Modeling Civic Engagement with Organizations: A Novel Application of Conjoint Survey Experiments

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Abstract

This paper investigates the ways in which congruence – a match in values – impacts individual decisions to engage with organization. In order to solve inferential problems that exist in the literature on organizational involvement, I develop a new way to use conjoint survey experiments to study questions of interest. The model has two parts: an IRT-like component that helps estimate where organizations and individuals are in the same values space, and an outcome model that uses latent distances estimated via the IRT model as inputs. I argue that individuals will be more likely to want to engage with organizations to which they are closer in the latent values space, and that they look at organizational traits for cues about an organization's values. There are many different organizational traits that can cue shared values. In this project I focus on descriptive representation and geographic localness. Applying the analytic framework and model to a sample of college students, I find that individuals are more likely to want to engage with organizations that are more descriptively representative of them. In addition, I find that congruence more consistently impacts considerations of benefits rather than costs.

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1   Introduction

Why do individuals choose to engage with some organizations over others? Olson (1971) posited that individuals undergo a material cost-benefit analysis when faced with joining an organization. In the wake of Olson, attention turned to the nature of these costs and benefits, with scholars arguing that social incentives, more than material incentives, played a key role in explaining involvement with organizations (Mitchell, 1979; Opp, 1983; Klandermans, 1984; McAdam, 1986).

Most of the literature has looked at what individuals seek from organizations rather than what individuals perceive organizations as offering. Thus, the focus has often been on individual attributes, such as income. Yet, a lot of this research has been inconclusive (Schussman and Soule, 2005). While a robust set of research has shown that an identity-match between individuals and organizations may be an important factor in collective action participation, it is not clear how this identity-match is established (Kelly and Breinlinger, 1996; Simon et al., 1998; de Weerd and Klandermans, 1999; Klandermans et al., 2002; van Zomeren, Spears and Leach, 2008; van Zomeren, Leach and Spears, 2010). Recent work has argued that not enough attention has been paid to the *supply* side of this equation; that is, how organizations supply motives for participation and how individuals demand them are different things (Klandermans, 2007). In other words, the role that organizational attributes and traits play in the cost-benefit process has been underexplored.

In this paper, I develop a theory that connects organizational attributes to collective action participation – engagement with organizations – via the mechanism of congruence. I argue that individuals take organization attributes as cues about a potential values-match, which they then factor into their cost-benefit analyses. The closer they are in a latent values space – the more congruent – the more likely they will be to want to engage with an organization, all else equal. In this work, I build on the research of Hoellerbauer (2021), who uses a conjoint survey experiment to show that market vendors in Malawi are more likely to interact with an election-oriented civil society organization if it was founded in

their district capital and if the leader is a former vendor. The design of the conjoint in that study made the proposed mechanism – congruence – difficult to study directly. I therefore create a new two-stage model that uses linked conjoint survey experiments to test for the effect of distances in a latent space. This two-stage model can be used in any situation in which the mechanism

Below, I first discuss how congruence impacts engagement decisions made by individuals and the role that organization attributes play in this process. I then present a statistical model that can be used to study this process. Next, I discuss the experimental design and the analysis. Finally, I present the results.

Applying the novel model to data I collected on a student sample, I find that cues for descriptive representation and localness help individuals situate organizations in a latent values space. In addition, I find that individuals are more likely to want to engage with an organization if it is closer to them in a latent values space. This research gives us further insight into the decision-making process that individuals undergo when they decide they engage with an organization. It also helps address how individuals use information that they learn about organizations in this process.

2 Modeling the Effect of Congruence on Organizations

The development literature argues that development-oriented civil society organizations can struggle to connect to local populations due to a lack of shared values (Mendelson and Glenn, 2002; Porter, 2003; Murdie, 2014). Building on Hoellerbauer (2021), I call this values match between organizations and individuals *congruence*. Lack of congruence has been used to explain the lack of engagement with civil society organizations in low- and middle-income countries, especially ones where civil society is not developed to the same extent as in higher-income, more democratic countries. The implied argument is that individuals do not expect their values to match with the organizations available to them – the supply of organizations – and so choose not to engage. Yet, how do individuals decide whether an organization will match their values or not? We know that localness and descriptive representation

can lead voters to assume shared values with politicians in the case of elections (Evans et al., 2017; Shugart, Valdini and Suominen, 2005; Carlson, 2015; Keele et al., 2017; Carnes and Sadin, 2015; Calfano and Djupe, 2009; McDermott, 2009, 2005). Hoellerbauer (2021) argues that similar logic applies to civil society organizations. Individuals take cues about potential congruence from information they know about an organization – in other words, they obtain information on organizational attributes and characteristics and use them to assess congruence. Their perception of how congruent they are with an organization then influences how likely they are to engage with it.

In this section, I formalize this congruence theory. I argue that individuals first use organizational attributes to form a picture how congruent an organization is with them. Second, individuals use information on congruence to make decisions about engagement. As Olson (1971) points out, contrary to many assumptions that humans are inherently social creatures, individuals will not automatically join an organization or engage in collective action. The costs involved can often be severe, and the benefits can seem far over the horizon. I argue, however, that organizations will find it easier to mobilize collective action when they exhibit traits that make them seem closer in values to the population they seek to engage. In the rest of this section, I first more concretely lay out my theory. I then describe the model I have developed to study the mechanism of congruence.

2.1   Organizational Attributes, Congruence, and Engagement

Building on the cost-benefit model in the social engagement literature, I propose the following simple, utility function for individual i faced with organization j:

$$U_i(\mathbf{x}_j, C_{ij}, B_{ij}) = -(\theta_i - \xi(\mathbf{x}_j))^2 + B_{ij} - C_{ij} \tag{1}$$

where $\mathbf{x}_j$ is a vector of organizational traits, and C_{ij} and B_{ij} are other costs—such as time, money, reputation, or government censure—and benefits—such as the financial benefit of

no longer having to pay bribes or achieving a more equitable distribution of government services—that individual i may incur or receive, respectively, when interacting with organization j. θ_i and $\xi(\mathbf{x}_j)$ represent individual i's and organization j's locations in a latent space. The substantive nature of this space can depend on the application, but I theorize that the space is a 1D representation of values – in other words, this is the congruence space.[1] You can tell what "kind" of organization an organization is by seeing where it falls in the latent space. θ_i can be seen as the location of individual i's ideal organization, which they compare with organization j's perceived location in that space, which is a function of its characteristics $\mathbf{x}_j$. Considered together, the $\theta_i - \xi(\mathbf{x}_j)$ term characterizes individual i's *congruence* with organization j, including directionality.[2] The smaller this distance, the more congruent an individual and an organization are. For simplicity's sake, here lack of congruence imposes an additional cost on an individual, although it could be framed as higher affinity leading to lower overall costs. In this formulation congruence is a benefit in and of itself — individuals will be happier working with an organization with which they are congruent because they will be among like-minded individuals and will feel like they belong.[3]

A logical conclusion from this utility function is that, all else equal, when an organization

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[1]This space can be be multi-dimensional.

[2]This model formalizes the identity comparison model developed by Foreman and Whetten (2002) and casts it in terms of utility. The problem with the identity comparison model, and with the organizational identity literature (Foreman and Whetten, 2002; Dutton, Dukerich and Harquail, 1994; Reger, Gustaffson, Demarie and Mullane, 1994; Ashforth and Mael, 1989), is that it can be very difficult to pin down what identity means with respect to organizations, both for individuals and the organizations themselves. It is also not entirely clear how the identity mechanism works.

[3]An alternative formulation could be the following:

$$U_i(\mathbf{x}_j, C_{ij}, B_{ij}) = \frac{1}{(\theta_i - \xi(\mathbf{x}_j))^2} * B_{ij} - (\theta_i - \xi(\mathbf{x}_j))^2 * C_{ij} \tag{2}$$

where as the distance between an individual and an organization increases (the lower the congruence), the larger other costs seem and the smaller other benefits seem. In this formulation, congruence impacts the perception of costs and benefits. Individuals may believe that an organization has a higher chance of being effective and having similar goals (and thus more likely to gain them material benefits). They may also view the cost of attending a meeting — either direct, such as time or resources required to travel to the meeting, or indirect, such as potential social stigma — as less important because they will be among like-minded individuals. Of course, the utility function can also include congruence as a direct cost *and* as a moderator for existing costs and benefits. Note that the empirical implication of all of these formulations is the same — higher congruence should leader to higher engagement.

and an individual do not have a high degree of congruence, it will struggle to get that individual involved in its programming. As long as the distribution of ideal points is not uniform, but centered in a different place from location of an organization in the latent space, then the consequences of this model in terms of expected members are magnified.[4] An organization located far from the mass of ideal points will then struggle to mobilize individuals collectively. Further, if the center of the distribution of organization locations is far from the center of the ideal point distribution, then organizations as a whole will struggle to mobilize individuals for collective action.

As Alinsky (1989[1971]) indicated in *Rules for Radicals*, individuals should be more open to engagement with organizations that reflect them and their interests. Mendelson and Glenn (2002, 241) restate this intuition in the context of development: "[i]f new ideas and practices are presented in a way that directly competes with local organizational cultures, local people are likely to reject them." Murdie (2014, 10) states that organizations must demonstrate "'shared values' with the domestic population." The necessity for respecting local customs when it comes to development organizations is also echoed in the works of Porter (2003); Challand (2005); Bardhan and Wood (2015). Scholars have thus recognized how important it is for organizations and aid programs to reflect—and if not reflect, then at least be able to integrate with—the values of communities they seek to reach and serve. My model formalizes this disconnect and its consequences in terms of a latent space and utility.

As the $\xi(\mathbf{x}_j)$ function indicates, an organization's perceived position in the latent space (and thus, per the theoretic model, how congruent it can be with an individual) is a function of its characteristics.[5] Individuals do not automatically know whether an organization is congruent with them. However, they may get a sense of the location of an organization in the latent space due to its characteristics.[6] I hypothesize that those traits that indicate

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[4]If the distribution of ideal points *is* uniform, then the location of the organization will not matter as much. But it seems extremely unlikely for the distribution of ideal points to be uniform.

[5]I also do not argue that traits automatically localize an organization's values *in truth*.

[6]Guarrieri (2018) makes a similar argument about how the nature of an organization serves as a cue for individuals.

what values an organization may hold will be most important for determining where an organization sits in the latent space.

While many traits may factor into congruence, in this project I look at attributes that provide information about geographic localness and descriptive representation. In this, I build on the voting and elections literature, which shows that individuals use information on the localness of electoral candidates (Shugart, Valdini and Suominen, 2005; Evans et al., 2017) and information on descriptive representation – such as race and ethnicity (Carson, 2017; Keele et al., 2017), social class (Carnes and Sadin, 2015), religion (Calfano and Djupe, 2009; McDermott, 2009), and occupation (McDermott, 2005) – to assess the potential values of electoral candidates. The nature of the values does not matter in this conceptualization – it is enough to specify that this is a values space.[7]

According to congruence theory, in a sample that is relatively homogeneous with respect to localness and descriptive identity, organizations that are local relative to a respondent and descriptively representative of a respondent will be closer to one pole, whereas organizations that are not local and that are not descriptively representative will be closer to the antipole. This is because a latent space is always, without other constraints, tied to the sample and because local and descriptively representative traits should suggest a values match. In this sense, the values space will be a continuum from non-local values to general local values, and the *nature* of this space – conservative vs liberal values, for example – will depend on the nature of the local values. In a more heterogeneous sample, however, this characterization may not be as straightforward, as what is local and descriptively representative will not be the same for most respondents. Nevertheless, my theory predicts that distance in the latent values should still matter in such a more general context, and attributes that can help signal localness and descriptive representation will still be seen as important for determining organizations' latent locations.

It is also important to note that for some individuals in some contexts, organizational

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[7]Further questions could be used to determine the exact tone of the values space.

characteristics that signal localness and descriptive similarity may *not* signal congruence. This is particularly true if an individual does not expect their values to match the values of others like them. For example, a progressive white farmer from Idaho may avoid organizations made up by other white farmers from Idaho with the expectation that such an organization will not match their values. For such individuals, large distance terms would be correlated with choosing to engage with an organization. However, the individual will still be using organizational attributes to help place organizations in the latent space. This means that, in general terms, I expect that the mass of the individual ideal point distribution will be closer to the more local and descriptively representative pole of the space, at least in a homogeneous sample. On the whole, individuals will then be more willing to engage with closer to them in the latent space.

