD* = 12.17), political orientation (Time 2: *M* = 3.98, *SD* = 1.80; Time 3: *M* = 3.97, *SD* = 1.86), and gender split (Time 2: n = 196, 63.3%; Time 3: n = 199, 65.2%).

Table 21. State of Residence of Participants

State	N (T1)	N (T2)	N (T3)
Alabama	19 (4.1%)	16 (5.2%)	14 (4.6%)
Arkansas	11 (2.4%)	7 (2.3%)	7 (2.3%)
Florida	78 (16.8%)	53 (17.4%)	45 (14.8%)
Georgia	56 (12.1%)	40 (13.1%)	36 (11.8%)
Louisiana	15 (3.2%)	11 (3.6%)	10 (3.28%)
Mississippi	15 (3.2%)	9 (3.0%)	7 (2.3%)
North Carolina	68 (14.7%)	45 (14.8%)	47 (15.4%)
South Carolina	41 (8.9%)	27 (8.9%)	29 (9.5%)
Tennessee	39 (8.4%)	21 (6.9%)	28 (9.18%)
Texas	75 (16.2%)	50 (16.4%)	51 (16.7%)
Virginia	46 (9.9%)	26 (8.5%)	31 (10.16%)

Table 22. Education Level of Participants

Education	N (T1)	N (T2)	N (T3)
Less than high school diploma	3 (0.6%)	1 (0.3%)	1 (0.3%)
High school diploma or equivalent	45 (9.7%)	25 (8.2%)	28 (9.2%)
Some College	118 (25.5%)	75 (24.6%)	79 (25.9%)
Associates Degree	56 (12.1%)	30 (9.8%)	31 (10.2%)
Bachelors Degree	155 (33.5%)	110 (36.1%)	107 (35.1%)
Professional Graduate Degree	33 (7.1%)	20 (6.6%)	15 (4.9%)
Other Graduate Degree	53 (11.4%)	44 (14.4%)	44 (14.4%)

The bivariate correlations between variables are reported in Table 23.

7.2.1 Structural validation. Using all data at Time One, I conducted a confirmatory factor analysis using maximum likelihood estimation with robust standard errors on participants' responses to the 18-item psychological ownership scale. I tested the fit of three models: the first specified all items loading onto one latent factor, the second specified that immersion and self-identity items load on one factor while efficacy items load on a second factor, and the third specified that the immersion, efficacy, and self-identity items load onto their respective latent factors. Using the Satorra Bentler scaled chi-square difference test, the three factor model yielded better fit than the one-factor model, $\chi^2_{diff} = 329.85$, $p < .001$ and better fit than the two-factor model, $\chi^2_{diff} = 192.00$, $p < .001$. Factor loadings are displayed in Table 25. The absolute fit indices

(RMSEA & SRMR) are acceptable based upon suggested values of < .08 for SRMR and < .08 for RMSEA (Hu & Bentler, 1999; Steiger, 2007). The CFI and TLI estimates are in line with acceptable fit >.90 but good fit would be considered > .95 (Hu & Bentler, 1999). Subsequent model fit was improved by allowing the residuals of items 7 ("We have control over policy in the South") and 8 ("We have the ability to change policies in the South") to correlate. Thus the model shows acceptable fit and supports a three-factor structure of psychological ownership of the South. All models are presented in Table 24 and the factor loadings of the final retained model are presented in Table 25.

Table 23. Bivariate Correlations of Variables Across Time

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. T1SI																					
2. T2SI	.86																				
3. T3SI	.85	.90																			
4. T1IMM	.82	.76	.72																		
5. T2IMM	.70	.75	.73	.70																	
6. T3IMM	.73	.77	.82	.75	.81																
7. T1EFF	.56	.48	.48	.75	.51	.53															
8. T2EFF	.41	.46	.47	.44	.71	.57	.55														
9. T3EFF	.45	.46	.58	.50	.55	.75	.51	.66													
10. T1ID	.83	.79	.77	.87	.66	.73	.68	.43	.48												
11. T2ID	.71	.80	.77	.70	.87	.77	.52	.65	.56	.77											
12. T3ID	.74	.79	.83	.69	.73	.89	.49	.50	.68	.79	.82										
13. T1SR	.43	.49	.49	.43	.42	.44	.23	.20	.21	.45	.42	.43									
14. T2SR	.45	.49	.48	.46	.42	.43	.25	.19	.17	.46	.42	.43	.89								
15. T3SR	.45	.50	.47	.44	.40	.44	.22	.14	.19	.45	.41	.43	.90	.93							
16. T1OR	.28	.31	.35	.30	.30	.34	.15	.10	.13	.37	.34	.37	.63	.59	.61						
17. T2OR	.26	.26	.28	.25	.25	.25	.08	.04	.04	.32	.31	.32	.57	.58	.61	.83					
18. T3OR	.29	.33	.33	.27	.30	.32	.09	.08	.12	.36	.35	.36	.57	.60	.59	.84	.88				
19. T1POC	.81	.76	.73	.95	.69	.74	.86	.51	.54	.94	.74	.73	.41	.44	.41	.31	.25	.28			
20. T2POC	.67	.75	.72	.68	.95	.79	.58	.85	.64	.70	.94	.76	.39	.39	.36	.29	.23	.28	.72		
21. T3POC	.71	.76	.82	.71	.78	.96	.55	.63	.64	.74	.80	.94	.40	.39	.39	.31	.24	.30	.74	.81	
N	463	305	305	463	305	305	463	305	305	463	305	305	463	305	305	463	305	305	463	305	305
M	3.52	3.40	3.53	4.96	5.01	5.07	5.04	5.03	5.16	4.23	4.37	4.42	3.68	3.75	3.75	2.21	2.28	2.26	4.74	4.80	4.88
SD	1.15	1.12	1.14	1.52	1.35	1.44	1.30	1.26	1.27	1.78	1.66	1.73	1.36	1.43	1.43	1.14	1.17	1.17	1.41	1.30	1.37

Note: SI = social identity; IMM = immersion; EFF = efficacy; ID = self-identity; SR = symbolic racial attitudes; OR = overt racial attitudes; POC = psychological ownership of country

Table 24. Goodness-of-Fit Indicators of Models for Psychological Ownership of the South

Model	χ^2	*df*	χ^2_{diff}	CFI	TLI	RMSEA	SRMR
Single Factor	1077.92***	135		.82	.80	.123 (.116, .130)	.08
Two Factor	748.07***	134	329.85	.89	.87	.099 (.093, .107)	.07
Three Factor	556.07***	132	192.00	.92	.91	.083 (.076, .091)	.06
POC7 WITH POC8	505.64***	131	50.43	.93	.92	.079 (.071, .086)	.06

Table 25. Factor Loadings of Psychological Ownership of the South

	Factor Loading		
Items	Factor 1	Factor 2	Factor 3
We belong in the South.	.851		
We are comfortable being in the South.	.833		
The South is ours.	.740		
The South is our home.	.842		
We care deeply about the South.	.891		
I'm glad to be in the South.	.837		
We have control over policy in the South.		.647	
We have the ability to change policies in the South.		.653	
We have the ability to contribute to the South's success.		.849	
We can make a difference in the South's future.		.784	
We influence Southern culture.		.873	
We gain value from our involvement in Southern society.		.833	
My identity is tied to being Southern.			.917
I feel the South's success is my success.			.838
Being Southern defines who I am.			.894
Southern values are my values.			.848
Being Southern forms a large part of who we are.			.881
Southern culture is an important part of my self-image.			.930

7.2.2 Structural validation of Southern identity and discriminant validity to psychological ownership. Using the same approach above, I tested the fit of the Southern identification scale. The fit was good, $\chi^2 = 27.52$, $p < .001$, CFI = .98, TLI = .97, RMSEA = .099 (.065, .136), SRMR = .014. Subsequently, I examined whether the psychological ownership of the South scale was discriminant from the Southern identification scale. I used a common procedure to compare the square root of the average variance extracted (AVE) for each construct to the inter-construct correlation (Fornell & Larcker, 1981; Hair et al., 2006; Maxwell-Smith et al., 2016). If this value is higher for each construct than the corresponding latent variable correlation then discriminant validity is demonstrated (see Table 26 for comparison values). Psychological ownership and Southern identification are clearly discriminant.

Table 26. Discriminant Validity as Shown by Latent Variable Correlations and Average Variance Extracted

	Southern Identification	Immersion	Efficacy	Self-identity
Immersion	.87			
Efficacy	.65	.84		
Self-identity	.85	.90	.74	
SQRT(AVE)	.94	.91	.88	.94

7.2.3 Psychological ownership as a mediator of the relation between Southern identification and prejudice. First, I attempted a replication of the cross-sectional mediation model in Study 1. Following the analytic protocol of Study 1, I tested the hypotheses using a latent variable modeling approach to mediation in MPLUS v. 7.4 using full information maximum likelihood (FIML). I utilized a parceling based approach (see Table 27) because the interest is in understanding the relations between the sets of constructs rather than the structure of the items themselves. I utilized an item-to-construct balanced approach to create the parcels, which balances the average item loading across the parcels (see Little, Cunningham, Shahar, & Widaman, 2002). This approach minimizes random error variance, improves stability of parameter estimates, and leads to

better fitting models than item-level approaches (Bandalos, 2002; Matsunaga, 2008). This model had 80% power to detect an effect as small as ß = .18, a small to medium effect (Soper, 2017).

