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**THE CONCEPT OF INDIVIDUAL REPRESENTATION:
APPROACHING POLITICAL REPRESENTATION DIFFERENTLY**

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(University of Neuchâtel)**

Center for the Study of Imperfections in Democracies

A research center at Central European University



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THE CONCEPT OF INDIVIDUAL REPRESENTATION: APPROACHING POLITICAL REPRESENTATION DIFFERENTLY

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Abstract:

This paper presents a new conceptualization and measure of political representation to complement existing approaches. Individual representation scores approach political representation from a different direction than the conventional dyadic and collective representation. By placing the individual at the centre, individual representation scores provide an answer to the question of how well an individual in society is represented by the legislature in place. This contrasts with the starting point of existing approaches, where the representative or a group of representatives are examined foremost. As other approaches to political representation, individual representation assumes that representation is “better” where Euclidean distances between the individual and the representative are smaller. Individual representation scores are calculated by comparing on the one hand the position of the individual vis-à-vis other citizens, and on the other hand the position of the individual vis-à-vis the legislature. The paper includes an empirical example to illustrate how the concept can be applied.

Introduction

Political representation describes the relationship between citizens and a representative body. Most commonly, this relationship is explored in the context of national legislatures, national governments, or political parties. The relationship between citizens and representatives is commonly conceived in one of two ways. On the one hand, dyadic representation is concerned with the link between constituents and their representatives. On the other hand, collective representation is concerned with the link between all citizens and the representative body as a whole.

Traditionally, the focus of representation studies has been somewhat different in the US and Europe. In the US, the dyadic perspective is used more frequently; in Europe, the collective perspective seems more common. To a large degree, this reflects the electoral systems in place. The dyadic perspective seems appropriate in countries with majoritarian systems, where there is a direct and clear link between the constituents and their (usually single) representative. Collective representation seems appropriate in countries with proportional representation (PR) systems, where the link between constituents and their (usually multiple) representatives is less clear. It is important to note, however, that both perspectives can be – and have been – applied to both contexts (Dalton 1985; Esaiasson and Holmberg 1996; C. Herrera, Herrera, and Smith 1992; Miller and Stokes 1963; Weissberg 1978).

This paper complements existing approaches by introducing a new perspective. Golder and Stramski (2007) mentioned the perspective presented in this paper in a footnote, but dismissed it from consideration. Despite this negligence in the literature, individual representation is a useful addition to existing perspectives that deserves attention. It is an addition rather than a replacement, just as dyadic representation and collective representation are complementary approaches. As will be outlined in more detail below, individual representation differs from the other two perspectives by taking a different starting point. For individual representation, citizens rather than representatives are taken as the starting point. The result is that the level of representation can be expressed at the individual level, which has advantages for data analysis.

In order to understand individual representation, it will be necessary to briefly outline different possible forms of political representation to situate the concept. This will be followed by a more thorough discussion of individual representation, and the properties of individual representation scores. A brief empirical example completes the paper to illustrate how individual representation scores can be used.

Forms of Political Representation

At its base, political representation describes the relationship between the mass and the political elite. Depending on the study and research question, the definition of the mass and the elite differs. The mass can be the population of a country, the citizens of a country, the electorate, actual voters, or voters of a specific party. The elite can be the representatives in the national legislature, in government, in a regional assembly, the representatives of a