In summary, I theorize the following causal process, from the perspective of the individual,

Org. Attributes → Org.'s Percevied Values → Congruence → Costs and Benefits → Engagement

noting that my theory predicts that the organizational attributes that indicate an organization will be local and descriptively representative of an individual will be taken as useful signals for congruence.

2.2   General Model and Statistical Approach

In section 2.1, I lay out a two-part theory. The first has do with how organizational attributes allow individuals to place organizations in a latent values space, and to assess a perceived values distance between them and organizations. The second part has to do with how individuals use the perceived congruence to determine whether they want to interact with an organization or not. In this framework, distance in the latent space is the mechanism that explains the choice to engage. To solve the inferential problem in the mainly survey-based literature, traditional conjoint survey experiments have been used to study this question

(Hoellerbauer, 2021). Yet, the traditional approach to analyzing conjoint survey experiments (Hainmueller, Hopkins and Yamamoto, 2014) does not match the theorized mechanism. We may want to interpret AMCEs as if they told us something about a latent process, but we have no guarantee that they do.

In traditional conjoint survey experiment analysis, we can fit the following regression to assess the impact of profile traits on the probability of selection:[8]

$$Y_{ijk} = \alpha + \boldsymbol{\beta} * \boldsymbol{x}_{ijk} + \epsilon_{ijk}$$

where, in this context, i would indicate respondents, $j \in \{1, \ldots, J\}$ would indicate profile-pair j of J, and $k \in \{1, 2\}$ would indicate the organization within each profile-pair. $Y_{i}jk$ would be a binary outcome that is 1 if a respondent chooses to engage with an organization and 0 if no, and $\boldsymbol{x}_i jk$ would represent a vector of organizational trait dummies for organization ijk. Each element of $\boldsymbol{\beta}$ would tell us the change in the probability that an organization is selected for engagement relative to the baseline level for the attribute with which that organizational trait is associated, when faced with a random other organization.[9] Because attribute-levels are randomized, this would be a causally identified way of seeing how organizational attributes can impact engagement decisions. However, this framework cannot tell us anything about whether organizational traits signaled congruence, and whether congruence then increased chances of engagement. In other words, it does not help test whether congruence is the mechanism for engagement.

In this section, I describe a statistical model that can be used in conjunction with a conjoint survey experiment to model the mechanism directly. The model I sketch out in this section allows me to first estimate the perceived distance between individuals and or-

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[8]See Hainmueller, Hopkins and Yamamoto (2014).

[9]Scholars often use this as an indicator of respondent preference, but this is not accurate in general, with Abramson, Kocak and Magazinnik (2021) pointing out that traditional conjoint analysis combines intensity and direction of preferences. Abramson, Kocak and Magazinnik (2021) argue that researchers need to model the conjoint choice much more directly, as I do here. See Bansak et al. (2021) for a counter-argument in the case of elections.

ganizations and then models the impact of that distance on a secondary outcome. It can illuminate which traits are most important for defining the latent space, which does not require assuming that only certain traits matter and can help identify the nature of the space. The model I describe here is general — it can be used to study other research questions with conjoints that involve an analogous two-step process and is not limited to organizations and engagement. It could also be used to study spatial voting patterns, for example.

In general terms, the model consists of two parts:

1. Item Response Theory (IRT): to place individuals and profiles in the same latent space, making it possible to estimate the distance between them.[10]

2. Any other modeling strategy, like a GLM: to see how distance impacts a secondary outcome.[11]

There are **separate** outcome questions for each part; the rationale behind this approach is to better fit the assumed causal process. The IRT portion of the model enables us to place individuals and profiles in the same latent space. The outcome of the second part can be anything related to a single profiles or profile pairs – the goal is to see whether respondent affinity for a profile impacts the outcome of interest.

2.2.1   IRT Model

The IRT model is statistically motivated by a random utility model, where individuals derive greater utility from profiles closer to them:

$$U_{ij}(\mathbf{x}_j) = -(\theta_i - \xi(\mathbf{x}_j))^2 + \epsilon_{ij}$$

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[10]For this part of the model, I adapt Caughey, Katsumata and Yamamoto (2019)'s IRT approach to conjoint analysis by dropping the valence component in the assumed utility function.

[11]If the latent space is multi-dimensional, then we can investigate the impact of the square of the L2 norm of the distance vector impacts a secondary outcome. We can also look at subsets of the distance vector. There can be also be *different* weights for this part of the model than for the first part.

where $\xi(\mathbf{x}_j) = \mathbf{x}_j^\top \boldsymbol{\beta}$. $\mathbf{x}_j$ represents the vector of profile attributes for profile j, and θ_i is individual i's ideal point in a latent space.[12,13]

Let N respondents choose between two different randomly constructed profiles, K times. We can term the sets of attribute-levels that describe these two profiles for profile-pair k for respondent i as $\mathbf{x}_{ik1}, \mathbf{x}_{ik2}$, where $i = 1, \dots, N$ and $k = 1, \dots, K$.

Let Y_{ik} be a forced choice outcome where individual i choices between profile 1 and profile 2 in profile-pair k. $Y_{ik} = 1$ if respondent chooses profile 1, 0 otherwise.

Using the quadratic random utility function assumed above, we can show that the probability of choosing profile 1 versus profile 2 in profile-pair k can be modeled in the following way:

$$\Pr(Y_{ik} = 1 | \mathbf{x}_{ik1}, \mathbf{x}_{ik2}) = \Pr(U_{ik1} > U_{ik2})$$
$$= \Pr(-(\theta_i - \xi(\mathbf{x}_{ik1}))^2 + \epsilon_{ik1} > -(\theta_i - \xi(\mathbf{x}_{ik2}))^2 + \epsilon_{ik2})$$
$$= \Pr(-(\theta_i - \xi(\mathbf{x}_{ik1}))^2 + (\theta_i - \xi(\mathbf{x}_{ik2}))^2 > -\epsilon_{ik1} + \epsilon_{ik2})$$
$$= \Pr(-\theta_i^2 + \xi(\mathbf{x}_{ik1})\theta_i - \xi(\mathbf{x}_{ik1})^2 + \theta_i^2 - \xi(\mathbf{x}_{ik2})\theta_i + \xi(\mathbf{x}_{ik2})^2 > \epsilon_{ik})$$
$$= \Pr(2(\xi(\mathbf{x}_{ik1}) - \xi(\mathbf{x}_{ik2}))\theta_i) + (-\xi(\mathbf{x}_{ik1})^2 + \xi(\mathbf{x}_{ik2})^2 > \epsilon_{ik})$$
$$= \Pr(2(\xi(\mathbf{x}_{ik1}) - \xi(\mathbf{x}_{ik2}))\theta_i - (\xi(\mathbf{x}_{ik1})^2 + -\xi(\mathbf{x}_{ik2})^2) > \epsilon_{ik})$$
$$= \Pr(2(\mathbf{x}_{ik1}^\top \boldsymbol{\beta} - \mathbf{x}_{ik2}^\top \boldsymbol{\beta})\theta_i - ((\mathbf{x}_{ik1}^\top \boldsymbol{\beta})^2 + -(\mathbf{x}_{ik2}^\top \boldsymbol{\beta})^2) > \epsilon_{ik})$$
$$= \Phi(b(\mathbf{x}_{ik1}, \mathbf{x}_{ik2})\theta_i - g(\mathbf{x}_{ik1}, \mathbf{x}_{ik2}))$$

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[12]Note that the latent space could be D-dimensional. In that context, we would have a length D vector of ideal points, $\boldsymbol{\theta}_i = \begin{bmatrix} \theta_{1,i} & \dots & \theta_{d,i} & \dots & \theta_{D,i} \end{bmatrix}$. This would lead to a length D vector of differences $\boldsymbol{DIFF}_{ij} = \begin{bmatrix} \theta_{1,i} - \xi(\boldsymbol{x}_{1,j}) & \dots & \theta_{d,i} - \xi(\boldsymbol{x}_{d,j}) & \dots & \theta_{D,i} - \xi(\boldsymbol{x}_{D,j}) \end{bmatrix}$, where $\boldsymbol{x}_{d,j}$ represents a vector of profile attributes for profile j relevant to the d-th dimension of the latent space. However, each dimension of the latent space may not be equally important to individuals. Therefore *distance* could be more important in one dimension than another. We can model this by introducing a D-length weights vector $\boldsymbol{w}$, where element w_d indicates the importance of dimension d. This vector could be the same for all individuals, or there could be a weight vector $\boldsymbol{w}_i$ unique to each individual i. The utility function would then be $U_{ij}(\mathbf{x}_j) = -\|\boldsymbol{w}_i \circ \boldsymbol{DIFF}_{ij}\|_2^2 + \epsilon_{ij}$. In other words, we replace the square of the distance with the square of the L2 norm of the Hadamard product of the weight vector and the distance vector. If the weights are all equal this reduces to the square of the L2 norm. For simplicity's sake, I assume the latent space is uni-dimensional for the rest of this section.

[13]The model could further be generalized by allowed θ_i to be a function of respondent characteristics.

If we assume $\epsilon_{ik} \sim \mathcal{N}(0, \sigma)$, then $\Phi(.)$ represents the CDF of the Standard Normal distribution. This is then in the form of a two-parameter IRT model. $b(\mathbf{x}_{ik1}, \mathbf{x}_{ik2})$ and $g(\mathbf{x}_{ik1}, \mathbf{x}_{ik2})$ represent the item difficulty and combined item discrimination and item difficulty parameters, respectively where $b(\mathbf{x}_{ik1}, \mathbf{x}_{ik2}) = 2(x_{ik1} - x_{ik2})^{\top}\boldsymbol{\beta}/\sigma$ and $g(\mathbf{x}_{ik1}, \mathbf{x}_{ik2}) = \boldsymbol{\beta}^{\top}(\mathbf{x}_{ik1}\mathbf{x}_{ik1}^{\top} - \mathbf{x}_{ik2}\mathbf{x}_{ik2}^{\top})\boldsymbol{\beta}/\sigma$. The $\boldsymbol{\beta}$ from this model allows us to place profiles in the same space as individuals.

2.2.2   Outcome Model

I then connect the IRT model to the second part of the model via $\boldsymbol{\beta}$ and θ_i very generally. If W_{ijl} is a response to an outcome question asked of respondent i about profile l in profile-pair j (where each respondent sees J total profile-pairs for this part), then

$$\mathbb{E}[W_{ijl}|\mathbf{x}_{ijl}, \theta_i, \boldsymbol{\beta}] = g^{-1}(\gamma_0 + \alpha_i + \gamma_1 * (\theta_i - \mathbf{x}_{ijl}^{\top}\boldsymbol{\beta})^2 + \mathbf{z}_i^{\top}\boldsymbol{\delta})$$

where g^{-1} is a function suitable for the outcome variable, α_i is a random intercept for respondent i (if $j > 1$, as responses may be correlated then), and $\mathbf{z}_i^{\top}\boldsymbol{\delta}$ are a vector of other covariates for respondent i and the coefficient vector for those covariates. Note that I now index $\mathbf{x}$ by j to make clear that *different* profile-pairs should be used for the IRT portion and GLM portions of the model. Respondents will each see $K + J$ profile-pairs.

There are numerous modifications we can make to this general model. For example, if our outcome is whether individual i chooses profile 1 in profile pair j or not for some question, we can formulate the following logistic regression:

$$\Pr(W_{ij} = 1|\mathbf{x}_{ij1}, \mathbf{x}_{ij2}, \boldsymbol{\beta}, \theta_i) = \mathrm{logit}^{-1}(\gamma_0 + \alpha_i + \gamma_1 * (2\theta_i(\mathbf{x}_{ij1} - \mathbf{x}_{ij2})^{\top}\boldsymbol{\beta} + \boldsymbol{\beta}^{\top}(\mathbf{x}_{ij2}\mathbf{x}_{ij2}^{\top} - \mathbf{x}_{ij1}\mathbf{x}_{ikj}^{\top})\boldsymbol{\beta}))$$

where $\boldsymbol{\beta}$ are the coefficients from the IRT model. Note that the term with the γ_1 coefficient is equal to $(\theta_i - \mathbf{x}_{ij2}^{\top}\boldsymbol{\beta})^2 - (\theta_i - \mathbf{x}_{ij1}^{\top}\boldsymbol{\beta})^2$: the *difference in the distance between ideal points and profile locations*. A positive value here would indicate that respondent i is closer to profile 1

than profile 2. This is a modification of the general structure above due to the forced choice nature of the outcome. Because of the forced choice nature of the outcome question, coupled with the fact that conjoint profiles are created totally randomly (so the expected value of W_{ij} will be around .5), additional covariates no longer make sense.

