An Exploration of the Mapuche Classificatory Scheme in Chile

Belen Unzueta

September 16, 2018

In the recent years, political scientists have been questioning the mismatch between the constructivist understanding of race and ethnicity and the methodological approaches used to estimate the effects of race and ethnicity on different outcomes (Sen & Wasow 2016, Chandra & Wilkinson 2008, Chandra 2012). In terms of inference, the usual approach of "controlling for race" by using dummy variables produces biased estimates of the "effect of race" (Sen & Wasow 2016). But also, the theoretical assumption behind such an approach implies a "primordialist" understanding of race and ethnicity that understands ethnic identities as fixed, mutually exclusive and collectively exhaustive, and exogenous to the phenomena they seek to explain (Chandra 2012).

These critiques could leave researchers interested in the effects of race and ethnicity in a standstill but possible solutions are offered by these authors. A constructivist theory of race and ethnicity needs to make a distinction between the social categories and the attributes that define those categories. Following Sen & Wasow, race is a "bundle of sticks", a composite measure of multiple characteristics. Similarly, Chandra offers a combinatorial language to elaborate a constructivist theory of ethnicity. This is a huge first step towards a constructivist theory of race and ethnicity. However, both accounts seem to take the relationship between categories and attributes as known and unitary.

Recent work on the cognitive underpinnings of culture can offer an interesting perspective on this development. This work has advanced our understanding of the assumptions that underlie social classifications (DiMaggio 1997). At the same time, objectivist approaches in the study of ethnicity have been displaced by subjectivist understandings, giving way to an incipient cognitive turn (Brubaker et al., 2004). Both trends have converged in an increasing concern with categorization and classification in the study of race and ethnicity. This convergence underscores that there are no natural or objective classifications but instead socially constructed category schemes, schemes that are-at their individual level-of a cognitive nature. This does not imply a reduction of this phenomenon to a psychological basis, but a

better understanding of the assumptions sociologists of culture make about cognitive processes and how they might influence social classifications.

In this article, I propose a second step in a constructivist theory of race and ethnicity: determining the particular classificatory scheme of the ethnoracial categories under study. This step is necessarily an empirical one since these schemes vary in both time and space. The study of classificatory schemes also brings together the cognitive concerns in the sociology of race and ethnicity with the methodological concerns of political scientists. Using a factorial survey design where the dependent variable is ethnoracial classification I analyze which attributes are linked to a specific ethnic category. The attributes included can be classified into three primary components: ancestry, physical appearance, and sociocultural elements (Monk 2016). The case study is the Mapuche category in Chile. The Mapuche people are the largest indigenous group in Chile. Like other Latin American indigenous groups, the process of (forced) assimilation has included intermarriage and miscegenation; the progressive disappearance of customs, traditional organization, and language; and the growing displacement from their original homeland (Zuñiga 2007). Thus, the specific attributes linked to today's understanding of the Mapuche category, I argue, are not necessarily agreed upon.

The challenge of causal inference

The study of the impact of ethnoracial classifications on social, political, and economic outcomes is a fundamental endeavor of social science. The problem, however, lies in the way researchers attempt to estimate such impacts. The common practice in sociology, political science, psychology, and other social sciences is to include dummy variables representing the ethnoracial categories of individuals. By doing this, researchers are implicitly assuming an essentialist definition of race and ethnicity, a definitions that assigns to each person a category that is fixed and unequivocal, mutually exclusive and collectively exhaustive, and exogenous to such outcomes. In consequence, there is a mismatch between the theoretical understanding of these concepts and the way we measure them. This is not only a problem for interpreting such estimates, it is also a methodological problem.

When researchers say they want to estimate the effect of X on Y, they usually mean the causal effect of X on Y. The problem with race and ethnicity (and many other characteristics) is that under an essentialist understanding, these are "immutable characteristics". And we can't estimate the effect of immutable characteristics. Sen & Wasow (2016) give the clearest account of why this is the case:

"The literature has identified two key problems within the context of race and potential

outcomes. First, race is resistant to manipulation; second, because race is generally understood to be"assigned" at conception, the characteristics for which most social scientists control (education, income, etc.) occur after the treatment is assigned and therefore have the potential to introduce post-treatment bias (Greiner & Rubin 2010). In addition, we introduce a third problem: Race is unstable. By this we mean both that (a) across groups and time, the boundaries defining racial and ethnic categories are in flux and (b) within groups, there is substantial variation. This complexity may violate the requirement that a treatment should be comparable across observations." (503)

Hence, we have a substantial theoretical and methodological problem when trying to estimate the effects of race and ethnicity on individual outcomes. A similar problem arise when trying to estimate the effects of race and ethnicity at an aggregate level. Let's take a famous example from political science, the detrimental diversity hypothesis. A considerable amount of research has established a negative association between ethnic diversity and public goods provision. This finding seems so robust that is has been described as "one of the most powerful hypotheses in political economy" (Banerjee et al. 2005). One issue that has long been debated with regards to this hypothesis, is how to measure ethnic diversity and how to connect this measurement with the theoretical mechanism. The measurement of choice for ethnic diversity is usually the ELF index, or ethno-linguistic fractionalization. Many researchers have criticized this measure. Baldwin and Huber for example, critique the use of ELF to test hypothesis of ethnic diversity and public goods provision. According to the authors, ELF "contains information about the identity and size of groups but incorporates no other information about groups' substantive characteristics. Existing arguments about how ethnic diversity affects governance, however, are typically grounded in the assumption that groups differ from each other in substantively important ways, and posit that these differences underlie governance problems in multiethnic societies". Another source of critique argues that one of the main problems of this literature is the mismatch between measurement and theory. On one hand, it is argued that the proposed mechanisms connecting ethnic diversity and public goods provision are not captured by the measurement (i.e. ELF) used in this literature. According to Posner, there are three important problems with measures of ethnic diversity (including ELF) in this literature. First, there issues with the data on which these measures are calculated. Second, the ethnic makeup of a country is a complex and multidimensional phenomenon, trying to capture it with a single measure is overly simplistic and it obscures many of its features, some of which might be relevant to the hypothesis. Third, and most important, there is a mismatch between the causal mechanisms that are claimed to link ethnic diversity with low public goods provision and the measure of diversity that is used to test that mechanism. In other words, measures of ethnolinguistic fractionalization do not

capture the theoretically relevant data needed to test the hypothesis. Chandra and Wilkinson critique the use of measures of ethnic diversity in this literature not only because there is a mismatch between measurement and theoretical mechanisms, but also because there is not a clear theoretical understanding of what ethnicity is. Making a distinction between ethnic structure and ethnic practice, the authors show that measures such as the ELF are flawed: "If intended to describe ethnic structure, they are flawed in that they ignore the problem of multidimensionality. If intended to describe ethnic practice they are flawed in that they ignore the problems of overlap and incompleteness".