Table 27. Parcels for Overt and Symbolic Prejudice Latent Variables

	Overt Racism Parcel 1	Overt Racism Parcel 2	Overt Racism Parcel 3	Symbolic Racism Parcel 1	Symbolic Racism Parcel 2	Symbolic Racism Parcel 3
	Item 4 Item 5	Item 1 Item 6	Item 3 Item 2 Item 7	Item 1 Item 4 Item 7	Item 2 Item 5 Item 6	Item 3 Item 8
Average Factor Loading	.70	.75	.71	.65	.67	.75

The significance of indirect effects was tested using bias corrected bootstrap confidence intervals with 10,000 bootstrapped samples (Jose, 2013). Initial model fit suggested possible misspecification, $\chi^2 = 273.45$, $p < .001$, CFI = .95, TLI = .92, RMSEA = .11 [.10, .13], SRMR = .05. Subsequently, I assessed the indicators of the latent variables to determine whether correlated residuals would be reasonable. When correlated errors are assumed to be zero all covariation among indicators loading on a given factor are assumed explained by the latent dimension (Brown, 2015) and thus all measurement error is considered random. In a subsequent model, I allowed correlated residuals between immersion, efficacy and self-identity. Model fit improved, $\chi^2 = 197.52$, $p < .001$, CFI = .96, TLI = .94, RMSEA = .10 [.09, .11], SRMR = .05. I accepted this model as having reasonable fit. The model is depicted in Figure 5.

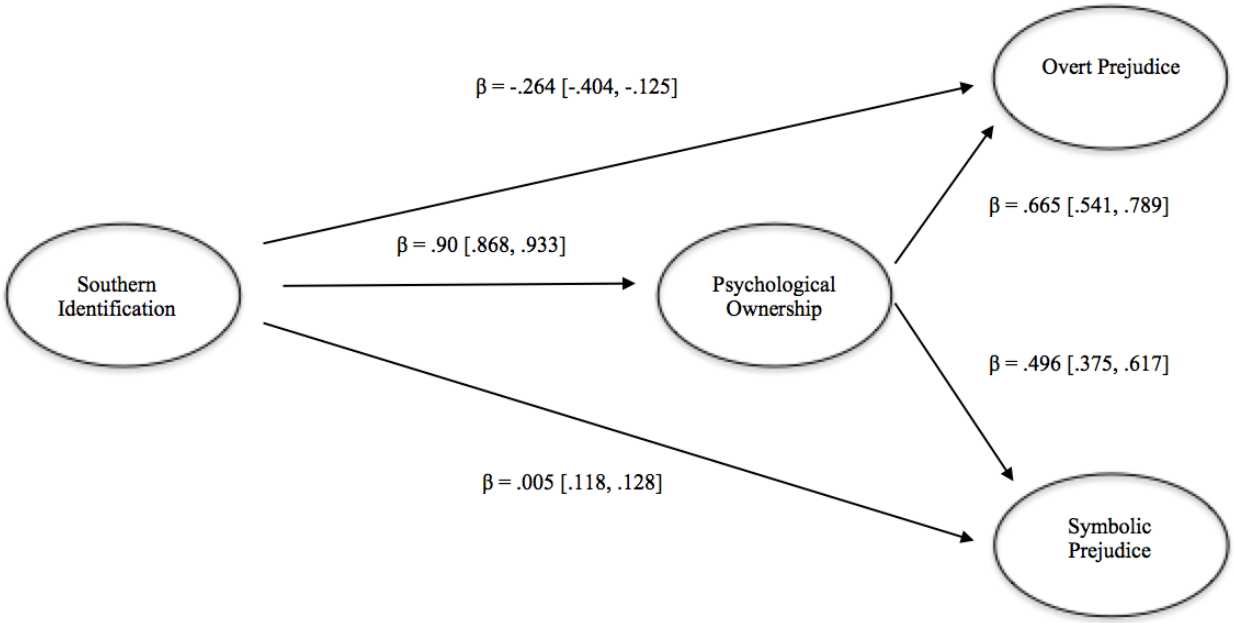


Figure 5. Structural model examining overt and symbolic prejudice as a function of southern identification and psychological ownership

Examining the indirect effects revealed statistically significant indirect effects of southern identification on symbolic prejudice through psychological ownership (β = .447 [.342, .551], p <.001), and of southern identification on overt prejudice through psychological ownership (β = .599 [.478, .720], p <.001). As in study 1, the positive bivariate association between southern identification and overt prejudice (r = .28) reverses once psychological ownership is accounted for in the model.

The primary goal in study 6 was to test the mediation model over time. In order to accomplish this, I analyzed a three-wave autoregressive mediation model with latent variables using maximum likelihood estimation with robust standard errors for each of the dependent variables. Indicators were equivalent to the cross-sectional model and I included the possible reverse mediation (psychological ownership → southern identification → prejudice). These models had 80% power to detect an effect as small as ß = .20, a small to medium effect (Soper, 2017).

7.2.3.1 Longitudinal mediation model for overt prejudice. The initial model for overt prejudice showed poor model fit. Subsequently, I allowed the residuals of indicators to correlate across time. This model showed significantly better fit than model 1 and this

model was retained as having good fit (see Table 28). The model and parameter estimates are displayed in Figure 6. Southern identification at Time 1 predicted less overt prejudice at Time 3 β = -.24 [-.49, .00]; however, there was no indirect effect of southern identification at Time 1 on overt prejudice at Time 3 through psychological ownership, β = .02 [-.03, .07] nor of psychological ownership at Time 1 on symbolic prejudice at Time 3 through southern identification, β = .02 [-.03, .06]. Psychological ownership is clearly predicted over time by southern identification. This includes southern identification at Time 1 predicting psychological ownership at Time 2, β = .45 [.09, .80] and southern identification at Time 2 predicted psychological ownership at Time 3, β = .44 [.28, .61]. Psychological ownership does not appear to predict southern identification over time (T1→T2: β = .10 [-17, .36]; T2→T3: β = .17 [.04, .27].

Table 28. Model Fit for the Longitudinal Mediation Model Predicting Overt Prejudice

	χ^2	*df*	χ^2_{diff}	CFI	TLI	RMSEA	SRMR
Model 1	1108.62	230		.89	.87	.09 [.09, .10]	.07
Model 2	514.46	206	425.92***	.96	.95	.06 [.05, .06]	.07

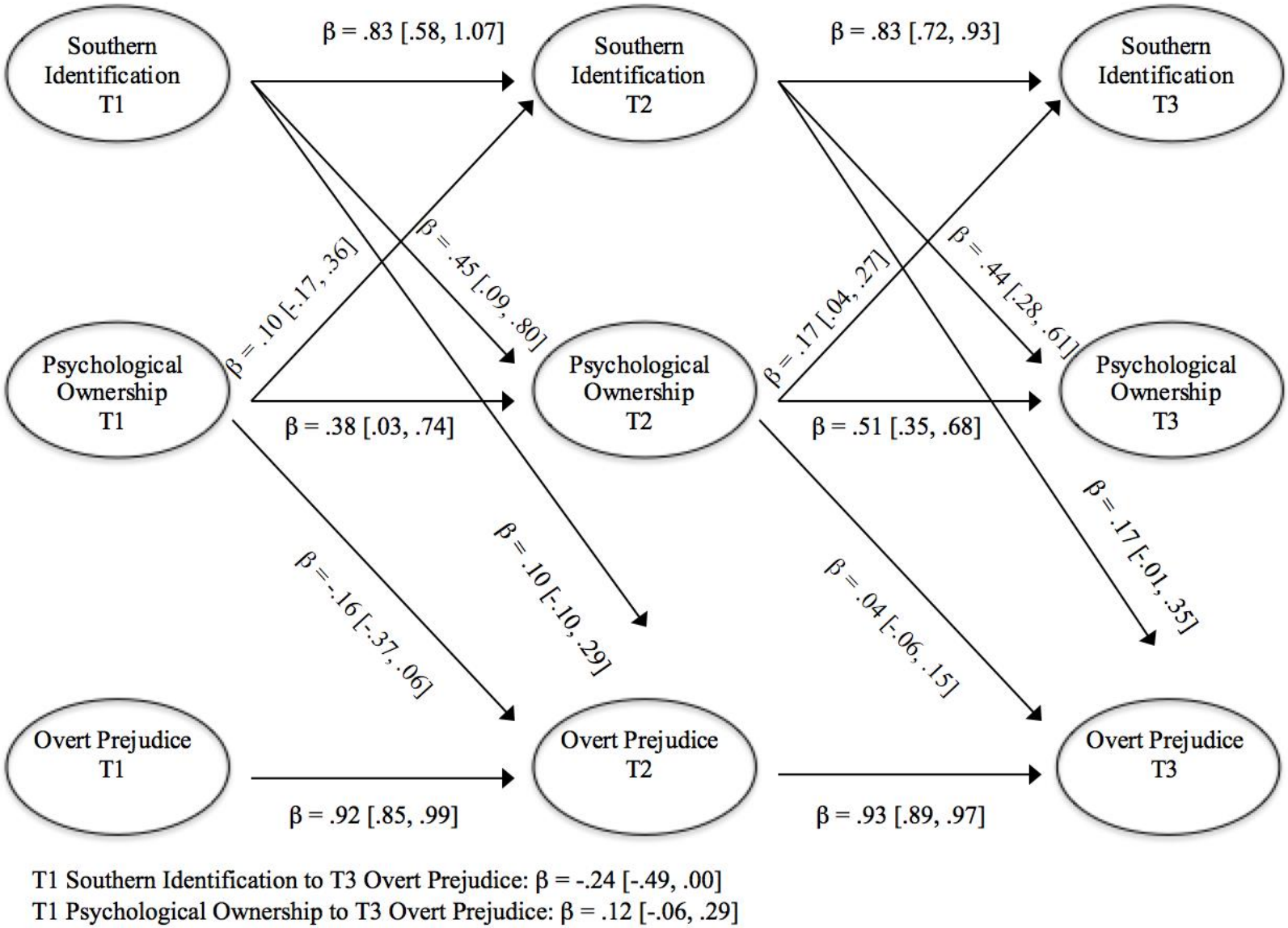
7.2.3.2 Longitudinal mediation model for symbolic prejudice. The initial model for symbolic prejudice showed poor model fit. Subsequently, I allowed the residuals of indicators to correlate across time. This model showed significantly better fit than model 1 and this model was retained as having good fit (see Table 29). The model and parameter estimates are displayed in Figure 7. There are no direct effects of either southern identification or psychological ownership at Time 1 on symbolic prejudice at time 3. There was also no indirect effect of southern identification at Time 1 on symbolic prejudice at Time 3 through psychological ownership, β = -.006 [-.007, .06] nor of psychological ownership at Time 1 on symbolic prejudice at Time 3 through southern identification, β = .007 [-.02, .03]. However, psychological ownership is clearly predicted over time by southern identification. This includes southern identification at Time 1 predicted psychological ownership at Time 2, β = .46 [.12, .80] and southern identification at Time 2 predicted psychological ownership at Time 3, β = .44 [.28, .61].