To avoid outcome questions contaminating one another, separate profile-pairs should be used for each part of model.

2.3   Model in Theoretical Context

More specifically, in context of my theory, I first model an individual's congruence with an organization, that is, the extent to which they think it shares their values — this is a function of organizational characteristics. It is important to note that I consider congruence as separate from engagement. This motivates the model choice. It is not guaranteed a priori that an individual who feels congruent with an organization will want to engage with it, nor that they will be congruent with an organization with which they want to engage, although this is what my theory predicts. As such, the IRT part of the model helps me place individuals and organizations in the same values space. The second part of the model helps assess the second step of the theory — does congruence help predict secondary outcomes, such as engagement? The second part of the model is therefore to assess the validity of the utility function 1. Thus, outcomes Y_{ik} will come from a question about values. Outcomes W_{ijl} will in general ask about engagement.

The model can also be used to assess the mechanisms by which congruence affects organizational engagement. We can use an intermediate outcome, such as perceived costs or benefits to see what effect congruence has on this outcome, which is theoretically prior to the decision about engagement.

3   Experimental Design

To test both how attributes affect congruence and the impact of congruence on organizational engagement, I used a conjoint survey experiment. In this section, I first address the design of the survey, including a discussion of the sample. Then, I explain the conjoint experiment itself.

3.1   Survey Design

The survey had the following general structure:

1. Demographic Questions

2. Conjoint Experiment Part 1 – Engagement Questions (3 conjoint profiles)

3. Political Participation Questions

4. Questions about importance of being a student and about place of origin

5. Conjoint Experiment Part 2 – Values Questions (12 conjoint profiles)

6. Civil Society Questions

Demographic questions included questions about how much free time students had and where they come from, as these are factors that could influence engagement with organizations. The conjoint survey experiment is split into two blocks – profile-pair creation was the same in each block, but the associated outcome questions were different, reflecting the model described in Section 2.2. I separated out the two conjoint sections because I wanted to minimize spillover between the main outcome (engagement) and the mechanism outcome (values). I put the engagement question first because I wanted students to answer about engagement without being first primed by being asked to think about values. I asked about how important student identity is to students and where they are from before the values conjoint block because I *do* want students to keep these factors in mind as they think about these factors with respect to values. The civil society questions asked about students' involvement with organizations on and off campus. In addition, two questions asked students to evaluate

how important different organizational attributes are when they considered getting involved with an organization. These questions came after the conjoint because I did not want them to prime students to think about these factors during the conjoint itself. The median survey duration was 11.3333 minutes.[14] Please see Appendix A for the full instrument.

The study was carried out on the Political Science Subject Pool (PSSP) at the University of North Carolina at Chapel Hill. The sampling frame consists of all undergraduate students enrolled in introductory American politics, comparative politics, and international relations classes. All individuals in the pool (a total of approximately 1000 students) were invited to participate, although only 899 completed the survey, of which 842 made it into the analysis.[15] The survey was fielded online via Qualtrics from November 8 to November 23, 2021.

The respondents were all students at UNC – Chapel Hill. However, the fact that all respondents are descriptively similar–in the sense that all are college students–and are all local to the Chapel Hill area meant that I was able to choose attributes in the conjoint experiment that had the potential to see if descriptive similarity and geographic localness influence how students would participate in organizations. This gave me much greater statistical power to test the concepts of interest.

3.2   Conjoint Experiment

In order to test the theory described in Section 2.1, I designed a conjoint survey experiment. In this experiment, respondents saw pairs of profiles consisting of 6 attributes each, describing a hypothetical civil society organization, in two blocks. The levels within each attribute were fully randomized. The order of attributes was randomized by respondent, so each individual

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[14]Average completion time was longer, at 20.2172 minutes.

[15]Students in these classes are required to complete a certain number of surveys during the semester in which they are enrolled in these introductory political science classes. However, they are not required to participate in any particular study. Students also always have the option of writing a short research paper. Respondents were not forced ot respond to questions. This meant that it was possible for a respondent to "finish" the survey but not respond to all questions. If a respondent did not provide responses to any of the 3 engagement block profile-pairs, I dropped them from the analysis. If a respondent left the questions associated with fewer than 9 values block profile-pairs blank, I dropped them from the analysis. This resulted in a total of 842 respondents.

saw attributes in the same order in all profile pairs. The profiles were created in the same way in both of the conjoint blocks.

Attribute (*What is cued*)	Level
Other members are (*Descriptive Representation*)	mainly students; students and non-students; mainly non-students
Leader is (*Descriptive Representation*)	a student; not a student
Organization's headquarters located in (*Localness*)	Chapel Hill, NC; Raleigh, NC; Richmond, VA; Washington, DC
Organization is (*Localness*)	not a chapter of a national organization; a chapter of a national organization
Funding mostly comes from (*Localness*)	donations from members and community; donations from national partners
Aiming to increase voter registration (*Localness*)	on campus; in the town of Chapel Hill; throughout North Carolina

Table 1: Attributes and Levels of Conjoint

Table 1 lays out the attributes and associated levels. The attributes correspond to organizational attributes that could influence an individual's willingness to engage with it. The first two attributes have to do with the demographic makeup of the organization; the first speaks to membership and the second to the nature of the leadership. The third, fourth, and fifth attributes have to do with the origin and nature of the organization - where was it founded, is it an independent organization or part of a larger national organization, and where does its funding come from. These attributes have a more geographic focus. The last attribute is also geographic in nature, but focuses more on where the organization is doing its work as opposed to its origin. Please see appendix B for examples of how profiles were presented to respondents.

3.2.1   Engagement Block

The engagement conjoint block began with the following introduction, shown only once to each respondent:

For the next few minutes, we are going to ask you to act as if you were considering getting involved with an organization.

You will be shown 3 pairs of hypothetical organizations. For each pair, imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the November 2022 elections.

They are both holding meetings on campus for potential volunteers to work registration tables on campus.

Respondents saw three profile pairs in the engagement conjoint block. The profiles were constructed from the attributes and levels in Table 1. Before each pair in the engagement block, respondents were reminded to: *Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.*

I specified that volunteers will work on campus so that the "Aiming to increase voter registration" attribute served to test the localness of the goals and did not induce respondents to think that they would be expected to travel to volunteer, if an organization had broader goals than campus. For similar reasons, I specified that meetings would be held on campus.

Outcome Questions:

Respondents answered 10 outcome questions after each profile-pair in the engagement block. The first three questions allow me to assess the effect of congruence on engagement directly. Questions 1 and 2 asked how likely (5-point scale) respondents would attend a meeting held by organizations 1 and 2, respectively. This allows me to directly assess the effect of congruence on engagement. Question 3 was a forced choice question that asked respondents which organization's meeting they would be more likely to attend. The forced-choice question can be used to see if the *difference* in perceived congruence between organization 1 and 2 affects engagement. I included the forced-choice outcome because it is possible for respondents to select the same likeliness level for the both organizations (in questions 1 and 2) for satisficing reasons, which could possibly limit the utility of those questions for testing the theory.

Questions 4-10 asked respondents to say to what extent they agree (on a 5-point scale) about **organization 1**:

4. It would be fun to work with this organization. (Fun)[16]

5. My input would be valued at meetings of this organization. (Input Valued)

6. Volunteering for this organization would be good for my resume. (Good for Resume)

7. I would be likely to make friends while volunteering for this organization. (Make Friends)

8. Meetings for this organization would go on for a long time. (Long Meetings)

9. My friends would make fun of me for volunteering for this organization. (Harassment)

10. I would feel very tired after meetings for this organization. (Tired After Meeting)

Questions 4-10 enable testing for the effect of congruence on perceived costs and benefits, which is a potential mechanism by which congruence impacts an individual's utility function. Questions 4-7 get at different types of benefits (enjoyment, ability to contribute, career, and personal connections, respectively). Questions 8-10 focus on costs (time, reputation, and energy, respectively). I ask only about the first organization in each profile-pair for costs and benefits to avoid burdening the respondents. In expectation, profile 1 and profile 2 in each pair are the same. See Appendix A for actual wording of the outcome questions and their presentation.

In the last profile-pair, I also asked

- Why do you think you would be more likely to attend a meeting by this organization versus the other organization?

after question 3. This allows me to collect qualitative evidence that can be used to help evaluate the validity of my results. I only ask this question once, for the last profile-pair that respondents see in the engagement task, to limit the cognitive burden on the respondent. I ask this question last because I want respondents' instinctual choices; I do not want this extended response question to affect their choices during this conjoint experiment.

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[16]In parentheses is the short form I use to refer to this question during the analysis.

3.2.2   Values Block

The values conjoint block began with a similar introduction, although indicating a shift of focus to values:

> Now, we are once again going to ask you to consider several hypothetical organizations. This time, we are interested in whether you think organizations will reflect your values.
>
> You will be shown 12 pairs of hypothetical organizations. For each pair, imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the November 2022 elections.
>
> They are both holding meetings on campus for potential volunteers to work registration tables on campus.

The profiles will be constructed from the attributes and levels in Table 1. Before each pair in the values block, respondents will be reminded to: *Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.*

As with the profile-pairs in the engagement block, I specified that volunteers would work on campus and that meetings would be held on campus.

Outcome Questions:

After each profile-pair in this block, respondents were asked to choose which organization they thought would be more likely to reflect their values. This forced choice question allows me to put organizations and individuals in the same latent space.

After the last profile-pair, students also answered:

- Why do you think you that this organization reflects your values more closely?

This allowed me to collect qualitative evidence that can be used to help evaluate the validity of my results. I only asked this question once to limit the cognitive burden on the respondent.

I asked this question last because I wanted respondents' instinctual choices; I did not want this extended response question to affect their choices during this conjoint experiment.

4   Analysis

In this section, I describe in greater detail the outcome model and the model fitting approach I employed in the analysis.

I fit the connected models described in section 2.2 in a Bayesian framework (i.e. both parts of the overall model at the same time), which allowed me to incorporate uncertainty around the estimated parameters into the engagement model. Y_{ik} will be 1 if student i choose organization 1, and 0 if they choose organization 2 for the values outcome question. The full model will also simultaneously fit nine W outcomes:

1. $W_{q,ijq}$, $q = 1, 2$, which is the answer to questions 1 and 2 pooled together (as each question asks about a different organization). The associated outcome model is $\mathbb{E}[W_{l,ijl}|\mathbf{x}_{ijl}, \theta_i, \boldsymbol{\beta}] = \gamma_0 + \alpha_i + \gamma_1 * (\theta_i - \mathbf{x}_{ijl}^\top \boldsymbol{\beta})^2 + \epsilon_{1,ijl}$, $\boldsymbol{\epsilon}_1 \sim \mathcal{N}(0, \sigma_{W_1})$, $\boldsymbol{\alpha} \sim \mathcal{N}(0, 1)$. In other words, this is normal linear regression where the outcome can be 1-5, where 5 = Very likely, and 1 = very unlikely. if there are N respondents, then $i = 1, \ldots, N$ indexes respondents, $j = 1, 2, 3$ indexes profile-pairs.