Ethnoracial categories as composite variables

So, questions such as 'what is the effect of race on Y' are impossible to answer. It cannot be address by the potential outcomes framework, as explained by Sen & Wasow (2016). But also, it doesn't make much sense as an analytical question. In Chandra & Wilkinson's words, ""Ethnicity," like "politics," is a big concept - so big as to be meaningless" (2008, 517). Thus, we need to abandon such all-encompassing questions and develop a finer framework to answer precise and dissecting questions. Luckily, such an effort is well on its way. Its first premise is that we need to disaggregate racial and ethnic categories into their constitutive elements.

Sen and Wasow (2016) propose a way of thinking about race that takes into account its constructivist nature and that can be used to estimate effects related to race in a more accurate way. In their framework, race is conceptualized as a composite variable which can be disaggregated: "racial categories are the product of a complex fusion of factors including societal values, skin color, cultural traits, physical attributes, diet, region of ancestry, institutional power relationships, and education. In other words, race is an aggregate of many components; metaphorically, it is a bundle of sticks" (506). This operationalization allows researchers to investigate the effects of these different components, since they are not necessarily "immutable characteristics". Of course, this approach does not solve all problems related to race and causal inference, but it opens new avenues of research and a more accurate and constructivist framework.

A similar proposal is that of Kanchan Chandra (2012). Using a combinatorial language, the author proposes a framework that does not assume that ethnic identities are fixed and exogenous to political and economic processes. According to this framework, ethnic identities are a subset of identity categories in which membership is determined by attributes associated with, or believed to be associated with, descent. A key piece of this definition is the distinction between attributes and categories. This distinction allows for a further distinction between

nominal and activated ethnic identities. Nominal identities are those in which an individual, based on her attributes, is eligible for membership. Activated identities are those categories to which she actually belongs, or is believed to belong. To represent this framework, the author uses combinatorial mathematics:

"If we accept that an ethnic identity is a category of classification in which a subset of descent-based attributes are necessary for membership, and those attributes are fixed in the short term, then we can redefine an ethnic identity category as a combination of elements from a fixed set. The category"Black" in contemporary New York, for instance, might be defined as the combination {Dark skin and descent from parents of African origin}. Similarly, the ethnic category WASP in the contemporary U.S. might be thought as the combination {White and Anglo Saxon and Protestant} (Chandra 2016, 22).

However, these accounts seem to take the relationship between categories and attributes as known and unitary, and in the case of Chandra, categories as as classical Aristotelian categories. Here is where recents studies on the cognitive underpinnings of culture can be a helpful addition to a constructivist theory of race and ethnicity.

The cognitive turn

The view of culture as "coherent, integrated, and ambiguous" has been challenged by research in cognitive psychology regarding memory and the way people attribute truth-value to statements (DiMaggio 1997, 267). The emerging view poses that culture is stored in memory "as an indiscriminately assembled and relatively unorganized collection of odds and ends" (268); therefore, a better model for culture is that of "toolkit" or "repertoire of heterogeneous things". Consequently, the importance of actors increases considerably in comparison to the previous view. Now, it falls into them to organize the unsystematic information they posses. Two mechanisms or modes of cognition implement this task: automatic cognition, and deliberate cognition. Automatic cognition is "implicit, unverbalized, rapid, and automatic" (D'Andrade 1995), and depends on a large extend to available schemas: "knowledge structures that represent objects or events and provide default assumptions about their characteristics, relationships, and entailments under conditions of incomplete information" (DiMaggio 1997, 269). This notion has become a cornerstone of cognitive studies in many disciplines such as psychology, anthropology, sociology, and linguistics. As a matter of fact, it has even been proposed as "a basic unit of analysis for the study of culture" (DiMaggio 1997, 269).

This cognitive turn has taken hold in the study of race and ethnicity. Its most evident expression is through the increasing concern with categorization and classification (Brubaker

et al. 2004). But this turn has also been highly beneficial to the field by providing the analytical tools to settle other pervasive debates. Regarding classification and categorization, it was anthropologist Fredrik Barth (1969) who first emphasized ascription-both self-ascription and ascription by other-as the critical feature of ethnic groups, and thus the importance of the ethnic categories in organizing the interactions that establish the boundaries between groups. Since then, much research has been done about ethnoracial categorization.

Two main concerns have characterized this research. First, the way the state and other powerful institutions create and employ official categories through their practice. The study of census categories and their powerful implications is one example of this type of research. The second concern is with informal everyday classifications used by people. This type of research tends to emphasize how people manage to manipulate formal categories, and the great variety of categories beyond state's classifications. However, categorization is not only a political project or an everyday practice, it is also a mental process. Here is where research takes on the cognitive framework, making use of the notion of schema, but also of the associated concepts of stereotypes and categories. Brubaker et al.'s main idea here can be summarized as follows: "Race, ethnicity, and nationality exist only in and through our perceptions, interpretations, representations, classifications, categorizations, and identifications. They are not things in the world, but perspectives on the world - not ontological but epistemological realities" (Brubaker et al. 2004, 45).

What are the implications of such definition for researchers interested in studying the effects of such "perceptions, interpretations, representations, classifications, categorizations, and identifications"? In particular, what can we say about the proposals for a constructivist theory of race and ethnicity?