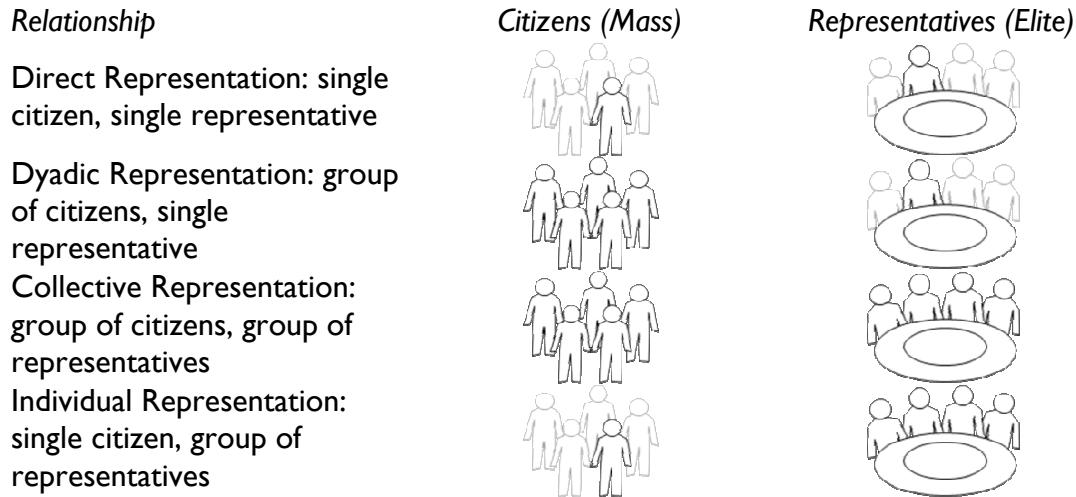
particular district, or elected representatives of a particular political party. By combining these – and further – relationships between the mass and the elite, political representation can refer to a wide range of arrangements. Yet, it is possible to categorize most of the possible relationships into dyadic and collective representation. In this paper, I show that relationships beyond dyadic and collective representation are conceivable, and I argue that these can indeed be useful additions.

In each case, the relationship between the mass and the elite can be conceived both in terms of ideology, issue preferences and agenda priorities (substantive representation), and in terms of membership in demographically defined groups (descriptive representation). There are arguments for highlighting both substantive and descriptive representation (Overby and Cosgrove 1996; Mansbridge 1999; Childs 2002; Banducci, Donovan, and Karp 2004; Mansbridge 2005; Dodson 2006). As will become apparent, however, not all possible relationships between the mass and the elite are equally suited for describing substantive and descriptive representation. This does not mean that such perspectives are invalid or generally unsuited, but illustrates that not all possible aspects of the relationship between the mass and the elite can be covered by a single perspective.

Within the perspective of substantive representation, there are different ways in which representation can be conceptualized. There is no agreement on how to capture the positions of citizens and members of representatives. On the one hand, the preferences can be measured using surveys – for example one's position on the left-right scale. On the other hand, the relevant positions may be derived from the behaviour of citizens and representatives. The two approaches are closely linked since preferences influence behaviour. For citizens, preferences influence voting behaviour. For representatives, preferences influence parliamentary actions – such as what they say in parliamentary debates or their voting behaviour. In either case, the choice should be determined by the research question of the study, but it may be influenced by the availability of appropriate data. The perspective outlined in this paper – individual representation – can be applied to both approaches.

Four representational relationships can be envisaged, covering groups or individuals at both the elite and mass level (figure 1). First, an individual citizen can be compared with an individual representative. I refer to this relationship as *direct representation*. Second, an individual representative can be compared with citizens as a group. This is *dyadic representation*, and studies tend to focus on the representatives rather than the citizens. Third, a group of representatives can be compared with groups of citizens. This is *collective representation*, and studies again tend to focus on the representatives. Fourth, the relationship between an individual and a group of representatives describes *individual representation*. The focus is normally clearly on the individual.

Figure 1: Relationships of Political Representation



Direct representation is concerned with a single representative representing a single citizen. Usually, the focus is on the individual: how the single citizen is represented by the representative. This perspective works well for substantive representation where distances may be of interest. For descriptive representation, it is possible to express whether the citizen and representative belong to the same group, but this may be of limited analytical interest. Direct representation is the common approach in vote recommendations (e.g. EU Profiler.eu, Smartvote.ch), but it may be of limited use in social and political sciences where it is probably too specific for comparative research. It is usually measured using the (absolute) difference between the position of the citizen and the position of the representative in question. Representation is generally considered to be better where differences are small or absent. In vote recommendations, the position of parties rather than individual representatives may be used, often the mean or median position of the party's representatives. In this case, direct representation does not use information on the distribution of position of representatives, implicitly arguing that the position of parties as a whole matters more than the positions of representatives within. It is possible to examine multiple domains at the same time by taking the average (mean) of domains, possibly incorporating weights.