2. $W_{3,ij}$, which is the answer to questions 3. Associated outcome model is $\Pr(W_{ij} = 1|\mathbf{x}_{ij1}, \mathbf{x}_{ij2}, \boldsymbol{\beta}, \theta_i) = \text{logit}^{-1}(\nu_0 + \tau_i + \nu_1 * (2\theta_i(\mathbf{x}_{ij1} - \mathbf{x}_{ij2})^\top \boldsymbol{\beta} + \boldsymbol{\beta}^\top (\mathbf{x}_{ij2}\mathbf{x}_{ij2}^\top - \mathbf{x}_{ij1}\mathbf{x}_{ikj}^\top)\boldsymbol{\beta})$, $\boldsymbol{\tau} \sim \mathcal{N}(0, 1)$. In other words, this is a logistic regression model. Because it is forced choice, we can only use the differences in the distances for the two profiles, not the distance for each profile, unlike in the models for W_1 and W_2.

3.–9. $W_{q,ij1}$, which is the answer for respondent i to question q (questions 4-10 asked after the each engagement conjoint). Associated outcome model is be $\mathbb{E}[W_{q,ij1}|\mathbf{x}_{ij1}, \theta_i, \boldsymbol{\beta}] = \zeta_0 + \delta_{q,i} + \zeta_{q,1} * (\theta_i - \mathbf{x}_{ij1}^\top \boldsymbol{\beta})^2 + \epsilon_{q,ijl}$, $\boldsymbol{\epsilon}_q \sim \mathcal{N}(0, \sigma_{W_q})$, $\boldsymbol{\delta}_q \sim \mathcal{N}(0, 1)$. In other words, this is normal linear regression where the outcome can be 1-5, where 5 = Strongly agree, and 1 = Strongly disagree.

The only parameters shared between the five models are $\boldsymbol{\beta}$ and $\boldsymbol{\theta}$. I do not include controls in

the profile-level models (models 1, 3-9) because only the effects of the distances are identified through randomization.

The baseline value for each of the categorical variables used to form $\boldsymbol{\beta}$ (i.e. the attributes of the conjoint) was the least local or descriptively representative level. In other words, the level listed *last* in table 1 was the baseline for each attribute.

I used the `cmdstanr` interface of the Bayesian model fitting language `Stan` to fit the model (Stan Developers and their Assignees, 2021; Stan Development Team, 2020). I chose $\mathcal{N}(0,1)$ priors for $\boldsymbol{\theta}, \boldsymbol{\beta}, \boldsymbol{\alpha}, \boldsymbol{\tau}, \boldsymbol{\delta}_q$. I used $\mathcal{N}(0, \sigma_q^2)$ priors for all q sets of regression coefficients, with all variance parameters distributed half-Normal(0, 1). I fix $\theta \sim \mathcal{N}(0,1)$ and force β_4 (coefficient associated with student leader attribute) to be positive as identifying restrictions. I ran the model on one chain (common with ideal point models to avoid the possibility of different chains switching the ideal points) for 4,000 post-warmup iterations. $\hat{R}$ values were all close to 1 and the estimated effective sample size for all parameters were all high.

5   Main Hypotheses

In this section I clarify my expectations in the context of the model.

5.1   Organization Latent Locations Hypotheses

H1: If attributes matter for determining where organizations place in the latent values space, then the $\boldsymbol{\beta}$ coefficients should be discernible from zero. Thus, the $\boldsymbol{\beta}$ coefficients should be different from 0.

H2: Student- and local-oriented attributes should place organizations in the same area of the latent space. As such, the coefficients on all student-only and local attribute-levels should be in the same direction. In other words, a profile consisting of all local- and all student-attributes should be in a different part of the latent space from an organization that is not local and not student-oriented. Because the student leader level is fixed to be positive, this expectation indicates that the coefficients for the *first* level in each

attribute in Table 1 should be positive.

5.2   Individuals' Latent Ideal Points Hypotheses

H3: Students will feel a greater congruence for student-involved and local organizations. In other words, I predict that the mass of the ideal points distribution will be in the same relative portion of the latent space as all-student/all-local organizations.

5.3   Distance Hypotheses

H4: For the first set of outcome questions, I can test the direct effect of distance. My theory suggests that an individual who is closer to organization will be more likely to want to engage with an organization. Because the key predictor is the distance, the higher the distance, the lower the chances of engagement. In terms of the model, I predict that the coefficient on the distance (γ_1) will be negative.

H5: For the third outcome question, I have relative results. As such, my theory suggests that an individual who is closer to organization 1 than organization 2 will be more likely to want to attend a meeting held by organization 1. The closer they are to organization 2 than organization 1, the more likely they will be to want to attend a meeting held by organization 2. In terms of the model, I predict that the coefficient on the difference in distances (ν_1) will be positive.

H6: For outcome questions four through seven, my theory predicts that individuals will perceive a less congruent organization (higher distance) as being less beneficial. In terms of the model, I predict that the coefficient on the distance ($\zeta_{q,1} \forall q = 4 \ldots 7$) will be negative.

H7: For outcome questions eight through ten, my theory predicts that individuals will perceive a less congruent organization as being more costly. In terms of the model, I predict that the coefficient on the distance ($\zeta_{q,1} \forall q = 8 \ldots 10$) will be positive.

6   Results

6.1   Ideal Points, Organization Locations, and Organizational At-
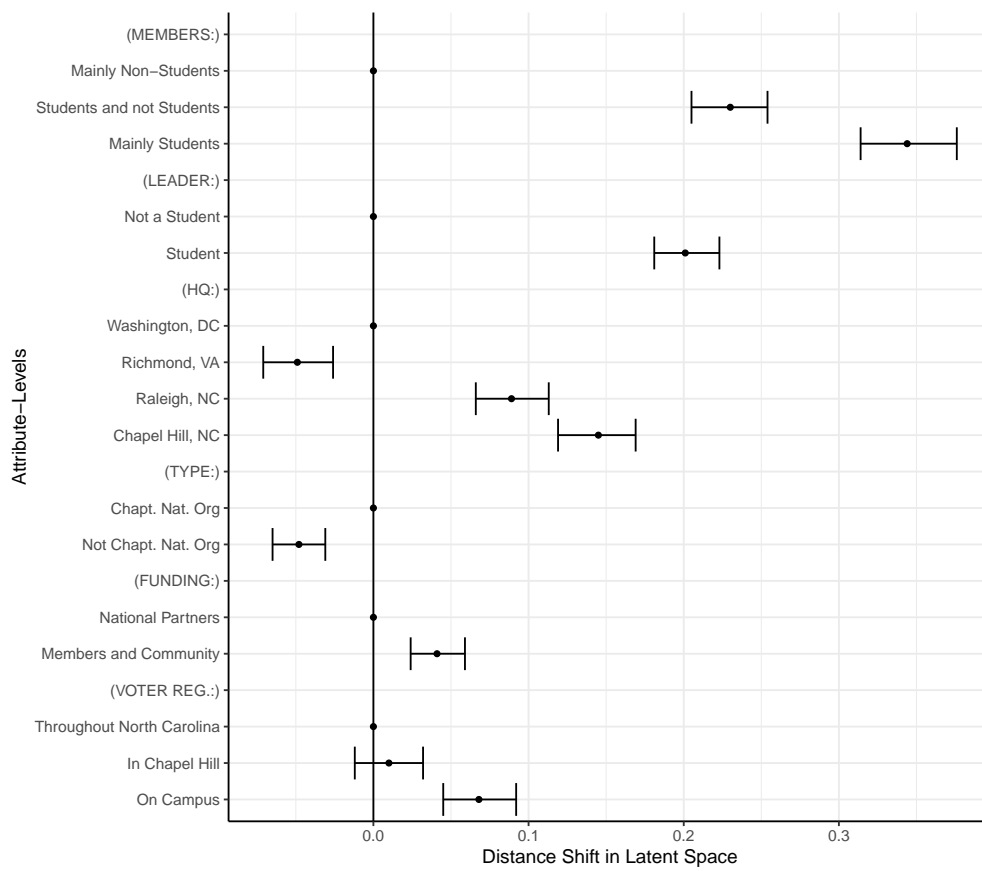   tributes

Figure 1 shows the posterior medians and 95% credible intervals for the coefficients in the IRT-model. These are the coefficients that determine where in latent space organizations are located and are determined by the decisions made by the respondents. The figure shows that respondents did use the organizational attributes to place organizations in a latent values space, as the theory predicts.

For the most part H1 is supported. Only one level, in the Voter Registration attribute, did not result in a statistically significant shift in latent space compared to its baseline category – students did not differentiate in values between an organization that is looking to increase voter registration in all of North Carolina from one that was looking to do so in Chapel Hill. It is possible that students thought that an organization looking to increase voter registration throughout North Carolina is not any less local than one aiming to do so in Chapel Hill, which is a fairly spread out city.

The results are also mostly in line with H2, with more local and descriptively representative organizations consistently in the positive end of the latent space. Figure 2, which shows the distribution of ideal points and of organization locations in the latent space, indicates that most students are located at the same end of the spectrum.[17] Given that most students at UNC are fairly liberal – especially with respect to North Carolina as a whole – we can assume that this is the more progressive end of the values scale. The most important organizational attributes — in that they shift the location of organizations in the latent space the most — are those indicating that an organization would be more descriptively representative. The ideal points and organization locations coupled with the coefficient estimates demon-

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[17]See Figure 4 in Appendix E.1 for credible intervals for each ideal point and potential organization location.

Figure 1: $\hat{\boldsymbol{\beta}}$ (Posterior medians with 95% cred. int.)

strate that, for a large part of the students, having student members and having a student leader were significant indicators of higher congruence. Only the Type attribute showed a different relationship than the one expected, with organizations that are not a chapter of a national organization moving away from the all-student, all-local pole. It is a possibility that students assumed that a chapter of a national organization would be more liberal than a non-national-organization-affiliated one, although the fact that an organization's headquarters mattered in the expected way makes this interpretation less likely. Instead, students may not have taken an organization not being a chapter of a national organization as a credible signal of any kind of localness, with this attribute cuing something else.

Figure 2: Density of $\hat{\boldsymbol{\theta}}$ and Possible Organization Positions ($\mathbf{X}\hat{\boldsymbol{\beta}}$) (Using posterior medians)
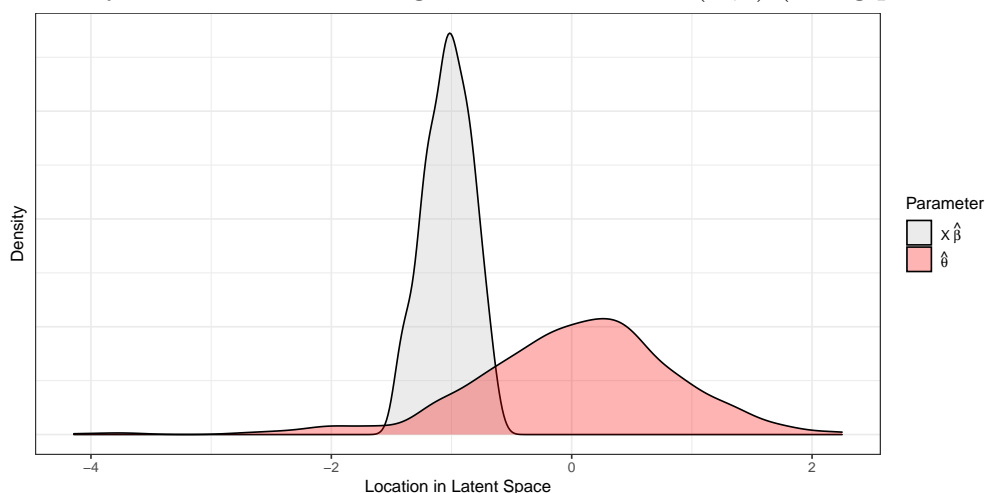
Figure 2 also provides evidence in support of H3. The ideal point distribution partially overlaps but is primarily to the right of the organization positions – less than 1.6 percent of the credible intervals for the difference between the most-student and -local organization and each individual's ideal point are wholly negative, yet 29.6 percent are wholly positive.[18] This indicates that respondents are closer to this organization than an organization that is less descriptively representative and less local, and therefore a large part of the respondents are more congruent with this kind of organization.

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[18]See Figure 5 in Appendix E.1 for the credible intervals for these differences.