First, classificatory schemes vary in both space and time. So, how do we know exactly which "sticks" make up the "bundle of sticks" that is race? It seems to me that this is an empirical question that needs to be answered before undertaking the study of their possible effects. And second classificatory schemes are not coherent and integrated frameworks. Wendy Roth has shown that people can have different classificatory schemes that they apply in different circumstances, as is the case of migrants (Roth 2012). But also, different people can have different schemes with different attributes making up the 'bundle of sticks'. The set of these multiple schemes is what Roth calls a "society's racial repertoire" (2012, 15). Different schemes give rise to the possibility of classification struggles, a possibility that is missing in these accounts. According to Bourdieu:

"Struggles over ethnic or regional identity - in other words, over the properties (stigmata

or emblems) linked with the *origin* through the *place* of origin and its associated durable marks, such as accent - are a particular case of the different struggles over classifications, struggles over the monopoly of the power to make people see and believe, to get them to know and recognize, to impose the legitimate definition of the divisions of the social world and, thereby, to *make and unmake groups*. What is at stake here is the power of imposing a vision of the social world through principles of division which, when they are imposed on a whole group, establish meaning and a consensus about meaning, and in particular about the identity and unity of the group, which creates the reality of the unity and the identity of the group." (Bourdieu 1992, 221)

Another issue that seems to be overlooked in these accounts is that race and ethnicity have multiple dimensions. In the words of Roth,

"Increasing numbers of people in the United States and beyond experience 'race' not as a single, consistent identity but as a number of conflicting dimensions. These may include, for instance, how an individual self-identifies her race, how she is perceived by others, how she believes she is perceived by others, what she checks among the limited options on the census or other surveys, her skin colour and other aspects of her racial appearance, and her racial ancestry. These dimensions influence one another, but are not necessarily the same. [...] The word 'race' tends to be used as a proxy for each of these dimensions, with the result that much of our scholarship, as well as public discourse, is actually comparing across several distinct, albeit correlated, variables." (Roth 2016, 1310)

Finally, ethnoracial categories might not follow the rules of classical categories. In the classical theory (also known as Aristotelian), all instances of a category share a set of properties singly necessary and jointly sufficient for membership within the category. In contrast, cognitive psychology has proposed a prototype theory of categories (Rosch & Mervis 1975), which construes membership in a category as graded, determined by similarity to the concept's "best" exemplar or prototype. The theory is based on Ludwig Wittgenstein's notion of "family resemblance" (1953), a notion introduced to deal with categories that have no common features in virtue of which we can classify all possible cases. Instead, in this type of category, "we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail" (66). If ethnoracial categories can be better described in these terms, this would a mayor complication for Chandra's proposal.

To assess these difficulties I study the case of a particular classificatory scheme. The case in question is the scheme for the Mapuche category in Chile. This case offers a particularly hard test for the theory since the definition of indigenous identity is highly contested in this

country, as I will describe below.

The Mapuche people in Chile

Controversies surrounding census counts of the indigenous population in Chile started the first time an "ethnic question" was introduced in the national census in 1992. The controversy with this census was about the question and what exactly was it measuring. The question read "If you are Chilean, do you consider yourself to belong to any of the following cultures?" and then listed four possibilities: 1 Mapuche, 2 Aymara, 3 Rapanui, and 4 None of the above. Two main problems were identified with this question. First, the question starts by asking only people who are Chilean, which is problematic since many indigenous peoples do not consider themselves to belong to the Chilean state. Second, the question asked about belonging to a culture, which some people considered to be too ambiguous. In the following census in 2002, the question changed and instead of referring to cultures it asked "Do you belong to any of the following first peoples or indigenous groups?" And then listed nine possibilities (Alacalufe (Kawashkar), Atacameño, Aimara, Colla, Mapuche, Quechua, Rapa Nui, Yámana (Yagán), None of the above). The controversy this time focused on the results. In 1992 the census counted 998,385 indigenous peoples. In 2002 the count fell to 692,192. This meant that the indigenous population went from 10.3 percent of the total population in 1992 to only 4.6 percent in 2002. Indigenous leaders called this an statistical genocide. In the failed 2012 census and in the 2017 census, number climbed up again. This considerable changes in the census results have long been discussed by national researchers.

But the discussion has not been limited to the census. Considerable discussion has also accompanied the criteria established in the Indigenous Act of 1993, and the institutions that it created. Ever since we can find multiple references to these controversies in the national media. In 2014, an article on *El Mercurio*–the largest conservative newspaper in Chile-commented on the need to raise the requisites to be legally recognized as an indigenous person in the country. Citing a study of the Aitue Foundation, the headline reads: "More than 12 thousand people without direct indigenous ancestors have received this recognition". The article explains that these people resorted to one of the three options that the indigenous law of 1993 establishes in order to acquire official recognition as an indigenous person, according to which people with cultural traits of an indigenous group who self-identify as such can apply to. One of the members of the foundation comments, "This is a problem because today we are fabricating indigenous people. We are at 12,000, counting foreigners. And that people put themselves in the queue for [state] benefits that are destined for indigenous people". The

same person then goes on and poses the possibility of implementing a DNA register for this purpose. The article generated many responses, many with accusations of racism.

The idea that indigenous people in Chile, particularly the Mapuche, are not "really" indigenous, but "mestizos" with a great component of white ancestry (as historian and national award of history winner Sergio Villalobos has posed on many occasions), or that their "so called culture" is just an instrument for political gains (as Chilean sociologist Aldo Mascareño stated in his widely debated 2007 article "Sociology of Culture. The deconstruction of the Mapuche"), has become a staple of right wing politicians that oppose any attempt towards the constitutional recognition of Chilean indigenous peoples and emphatically deny the idea of Chile as a plurinational state under the banner of "one nation, one state", leaving Chile as one of the few Latin American countries that do not officially recognize its ethnic diversity. Pedro Melinao, a famous Mapuche caricaturist, captured this idea in a cartoon called "Mapuchometro [Mapuchemeter]", which portrayed a machine capable of measuring the amount of "Mapuche-ness" in a person.