Psychological ownership does not appear to reliably predict southern identification over time (T1→T2: β = .08 [-17, .36]; T2→T3: β = .15 [.04, .27].

Table 29. Model Fit for the Longitudinal Mediation Model Predicting Symbolic Prejudice

	χ^2	*df*	χ^2_{diff}	CFI	TLI	RMSEA	SRMR
Model 1	959.74	230		.90	.88	.08 [.08, .09]	.06
Model 2	392.25	206	463.98***	.97	.97	.04 [.04, .05]	.05

It is possible that indirect effects occur through specific factors of psychological ownership. I conducted exploratory analyses using the same model described above but for each of the factors independently. There were no indirect effects of southern identification on overt prejudice through immersion, efficacy, or self-identity, or indirect effects of immersion, efficacy, or self-identity on overt prejudice through southern identification. Likewise, there were no indirect effects of southern identification on symbolic prejudice through immersion, efficacy, or self-identity, or indirect effects of immersion, efficacy, or self-identity on symbolic prejudice through southern identification. These analyses are not reported.



T1 Southern Identification to T3 Overt Prejudice: β = -.24 [-.49, .00]
T1 Psychological Ownership to T3 Overt Prejudice: β = .12 [-.06, .29]

Figure 6. Longitudinal mediation model for overt prejudice

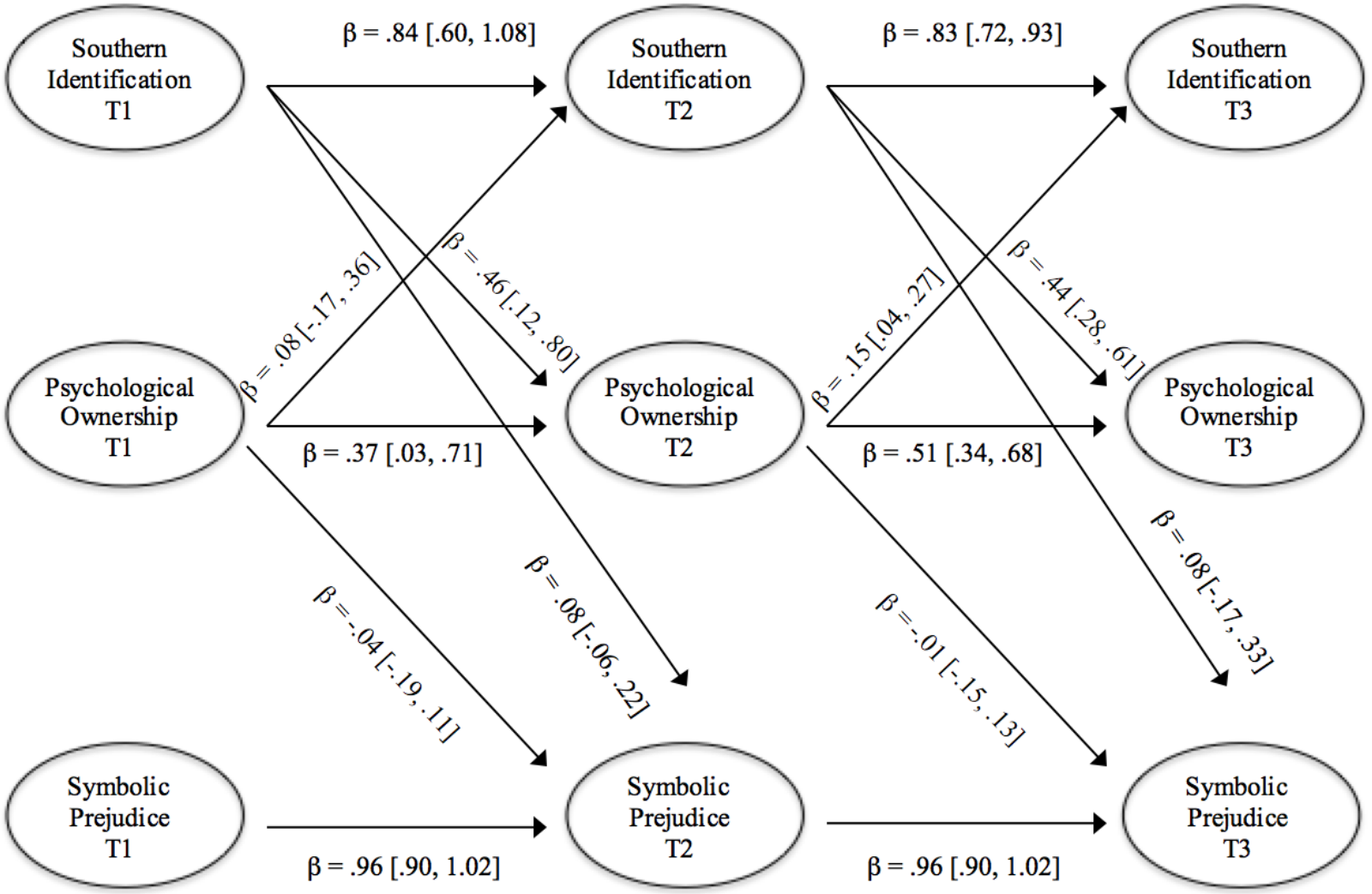


Figure 7. Longitudinal mediation model for symbolic prejudice

7.3 Discussion

Study 6 provides additional evidence of the structural validity of the psychological ownership construct and additional evidence of its discriminant validity to social identification. Additionally, using the cross-sectional data from Time 1, I was able to replicate the mediation model from Study 1. However, the longitudinal mediation model failed to provide evidence that psychological ownership of the South predicts either overt or symbolic prejudice against Blacks and fails to provide evidence that psychological ownership mediates the relation between southern identification and either overt prejudice or symbolic prejudice. The only hypothesis strongly supported by the longitudinal mediation model is that social identification appears to predict psychological ownership over time, supporting Brylka et al.'s (2015) suggestion that social identification acts as a precursor to developing feelings of ownership and contradicting other research in non-national domains that has suggested that psychological ownership predicts identification (Johnson, Morgeson, Ilgen, Meyer, & Lloyd, 2006).

There was very little variance in either overt prejudice or symbolic prejudice to predict over time. Both overt prejudice and symbolic prejudice share a high degree of stability across measurement periods. Overt prejudice between Time 1 and Time 2 (β = .92) and between Time 2 and Time 3 (β = .93) share an almost 1:1 relationship. Likewise, symbolic prejudice shows a similar trend (Time 1 to Time 2: β = .96; Time 2 to Time 3: β = .96). Longitudinal mediation models are distinct in that an independent variable is not predicting total scores of a dependent variable but actually predicting the change in the score of the dependent variable overt time. Without change over time, there is no variance to predict. Thus, these results leave the conclusion unknown. The challenge in testing this hypothesis now is that an extended longitudinal evaluation is necessary. Even long periods of time show high stability of racial prejudice (Henry & Sears, 2009). Test-retest reliabilities of .75 for social distance scales and .62 for affective scales over a period of 6 months may suggest that 6 months is a reasonable time-frame to expect enough variability in prejudice to test this hypothesis (Binder et al., 2009).