Dyadic representation is concerned with political representation in a specific district or constituency (Miller and Stokes 1963; Eulau and Wahlke 1978; C. Herrera, Herrera, and Smith 1992). The perspective is of a (single) representative representing his or her constituents. Usually, studies concerned with dyadic representation examine the role of delegates of a district and to what extent they can be said to represent their constituent. The focus in these studies is on substantive representation, most commonly political left and right. In terms of measurement, a common approach is to look at the difference between the position of a single representative R_k and the mean position of the citizens Z : $R_k - Z$ (Dalton 1985), or the mean

distance to each citizen in the district Z_i ; $(R_k - Z_i)/n$ (Dalton 1985)¹. In both cases, smaller differences stand for higher congruence, which is considered better. As outlined in detail by Achen (1977; 1978), in heterogeneous districts it is more difficult for representatives to be close to citizens, and representatives cannot do better than the variance of citizen positions. To address this issue, Achen insisted that three aspects of dyadic representation should be differentiated: proximity, centrism, and responsiveness. Descriptive representation could be studied using the dyadic perspective if the mode citizen in the constituency is compared with the representative.

Collective representation is concerned with political representation in a specific representative body (Weissberg 1978; Mansbridge 1999; Marsh and Norris 1997; Norris 1985). The perspective is of representatives as a group representing all citizens. Depending on the study, the focus can for example be on parliament representing citizens, government representing voters, or political parties representing voters of the party in question. In each situation, the focus is on the act of representing rather than who does the representing. Put differently, the (direct) link between constituents and their representatives is no longer central. It has been argued that citizens are more concerned that their interests are represented than who does this (Weissberg 1978).

With its focus on groups, collective representation is the perspective used for descriptive representation (Norris 1985; Koch and Fulton 2011; Schwindt-Bayer 2010; Sawyer, Tremblay, and Trimble 2006; Kunovich and Paxton 2005), although substantive representation could also be covered. Given that descriptive representation really is about group rights, for questions of descriptive representation collective representation is more appropriate than dyadic representation. Indeed, by examining proportions in the population and the representative body, questions of numerical under-representation can be addressed using collective representation. This is generally done by taking the (absolute) difference between the proportion of a specific group in the representatives and the proportion of the same group in the citizens, or by dividing the proportion of one by the other. In the case of the representation of women in legislatures, it is also common to take the proportion of women as a measure of representation (Krook 2011; Schwindt-Bayer 2010; Paxton, Kunovich, and Hughes 2007). This approach ignores the variation in the population, but it can be defended in the case of women.

Individual Representation

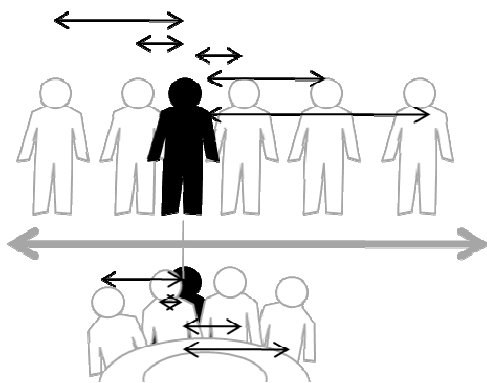
This paper is concerned with individual representation. The focus is on how individuals are represented by a representative body as a whole. With its starting point at the individual level, the relationship between the mass and the elite is approached from a different direction than what is normally done. The perspective of individual representation can be applied to many situations, including citizens being represented by parliament, or voters being represented by a particular party. In contrast to collective representation where the position of citizens and

¹ With n denoting the number of citizens in a district

representatives is combined to compare midpoints, here information on the position of individuals is maintained. At the same time, the level of representation is expressed as the property of individuals rather than groups they belong to. This has advantages for data analysis, and makes it possible to address multiple group membership, such as by calculating interaction effects. For questions of trust and social cohesion, for instance, the interaction between multiple forms of under-representation are of central interests. Using individual representation scores it can be examined if say black women are particularly prone to distrust government, given their (common) double under-representation. As dyadic representation, the outlined approach is more suited for substantive representation where distances are examined. In both cases, equivalence with the mode position could be used to examine descriptive representation, but this does not offer an intuitive way.