In this context, it's difficult to say exactly what attributes make up the Mapuche category in Chile. In fact, it would be difficult to say that there is a consensus regarding what it mean to be indigenous. For this reason, I think the Mapuche people in Chile is a particularly interesting case for the study of ethnoracial categories.

Data and methods

The data for this study correspond to an experiment conducted in Chile in 2013 in a sample of high school seniors. The experiment consisted of a factorial survey where each respondent had to evaluate a set of 12 vignettes describing a hypothetical person. Twelve sets of vignettes were randomly distributed to the respondents. The rating task is a dichotomous question that asks whether the person described in the vignette is Mapuche (yes/no answer). The survey was a self-administered paper-based survey. The randomization was a complete randomization within schools.

The main components of a factorial survey are the vignettes that are judged by the respondents. Vignettes are fictive descriptions of social objects, constituted either of people or of social situations. Each vignette represents a different combination of levels (values) of various dimensions (variables), which are included on account of their presumed relevance as determinants of the judgment of interest (Wallander 2009). In this study we include nine dimensions corresponding to the three primary components of race and ethnicity: ancestry, physical appearance, and sociocultural elements.

The first component -ancestry– includes two dimensions (each with two levels): 1. Paternal last name (Mapuche last name and non-Mapuche last name), and 2. Maternal last name (Mapuche last name and non-Mapuche last name). Mapuche last names are easily recognized by the Chilean population and thus there is little room for ambiguity. We include both paternal and maternal last names for two main reasons. First, in Chile the legal name of a person includes paternal and maternal last names, in that order. Second, it allows us to introduce a measure of ancestry regarding the paternal and maternal sides of the family, which allows not only for more information but also to determine if there is patrilineality (tracing of descent through the male line) or matrilineality (tracing of descent through the female line). The second component - physical appearance-includes only one dimension, skin and eye color, with two levels: dark skin and dark eyes and light skin and light eyes. Although the literature on the Mapuche does not make any references to this dimension, it has been a central concern of the literature on race and ethnicity.

The third component -sociocultural elements-includes two subcomponents: sociodemographic characteristics and sociocultural characteristics. Regarding the first subcomponent, we include two dimensions: sex (male and female) and socioeconomic status of the municipality where the person lives (low, medium and high SES). Regarding the second subcomponent, we include four dimensions (with two levels each): 1. Indigenous self-identification of the father (father self-identifies as Mapuche and father does not self-identify as Mapuche), 2. Indigenous self-identification of the mother (mother self-identifies as Mapuche and mother does not self-identify as Mapuche), 3. Connection to indigenous homeland (grandparents live in indigenous homeland and grandparents live in the capital city), and 4. Interest in tradition (person is interested in Mapuche tradition and person is not interested in Mapuche tradition).

By letting each of the dimensions included in the vignettes vary independently with respect to its levels, factor orthogonality is obtained across dimensions in the vignette universe, which consists of all possible combinations of dimension levels. The vignette universe of a survey design consists of the (Cartesian) product of the levels attached to the all the dimensions, in this case 2 x 2 x 2 x 2 x 3 x 2 x 2 x 2 x 2 = 768 different vignettes. By having respondents judge a randomly drawn sample from the vignette universe, it is possible to include a large number of vignette dimensions and levels in the design. In this case we draw a random sample of 144 vignettes, that were randomly assigned to 12 decks (sets of vignettes), which in turn were randomly assigned to respondents. The presence of approximate factor orthogonality in the sample of vignettes that were judged by the respondents makes it possible to disentangle the unique effect of the dimensions included (Wallander 2009).

The first part of the analysis consists of regression models where the dependent variable is the

rating task and the explanatory variables are the randomized factors of the vignettes. I use logistic regression to model the outcome since it is a binary variable (1 for Mapuche and 0 for non-Mapuche). To account for the hierarchical nature of the data (multiple vignettes nested within people) I use random intercepts models. After modeling the outcome with the complete set of vignettes, I divide the sample into a series of subsets where one variable is fixed in the absence of the cue in order to test if any of them is singly necessary. Consequently, there are five subsets: 1) People described as not having Mapuche ancestry; 2) People described as not having light skin color or light eyes; 3) People described as not having an interest in Mapuche tradition; 4) People described as not having a connection to the homeland; and, 5) People described as not having parents who self-identify as Mapuche.

The second part of the analysis consists of a mixture model that tests the hypothesis that there is unobserved heterogeneity in the definition of ethnicity. I compare different models by comparing BIC scores.

Results

Model 1 in Table 1 shows the results of a logistic regression where the outcome is ethnic classification (1 = Mapuche) using all the combinations of the components of ethnicity. In this sample the proportion of cases classified as Mapuche is 56 percent. The model suggests that ancestry, physical appearance, and sociocultural elements are all significant cues that people use in order to classify others. In particular, "Interest in tradition" is the cue with the highest magnitude effects: the odds of being classified as Mapuche increase by a factor of 5.3 ($\exp(1.668) = 5.3$) when a person is described as being interested in tradition, as opposed to those described as not being interested in tradition. Paternal and maternal ancestries also have a high magnitude effect, increasing the odds of being classified as Mapuche significantly. Being described as having a dark skin color and dark eyes likewise increases the odds of being classified as Mapuche, although the magnitude of the effect is somewhat lower than the ones above. Finally, connection to the ethnic homeland and parent's self-identification is similarly positive and significant.