Chapter 8

8 Study 7

Study 7 was designed to evaluate the newly developed psychological ownership scale within a U.S. sample, to examine the mediation model from studies 1, 4, and 6, and to move beyond predicting attitudes toward outgroups by evaluating how psychological ownership influences citizenship behaviors.

8.1 Method

Using the Turkprime platform (Litman, Robinson, & Abberbock, 2016) and its panel features, I collected data from 432 participants identifying as White and who were born in the United States. Participants were asked to participate in a three-part online study on the relation between national identity and political attitudes, were promised $0.20 for participation, and completed the study between January 31, 2018 and February 10, 2018. The Western University Non-Medical Research Ethics Board approved this study with approval number 110593. Following informed consent, participants reported their age, gender, race, education, state of residence, place of birth, political orientation, and measures of national identification, psychological ownership of country, attitudes toward both legal and illegal immigrants, and completed a product selection task as a measure of citizenship behavior.

8.1.1 Political orientation. I measured political orientation using the single item " Please select the political orientation that you most align with," which ranged from 1: "Extremely liberal" to 7: "Extremely conservative".

8.1.2 National identity. I measured national identity using the same two item scale used in Brylka et al., 2015 ("I am happy that I am American," and "I am proud that I am American"), which conceptualized national identity as the extent to which one identifies with and feels proud of being from one's homeland (Brylka et al., 2015) or simply a positive affective bond with one's country (Blank & Schmidt, 2003; Reed,

2008). Items were measured on a 5-point scale with higher scores indicative of greater identification ($\rho = .93$).

8.1.3 Psychological ownership of country. I used the same wording of the scale as in Study 4. Prior to completing the items, participants were presented with these instructions:

> *"You were born in the United States and are American by birth. Think about how you and others who identify in this way interact in and experience American society. Please respond to the following series of statements with the extent to which you agree or disagree with each one."*

The presentation of items was randomized and each item was responded to on a scale from 1: "Strongly disagree" to 7: "Strongly agree". The general construct of psychological ownership showed good internal consistency reliability ($\alpha = .96$), as did immersion ($\alpha = .93$), efficacy ($\alpha = .90$), and self-identity ($\alpha = .95$).

8.1.4 Attitudes toward legal immigrants. Attitudes toward legal immigrants were measured using the same items from Study 4 (see Table 15). These items reflect economic, cultural, and security based rationales for harboring negative attitudes toward legal immigrants. Prior to completing this scale, participants were specifically informed to respond with legal immigrants in mind. Internal consistency was adequate for economic attitudes ($\rho = .77$), cultural attitudes ($\rho = .76$), and security attitudes ($\rho = .90$). Higher scores indicate a more negative attitude toward legal immigrants.

8.1.5 Attitudes toward illegal immigrants. Measurement of attitudes toward illegal immigrants was accomplished using two items on a nine-point scale. "What is your overall attitude toward illegal immigrants to the United States" was evaluated ranging from "Extremely unfavorable" to "Extremely favorable" and "How positive or negative do you feel toward illegal immigrants to the United States") was evaluated ranging from "Extremely negative" to "Extremely positive". These two items showed good internal consistency ($\rho = .97$). Items were reversed scored such that higher scores indicate a more negative attitude toward illegal immigrants.

8.1.6 Product selection task. The product selection task entailed selecting between two options of products. In each case, the product was the same but the origin of the product varied between either an American-made product or a foreign-made product. Additionally, the American product varied between being cheaper (by 15%), equal in price, or more expensive (by 15%) to the foreign made product. There were nine trials for this task with three trials within each of three separate products (stainless steel water bottle made in either America or Germany; Cabernet Franc red wine produced in either Finger Lakes, NY or Yarra Valley, Australia; a cotton t-shirt produced in either America or in Taiwan). Presentation of all trials was randomized.

I used an iterative data screening procedure to determine who was retained for analysis. This involved eliminating those who consented but never began the survey (n = 16), those who did not exclusively identify as White (n = 12), and those who left more than 50% of any given scale blank (n = 31). This left 372 participants for data analysis.

8.2 Results

8.2.1 Structural validation. I conducted a confirmatory factor analysis using maximum likelihood estimation with robust standard errors on participants' responses to the 18-item psychological ownership of country scale. I tested the fit of three models: the first specified all items loading onto one latent factor, the second specified that immersion and self-identity items load on one factor while efficacy items load on a second factor, and the third specified that the immersion, efficacy, and self-identity items load onto their respective latent factors (see Table 30). Using the Satorra Bentler scaled chi-square difference test, the three-factor model yielded better fit than the one-factor model, $\chi^2_{diff} = 238.76$, $p < .001$ and better fit than the two-factor model, $\chi^2_{diff} = 160.51$, $p < .001$. Factor loadings are displayed in Table 31. Subsequent model fit was improved by allowing the residuals of items 7 ("We have control over policy in America") and 8 ("We have the ability to change policies in America") to correlate. The absolute fit indices (RMSEA & SRMR) are acceptable based upon suggested values of < .08 for SRMR and < .08 for RMSEA (Hu & Bentler, 1999; Steiger, 2007). The CFI and TLI estimates are in line with acceptable fit >.90 but good fit would be considered > .95 (Hu & Bentler,

1999). Thus we conclude the model shows acceptable fit and supports a three-factor structure of psychological ownership of country.

Table 30. Goodness-of-Fit Indicators of Models for Psychological Ownership of Country

Model	χ^2	*df*	χ^2_{diff}	CFI	TLI	RMSEA	SRMR
Single Factor	833.07***	135		.82	.80	.12 (.110, .136)	.07
Two Factor	635.14***	134	70.64	.87	.85	.100 (.092, .108)	.07
Three Factor	457.43***	132	88.06	.92	.90	.081 (.073, .090)	.07
POC7 WITH POC8	359.66***	131	91.31	.94	.93	.069 (.060, .077)	.05

Note: Chi-square differences are calculated using the Satorra-Bentler scaled chi square correction.

8.2.2 Discriminant validity of psychological ownership and national identification. I examined whether the psychological ownership of country scale was discriminant from the national identification scale. I used a common procedure to compare the square root of the average variance extracted (AVE) for each construct to the inter-construct correlation (Fornell & Larcker, 1981; Hair, Black, Babin, Anderson, & Tatham, 2006; Maxwell-Smith, Conway, Wright, & Olson, 2016). If this value is higher for each construct than the corresponding latent variable correlation then discriminant validity is demonstrated (see Table 32 for comparison values). Psychological ownership and national identification are clearly discriminant.

Table 31: Factor Loadings of Psychological Ownership of Country

	Factor Loading		
Items	Factor 1	Factor 2	Factor 3
We belong in America	.857		
We are comfortable being in America.	.823		
America is our country.	.837		
America is our home.	.808		
We care deeply about America.	.854		
I'm glad to be in the America.	.866		
We have control over policy in America.		.707	
We have the ability to change policies in America.		.662	
We have the ability to contribute to America's success.		.827	
We can make a difference in America's future.		.781	
We influence American culture.		.764	
We gain value from our involvement in American society.		.834	
My identity is tied to being American.			.907
I feel this country's success is my success.			.781
Being American defines who I am.			.895
The values of America are my values.			.879
Being American forms a large part of who we are.			.880
American culture is an important part of my self-image.			.911

Table 32. Discriminant Validity of Psychological Ownership and National Identification

	National Identification	Immersion	Efficacy	Self-identity
Immersion	.87			
Efficacy	.70	.85		
Self-identity	.81	.88	.80	
SQRT(AVE)	.97	.92	.87	.94

8.2.3 Psychological ownership as a mediator of the relation between national identification and attitudes towards immigrants. First, I attempted a replication of the cross-sectional mediation model in Study 1. Following the analytic protocol of Study 1, I tested the hypotheses using a latent variable modeling approach to mediation in MPLUS v. 7.4 using full information maximum likelihood (FIML). Latent variables were created either from their respective items (national identification and attitudes toward illegal immigrants) or from factors (psychological ownership and attitudes toward legal immigrants). The significance of indirect effects was tested using bias corrected bootstrap confidence intervals with 10,000 bootstrapped samples (Jose, 2013). This model had 80% power to detect an effect as small as ß = .19, a small to medium effect (Soper, 2017). The initial model fit the data well, $\chi^2 = 89.62$, $p < .001$, CFI = .98, TLI = .97, RMSEA = .075 [.058, .093], SRMR = .05 and is depicted in Figure 8. While national identification shows direct effects on more negative attitudes toward both legal and illegal immigrants, psychological ownership appears unrelated to attitudes toward either.

Subsequently I evaluated the model with the factors as mediators similarly to Study 4. Because of the additional size of the model, I estimated parameters using FIML with robust standard errors rather than with bootstrapping. Immersion, efficacy, and self-identity were estimated using their corresponding item level indicators, as were national identity and attitudes toward illegal immigrants. Attitudes toward legal immigrants were estimated using its corresponding economic, cultural, and security components as indicators. This model had 80% power to detect an effect as small as ß = .21, a small to medium effect (Soper, 2017).