6.2   Congruence and Engagement

Figure 3 shows credible intervals for the coefficient on the distance for all nine outcome models. The medians are all in the expected direction, although the credible intervals for two of the cost models – Long Meetings and Harassment – include 0. The coefficients for the Attend Meeting and Attend Meeting Forced Choice models suggest that congruence does impact individual engagement decisions, providing support for hypotheses H4 and H5. For every one unit decrease in congruence (i.e. for every one unit increase in the distance in latent space), the average of the Attend Meeting outcome goes down by approximately .27 points. Given that the estimated distances that are fed into the outcome model range from functionally 0 to 8.96, with a standard deviation of 1.52, this indicates a substantively meaningful change in how likely a respondent would attend an organization's meeting.

Furthermore, the forced choice model indicates that students were much more likely to select an organization that was closer to them in values than one that was further away. The posterior predicted probability of choosing organization 1 increases by 0.301 when the difference in latent distances goes from 0 (i.e. when the two organizations have the same attributes) to 1.[19] Such a change is realistic: the posterior medians of the estimated difference in distances seen in the data range from approximately -3.14 to 2.91, with a standard deviation of roughly 0.9.[20]

The benefits and costs mechanism results are noteworthy. Figure 3 shows that congruence has a strong effect on perceptions of benefits but that this result does not extend to perceptions of costs. The posterior medians of the effect of congruence in all four benefit models are negative and the credible intervals do not contain zero, indicating that a greater distance in latent space lowers perception of benefits. On the other hand, while the posterior medians are in the expected direction, the credible intervals for the effect of latent distance for two of the cost outcomes – Long Meetings and Harassment by peers – contain zero, and

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[19]The credible interval for this difference is [0.264, 0.339].

[20]See Appendix E.2 for a histogram and the summary statistics for the posterior medians of the estimated difference in distances.

Figure 3: Outcome Models Coefficient on Distance Estimates (Posterior medians with 95% cred. int.)
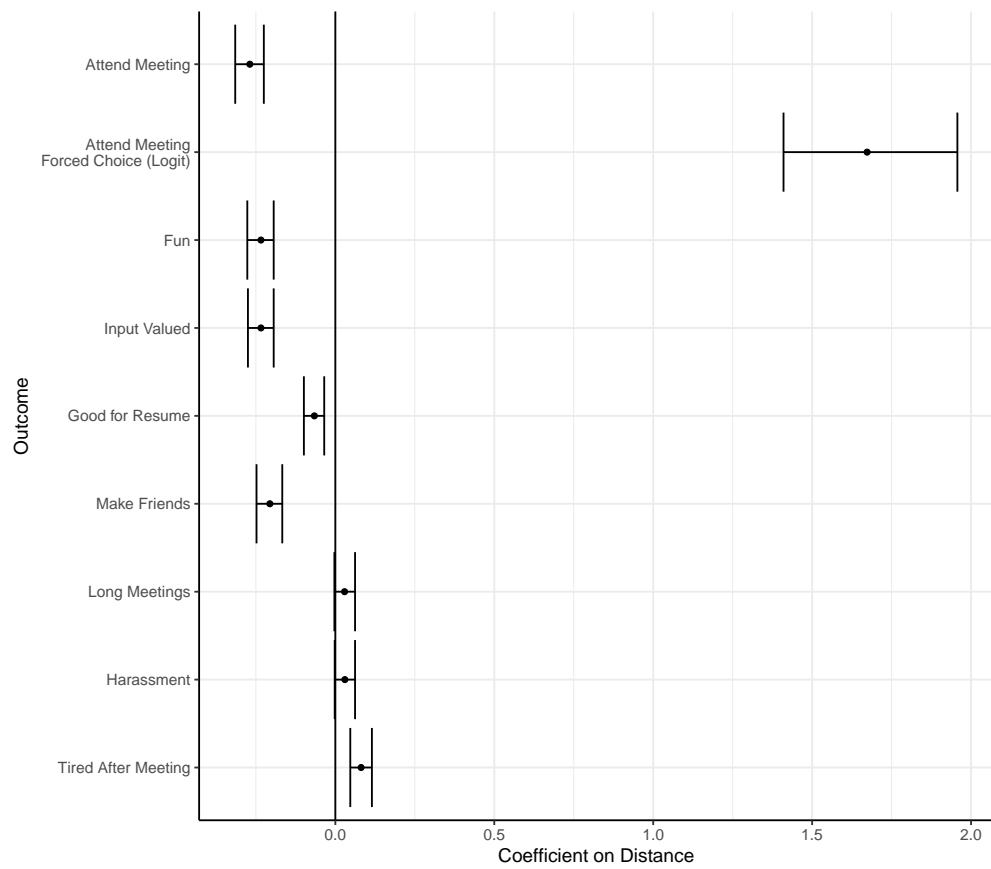
the effect for the Tired After Meeting outcome – with a posterior median of 0.081 and a 95%
credible interval of [0.048, 0.117] – is smaller than or equal in magnitude to three of the four
benefit outcomes.[21][22] Thus, H6 is supported by the data, but H7 is not.

7   Discussion and Conclusion

The novel model presented here makes it possible to study the theorized process for
how organizational attributes affect engagement with an organization. The empirical results
reaffirm the findings of Hoellerbauer (2021): individuals look to organizational attributes to
help them decide whether to engage with an organization. Organizational attributes that cue
a descriptive match or lack thereof strongly shape where individuals place an organization
relative to themselves in a latent values – that is, congruence – space. Individuals also use
attributes that cue a geographic match to localize organizations, although not to the same
extent as ones that hint at a descriptive match. As expected, the respondents in the study –
all students at UNC-Chapel Hill – were more congruent with organizations that were more
local and with more student-involvement.

It is possible that while the results are significant, organizational attributes (and therefore
congruence) may form a negligible part of the engagement-process in the real world. To
address this concern, I use several questions from the survey that asked respondents to
assess how important certain factors are when they were considering getting involved with
an organization.[23] Several of the characteristics about which respondents were asked were
ones not directly varied in this study but that prior research has theorized to be important
in engagement decisions, including the organization's goal, the perceived feasibility of that
goal, how the organization benefits the individual, and an individual's free time. The top
half of Table 2 shows the percent of respondents who considered these factors very important

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[21]It is not smaller than in the Good for Resume model, but their magnitudes are also not statistically
discernible.

[22]It is possible that the *types* of costs tested here are simply not important to respondents. I return to
this possibility in the discussion.

[23]See App. A for full question texts.

or extremely important.[24] Respondents were most likely to consider an organization's goal and their own free time as extremely or very important when it comes to deciding whether to engage with an organization or not. Interestingly, the feasibility of an organization's goal was considered comparatively less important, and the direct benefit that an organization could provide was considered less important, relatively. The bottom part of this table indicates how important factors that *were* varied for this study are for engagement. Only 43.85% of respondents considered the localness of an organization as an extremely or very important factor when it comes to engagement decisions, yet 79.12% considered a descriptive match an extremely or very important factor. This matches the patterns we observe in the effect of the attributes on distances in latent space. Taken by itself, it also demonstrates that respondents do consider these organizational attributes important.

Table 2: Percent of Respondents Answering Very Important Or Extremely Important

Variable	%
How Important Is Org.'s Goal for Engagement	89.13
How Important Is Feasibility of Org's Goal for Engagement	65.39
How Important Is How Org. Benefits Me for Engagement	54.13
How Important Is My Freetime for Engagement	89.13
How Important Is Org. Localness for Engagement	43.85
How Important Is Whether Org Reflects Me for Engagement	79.12
How Important Is How My Values Match the Org's for Engagement	84.23
How Important Is How Close I Feel to Org for Engagement	72.80

The last entries in Table 2 also show that respondents report taking a values match into account when considering getting involved with an organization, and that this is almost as important as their free time or the goal of the organization. This lends confidence to the results; congruence matters.

While the present analysis expands our knowledge of engagement decisions and the process behind it, further research needs to be done. Is the functional form for the outcome model the correct one? Similar to the debate in the spatial voting literature, the exact rela-

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[24]Other response options were, Not at all important, slightly important, and moderately important. Please see App. C for a full breakdown of responses.

tionship between latent distance and individual attitudes and behaviors is worthy of inquiry. It is possible that the absolute distance, as opposed to the squared distance, explains engagement decisions and perceptions of costs better. Specifying alternative functional forms is possible under the current design. Another possibility is that distance matters unidirectionally – that is, for individuals an organization farther toward one pole in the latent space is preferable to one closer to the antipole, even if the squared distance between them and the second organization is shorter than between them and the first organization. One can also imagine that, in the general population, the way in which individuals consume organizational cues to estimate congruence may be a mixture of a variety of approaches. The current design is ill-suited to study this question because of the homogeneity of the sample and the limited overlap between the organizational position and individual location distributions.

Future work should also look at which types of costs and benefits may be most important to respondents and how they factor into the engagement decision-making process. The results of this study seem to suggest that congruence has a larger impact on perceptions of benefits than costs; however, it is possible that this is simply because of the types of costs *and* benefits tested here. A future study could phrase the same factor as a cost or a benefit – making friends versus not making friends – to see whether congruence affects these differently.

This project also demonstrates the utility of the linked conjoint experiment and associated general statistical model for studying latent mechanisms, where features of a profile are assumed to cause respondents to evaluate some latent mechanism that impacts their decision-making. Without using one conjoint to estimate distances in that latent space, it is not possible to place respondents in the mechanism space. Future researchers can use this approach various applications to study such processes.

References

Abramson, Scott F., Korhan Kocak and Asya Magazinnik. 2021. "What Do We Learn About Voter Preferences From Conjoint Experiments." Working Paper.

Alinsky, Saul D. 1989[1971]. *Rules for Radicals: A Pragmatic Primer for Realistic Radicals.* New York: Vintage Books.

Ashforth, Blake E. and Fred Mael. 1989. "Social Identity Theory and the Organization." *Academy of Management Review* 14(1).

Bansak, Kirk, Jens Jainmueller, Daniel J. Hopkins and Teppei Yamamoto. 2021. "Using Conjoint Experiments to Analyze Election Outcomes: The Essential Role of the Average Marginal Component Effect (AMCE)." Working Paper.

Bardhan, Soumia and Richard L. Wood. 2015. "The Role of Culture and Technology in Civil Society Promotion in the Middle East: A Case Study Approach." *Digest of Middle East Studies* 24(1):111–138.

Calfano, Brian Robert and Paul A. Djupe. 2009. "God Talk: Religious Cues and Electoral Support." *Political Research Quarterly* 62(2):329–339.

Carlson, Elizabeth. 2015. "Ethnic Voting and Accountability in Africa: A Choice Experiment in Uganda." *World Politics* 67(2):353–383.

Carnes, Nicholas and Meredith L. Sadin. 2015. "The "Mill Worker's Son" Heuristic: How Voters Perceive Politiicians from Working-Class Families — and How They Really Behave in Office." *The Journal of Politics* 77(1):285–298.

Carson, Erin. 2017. "Here's where Nazi sympathizers go to raise money." https://www.cnet.com/news/neo-nazi-sympathizers-crowdfunding/. Accessed 6-April-2018.

Caughey, Devin, Hiroto Katsumata and Teppei Yamamoto. 2019. "Item Response Theory for Conjoint Survey Experiments." Working Paper.

Challand, Benoit. 2005. "Looking Beyond the Pale: International Donors And Civil Society Promotion in Palestine." *Israel Journal of Politics, Economics, and Culture* 12(1):56–63.

de Weerd, Marga and Bert Klandermans. 1999. "Group identification and political protest: farmers' protest in the Netherlands." *European Journal of Social Psychology* 29:1073–1095.

Dutton, Jane E., Janet M. Dukerich and Celia V. Harquail. 1994. "Organizational Images and Member Identification." *Administrative Science Quarterly* 39(2):239–263.

Evans, Jocelyn, Kai Arzheimer, Rosie Campbell and Philip Cowley. 2017. "Candidate localness and voter choice in the 2015 General Election." *Political Geography* 59:61–71.

Foreman, Peter and David A. Whetten. 2002. "Members' Identification with Multiple-Identity Organizations." *Organization Science* 13(6):618–635.

Guarrieri, Thomas R. 2018. "Guilty as perceived: How opinions about states influence opinions about NGOs." *Review of International Organizations* 13:573–593.

Hainmueller, Jens, Daniel J. Hopkins and Tepei Yamamoto. 2014. "Causal Inference in Conjoint Analysis: Understanding Multidimensional Choices via Stated Preference Experiments." *Political Analysis* 22:1–30.