Models 2 through 6 in Table 1 test if any of these cues are individually necessary for the Mapuche category. In order for this to be true, the proportion of people classified as Mapuche in each subset should drop to zero, or close to it. Additionally, the cues included in the model should not show any effect, which would suggest that any case classified as Mapuche in the sample was randomly classified as so. The results suggest that none of these cues are individually necessary. The proportion of cases classified as Mapuche decline considerably

Table 1: Multi-level logistic regression models (Log-odds)

	Dependent variable:					
	Pr(Mapuche=1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Sex	0.070	0.087	0.139	0.038	0.216**	0.425**
	(0.046)	(0.158)	(0.080)	(0.072)	(0.070)	(0.106)
SES	0.114	0.356	0.135	0.135	−0.058	−0.328
	(0.060)	(0.201)	(0.108)	(0.095)	(0.091)	(0.168)
SES	−0.032	0.121	0.142	−0.093	−0.135	−0.299*
	(0.055)	(0.154)	(0.092)	(0.088)	(0.088)	(0.138)
Mother's self-ID	0.194**	0.503**	0.274**	0.385**	0.227**	
	(0.046)	(0.165)	(0.077)	(0.075)	(0.072)	
Father's self-ID	0.143**	0.103	−0.023	0.184*	0.149*	
	(0.047)	(0.157)	(0.079)	(0.077)	(0.071)	
Homeland	0.283**	0.362**	0.154	0.306**		0.347**
	(0.046)	(0.139)	(0.080)	(0.074)		(0.112)
Interest in tradition	1.668**	2.040**	1.634**		1.764**	1.871**
	(0.048)	(0.171)	(0.083)		(0.078)	(0.138)
Skin color	0.411**	0.613**		0.340**	0.307**	0.298*
	(0.046)	(0.144)		(0.074)	(0.067)	(0.121)
Maternal ancestry	0.966**		0.952**	1.347**	1.060**	0.980**
	(0.047)		(0.077)	(0.078)	(0.075)	(0.115)
Paternal ancestry	1.283**		1.404**	1.620**	1.416**	1.602**
	(0.047)		(0.081)	(0.080)	(0.072)	(0.140)
Constant	−2.290**	−3.437**	−2.377**	−2.977**	−2.391**	−2.490**
	(0.087)	(0.309)	(0.131)	(0.151)	(0.122)	(0.194)
Observations	12,264	2,365	5,070	6,550	6,121	2,708
Log Likelihood	−6,686.6	−1,161.9	−2,910.1	−3,514.0	−3,432.1	−1,545.0
Proportion of cases classified as Mapuche	0.56	0.25	0.51	0.39	0.52	0.51

Note: *p<0.05; **p<0.01

when ancestry and interest in tradition is fixed in its absence, with only 24.7 and 39 percent classified as such, respectively. However, that is still a sizeable amount of cases being classified as indigenous. For the rest of the subsets, all the proportions decrease slightly under the 56 percent of the complete sample. Furthermore, most coefficients remain similar in magnitude and significance to the coefficient in Model 1. One interesting difference with respect to Model 1 is that father's self-identification ceases to be a significant cue in Model 2 and 3, while mother's self-identification grows larger in magnitude. This, together with the fact that paternal ancestry has a higher magnitude effect than maternal ancestry in all models, suggest that there are two parallel models of tracing descent: patrilineality in ancestry, and matrilineality in self-identification. Stated differently, a person inherits an ethnic category through his father's name and through his mother's self-identification.

Table 2: Mixture Model (log odds) - Component 1

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-3.479	0.462	-7.526	0.000
gender-female	-0.152	0.231	-0.660	0.509
ses-low	0.270	0.308	0.875	0.382
ses-middle	0.391	0.254	1.539	0.124
mother's self id-mapuche	0.256	0.268	0.955	0.340
father's self id-mapuche	0.260	0.254	1.023	0.306
place of origin-south	0.414	0.251	1.653	0.098
tradition-interested	0.251	0.267	0.940	0.347
skin color-dark	0.323	0.233	1.386	0.166
maternal surname-mapuche	5.051	0.382	13.229	0.000
paternal surname-mapuche	5.113	0.383	13.348	0.000

Tables 2 through 5 shows the results of the preferred model of the mixture models using BIC scores as selection criteria. In this model there are four components or clusters that I interpret as having four different definitions of Mapuche ethnicity. The first definition uses indigenous last names, a proxy for ancestry, as the single feature determining someone as Mapuche. The second definition also gives great importance to ancestry as a defining feature of Mapuche ethnicity but it also considers other factors when identifying some as Mapuche. In this definition dark skin color and interest in tradition increases the chances of classifying a person as Mapuche. The third definition uses interest in tradition as a fundamental feature to define Mapuche ethnicity. Although other features also appear as significant cues, such as skin color and ancestry, the magnitude of the effect is much smaller than the magnitude of the effect of interest in tradition. Finally, the fourth definition uses multiple features to classify people as Mapuche. In terms of the magnitude of the effect, interest in tradition and

Table 3: Mixture Model (log odds) - Component 2

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-1.068	0.158	-6.740	0.000
gender-female	0.015	0.072	0.201	0.840
ses-low	-0.009	0.095	-0.097	0.922
ses-middle	0.064	0.088	0.728	0.467
mother's self id-mapuche	-0.008	0.078	-0.109	0.913
father's self id-mapuche	-0.056	0.087	-0.651	0.515
place of origin-south	0.135	0.079	1.712	0.087
tradition-interested	0.348	0.092	3.774	0.000
skin color-dark	0.433	0.081	5.325	0.000
maternal surname-mapuche	0.648	0.084	7.690	0.000
paternal surname-mapuche	1.043	0.084	12.412	0.000

Table 4: Mixture Model (log odds) - Component 3

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-4.992	0.458	-10.909	0.000
gender-female	0.443	0.210	2.104	0.035
ses-low	0.245	0.304	0.805	0.421
ses-middle	-0.331	0.266	-1.245	0.213
mother's self id-mapuche	0.448	0.224	2.001	0.045
father's self id-mapuche	0.359	0.235	1.527	0.127
place of origin-south	0.439	0.225	1.951	0.051
tradition-interested	5.981	0.329	18.193	0.000
skin color-dark	0.716	0.237	3.022	0.003
maternal surname-mapuche	0.718	0.231	3.106	0.002
paternal surname-mapuche	0.966	0.219	4.413	0.000

Table 5: Mixture Model (log odds) - Component 4

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-5.628	0.676	-8.320	0.000
gender-female	0.162	0.161	1.006	0.314
ses-low	0.427	0.244	1.752	0.080
ses-middle	0.216	0.211	1.027	0.304
mother's self id-mapuche	0.884	0.199	4.437	0.000
father's self id-mapuche	1.225	0.204	5.995	0.000
place of origin-south	0.934	0.187	4.985	0.000
tradition-interested	2.190	0.339	6.458	0.000
skin color-dark	1.120	0.198	5.653	0.000
maternal surname-mapuche	0.705	0.182	3.875	0.000
paternal surname-mapuche	1.388	0.211	6.582	0.000

ancestry seem to be the main features of this definition, however, other features such as skin color and parent's self-identification are also relevant.