The model showed acceptable fit to the data, $\chi^2 = 748.82$, $p < .001$, CFI = .93, TLI = .92, RMSEA = .071 [.065, .077], SRMR = .06; however model fit was improved by allowing the residuals of endogenous variables to correlate (i.e., between immersion, efficacy, self-identity and between attitudes toward legal and illegal immigrants). This model fit the data well, $\chi^2 = 633.25$, $p < .001$, CFI = .94, TLI = .93, RMSEA = .062 [.056, .068], SRMR = .05. Specifying the correlations between endogenous residuals in this case assumes that immersion, efficacy, and self-identity share a common cause not included in the model and that attitudes toward legal and illegal immigrants share a common cause not included in the model (Kline, 2012). Given the convergent validity demonstrated for immersion, efficacy, and self-identity in earlier studies presented, and that prejudice can be viewed as a generalized tendency across targets (Akrami, Ekehammar, & Bergh, 2010), this is justified theoretically. The model is displayed in Figure 9.

This model suggested statistically significant direct effects from national identification to attitudes toward legal immigrants, wherein greater national identification was associated with more negative attitudes toward legal immigrants, and from national identification to attitudes toward illegal immigrants, wherein greater national identification was associated with more negative attitudes toward illegal immigrants.

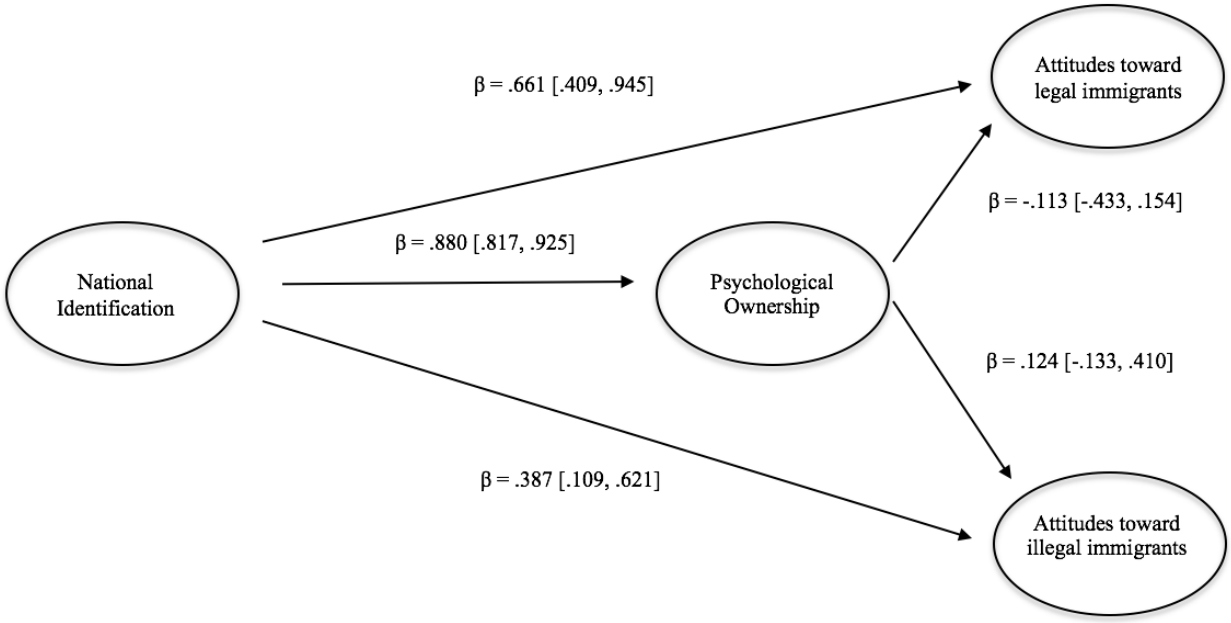


Figure 8. Structural model of the associations between national identification and attitudes toward legal and illegal immigrants

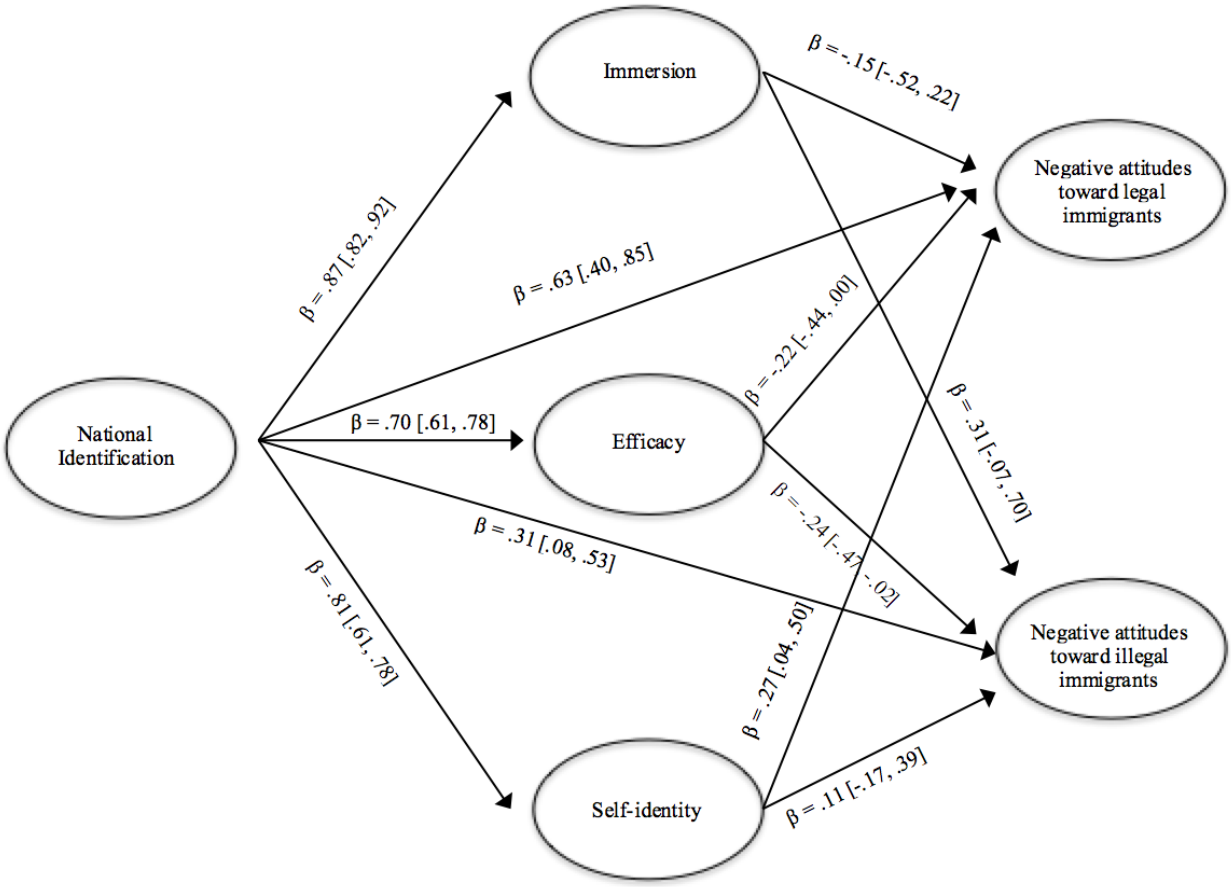


Figure 9. Structural model of the associations between factors of psychological ownership and attitudes toward legal and illegal immigrants.

There was one statistically significant indirect effect of national identification on attitudes toward legal immigrants through self-identity (β = .22 [.04, .41], p = .02) and a marginal effect through efficacy worth noting (β = -.15 [-.31, .00], p = .056). While self-identity was associated with more negative attitudes towards legal immigrants, efficacy was associated with more positive attitudes. With regard to attitudes toward illegal immigrants, there was a statistically significant indirect effect of national identification through efficacy (β = -.17 [-.33, -.01], p = .04). Efficacy was associated with more positive attitudes toward illegal immigrants. The variance inflation factors were all within acceptable thresholds ($VIF_{\text{national identity}}$ = 4.55, $VIF_{\text{Immersion}}$ = 7.69, VIF_{Efficacy} = 3.03, $VIF_{\text{self-identity}}$ = 4.76; O'Brien, 2007).

8.2.4 Predicting citizenship behavior. I examined whether psychological ownership predicts selection of one's own national products relative to foreign produced comparison products. Using an observed linear regression model with maximum likelihood estimation and 10,000 bootstrapped samples, I examined whether those higher in psychological ownership of country preferred American-made products when they are a) cheaper in price to comparable foreign- made products, b) equivalent in price to comparable foreign-made products and c) more expensive than comparable foreign-made products. I included both national identification and political orientation in the model since political orientation can motivate product selection (Sandikci & Ekici, 2009). Political consumerism suggests that individuals make choices between various products as a result of political motivations (Micheletti, 2003) and conservatives appear more motivated to buy national brands (Khan, Misra, & Singh, 2013). A power analysis suggested that this model had 80% power to detect effects as small as $f = .03$, a small effect size. Results revealed that psychological ownership, but not national identification or political orientation predicted favorability toward selection of American products even when those products were more expensive than their comparable foreign-made products (see Table 33).