Individual representation scores are based on a thought experiment of sequential comparison: once the position of an individual citizen is compared with all other citizens, and once his or her position is compared with those of all the representatives. Put differently, the intuition is first to determine how marginal the position of an individual is in a given society. In a second step, the position of the citizen is compared with the representatives, to determine how marginal this position would be amongst representatives. Based on absolute values, these measures of marginality determine the mean of the distances to all other individuals (figure 2).

Figure 2: Individual Representation



The position of the same individual (highlighted in black) is compared with the position of other citizens (top), and then to the positions of the representatives (bottom). The comparison at the top describes the marginality of the citizen vis-à-vis all other citizens, the comparison at the bottom describes the marginality of the citizen vis-à-vis the representatives. In each case, the average distance between the individual and the others is taken as a measure of how marginal the position of the individual is.

The marginality of the citizen in the population is compared with the marginality of the citizen among representatives to give an individual representation score. As other approaches to political representation, individual representation scores assume that representation is “better” where Euclidean distances between the individual and the representative are smaller. This is the case, because higher congruence is regarded as normatively preferable.

More formally, individual representation scores (V) consists of two components: the marginality of the individual among citizens (M_Z), and the marginality of the individual among representatives (M_R): $V=M_Z-M_R$. For every citizen (Z_k), the distance between him or herself to every other citizen (Z_i) is calculated. This gives a measure of how marginal the individual's position is in society: $M_Z = \frac{1}{n-1} \sum_{i=1}^n |Z_k - Z_i|$, with n denoting the number of citizens. In a similar fashion, the distance between the individual (Z_k) and all the representatives (R_i) is calculated: $M_R = \frac{1}{m} \sum_{i=1}^m |Z_k - R_i|$, with m denoting the number of representatives. The theoretically possible values range from -1 to 1. The relationship between the two components illuminates the representation of the individual. If $M_Z=M_R$, then the individual is equally marginal among the population and the representatives. Following theories of representation (e.g. Phillips 1995; Mansbridge 1999), this is considered the ideal. If $M_Z < M_R$, then the individual is under-represented. Put differently, the position of the individual is closer to the position of other citizens than those of the representatives. This means that the position of the individual is relatively more common – taking into account the position of other citizens – than it would be among representatives. It is thus assumed that the position in question carries less weight in the representative body and decision-making than among citizens. Conversely, an individual can be over-represented, where his or her position is closer to the representatives than to other citizens. M_Z/M_R can provide an additional indication of the magnitude of such under- or over-representation. This ratio is 1 if the distance between the individuals and the representatives is equal. Being individual scores, group membership is not a direct concern, and the possibility of multiple group membership is explicitly catered for.

There are usually correlations between the individual representation scores and placement in the base variable, such as generic left-right placements. This relationship, however, is not necessarily of the nature that predicting left-right positions would help predicting individual representation scores. This is the case because the order of values need not correspond. There is a one-way link from the base variable – left-right placements – to the individual representation scores, but from individual representation scores it is not necessarily possible to recreate left-right positions. The link between the base variable and individual representation scores requires knowledge of the distributions of the citizens and representatives.

Since individual representation cores rely on the distributions of citizens and representatives, they are sensitive to small N and missing values. This may affect particularly representative bodies, but the sensitivity outlined equally affects collective and dyadic representation. Individual representation scores are different from a comparison involving mean positions: $|Z_k - \bar{Z}| - |Z_k - \bar{R}|$, which can be shortened to $|\bar{Z} - \bar{R}|$. If the distributions of citizens and representatives are similar, the comparison of mean positions carries some information. Specifically, we can tell whether those left or right of the mean are over-represented, but no finer distinctions are possible. In this case we also need a definition of what we mean by “being

similar.” A crude approach may be offered by the AJUS system, which classifies the shape of distributions (Galtung 1969). By contrast, individual representation scores compare the distributions explicitly and therefore can circumvent conceptual issues of how to determine whether two distributions are similar.