Using the criteria developed by Qualitative Comparative Analysis (QCA), definitions one and three can be described as having a single necessary condition to define Mapuche ethnicity. In the case of the first definition, ancestry (that is any ancestry, whether maternal or paternal) has a coverage of 0.9 and a consistency of 0.9, meaning that from all the cases identified as Mapuche, ancestry is present in 90% of them and that from all the cases that have the condition (ie. ancestry), 90% of them are identified as Mapuche. Similarly, in the case of the third definition, interest in tradition has a coverage of 0.9 and a consistency of 0.9, meaning that from all the cases identified as Mapuche, interest in tradition is present in 90% of them and that from all the cases that have the condition (ie. interest in tradition), 90% of them are identified as Mapuche. Following QCA standards, both of these features can be considered necessary conditions. Using the same criteria, definitions two and four have no necessary conditions. Instead, these definitions offer a number of combinations of features (usually between 3 and 4 features) that work as sufficient conditions.

Components do not only differ in their definition of Mapuche ethnicity. A brief descriptive analysis also shows interesting differences among them. First, let me remind you that this sample is only representative of high school seniors in the city of Santiago. Although I have no reasons to think that these results might greatly differ from a more encompassing sample, this analysis is restricted to this particular sample. Table 6 shows a couple of descriptive statistics for the components as a whole. In terms of size, Component Two includes 38 percent of the sample, the biggest cluster of the model. The rest of the components range between 15

and 25 percent of the sample. Most interesting though is the fact that all components differ greatly in the percentage of vignettes classified as Mapuche: Component One has 78 percent, Component Two has 59 percent, Component Three has 59 percent, and Component Four has 33 percent of its vignettes classified as Mapuche. In terms of the respondents' characteristics there are two interesting facts. First, respondents that self identify as Mapuche (5.6 percent of the sample) belong mostly to Component Three. And second, Components Three and particularly Four, have higher levels of education than Components One and Two.

Table 6: Descriptive statistics

	1	2	3	4
Component's Characteristics				
Relative size of component	20.7	37.6	25.8	15.9
Rate of classification as Mapuche	78.6	58.8	48.0	33.7
Respondant's characteristics				
Self identification				
Mapuche	3.8	5.7	8.7	2.5
Mother's education				
Less than high school	30.2	30.7	17.0	14.2
Complete high school	21.2	22.7	25.8	19.1
Some college	6.6	6.8	7.6	7.4
Complete college	38.7	37.0	47.0	55.6
NA	3.3	2.9	2.7	3.7
Father's education				
Less than high school	27.4	26.8	18.6	11.7
Complete high school	17.9	24.7	17.0	14.8
Some college	5.7	5.7	9.1	10.5
Complete college	42.9	35.4	46.6	53.7
NA	6.1	7.3	8.7	9.3

Discussion

What is the definition of Mapuche ethnicity in Chile? Is there a classificatory scheme? My results suggest that there is no single and coherent classificatory scheme. On the contrary, people seem to follow different definitions of who is considered Mapuche. Can this result help us understand some of the discussions and controversies regarding the Mapuche in Chile? And what does this mean for a constructivist theory of race and ethnicity? I'll try to answer these questions in the remainder of this article.

At the beginning of this article I described how census counts of indigenous peoples in Chile have been surrounded by considerable controversy ever since its first application in 1992. This preoccupation is not limited to censuses but is in fact a broader question about the definition of indigenous ethnicity. Much of the controversy revolves around the place of culture and its validity as a legitimate criterion of indigenous identity. According to Bourdieu, practices can "only be accounted for by relating the social conditions in which the habitus that generated them was constituted, to the social conditions in which it is implemented" (1990, p. 56). Thus, in order to understand how culture can be such a controversial component of indigenous identity we need to investigate the conditions that gave rise to this particular scheme of indigenous ethnicity and the conditions where it is being applied.

Although indigenous peoples were frequently exploited under colonial rule, it was the new independent national state that sought to gradually make them disappear. Latin American elites wanted to emulate the modernity and progress of the European and North American nations but they first had to deal with their abundant indigenous and Afrodescendant populations. It is in this context that a progressive *whitening* of the population started and that "national progress" was equated with "racial progress". Mara Loveman (2014) describes how censuses played an important role in measuring this "national progress" by "documenting and predicting [indigenous peoples] eventual disappearance as a distinct demographic component of the nation" (p. 210). Increasingly after the 1940s, this was done through questions about an array of cultural characteristics. At this time international political and scientific understandings where shifting. "Decisions to remove race from censuses in Latin America reflected shifts in international criteria for how to be a modern nation and promote national progress" (p. 209). Ironically, "the use of censuses to track the demographic disappearance of Indians ended up accentuating their enduring and heterogeneous presence" (p. 233). There is also a long ethnographic tradition of documenting the disappearance of culture and equating it with the disappearance of peoples. Books like Tomás Guevara's "Las Últimas Familias I Costumbres Araucanas" (1913) are a good example of such practice.