Table 33. Psychological Ownership of Country Predicting Selection of Ingroup National Products Over International Products

	U.S. Product Cheaper than Foreign Product		U.S. Product Equivalent to Foreign Product		U.S. Product More Expensive than Foreign Product		Combined U.S. Product versus Foreign Product	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Political Orientation	.03	-.09, .16	.00	-.13, .13	.11	-.02, .23	.08	-.05, .20
National Identification	-.18	-.34, -.00	-.11	-.29, .08	-.00	-.20, .17	-.10	-.29, .08
Psychological Ownership	.25	.09, .42	.25	.09, .43	.17	.01, .35	.29	.13, .46
R^2	.03		.03		.06		.06	

Subsequently, I examined favorability toward U.S. products using the factors of psychological ownership. These results are reported in Table 34 and reveal that these effects are driven primarily by immersion.

Table 34. Immersion, Efficacy, and Self-identity Predicting Selection of Ingroup National Products Over International Products

	U.S. Product Cheaper than Foreign Product		U.S. Product Equivalent to Foreign Product		U.S. Product More Expensive than Foreign Product		Combined U.S. Product versus Foreign Product	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Political Orientation	.03	-.09, .16	.00	-.13, .13	.11	-.02, .23	.08	-.05, .20
National Identification	-.25	-.43, -.08	-.16	-.36, .04	-.00	-.21, .18	-.15	-.35, .04
Immersion	.35	.12, .42	.24	.02, .45	.06	-.15, .27	.25	.03, .47
Efficacy	-.04	-.18, .10	.00	-.14, .17	.05	-.11, .21	.02	-.14, .18
Self-Identity	.03	-.17, .23	.07	-.14, .28	.08	-.13, .27	.08	-.13, .29
R^2	.04		.04		.05		.07	

8.3 Discussion

Study 7 provided additional structural validation of the psychological ownership of country scale in a U.S. sample and provided additional evidence of reliability and validity. It provided another test of the mediation model from studies 1,4, and 6 using a slight modification from study 4. In lieu of a general attitude towards immigrant scale with no specific reference to either legal or illegal immigrants, this study distinguished between legal versus illegal immigrants as targets of negative attitudes. While psychological ownership as a general construct showed no relationship with negative attitudes towards either legal or illegal immigrants, at the factor level greater efficacy appears to be associated with more positive attitudes towards legal and illegal immigrants and self-identity was linked to more negative attitudes towards legal immigrants.

The relationship between efficacy and anti-immigrant attitudes mirrors that found in study 4, while this study diverges from study 4 in that it was self-identity, rather than

immersion, that was associated with more negative attitudes towards legal immigrants. The finding that efficacy may actually attenuate the relationship between national identification and anti-immigrant attitudes is in the opposite direction predicted by scholars in the psychological ownership and intergroup attitudes literature (Brylka et al., 2015; Verkuyten & Martinovic, 2017). One possible explanation can be derived from the concept of psychological ownership threat (Verkuyten & Martinovic, 2017). It may not be strong feelings of possession that instigate negative outgroup attitudes but perceptions that one's ownership is being threatened. Mexican immigrants are the general concern of the United States when it comes to immigration policy and Mexican immigrants are viewed as low in competence and low in warmth (Lee & Fiske, 2006) and thus may not be perceived as a threat to the national ingroup's ownership claims when efficacy is high within ingroup members. In this framework, strong feelings of possession involving high efficacy can bolster one's sense of ownership and insulate ingroup members from threatened ownership. Legal immigrants are viewed along dimensions of competence and warmth relative to ethnicity (Lee & Fiske, 2006). Immigrant farm workers and Mexican immigrants are viewed along the competence and warmth dimensions similarly to illegal immigrants while Asian immigrants and immigrants in the tech industry are viewed with high competence. Future work will need to examine specific immigrant groups as conceptualizations of immigrants may vary across individuals. Doing so will allow researchers to understand the direction of the psychological ownership and outgroup attitudes relationship in relation to specific conceptualizations of immigrants.

Chapter 9

9 General Discussion

The current set of studies set out to accomplish two primary tasks. The first was to develop and validate a measure of psychological ownership of ideological territories, whether countries or regions, which could be used to begin examining the multitude of theoretical predictions from scholars in recent years (e.g., Brylka et al., 2015; Verkuyten & Martinovic, 2017). The second was to test a series of four hypotheses predicting that social identification should predict psychological ownership (H1), that psychological ownership should predict negative outgroup attitudes (H2), that psychological ownership should mediate the relation between social identification and negative outgroup attitudes (H3), and that psychological ownership should predict citizenship behaviors (H4).

9.1 Measurement of Psychological Ownership

While psychological ownership, developed from the literature on the psychology of posession, has been around for years, the proper measurement of the construct has been debated (Dawkins, Tian, Newman, & Martin, 2017). In the organizational psychology domain from which the construct originally developed, researchers have discriminanted the construct from other similar constructs (Dawkins, et al., 2017; Van Dyne & Pierce, 2004), such as affective commitment (Liu, Wang, Hui, & Lee, 2012) and organizational identity (Knapp, Smith, & Sprinkle, 2014), even while disagreeing over the precise factor structure of the construct (Avey et al., 2009; Pierce et al., 2001). However, in the intergroup domain (e.g., Brylka et al., 2015; Verkuyten & Martinovic, 2017), the measurement of psychological ownership is in its infancy. Thus, the initial goal of this systematic project of research was to a) develop a scale for the intergroup domain based upon the core features of psychological ownership (Pierce et al., 2001), b) evaluate the structural validity of the construct, c) rigorously test the discriminant validity of psychological ownership with other similar constructs, d) evaluate the construct's concurrent and convergent validity, e) evaluate the construct's reliability, and f) determine the ability of psychological ownership to predict outcomes.

In Study 1, I initially tested the discriminant validity of social identification and psychological ownership using similar measurements as Brylka et al., 2015. This showed promise for investigating the construct further. In Study 2, I began a rigorous process of item development, which involved substantial input from content and methodological experts. Study 2 provided evidence that experts are able to differentiate the items into their respective theoretical factors, and non-expert participants in a q-sorting task were likewise able to sort items into their appropriate factors. Study 2 also provided initial factor analytic evidence that the items converge on their respective theoretical factors, that the psychological ownership construct distinguishes between groups that it should theoretically be able to distinguish, that psychological ownership is both convergent to other similar constructs and discriminant from these constructs, and that the measure is internally consistent.

Study 3 extended the validation of the initial scale in a second sample, providing further evidence of convergent, concurrent, and discriminant validity, and internal consistency. Study 4 provided positive evidence of these psychometric properties in a U.S. sample and provided evidence of predictive validity. Study 5 initially tested the test-retest reliability of the scale, which converged with the measurement of psychological ownership in the organizational literature (Van Dyne & Pierce, 2004). Further evidence of the general stability of the construct is provided by Study 6. Together these studies provide good evidence of the stability of psychological ownership over a 4 to 12 week window (r = .74-.79), and good evidence of stability for the immersion (r = .75-.76) and self-identity (r = .79) factors. Efficacy has the least stability (r = .51-.61). This suggests that efficacy is more amenable to changing circumstances and would likely be the best target for experimental manipulations of psychological ownership (Hsu, 2013). Studies 5 through 7 all additionally provided evidence of the structural validity of the psychological ownership measure, evidence of good internal consistency, and evidence of convergent and discriminant validity to social identification. Additionally, study 6 provided strong predictive validity of the ownership construct in a product selection task. Beginning the application of psychologial ownership to the intergroup domain with a validated measurement instrument avoids potential pitfalls in interpreting research domains with poor measurement practices (Fried & Flake, 2018).

9.2 Theoretical Hypotheses

This series of studies began on the premise that psychological ownership of territory or ideological spaces was one potential mechanism linking social identification to negative outgroup attitudes within highly segmented intergroup domains. I tested H1, that social identification predicts psychological ownership in Studies 1, 4, 6, and 7. The cross-sectional data from Studies 1 and 4 suggested a plausible model wherein social identification of a country or region is a precursor to psychological ownership of that country or region. This confirms previous analyses applying psychological ownership to the intergroup domain (Brylka et al., 2015). Because cross-sectional data cannot determine causality, although it can be used to determine plausible models (Jose, 2013), Study 6 tested the causal direction of H1, providing evidence that social identification precedes psychological ownership and that this effect is quite strong, while there is little to no effect of psychological ownership on social identification over time. This supports the conceptual arguments of others (Brylka et al, 2015; Martinovic & Verkuyten, 2013), while contradicting the alternative that psychological ownership leads to increased social identification. Study 6 then provides an empirical argument for psychological ownership as a possible mediator. It should be noted that three conditions must hold for the validity of causal claims: time precedence, a relationship between variables, and nonspuriousness (Kenny, 1979). Longitudinal studies improve our ability to make causal claims by providing time precedence, which is otherwise ignored in cross-sectional research. However, spuriousness—that there may be a third variable that causes both social identification and ownership, explaining away their relationship, has not be ruled out empirically.