An extreme example can be used to make the difference to mean-based comparisons apparent. Let the distribution for citizens resemble a u-curve and that of the representation an n-curve (figure 3). The citizen on the very left is *not* marginal compared with the other citizens, but he or she is marginal compared with the representatives. Individual representation scores indicate under-representation for citizens at the margins; a mean-based approach will not pick this up.

Figure 3: Individual Representation and Comparison of Means



Hypothetical example, citizens and representatives both with equal mean position but different distributions

At the same time, individual representation scores cannot replace dyadic and collective representation. This is the case because individual representation scores are in most cases unsuitable for direct comparisons between countries. It is possible to compare the level of representation for specific groups, such as by comparing the mean of individual representation scores for a group. Where individual representation scores differ from the mean, it is possible to argue that the political process has made individuals marginal by not reflecting their position in the representative body. The intuition here is that the political process can aggravate marginal positions, as they exist in the population.

Individual representation scores are a useful addition to the commonly studied dyadic and collective representation. This is the case, because individual representation scores open up the possibility of innovative studies examining the relationship between the elites and citizens in a new light. By allowing the quality of representation to be expressed at the individual level, the approach presented in this paper clearly takes a different perspective than the commonly used dyadic and collective representation do. Conventionally, the focus of representation studies is on the representatives and their behaviour in the representative body. Using representation scores at the individual level allows for micro-level analyses. Rather than treating representation as a property of a predefined group, representation is regarded as an individual affair. Consequently, sophisticated analyses with individual-level data are feasible. Expressing the level of representation at the individual level caters for multiple group membership and allows testing for example whether under-representation is cumulative. What is more, the link between the

level of (individual) representation and levels of trust in government and key institutions can be addressed more intuitively at the individual level. More generally, using individual representation scores it becomes possible to identify groups in non-political dimensions and consider multiple group membership simultaneously. To do so, it is not necessary to have data on group membership for the representatives. Such data are necessary to determine the collective representation of groups, for example, but data availability is often a limitation for studies using collective representation.

Illustrative Example

In this section, I use an example to illustrate the theoretical considerations outlined above. Associations between individual representation scores and individual-level variables are explored using an electoral study in combination of a candidate study. The example is included to illustrate that the perspective of individual representation is feasible and that it may be relevant for explaining empirical realities. No doubt, these preliminary results can be improved by explicit theory and better operationalization of the concepts.

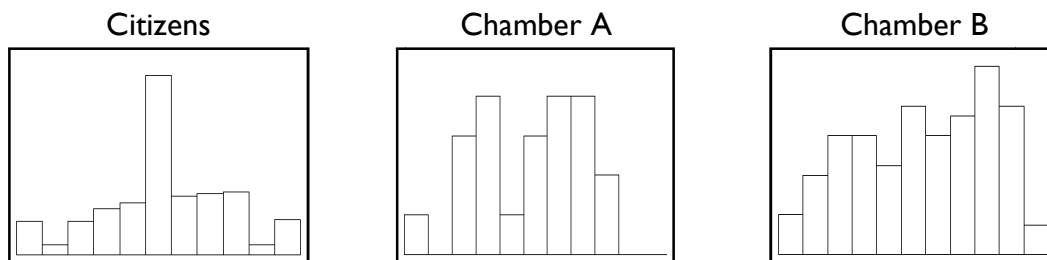
In the illustrative example, I will address three generic expectations to demonstrate the usefulness of individual representation scores. The first expectation concerns political behaviour. It can be expected that some individuals behave in a way conducive to higher representation. Without specifying the exact mechanism, it can be expected that those with more education, of a higher class, and with more interest in politics are over-represented. The intuition is that the political behaviour of members of these groups is such that their interests are represented to a greater degree. In a similar vein, it can be expected that individuals who choose to abstain from voting are not as well represented than people who vote. Non-voting is here treated as a non-random issue (bias).