Hoellerbauer, Simon. 2021. "Why Join? How Civil Society Organizations' Attributes Signal Congruence and Impact Community Engagement." *Journal of Experimental Political Science* FirstView:1–12.

Keele, Luke J., Paru R. Shah, Ismail White and Krisinte Kay. 2017. "Black Candidates and Black Turnout: A Study of Viability in Louisiana Mayoral Elections." *The Journal of Politics* 79(3):780–791.

Kelly, Caroline and Sarah Breinlinger. 1996. *The Social Psychology of Collective Action.* Taylor & Francis: Basingstoke.

Klandermans, Bert. 1984. "Mobilization and Participation: Social-Psychological Expansions of Resource Mobilization Theory." *American Sociological Review* 49(5):583–600.

Klandermans, Bert. 2007. The Demand and Supply of Participation: Social-Psychological Correlates of Participation in Social Movements. In *The Blackwell Companion to Social Movements*, ed. David A. Snow, Sarah A. Soule and Hanspeter Kriesi. Malden, MA: Blackwell Publishing pp. 360–379.

Klandermans, Bert, Jose Manuel Sabucedo, Mauro Rodriguez and Marga de Weerd. 2002. "Identity Processes in Collective Action Participation: Farmers' Identity and Farmers' Protest in the Netherlands and Spain." *Political Psychology* 23(2):235–251.

McAdam, Doug. 1986. "Recruitment to High-Risk Activism: The Case of Freedom Summer." *American Journal of Sociology* 92.

McDermott, Monika L. 2005. "Candidate Occupations and Voter Information Shortcuts." *The Journal of Politics* 67(1):201–219.

McDermott, Monika L. 2009. "Religious Stereotyping and Voter Support for Evangelical Candidates." *Political Research Quarterly* 62(2):340–354.

Mendelson, Sarah E. and John K. Glenn, eds. 2002. *The Power and Limits of NGOs: A Critical Look at Building Democracy in Eastern Europe and Eurasia.* Columbia University Press.

Mitchell, Robert C. 1979. National Environmental Lobbies and the Apparent Illogic of Collective Action. In *Collective Decision Making Applications from the Public Choice Theory*, ed. Clifford S. Russell. Baltimore: Johns Hopkins University Press pp. 87–121.

Murdie, Amanda. 2014. *Help or Harm: The Human Security Effects of International NGOs.* Standford, CA: Stanford University Press.

Olson, Mancur. 1971. *The Logic of Collective Action: Public Goods and the Theory of Groups.* Cambridge, MA: Harvard University Press.

Opp, Karl-Dieter. 1983. "Soft Incentives and Collective Action: Some Results of a Survey on the Conditions of Participating in the Anti-Nuclear Movement.".

Porter, Gina. 2003. "NGOs and poverty reduction in a globalizing world: perspectives from Ghana." *Progress in Development Studies* 3(2):131–145.

Reger, Rhonda K., Loren T. Gustaffson, Samuel M. Demarie and John V. Mullane. 1994. "Reframing the Organization: Why Implementing Total Quality Is Easier Said Than Done." *Academy of Management Review* 19(3).

Schussman, Alan and Sarah A. Soule. 2005. "Process and Protest: Accounting for Individual Protest Participation." *Social Forces* 84(2):1083–1108.

Shugart, Matthew Søberg, Melody Ellis Valdini and Kati Suominen. 2005. "Looking for Locals: Voter Information Demands and Personal Vote-Earning Attributes of Legislators under Proportional Representation." *American Journal of Political Science* 49(2):437–449.

Simon, Bernd, Michael Loewy, Stefan Stürmer, Ulrike Weber, Claudia Kampmeier, Peter Freytag, Corinna Habig and Peter Spahlinger. 1998. "Collective Identification and Social Movement Participation." *Journal of Personality and Social Psychology* 74(3):646–658.

Stan Developers and their Assignees. 2021. *CmdStanR.* R Package Version 0.4.0 (Not published on CRAN).
URL: *https://mc-stan.org/cmdstanr/*

Stan Development Team. 2020. *Stan Modeling Language Users Guide and Reference Manual.* 2.27.
URL: *http://mc-stan.org*

van Zomeren, Martijn, Colin Wayne Leach and Russel Spears. 2010. "Does group efficacy increase group identification? Resolving their paradoxical relationship." *Journal of Experimental Social Psychology* 46:1055–1060.

van Zomeren, Martijn, Russel Spears and Colin Wayne Leach. 2008. "Exploring psychological mechanisms of collective action: Does relevance of group identity influence how people cope with collective disadvantage?" *British Journal of Social Psychology* 47:353–372.

A   Survey Instrument

Most of the conjoint profile-pairs are not populated in the following instrument; it does not show them in the way they would actually be seen by all respondents. This is because the technicalities of printing of the Qualtrics survey. Appendix B includes several examples of how profiles will be seen by respondents.

Consent Statement

The purpose of this research study is to study student engagement with organizations.

You are being asked to be in the study because as a student in a POLI 100, POLI 130, or POLI 150 class you are required to participate in research studies conducted by the Political Science Subject Pool (PSSP). However, participation in THIS research study is not mandatory. Students who object to participating in this study will have the opportunity to satisfy the research participation requirement in another way. You must be at least 18 years of age to participate.

What does the study entail? If you agree to be in this study, you will be asked to answer an on-line survey composed of questions addressing your feelings on a series of hypothetical organizations that could be active in Chapel Hill. You will also be asked about your involvement with organizations and your opinion on civil society and organizations, in addition to some basic demographic questions. The completion of this study satisfies 1 credit towards the research requirement of POLI 100, POLI 130, or POLI 150 courses for the Fall 2021 semester.

Do I have to participate? Participation in this study is voluntary. You may refuse to participate, and you may withdraw your participation without penalty. You may also skip any question or other aspects of this study for any reason without penalty. If you do not wish to participate or withdraw from this study, you can fulfill the research requirement by completing other studies listed in the Political Science Subject Pool (PSSP) Web Portal (go.unc.edu/pssp) or by completing a research-oriented paper as explained in your POLI 100, POLI 130, or POLI 150 syllabus.

What should I do if I wish to participate? You can participate in the study by any computer terminal by accessing the PSSP Web portal: go.unc.edu/pssp.

Will you ever tell us what you're studying? Yes, you will receive an email summary of our findings once the data are collected and analyzed. In addition, to protect the integrity of the responses, the full study purpose will not be disclosed until after the survey is completed. If

there is anything about the study or your participation that is unclear or that you do not understand, or if you have questions or wish to report a research-related problem, you may contact the principal investigator: Simon Hoellerbauer. For questions about your rights as a research participant, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu

Investigators:
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Background1

Which gender identity best matches yours?

○ Nonbinary
○ Female
○ Male
○ [   ] Other

How many years have you attended UNC, including this one?

○ 1
○ 2
○ 3
○ 4
○ 5
○ More than 5

The next two questions ask about your *free time*. By free time, we mean time **not spent** working, studying, doing homework, attending classes, or volunteering.

Think about an average week, not midterms or finals time.

On an average **weekday**, how many hours of free time do you have?

<div style="border:1px solid #ccc; height:2em;"></div>

On an average **weekend**, that is, both Saturday and Sunday combined, how many hours of free time do you have?

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Conjoint 1 Introduction

For the next few minutes, we are going to ask you to act as if you were considering getting involved with an organization.

You will be shown 3 pairs of hypothetical organizations. For each pair, imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the November 2022 elections.

They are both holding meetings on campus for potential volunteers to work registration tables on campus.

EngPair1

Scenario 1 out of 3
Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

For each organization, how likely would you be to attend a meeting held by it?

	Very unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
Organization 1	○	○	○	○	○
Organization 2	○	○	○	○	○

If you had to choose, would you be more likely to attend a meeting held by organization 1 or organization 2? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

Now, please think more specifically about **organization 1**. To what extent do you agree with the following statements?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
It would be fun to work with this organization.	○	○	○	○	○
My input would be valued at meetings of this organization.	○	○	○	○	○
Volunteering for this organization would be good for my resume.	○	○	○	○	○
I would be likely to make new friends while volunteering for this organization.	○	○	○	○	○
Meetings for this organization would go on for a long time.	○	○	○	○	○
My friends would make fun of me for volunteering for this organization.	○	○	○	○	○
I would feel very tired after meetings for this organization.	○	○	○	○	○

EngPair2

Scenario 2 out of 3

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

For each organization, how likely would you be to attend a meeting held by it?

	Very unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
Organization 1	○	○	○	○	○
Organization 2	○	○	○	○	○

If you had to choose, would you be more likely to attend a meeting held by organization 1 or organization 2? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

Click to write the question text

[   ]

Now, please think more specifically about **organization 1**. To what extent do you agree with the following statements?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
It would be fun to work with this organization.	○	○	○	○	○

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
My input would be valued at meetings of this organization.	○	○	○	○	○
Volunteering for this organization would be good for my resume.	○	○	○	○	○
I would be likely to make new friends while volunteering for this organization.	○	○	○	○	○
Meetings for this organization would go on for a long time.	○	○	○	○	○
My friends would make fun of me for volunteering for this organization.	○	○	○	○	○
I would feel very tired after meetings for this organization.	○	○	○	○	○

EngPair3

Scenario 3 out of 3

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

For each organization, how likely would you be to attend a meeting held by it?

	Very unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
Organization 1	○	○	○	○	○
Organization 2	○	○	○	○	○

If you had to choose, would you be more likely to attend a meeting held by organization 1 or organization 2? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

Now, please think more specifically about **organization 1**. To what extent do you agree with the following statements?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
It would be fun to work with this organization.	○	○	○	○	○
My input would be valued at meetings of this organization.	○	○	○	○	○
Volunteering for this organization would be good for my resume.	○	○	○	○	○
I would be likely to make new friends while volunteering for this organization.	○	○	○	○	○
Meetings for this organization would go on for a long time.	○	○	○	○	○
My friends would make fun of me for volunteering for this organization.	○	○	○	○	○
I would feel very tired after meetings for this organization.	○	○	○	○	○

Background2

Are you currently registered to vote?

○ Yes
○ No, but I have thought about it
○ No

In talking to people about elections, we often find that a lot of people were not able to vote because they weren't registered, they were sick, or they just didn't have time. With respect to

the **2020 general election that took place in November 2020**, which of the following statements best describes you?

○ I am not eligible to vote
○ I did not vote
○ I thought about voting but didn't that time
○ I usually vote but didn't that time
○ I am sure I voted

To what extent do you agree or disagree with the following statements?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I am proud to be a student at UNC	○	○	○	○	○
Being a student is an important part of who I am	○	○	○	○	○

Where did you live before starting UNC?

○ Raleigh metro area, including Durham/Chapel Hill/Carrboro
○ Somewhere else in North Carolina
○ Somewhere else in the US
○ Outside of the US

Conjoint 2 Introduction

Now, we are once again going to ask you to consider several hypothetical organizations. This time, we are interested in whether you think organizations will reflect your values.

You will be shown 12 pairs of hypothetical organizations. For each pair, imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the November 2022 elections.

They are both holding meetings on campus for potential volunteers to work registration tables on campus.

ValPair1

Scenario 1 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

ValPair2

Scenario 2 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

ValPair3

Scenario 3 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

ValPair4

Scenario 4 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase

voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

ValPair5

Scenario 5 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

ValPair6

Scenario 6 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

ValPair7

Scenario 7 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

ValPair8

Scenario 8 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

ValPair9

Scenario 9 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

ValPair10

Scenario 10 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1   ○ Organization 2

ValPair11

Scenario 11 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

ValPair12

Scenario 12 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

○ Organization 1 ○ Organization 2

Why do you think you that this organization reflects your values more closely?

[   ]

Civil Society

The next section asks you about your involvement with organizations.

Are you involved with any on-campus, university-affiliated organizations?

○ Yes
○ No

With how many of such organizations are you involved? Please enter a number.

[   ]

With which organization(s) are you involved? Please list them, with each organization's name separated by a comma.

[   ]

Are you involved with any organizations that are not affiliated with the university?

○ Yes
○ No

With how many of such organizations are you involved? Please enter a number.