However, in the closing decades of the twentieth century there is an important shift regarding ethnic and racial diversity. This shift is most clear on censuses: "Breaking with the long history of presuming and celebrating the eventual disappearance of indigenous and Afrodescendant populations, contemporary Latin American censuses increasingly underscore enduring ethnoracial diversity" (p. 249). This shift has been called the "Indigenous Emergence in Latin America" (Bengoa 2000). This process, that started in the 1990s, is characterized by an increasing awareness among indigenous peoples of their collective rights (ILO Convention 169 is an important antecedent of this process), more direct participation

in state institutions (the new census questions can be seen as a direct consequence of this), and a complex network that connects peoples in rural and urban areas, and in different countries (Bengoa characterizes this as a panindigenous movement). The causes of this process are multiple, but Yashar's account provides a coherent description of the conditions under which this happened. According to her, the mid-twentieth-century corporatist project that involved most Latin American states attempted to restructure society into class-based federations in order to centralize state-society relations. Yet this project was undermined by "the absence of a rationalized bureaucracy, the failure to establish authority, and a lack of monopoly on the legitimate use of force" (1999, p. 82). This provided autonomous spaces that sheltered-among others-rural indigenous communities from state control, allowing "the growth and/or maintenance of politically autonomous local enclaves, indigenous culture, and political practices" (p. 83). Transitioning out of authoritarian rule in the last decades of the twentieth century, democracy was reestablished in the region and a neoliberal citizenship regime was adopted. This had far reaching consequences for indigenous peoples, as states were unable to deliver the individual rights that they had promised but continued to dismantle the corporatist regime. It is in this context that the Indigenous Emergence comes into full view, with politicized ethnic cleavages and indigenous movements challenging the neoliberal shift in democratic citizenship. It is in this context of changing state-society relations that the highly atomized understanding of citizenship embraced by neoliberalism clashes with an understanding of collective rights, and with the identities that support them, particularly with a loose category scheme that emphasizes culture as the basis of ethnicity. This clash has provoked the controversy surrounding the criteria under which people are considered indigenous. The higher the standards, the less people are classified in the indigenous category, and any attempt to recognize their collective rights is frustrated by either the low number of "authentic" Mapuches or the high number of "fake" Mapuches. This can also explain the politicized atmosphere that has surrounded ethnic counts in the censuses since 1992 and its attendant controversies.

As we have seen, the practice of using culture as the defining characteristic of indigenous people is related, especially during the 20th century, with the aim of showing their disappearance. In recent decades, however, an indigenous emergence has empowered indigenous peoples and revitalized their cultural practices, making their claim for official recognition and collective rights much stronger. In fact, in most Latin American countries populations with distinct group identities defined in cultural or ethnic terms have been more successful in gaining collective rights than those defined in racial terms (Hooker 2005)-albeit with some considerable exceptions (Paschel 2016). Chile, however, remains one of the very few Latin American countries that has not given constitutional recognition to its indigenous peoples. It is in this

context that a struggle over classification is developing, where culture and its authenticity is the feature or property in question. This, of course, begs the question of what does culture mean in this context.

The importance of culture should not be understood as a victory for the "constructivist" understanding of ethnicity. Although traditions and customs are not immutable characteristics, I argue that they can be equally subject to essentialist or primordialist thought. Two principles underlie this moral standard of indigenous culture. First, it suggests that there is only one true way of acquiring culture, and that is through primary socialization, i.e. culture can be a descent-based attribute (see for example the idea of primordial attachment in Geertz 1963). Alternative modes of acquisition are considered less acceptable and raise suspicions concerning self-interest or otherwise ulterior motives (instrumentalism). Second, culture is understood as "traditional customs", those described by the first travellers and missionaries that met the "aboriginal people" in their "original" circumstances, unpolluted by civilization, savages in perfect balance with nature. These are the ahistorical accounts of old ethnographies of the "true natives" (Bascopé 2009), the "authentic Indians" (Raibmon 2005). This view of culture has resulted in a search for authenticity and fostered the essentialist understanding of indigenous culture. Of course, this generates an insurmountable distance between this ideal of authentic Indians and the concrete historical subjects whose present conditions are the result of 150 years of forced assimilation, discrimination, loss of traditional ways of life, poverty, etc. In a similar vein, Raibmon comments on the case of Native Americans: "The notion of a singular Aboriginal culture-a culture that could be preserved in the static representations of ethnographic texts, museum cases, or stylized performances-held Aboriginal people to impossible standards of ahistorical cultural purity" (p. 9).

Conclusion

Under these standards it is easy to see how culture can be used to define and/or deny indigenous status. However, a question remains: Why would a struggle over classification and the meaning of culture be important for a constructivist theory whose aim is to determine the effects of race and ethnicity? The answer, I argue, is that disentangling the attributes of an ethnoracial category-the first step of a constructivist theory of race and ethnicity-is not such a straightforward task. Here, I want to highlight two points that I feel are missing in Sen and Wasow's proposal.

First, in order to disentangle these attributes we need to determine which dimension (or dimensions) of the category is relevant to the problem at hand. This complexity seems

absent in Sen and Wasow's proposal as they don't differentiate between race as racial self-classification, observed race, reflected race, etc. As I mentioned before, 'race' exists not as "a single, consistent identity but as a number of conflicting dimensions" (Roth 2016). These dimensions, although interdependent, can have different effects. A great example of this is Ellis Monk's article "The cost of color: Skin color, discrimination, and health among African-Americans" (2015). Here, the author examines the relationship between skin tone, discrimination, and health among African-Americans and finds that skin tone is a significant predictor of multiple forms of perceived discrimination, which in turn are significant predictors of various health outcomes. One of the key insights, however, is the fact that self-reported skin tone is a stronger predictor of perceived discrimination than interviewer-rated skin tone.