The second expectation concerns demographically defined groups. It can be expected that members of demographically defined groups are over-represented in policy domains that directly affect them. This is the case because they have greater incentives to defend their particularized interests. Relevant groups may include minority and language groups, regional groups, but also gender/sex, and age. Where no such associations exist, the existence of substantive group interests in these dimensions can be questioned. Put differently, if there is no association between group membership and individual representation, we have less reason to believe that descriptive under-representation leads to substantive under-representation. The political dominance of certain groups in society more generally means that we can expect these groups to be over-represented.

The third expectation concerns the outcome of over-representation. It can be expected that individuals who are over-represented have greater trust in key institutions, such as parliament, government, or the police. This may also be reflected in higher levels of generalized trust.

The empirical example is based on the 2007 *Swiss Election Studies*, which includes a part on citizens and a matching candidate survey. Elected members of parliament are used as the sample of representatives. The data cover both Swiss chambers, the Council of States and the National Council. The two chambers will be covered separately. The example covers representation on a generic left-right scale, which is based on self-placement (0 to 10). Other dimensions, or the coverage of agenda priorities, are also possible with the data in question, and will be covered in future research. The data are somewhat patchy, with a response rate of 63% for the National Council and 50% for the Council of States. There is serious response bias, but no weights or other corrections are applied in this paper. This means that the substantive results possibly do not apply to Switzerland, but they are included as an illustration what could be the case. To highlight the illustrative character of the example, I will refer to the chambers as *chamber A* and *chamber B* respectively.

Figure 4: Left-Right Distributions



Left-right distributions of the citizens and the representatives in the two chambers

The left-right distribution of the citizens gives a typical picture, found in many Western societies (figure 4). Many individuals place themselves in the centre. Other than that, the positions of the citizens are largely normally distributed, with small peaks at the extremes. In this case, the mean position is 5.23. The distribution of representatives in the two chambers is somewhat different. In contrast to the citizens, there is no peak at the median position in chamber A. It is a small chamber, so the histogram is more rugged. More noticeable is the absence of representatives at the extreme right, which results in an overall bias to the left. The mean position is 4.77. In chamber B, in contrast, a clear skew to the right can be observed. The mean position is 5.41.

The marginality of citizens is as expected from a unimodal distribution: the average distance to other citizens is larger for those at the margins. The same is true for the assumed marginality among members of parliament, with perhaps the outlined skew being visible to some extent. For the generic left-right scale, citizens on the right are under-represented by chamber A; citizens on the right are over-represented by chamber B (figure 5).

Figure 5: Individual Representation



Individual representation scores in the two chambers. Given are the representation scores for each position on the left-right scale of the citizens. The distance above the horizontal axis indicates the degree of over-representation for individuals with a given left-right placement; the distance below the horizontal axis indicates under-representation for individuals with a given left-right placement. The number of citizens with a particular left-right placement is not visible in these graphs (see figure 4 instead).

Including the two chambers in the example is interesting because they are located at different sides of the citizen mean. In the following paragraphs, representation at individual level is examined to demonstrate the usefulness of the concept. The first expectation outlined stipulates an association between differences in political behaviour associated with education and interest in politics on the one hand, and individual representation scores on the other.

Table 1: Education and Individual Representation

Variable	Individual Representation	
	Chamber A	Chamber B
Education	0.21 *	0.04 *
ISCO-88 ("class")	(p>0.1)	(p>0.1)
Income (relative)	(- 0.02)	(- 0.01)
Interest in politics	0.06 *	0.13 *
Voted in previous election	(p>0.1)	p<0.00 *
Political activities: gave money	0.08 *	0.08 *
Discuss politics with friends and family	0.09 *	0.08 *
Difficult to make vote choice	(0.03)	0.14 *
Mixed feelings when making vote choice	0.05 *	- 0.15 *
Political knowledge	0.06 *	0.09 *

Given in this table are correlation coefficients, or significance levels for categorical variables. * $p < 0.00$, coefficients in brackets are not statistically significant ($p > 0.1$)

Table 1 also includes other variables that can be thought to affect individual political behaviour in a similar manner. Most of these bivariate associations are statistically significant. Individuals with more education and those with more interest in politics are indeed over-represented on

the left-right scale. This is generally true for both chambers, but substantially the associations are not strong. This suggests that the groups identified here are not homogeneous in terms of individual representation scores.