With which organization(s) are you involved? Please list them, with each organization's name separated by a comma.

On average, how many hours a week do you spend attending meetings, volunteering for, or otherwise engaging with the organizations with which you are involved? Please enter a number.

What does the phrase "civil society" mean to you?

What does the acronym NGO mean to you?

How important are the following characteristics when you are considering whether to get involved with an organization?

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
How local the organization is	○	○	○	○	○
The organization's goals	○	○	○	○	○

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
How much free time you have	○	○	○	○	○
How much the organization can benefit you	○	○	○	○	○

How important are the following characteristics when you are considering whether to get involved with an organization?

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
How likely you think it is that the organization can achieve its goals	○	○	○	○	○
How much you think the organization reflects you as a person	○	○	○	○	○
How close you feel to the organization	○	○	○	○	○
The extent to which you think the organization's values seem to match your values	○	○	○	○	○

If you wanted to, do you think you could start your own campus or community group?

○ Yes
○ No

Are you involved with Greek life on campus?

○ Yes
○ No

To what extent do you agree or disagree with the following statements:

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree

Qualtrics Survey Software

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
If UNC students act together, we can get the UNC administration to listen to us.	◯	◯	◯	◯	◯
If UNC students act together, we can get the North Carolina State Legislature to listen to us.	◯	◯	◯	◯	◯

Powered by Qualtrics

B   Example Profiles

Scenario 1 out of 3

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2
Funding mostly comes from	donations from national partners	donations from members and community
Organization's headquarters located in	Chapel Hill, NC	Raleigh, NC
Aiming to increase voter registration	in the town of Chapel Hill	throughout North Carolina
Organization is	**not** a chapter of a national organization	a chapter of a national organization
Other members are	students and non-students	mainly non-students
Leader is	**not** a student	a student

For each organization, how likely would you be to attend a meeting held by it?

	Very unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
Organization 1	○	○	○	○	○
Organization 2	○	○	○	○	○

If you had to choose, would you be more likely to attend a meeting held by organization 1 or organization 2? Even if you aren't entirely sure about your choice, please select one.

○   ○
Organization 1   Organization 2

Why do you think you would be more likely to attend a meeting by this organization versus the other organization? Please limit your response to one sentence.

[   ]

⟵   ⟶

Press F11 to exit full screen

Scenario 1 out of 12

Imagine that these are two non-partisan organizations working in Chapel Hill to increase voter registration ahead of the 2022 North Carolina primaries and the November 2022 elections. They are looking for volunteers to work registration tables on campus.

	Organization 1	Organization 2
Organization's headquarters located in	Washington, DC	Richmond, VA
Aiming to increase voter registration	in the town of Chapel Hill	on campus
Leader is	**not** a student	**not** a student
Funding mostly comes from	donations from members and community	donations from national partners
Other members are	mainly students	students and non-students
Organization is	a chapter of a national organization	a chapter of a national organization

If you had to choose, would you say that organization 1 or organization 2 reflects your values more closely? Even if you aren't entirely sure about your choice, please select one.

O   O
Organization 1   Organization 2

Why do you think you that this organization reflects your values more closely? Please limit your response to one sentence.

←   →

C   Summary Statistics

Table 3: Summary Statistics. Only respondents who finished the survey and passed the data quality checks specified in the pre-analysis plan.

Variable	Levels	n	%
Gender	Female	538	63.90
	Male	293	34.80
	Nonbinary	11	1.31
	All	842	100.01
Live Before UNC	Outside of the US	44	5.23
	Raleigh metro area, including Durham/Chapel Hill/Carrboro	166	19.71
	Somewhere else in North Carolina	482	57.24
	Somewhere else in the US	150	17.81
	All	842	99.99
Years at UNC	1	421	50.12
	2	284	33.81
	3	91	10.83
	4	42	5.00
	More than 5	2	0.24
	All	840	100.00
Registered to Vote	No	59	7.02
	No, but I have thought about it	61	7.26
	Yes	720	85.71
	All	840	99.99
Voted November 2020	I am not eligible to vote	299	35.51
	I am sure I voted	467	55.46
	I did not vote	52	6.18
	I thought about voting but didn't that time	20	2.38
	I usually vote but didn't that time	4	0.48
	All	842	100.01
Proud to be Student	Strongly disagree	15	1.78
	Somewhat disagree	35	4.16
	Neither agree nor disagree	66	7.84
	Somewhat agree	305	36.22

	Strongly agree	421	50.00
	All	842	100.00
Being Student Is Important to Me	Strongly disagree	23	2.73
	Somewhat disagree	32	3.80
	Neither agree nor disagree	85	10.11
	Somewhat agree	288	34.24
	Strongly agree	413	49.11
	All	841	99.99
Org. Localness Is Important for Engagement	Not at all important	29	3.46
	Slightly important	112	13.38
	Moderately important	329	39.31
	Very important	256	30.59
	Extremely important	111	13.26
	All	837	100.00
Org.'s Goal " "	Not at all important	9	1.08
	Slightly important	19	2.27
	Moderately important	63	7.53
	Very important	262	31.30
	Extremely important	484	57.83
	All	837	100.01
My Freetime " "	Not at all important	9	1.08
	Slightly important	19	2.27
	Moderately important	63	7.53
	Very important	262	31.30
	Extremely important	484	57.83
	All	837	100.01
How Org. Benefits Me " "	Not at all important	12	1.43
	Slightly important	84	10.04
	Moderately important	288	34.41
	Very important	294	35.13
	Extremely important	159	19.00
	All	837	100.01
Feasibility of Org's Goal " "	Not at all important	8	0.95
	Slightly important	57	6.80
	Moderately important	225	26.85
	Very important	373	44.51
	Extremely important	175	20.88
	All	838	99.99
Whether Org Reflects Me " "	Not at all important	5	0.60
	Slightly important	35	4.18

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	Moderately important	135	16.11
	Very important	377	44.99
	Extremely important	286	34.13
	All	838	100.01
How Close I Feel to Org ” ”	Not at all important	8	0.95
	Slightly important	46	5.49
	Moderately important	174	20.76
	Very important	396	47.26
	Extremely important	214	25.54
	All	838	100.00
How My Values Match the Org's ” ”	Not at all important	5	0.60
	Slightly important	22	2.63
	Moderately important	105	12.54
	Very important	331	39.55
	Extremely important	374	44.68
	All	837	100.00
	Full Sample	842	

D   Goodness of Fit

In order to assess model fit for the IRT model, I retained one profile-pair at random for each respondent from the three engagement block profile-pairs. In order to assess model fit for the outcome model, I chose two profile-pairs at random for each respondent from the middle ten values block profile-pairs.[25] This is analogous to strategy of punching holes in the middle of the voting record used to assess ideology-focused IRT models. I will use the AUC to assess model fit for the binary outcomes. I will use mean squared error to assess model fit for the continuous/ordered outcomes.

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[25]Please note that this is partly a deviation from the goodness of fit assessment pre-specified in the pre-analysis plan. Please see the Appendix G for an explanation for this and other deviations from the pre-analysis plan.

Table 4: Model Fit (Posterior Medians with 95% Credible Intervals)

IRT (AUC):	0.703 [0.692, 0.715]
Attend Meeting (RMSE)	1.198 [1.175, 1.122]
Attend Meeting (Forced):	0.653 [0.624, 0.679]
Fun (RMSE):	0.824 [0.798, .851]
Input Valued (RMSE):	0.824 [0.799, 0.851]
Good for Resume (RMSE):	0.709 [0.687, 0.733]
Make Friends (RMSE):	0.934 [0.909, 0.964]
Long Meetings (RMSE):	0.812 [0.788, 0.837]
Harassment (RMSE):	0.812 [0.786, 0.836]
Tired After Meeting (RMSE):	0.769 [0.744, 0.792]

E   Additional Plots

E.1   Ideal Points and Organization Locations

Figure 4 shows 95% credible intervals for individual ideal points and for all 288 possible organization locations. Some of the credible intervals for the ideal points are very wide. The traceplots for these parameters are normal (although they do show considerable autocorrelation between draws); it is possible that some respondents did not fully take the survey seriously and answered the forced choice values question at random.[26] This would make it very difficult for the model to situate them in the latent values space. The fact that there are only ten observations per respondent may have compounded this issue, although the vast majority of credible intervals cover more reasonable portions of the parameter space. This indicates that in most circumstances, ten observations is not too few to situate individuals in the latent space. Credible intervals for the organization locations are much smaller because there are more observations to estimate fewer parameters.

Figure 5 shows 95% credible intervals for the difference between each respondent's ideal point and the most-student organization (i.e. the organization characterized by the first level within each attribute shown in Table 1).

E.2   Latent Distances

Figure 6 shows a histogram of the posterior medians of all estimated latent distances from the outcome model (estimated in the sense that $\hat{\boldsymbol{\beta}}$ and $\hat{\boldsymbol{\theta}}$ are estimated from the data). This distance is the sole predictor in each of the outcome models. Table 5 shows the summary statistics for the posterior medians of the latent distances from the training data. This includes all organizations used for outcome model 1 (using outcomes W_1 and W_2).

Figure 7 shows a histogram of the posterior medians of all estimated difference in latent

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[26]Satisficing by straightlining did not seem to be a consistent problem, with Organization 1 chosen 49.95% chosen of the time, as expected.

Figure 4: $\hat{\boldsymbol{\theta}}$ and Possible Organization Positions ($\mathbf{X}\hat{\boldsymbol{\beta}}$) (Posterior medians with 95% cred. int.)
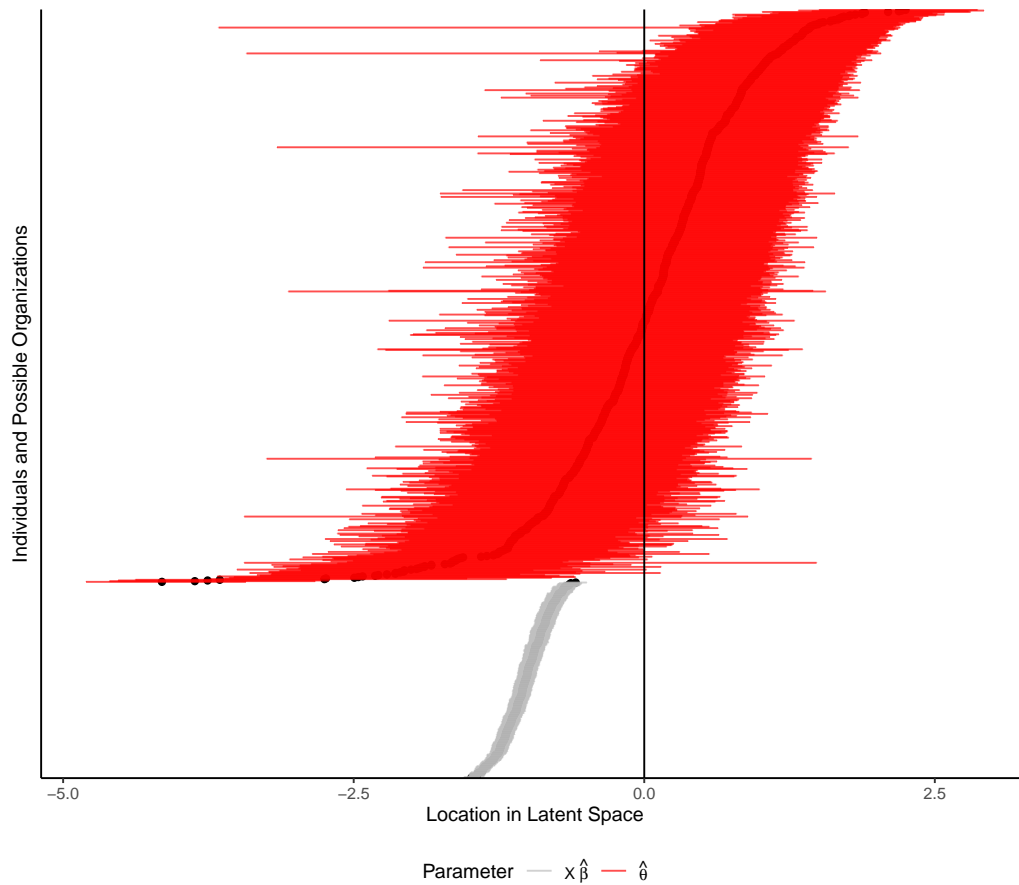
Table 5: Summary Statistics for the Posterior Medians of the Latent Distances