H2 suggested that psychological ownership should predict negative outgroup attitudes and H3 suggested that psychological ownership should mediate any direct effect between social identification and outgroup attitudes. In essence, psychological ownership entails psychological posession of ideological spaces and physical territories, which are subsequently invested in, altered, and protected from rivals. The cross-sectional data from Studies 1 and 6 (Southern U.S. context) provided converging evidence that it was ownership that was linked to increased outgroup prejudice, rather than social

identification, providing support for both H2 and H3; however, in the second context of U.S. natives and immigrants this mediation was limited to immersion in study 4, and in Study 7, wherein I differentiated between legal and illegal immigrants, this was limited to self-identity, while efficacy was actually associated with more positive attitudes toward legal and illegal immigrants. In Study 7, it was national identification that was associated with more negative attitudes toward both legal and illegal immigrants, while efficacy appeared to subsequently mitigate these effects. The differential associations between the factors of psychological ownership and negative outgroup attitudes will need to be probed in future studies.

It is possible that these different associations could be due to higher feelings of control actually making one feel more secure in one's current status, and only when that ownership is directly threatened would this relationship switch directions to what we see in Studies 1 and 6. Verkuyten and Martinovic (2017) argue that fear of losing one's control or one's "gatekeeper" right can lead to reactionary defenses (e.g., De Dreu & Van Knippenberg, 2005). These threats are theoretically distinct from threats to social identity (e.g., symbolic and realistic threats). The latter is concerned with loss of in-group control, whereas realistic threats relate to material objects belonging to the ingroup and symbolic threats relate to the positive distinctiveness of the ingroup identity (Branscombe, Ellemers, Spears, & Doosje, 1999; Branscombe & Wann, 1994; Branscombe, Wann, Noel, & Coleman, 1993). Thus, realistic threat might manifest itself through viewing immigrants as taking jobs from the native-born, symbolic threats might manifest through seeing immigrants as diluting the native culture, while ownership threats would involve loss of influence or power. Due to the period of data collection for Study 7, respondents may have been firm in their perceptions of control given the political dynamic of Donald Trump, who acts as a protector of the national ingroup's maintenance of power and control.

9.3 Cross-sectional Versus Longitudinal Findings

Cross-sectional and longitudinal findings can often diverge (Lemmer & Gollwitzer, 2016; O'Laughlin, Martin, & Ferrer, 2018; Thoemmes, 2015) Whereas cross-

sectional models can be used to test plausible models, they cannot empirically identify causal pathways (Jose, 2013). Longitudinal models are better able to identify causal pathways but require specification of correct time intervals for processes to unfold (Jose, 2013), and are still not immune to the third variable problem. Slowly developing effects can be missed if time intervals are too short and quickly developing effects can be missed if time intervals are too long. Additionally, analyzing mediation models requires change over time in both the dependent variable and the mediating variable. In effect, a three-wave longitudinal mediation model is identifying whether the independent variable (social identification) at Time 1 predicts change in the mediating variable between Time 1 and Time 2, while controlling for the mediator at Time 1, and subsequently whether the mediator at Time 2 predicts change in the dependent variable (outgroup attitudes) between Time 2 and Time 3. If there is limited variability across time in either the mediator or the dependent variable, there will be limited additional variance to predict. The longitudinal mediation model from Study 6 clearly demonstrates the predictive validity of social identification on psychological ownership; however, the stability of both symbolic and overt prejudice across a 3 month time frame limits the ability to evaluate H2 and H3.

There was very little variance in either overt prejudice or symbolic prejudice to predict over time. Both overt prejudice and symbolic prejudice share a high degree of stability across measurement periods. Overt prejudice between Time 1 and Time 2 (β = .92) and between Time 2 and Time 3 (β = .93) share an almost 1:1 relationship. Likewise, symbolic prejudice shows a similar trend (Time 1 to Time 2: β = .96; Time 2 to Time 3: β = .96). Future research should evaluate the model across longer periods of time, make use of natural events that will likely affect levels of outgroup attitudes, or use experiments to manipulate psychological ownership and evaluate correponding changes in outgroup attitudes.

9.4 The Promise (and Problems) of Experimental Paradigms

Experimental paradigms are limited in the psychological ownership domain, and none yet exist within the subdomain of psychological ownership in intergroup relations given the nascence of this area of research. Hsu (2013) manipulated psychological ownership of a business venture among entrepreneurs by having them imagine a specific percentage of control that they exerted over the business. The included manipulation check suggested that that the manipulation did influence self-reported feelings of ownership. This suggests promise for future research. Psychological ownership could be manipulated in the intergroup context by having individuals imagine varying percentages of ingroup voting share (e.g., high ownership could be manipulated by having individuals imagine their national ingroup accounting for 80% of the country's national votes in the last election).

Another possibility described by Verkuyten and Martinovic (2017) is to design manipulations that affect perceptions of threat to one's ownership claims. When individuals experience psychological ownership for a target and they perceive that someone else has also laid ownership claims over a target, this instigates perceptions of infringement of one's own ownership claim and possible territorial responses (Kirk, Peck, & Swain, 2017). Fear of being deprived and losing what is seen as belonging to the ingroup can thus result in negative attitudes toward the outgroup. For example, a sense of territorial ownership among Chileans was associated with greater protest against Bolivians in the Chilean-Bolivian territorial conflict, but only among those who viewed Bolivia as a serious threat to ownership (Verkuyten and Martinovic, 2017).

In the first case, problems may arise because of the relation between social identification and psychological ownership. Pilot studies would need to ensure that any proposed manipulation of psychological ownership of territory did not also influence levels of social identification with the ingroup, or at least affected social identification substanially less than psychological ownership. If not, there is no way to determine whether psychological ownership or social identification is the causal variable directly influencing attitudes toward the target. Given the evidence presented in Study 6 that psychological ownership does not influence social identification over time, this should be possible, but will require programmatic research with this goal in mind. In the second

case, researchers must ensure that any manipulation of perceived threat to control of territorial spaces does not also influence perceptions of threats to culture (symbolic threat) or threats to resources (realistic threat) or else there is no way to differentiate a causal effect of perceived threat to ownership from perceived threat to culture or resources. Overlap and mutual influence between symbolic, realistic, and ownership threats are likely to exist given the more general observation that competition of any sort can lead to outgroup prejudice (Esses, Dovidio, Jackson, & Armstrong, 2001; Esses, Jackson, & Armstrong, 1998).

9.5 Where the Grass is Greener: Focusing on the Positive Aspects of Psychological Ownership

Much of this research has focused on scale development and subsequently on outgroup attitudes, with a particular focus on negative outgroup attitudes However, if the organizational domain is used as a guide, psychological ownership is associated with many positive outcomes (Dawkins et al., 2017). These include greater comittment to an organization (Van Dyne & Pierce, 2004; Vandewalle et al., 1995), intention to remain with an organization (Zhu, Chen, Li, & Zhou, 2013), and extrarole or citizenship behaviors (Van Dyne & Pierce, 2004; Vandewalle et al., 1995; Wiener, 1993). Support for ingroup symbols can reflect commitment to one's group and in Study 1, stronger psychological ownership of the U.S. South was associated with increased support for the Confederate battle flag, a century old symbol of Southern resistance to the North, which developed somewhat of a cult following in the post-civil rights era as a symbol of Southern culture (Wright & Esses, 2017).

In the context of a national space, voting can be viewed as a behavioral display of commitment to the nation, to participate and exhibit one's personal ownership over democratic processes. Study 4 suggested that psychological ownership of country has a small effect on individuals' decisions to cast a vote, supporting H4. In a more stringent test of psychological ownership's predictive validity on behaviors that benefit the ingroup, I examined the extent to which psychological ownership could predict decisions to select national products over foreign products, especially in cases where the national

product was more expensive. This can be seen as both commitment to one's country and willingness to engage in some small sacrifice for the perceived benefit to the nation. Individuals higher in psychological ownership of country were more likely to choose national products over foreign products even in cases where the national product was 15% more expensive. This supports H4 and confirms and extends recent research on preferences for domestic brands (e.g., Gineikiene, Schlegelmilch, & Auruskeviciene, 2017). This paradigm is not only a novel test of the importance of psychological ownership as a predictor of citizenship behaviors, but also has important practical implications. Psychological ownership can become a target of advertising by domestic manufacturers to increase support for their products and ingroups can target psychological ownership to increase commitment to the ingroup.

9.6 Mechanical Turk and Generalizability

All of the research presented here utilized convenience samples. Studies 2, 3, and 5 used Canadian undergraduate student samples, which served the purposes of limiting research costs while developing the initial scale of psychological ownership of country and evaluating its psychometric properties. Studies 1, 4, 6, and 7 utilized mechanical turk (Mturk) to obtain more representative samples and to examine the structure and function of psychological ownership across multiple contexts (Canadian national context, the U.S. South, and U.S. national context). This has enabled a strong case for the generalizability of the structure of the construct.