Table I suggests that individuals are better represented on the left-right scale if they are better educated, have more interest in politics, are politically involved, discuss politics with friends and family, and are knowledgeable about politics. The associations can also be found for different forms of political participation than the donating money listed in the table. Individuals who find it easier to make a vote choice tend to be better represented, but only by chamber B. By contrast, those who have mixed feelings about the vote choice are under-represented by chamber B, suggesting that mixed feelings may be an indicator of political behaviour that is not conducive to higher representation on the left-right scale.

Not shown in table I is the association for voting frequency. Individuals who vote more frequently are over-represented for both chambers ($p < 0.05$). Not surprisingly given the base variable (left-right placement) and the skews in the two chambers outlined above, there are associations between the probability to vote certain parties and being over-represented in one of the chambers ($p < 0.00$). Supporters of the left are over-represented by chamber A; supporters of the right are over-represented by chamber B. Supporters of the centrist parties are under-represented in both chambers. Whilst this association is expected given the base variable and the distributions in the two chambers, the situation for the centre is somewhat surprising. Furthermore, individuals with post-materialist values – as measured by the Inglehart Index – are under-represented by chamber A ($p < 0.00$), but materialists are not significantly over-represented by chamber B.

Table 2: Age and Gender and Individual Representation

Variable	Individual Representation	
	Chamber A	Chamber B
Sex (Female)	$\Delta = 0.02 +$	$\Delta = - 0.08 *$
Age	$- 0.18 *$	$(- 0.01)$
Foreign-born	$(p > 0.1)$	$(p > 0.1)$
Married	$(p > 0.1)$	$(p > 0.1)$
Size of municipality (large)	$- 0.12 *$	$(- 0.01)$
Rural	$\Delta = 0.06 *$	$(p > 0.1)$

*Given in this table are correlation coefficients for continuous variables and significance levels for categorical variables – with differences in means (Δ) where significant. * $p < 0.00$, + $p < 0.05$, coefficients in brackets are not statistically significant ($p > 0.1$)*

The second expectation covers demographically defined groups. Looking at representation on the generic left-right scale, the only groups who can be expected to be over-represented are those who dominate political life generally: older individuals and men. Table 2 includes a number of other possibilities, but unsurprisingly there is no clear pattern. If anything, counter to the expectation, it appears that older individuals are under-represented by chamber A. Women

appear to be under-represented by chamber B and over-represented by chamber A. There are no statistically significant associations for being foreign-born, married, or for the rural-urban divide.

The third expectation is concerned with the consequences of individual representation. It is stipulated that higher levels of representation, including over-representation, are associated with higher levels of trust in key institutions. This pattern of association can be found for chamber B, but the opposite is the case for chamber A. Individuals who are better represented by chamber B are more trusting of parliament, political parties, or the police. By contrast, individuals who are better represented by chamber A are less trusting of these key institutions (table 3).

The picture is different if we examine generalized trust. Individuals who are better represented by chamber A are more trusting, whilst those better represented by chamber B are more likely to agree that one cannot be careful enough when dealing with others in society.

Table 3: Individual Representation and Trust

Variable	Individual Representation	
	Chamber A	Chamber B
Trust in parliament	- 0.08 *	0.11 *
Trust in political parties	- 0.08 *	0.12 *
Trust in police	- 0.13 *	0.04 +

*Given in this table are correlation coefficients. * $p < 0.00$, + $p < 0.05$*

Not shown in tables 1 to 3 is that individuals who feel attached to their local community, their region, their language region, or the country in general are better represented by chamber B. By contrast, those who feel attached to Europe are better represented by chamber A. These are probably simply different expressions of the cleavage structure in place.