Second, we need to analyze the classificatory scheme empirically and understand the cultural model that sustains it, with all of its complexities-including the possibility of struggles over classification. If we define, following Chandra's example, the category 'Black' in contemporary New York as the combination {Dark skin and descend from parents of African origin} we need to also understand the cultural standards for such attributes. What do we mean by dark skin? Dark skin according to whom? Are all dark skin colors the same or do they entail different meanings? Can this attribute be questioned, i.e. can someone be 'not dark enough' or maybe 'too dark'? A quick look at an example from Brazil can be useful here. A lot has been said about the Brazilian classificatory scheme, in particular with regards to their use of skin color or phenotype as racial categories. But is the Brazilian *cor* the same as skin color? Not really. We have abundant evidence that what Brazilians call *cor* is a complex concept that includes both skin color and socioeconomic status and that, in the words of Schwartzman (2007), money does indeed whiten. And when we say that descendants from parents of African origin is a necessary attribute, are we excluding people from Latin America or the Caribbean? How many generations ago do 'parents of African origin' include? Is 'Black' the same as 'African American'? Social categories do not equal mere weighted features bundles (Lakoff 1999) or sets of properties with logical relations between them (D'Andrade 1995). The concept of race and ethnicity as a composite measure or "bundle of sticks" is not sufficient to understand the consequences of ethnoracial classifications. Literature in cognitive linguistics, cognitive anthropology, and sociology of culture calls for a richer framework, drawing on notions of schemas (D'Andrade 1995, DiMaggio 1997) or cultural models (Lakoff 1999, Sweetser 1987). To understand folk definitions of indigenous ethnicity, more is needed than just the components of ethnicity and their related weights. According to the influential work of Barth, the cultural contents of ethnic categories include not only the "overt signals or signs - the diacritical features that people look for and exhibit to show identity" but also "basic value orientations: the standards of morality and excellence by which performance is

judged" (Barth 1969, p. 11).

This complexity also includes the level of agreement over classification schemes, which can range between complete consensus over a single cultural model and a classification struggle. One way of addressing this issue is by using multiple measures of race, as Bailey et al (2013) showed using the case of Brazil. And we can supplement this strategy, I would add, by advancing our understanding of how people classify others. It seems that for many questions regarding the effect of race on other outcomes, this is what we really want to measure. As I have shown in this analysis, the rate of classification can vary widely depending on the definitions that people (not only researchers) use. For the case of the Mapuche in Chile, these estimates varied between 34 and 79 percent, quite a significant variation. How exactly can we use this information is not yet clear but directly examining how people classify others seems to be a good way to continue thinking about a constructivist theory of race and ethnicity.

References

Armstrong, S. L., Gleitman, L. R., & Gleitman, H. (1983). What some concepts might not be. *Cognition, 13*(3), 263-308.

Bailey, S. R., Loveman, M., & Muniz, J. O. (2013). Measures of "Race" and the analysis of racial inequality in Brazil. *Social Science Research, 42*(1), 106-119.

Barth, F. (Ed.). (1969). *Ethnic Groups and Boundaries: The Social Organization of Culture Difference;[essays Pres. at a Symposium Held at Bergen, Norway, 23rd to 26th Febr. 1967]*. Little, Brown & Company.

Julio, J. B. (2009). *La invasión de la tradición. Lo mapuche en tiempos culturales*. CoLibris éditions.

Bengoa, J. (2000). *La emergencia indígena en América Latina* (Vol. 20). Santiago de Chile: Fondo de Cultura Económica.

Bourdieu, P. (1990). *The logic of practice*. Stanford University Press.

Bourdieu, P. (1992). *Language and Symbolic Power*. Polity Press.

Brubaker, R., Loveman, M., & Stamatov, P. (2004). Ethnicity as cognition. *Theory and society, 33*(1), 31-64.

D'Andrade, R. G. (1995). *The development of cognitive anthropology*. Cambridge University Press.

DiMaggio, P. (1997). Culture and cognition. *Annual review of sociology, 23*(1), 263-287.

Flores, R., & Telles, E. (2012). Social stratification in Mexico disentangling color, ethnicity, and class. *American sociological review, 77*(3), 486-494.

Geertz, C. (Ed.). (1963). *Old societies and new states: The quest for modernity in Asia and Africa* (pp. 105-157). New York: Free press of Glencoe.

Lakoff, G. (1999). Cognitive models and prototype theory. *Concepts: Core Readings*, 391-421.

Loveman, M. (2014). *National colors: Racial classification and the state in Latin America*. Oxford University Press, USA.

Mascareño, A. (2007). Sociología de la cultura. *Estudios Públicos, 105*, 61-112.

Monk Jr, E. P. (2016). The Consequences of "Race and Color" in Brazil. *Social Problems, 63*(3), 413-430.

Raibmon, P. (2005). *Authentic Indians: Episodes of encounter from the late-nineteenth-century northwest coast*. Duke University Press.

Rosch, E., & Mervis, C. B. (1975). Family resemblances: Studies in the internal structure of categories. *Cognitive psychology, 7*(4), 573-605.

Roth, W. (2012). *Race migrations: Latinos and the cultural transformation of race*. Stanford University Press.

Roth, W. D. (2016). The multiple dimensions of race. *Ethnic and Racial Studies, 39*(8), 1310-1338.

Schwartzman, L. F. (2007). Does money whiten? Intergenerational changes in racial classification in Brazil. *American Sociological Review, 72*(6), 940-963.

Sen, M., & Wasow, O. (2016). Race as a Bundle of Sticks: Designs that Estimate Effects of Seemingly Immutable Characteristics. *Annual Review of Political Science, 19*, 499-522.

Sweetser, E. (1987). The definition of lie. *Cultural models in language and thought*, 43-66.

Valenzuela, E. (2007). Tierra, comunidad e identidad mapuche. *Estudios Públicos, 105*, 25-35.

Valenzuela, E., & Unzueta, M. B. (2015). Parental transmission of ethnic identification in mixed couples in Latin America: the Mapuche case. *Ethnic and Racial Studies, 38*(12), 2090-2107.

Villarreal, A. (2012). Reply to Flores and Telles: Flawed statistical reasoning and misconceptions about race and ethnicity. *American Sociological Review, 75*, 495-502.

Wallander, L. (2009). 25 years of factorial surveys in sociology: A review. *Social Science Research, 38*(3), 505-520.

Wimmer, A. (2008). Elementary strategies of ethnic boundary making. *Ethnic and racial studies, 31*(6), 1025-1055.

Wittgenstein, L. (1953). 1958. *Philosophical investigations, 3*.

Yashar, D. J. (1999). Democracy, indigenous movements, and postliberal challenge in Latin America. *World Politics, 52*(01), 76-104.

Zúñiga, F. (2007). Mapudunguwelaymi Am? '¿Acaso Ya No Hablas Mapudungun?'. *Estudios Públicos, 105*, 9-24.