Although these samples are not nationally representative, Mechanical Turk is a robust data acquisition platform (Litman, Robinson, & Abberbock, 2017), allowing for valid measurement of constructs, which are generally lacking among nationally representative samples (e.g., Strother, Piston, & Ogorzalek, 2017). Mturk offers diverse samples (Buhrmester, Kwang, & Gosling, 2011; Huff & Tingley, 2015), and is a valid recruitment tool for political research (Clifford, Jewell, & Waggoner, 2015). It provides greater heterogeneity for testing political hypotheses than student samples and other non-representative sampling methods (Crowson & Brandes, 2017).

It is also the case that Mechanical Turk samples are generally more educated,

more liberal, have higher incomes, and are younger than representative samples (Berinsky, Huber, & Lenz, 2012; Huff & Tingley, 2015). Some of these characteristics, such as liberalism, could influence the results. Clifford, Jewell, & Waggoner (2015) identified that Mturk liberals hold more characteristically liberal values than liberals in representative samples. Given the interest in psychological ownership's link to outgroup attitudes, this may mask effects of psychological ownership on outgroup attitudes by reducing the overall variability within outgroup attitudes. Research suggests that conservatives are more likely to harbor negative attitudes toward liberal-leaning groups such as illegal immigrants and Hispanics (Brandt, Reyna, Chambers, Crawford, & Wetherell (2014)[3] and thus studying more politically representative samples in future work may help clarify some of the mixed results obtained in the current research.

The research presented suggests a promising future for psychological ownership within intergroup relations, within both models of intergroup attitudes and models of ingroup commitment and citizenship behaviors. The scale developed in these seven studies has strong reliability and validity, which provides a strong foundation from which to examine interesting hypotheses regarding intergroup relations and citizenship behaviors. Moving beyond thinking about psychological ownership as a characteristic influencing intergroup attitudes led to merging the psychological ownership of country literature with key characteristics of participation in democracy (i.e., voting) and behaviors that deliberately influence the protection of and economic viability of one's owned space (i.e., financially supporting one's country). While engaging in responsible ingroup protection as an 'owner' is commendable, individuals with high psychological ownership appeared willing to sacrifice individual financial benefit for the benefit of the country, clear evidence of responsible ownership verging on altruistic ingroup behavior.

[3] Likewise, liberals harbor more negative attitudes towards conservative-leaning groups such as Asian-Americans.

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Appendices

Appendix 1

Western Research

Research Ethics

Western University Non-Medical Research Ethics Board
NMREB Delegated Initial Approval Notice

Principal Investigator: Prof. Vicki Esses
Department & Institution: Social Science\Psychology,Western University

NMREB File Number: 107036
Study Title: Symbols and Identity
Sponsor:

NMREB Initial Approval Date: September 08, 2015
NMREB Expiry Date: September 08, 2016

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Recruitment Items	Mturk Recruitment	2015/07/27
Other	Debriefing	2015/07/27
Revised Western University Protocol		2015/08/24
Revised Letter of Information & Consent		2015/08/24
Instruments	Revised Measures	2015/08/24

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

[redacted]

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Western University, Research, Support Services Bldg., Rm. 5150
London, ON, Canada N6G 1G9 t. 519.661.3036 f. 519.850.2466 www.uwo.ca/research/ethics

Western Research

Research Ethics

Western University Health Science Research Ethics Board
NMREB Delegated Initial Approval Notice

Principal Investigator: Prof. Vicki Esses
Department & Institution: Social Science\Psychology,Western University

NMREB File Number: 106546
Study Title: Social and Political Attitudes
Sponsor:

NMREB Initial Approval Date: May 21, 2015
NMREB Expiry Date: May 21, 2016

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Instruments	Revised Demographic Questions Clean Copy	2015/04/16
Other	SONA AD	
Revised Letter of Information & Consent		
Revised Western University Protocol		

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

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Western Research

Research Ethics

Western University Non-Medical Research Ethics Board
NMREB Delegated Initial Approval Notice

Principal Investigator: Prof. Vicki Esses
Department & Institution: Social Science\Psychology,Western University

NMREB File Number: 108412
Study Title: US Election Voting Behavior

NMREB Initial Approval Date: September 16, 2016
NMREB Expiry Date: September 16, 2017

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Western University Protocol	Received September 12, 2016	
Advertisement	Mturk Description - Received August 22, 2016	
Letter of Information & Consent	Received September 12, 2016	
Instruments	Measures	2016/09/12
Other	Part One - Partial Debrief - Received September 12, 2016	
Other	Full Debriefing - Received September 12, 2016	

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

[redacted]

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Western Research

Research Ethics

Western University Non-Medical Research Ethics Board
NMREB Delegated Initial Approval Notice

Principal Investigator: Prof. Vicki Esses
Department & Institution: Social Science\Psychology,Western University

NMREB File Number: 108448
Study Title: Canadian Social and Political Attitudes

NMREB Initial Approval Date: October 14, 2016
NMREB Expiry Date: October 14, 2017

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Western University Protocol	Received October 14, 2016	
Recruitment Items	SONA Description	2016/10/13
Letter of Information & Consent		2016/09/27
Instruments	Measures	2016/09/27
Other	Debriefing	2016/08/30

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

[redacted]

Western University, Research, Support Services Bldg., Rm. 5150
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Western Research

Date: 21 November 2017

To: Prof. Vicki Esses

Project ID: 110593

Study Title: Identity and Political Attitudes

Application Type: NMREB Initial Application

Review Type: Delegated

Full Board Reporting Date: 08/Dec/2017

Date Approval Issued: 21/Nov/2017 16:25

REB Approval Expiry Date: 21/Nov/2018

Dear Prof. Vicki Esses

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the WREM application form for the above mentioned study, as of the date noted above. NMREB approval for this study remains valid until the expiry date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

This research study is to be conducted by the investigator noted above. All other required institutional approvals must also be obtained prior to the conduct of the study.

Documents Approved:

Document Name	Document Type	Document Date	Document Version
Debriefing Statements	Debriefing document	24/Oct/2017	1
Measures	Online Survey	24/Oct/2017	1
Phase LOI's-American Sample	Implied Consent/Assent	24/Oct/2017	1
Phase LOI's-Southern Sample	Implied Consent/Assent	24/Oct/2017	1
Survey Panel Scripts	Recruitment Materials	24/Oct/2017	1

No deviations from, or changes to the protocol should be initiated without prior written approval from the NMREB, except when necessary to eliminate immediate hazard(s) to study participants or when the change(s) involves only administrative or logistical aspects of the trial.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario. Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB. The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Katelyn Harris, Research Ethics Officer on behalf of Dr. Randal Graham, NMREB Chair

Appendix 2

Psychological Ownership of Country Scale (POCS)

Responses on the following scale:

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

Subscale and Item
Immersion
1. We belong in [Country Name].
2. We are comfortable being in [Country Name].
3. [Country Name] is our country.
4. [Country Name] is our home.
5. We care deeply about [Country Name].
6. I'm glad to be in [Country Name].
Efficacy
7. We have control over policy in [Country Name].
8. We have the ability to change policies in [Country Name].
9. We have the ability to contribute to [Country Name]'s success.
10. We can make a difference in [Country Name]'s future.
11. We influence [Country Name]'s culture.
12. We gain value from our involvement in [Country Name]'s society.
Self-identity
13. My identity is tied to being [Country Name].
14. I feel this country's success is my success.
15. Being [Country Name] defines who I am.
16. The values of [Country Name] are my values.
17. Being [Country Name] forms a large part of who we are.
18. [Country Name] is an important part of my self-image.

NOTE: Items should be randomized.

Curriculum Vitae

Name:	Joshua D. Wright
Post-secondary Education and Degrees:	Texas Tech University Lubbock, TX 2008-2012 B.A., B.S. Hunter College of the City University of New York New York, NY 2012-2014 M.A. The University of Western Ontario London, Ontario, Canada 2014-2018 Ph.D.
Honours and Awards:	Heterodox Psychology Workshop Grant 2018 SPSSI Local and State-Level Policy Work Grant 2018 SPSP Op-Ed Training Grant 2017 ICP Seisoh Sukemune/Bruce Bain Early Career Research Award 2015
Related Work Experience	Instructor of Record The University of Western Ontario 2016, 2018

Teaching Assistant
The University of Western Ontario
2014-2018

Publications:

Tomlinson, M.F & **Wright, J.D.** (2018). Identifying the "therapy targets" for treating the negative symptoms of psychosis using cognitive behavioral therapy. *Journal of Cognitive Psychotherapy, 32*(3), 1-17. http:// dx.doi.org/10.1891/0889-8391.32.3

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Wright, J.D. (2016). Why is religious terrorism predominantly Islamic? An exploration of psychosocial religious factors. *Perspectives on Terrorism. 10(1),* 19-31.

Wright, J.D. (2016). More religion, less justification for violence: A cross-national analysis. *Archive for the Psychology of Religion, 38 (2),* 159-183. doi: 10.1163/15736121-12341324

Wright, J.D. (2015). A social identity and social power perspective on terrorism. *Journal of Terrorism Research, 6(3),* 76-83. doi: http://doi.org/10.15664/jtr.1184

Wright, J.D., Cogan, R., & Taylor, N. (2012). Physical and sexual aggression involve different relationship dynamics. *Journal of Student Research, 1(3),* 26-27.