Individual representation scores can also be used in multivariate analysis. Using individual representation scores as the dependent variable, most of the variables identified as significant in the bivariate analysis remain significant in the multivariate analysis. The coefficients do not change significantly in parsimonious models that exclude variables that are not statistically significant. There are no apparent collinearity issues. The same substantive results can be achieved with alternative variables for political activities, rather than giving money to political parties and campaigns. In contrast to the bivariate analyses above, discussing politics with friends and family, and actual political knowledge do not appear to be significant for individual representation on the generic left-right scale. Age and education are significant coefficients for chamber A only.

Multivariate analysis can also be applied to the influence of individual representation on trust, using individual representation scores as explanatory variables. The patterns for trust in key

institutions reflect the findings of the bivariate analysis: Better representation by chamber B is associated with higher levels of trust in key institutions.

The results for generalized trust, by contrast, are different from the pattern outlined above. As visible in table 4, once controlling for other covariates, higher levels of individual representation in both chambers are associated with higher levels of generalized trust. In all instances, the substantive impact of individual representation is significant.

Table 4: Individual Representation and Generalized Trust

Variable	Model 1		Model 2	
	B	p-value	B	p-value
(Constant)	5.13		5.10	
Individual Representation: Chamber A	0.35	0.00		
Individual Representation: Chamber B			0.06	0.56
Age	0.00	0.09	0.00	0.15
Education	0.04	0.00	0.05	0.00
Sex (female)	- 0.03	0.73	- 0.01	0.89
Ingelhart (post-materialism)	0.11	0.00	0.14	0.00

$R^2=0.04$ for both models (OLS), generalized trust as the dependent variable.

The multivariate results suggest that the two chambers are able to represent different groups of society on the left-right scale. With one chamber being left-leaning and the other right-leaning, different groups are represented differently by the two chambers. Whilst this has a different impact on trust in key institutions, higher levels of individual representation in both chambers are associated with higher levels of generalized trust.

Discussion

This paper has introduced a new way to conceptualize political representation. Individual representation scores compare the position of individuals vis-à-vis other citizens, and their position vis-à-vis representatives. By approaching political representation this way, it is possible to calculate representation scores for individuals. This way it becomes possible to address new questions of representation that are inaccessible with conventional approaches of dyadic and collective representation. For example, under-representation due to multiple group membership – such as being black and a woman – can easily be addressed. Furthermore, consequences of under-representation on trust or alienation can be expressed in an intuitive way at the individual level. Despite these advantages, however, the perspective of individual representation is not in itself preferable to other approaches of political representation. It is a complement to existing perspectives, opening the possibility for addressing new questions, or old questions from a new perspective.

Existing approaches mean that we necessarily begin with a clearly defined group, such as women, or the voters of a specific party. Issues where representation may be high or low –

such as left-right placements or views on immigration – are examined in a second step. With individual representation scores, it is possible to start with the issue, and find groups who are under- or over-represented in a second step. The advantage in this case is that groups can be defined in a flexible manner, because representation scores are calculated as the property of individuals. For instance, the level of representation of old women or left-wing men can easily be expressed. Similarly, individual representation may test the question whether individuals who are better represented also feel better represented – rather than make the assumption. Individual representation scores take into consideration the marginality of individuals. In the context of feeling represented, this caters for the intuition that individuals with marginal positions will have less expectation to be represented than someone with a majority position has.

Although this paper has focused on the individual representation of citizens, it is possible to reverse the perspective and look at individual representatives. This way, the question whether the position of a representative is in line with the population appears in a new light. Specifically, individual representation scores give use a more nuanced view than approaches based on the midpoint. They give weight to less common positions among the citizens which also deserve representation. In this sense, we can separate party politics (and the concern for the median voter) from representation where every citizen has a right to be heard. At the same time, individual representation scores take into consideration the distributions of the citizens and representatives, and marginal voices are not over-emphasized.

For purposes of illustration, this paper included an empirical example examining individual left-right representation in the two Swiss chambers. This example could demonstrate the usefulness of individual representation as a complement to existing approaches. Individual representation is suitable for issue positions as examined in this paper, but may also be applied to agenda priorities, which can be treated the same way. In this sense, individual representation scores are a useful way to examine political representation.

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