	Median	Mean	SD	Min	Max
Latent Distance	2.1741918311	2.4133607602	1.5172199298	0.0009666185	8.9607716400

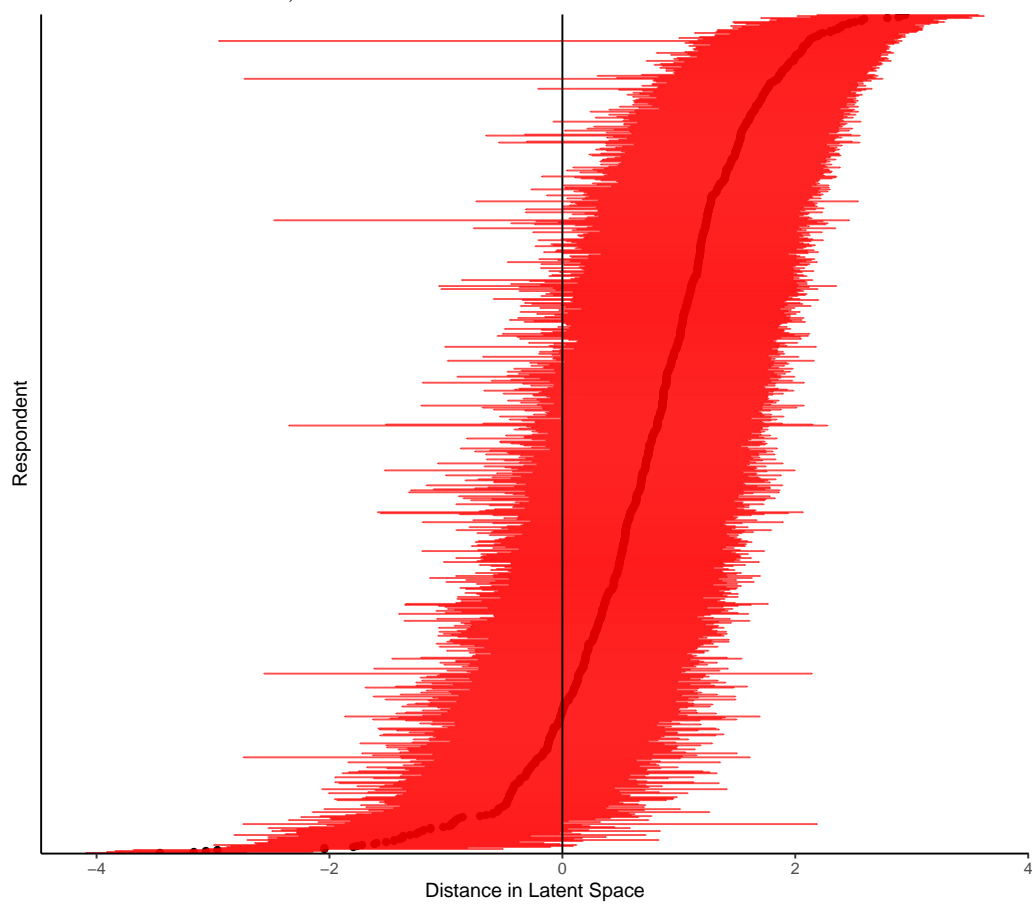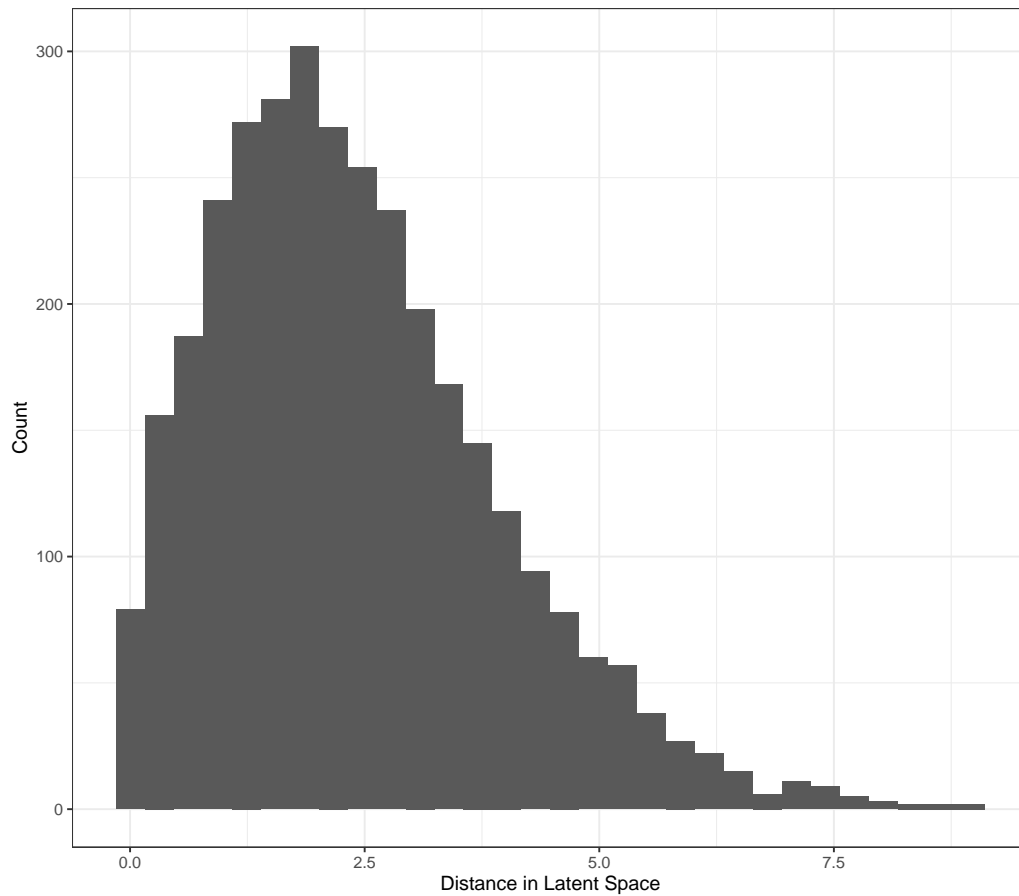Figure 5: Difference Between Most-Student Organization and Ideal Locations (Posterior medians with 95% cred. int.)

Figure 6: Histogram of Estimated Latent Distances (Using Posterior Medians)

distances from the outcome model (estimated in the sense that $\hat{\boldsymbol{\beta}}$ and $\hat{\boldsymbol{\theta}}$ are estimated from the data). Negative values indicate that organization 1 is further away in latent space than organization 2. Positive values indicate that organization 1 is closer to the respondent than organization 2. This difference in distances is the sole predictor in the forced choice outcome model. Table 5 shows the summary statistics for the posterior medians of the difference in latent distances from the training data. This includes all organizations used for outcome model 2 (using outcomes W_3).

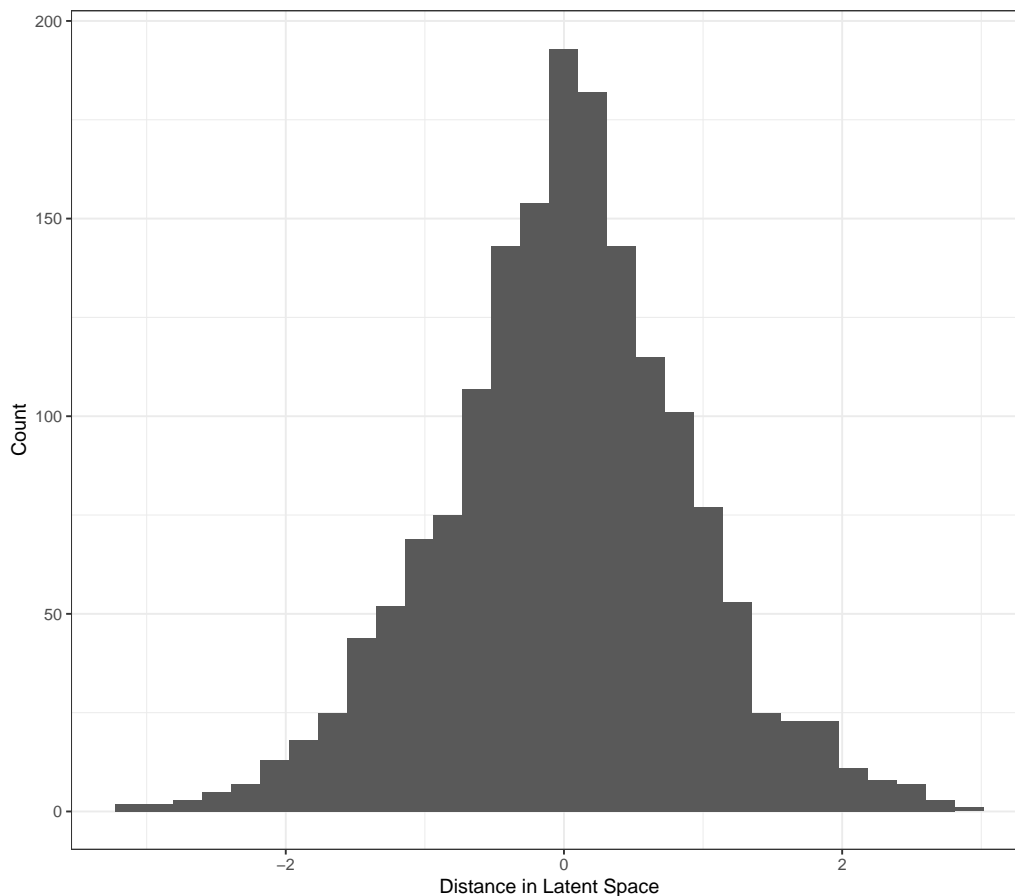Figure 7: Histogram of Estimated Difference in Latent Distances (Using Posterior Medians)

Table 6: Summary Statistics for the Posterior Medians of the Difference in Latent Distances Between Organization 2 and Organization 1

	Median	Mean	SD	Min	Max
Difference in Latent Distance	0.018520146	0.007191126	0.900330395	-3.139214179	2.905503876

F   Previous Version of Study

As mentioned above, this is the follow-up to a different study run on the PSSP in March and April 2020, which I also pre-registered (EGAP Registration ID: 20200612AD). I have analyzed the results of that study and found support for the main hypotheses registered in that pre-analysis plan. However, my theory has changed somewhat since then – the nature of the latent space is less nebulous now, for example, and I have introduced the concept of congruence. In addition, during the analysis of the previous study, I realized that the design was somewhat suboptimal. In that design, I asked two forced choice outcome questions after each of 15 profile-pairs; one was to be used for the IRT model and the other for the GLM model. However, I was worried about spillover so I used only the first profile-pair for the GLM portion and the other 14 profile-pairs. In addition, because the GLM outcome question was forced choice, I could only identify the difference in distances, not the distances themselves. I have addressed all of these issues in this study.

G   Deviations from and Extensions to Pre-Analysis Plan

This study was pre-registered with OSF (https://osf.io/erqja). There are some changes between the pre-registered analysis and the analysis that was carried out.

I pre-registered a different model fit assessment, in which I stated that I would use 3/4 of the sample for model training and 1/4 of the sample for assessing model performance. However, this is infeasible with a latent variable model as I need latent locations for individuals to assess the effect of latent distances. As such, I changed this by choosing one of the three engagement outcomes at random for each individual in the sample and two of the middle ten (of twelve) values outcomes for assessing model fit. The remaining observations were used for training the model.

In addition, in my pre-analysis plan, I failed to pre-register priors for the the random intercepts by respondents in each of the outcome models. To save on model complexity, I specified $\mathcal{N}(0, 1)$ priors for these parameters.

Furthermore, there are several hypotheses that I pre-specified in the pre-analysis plan that I have yet to test due to technical reasons (hypotheses H2 and H3 in the pre-analysis plan). Future versions of this paper will perform these tests. I also pre-registered exploratory subgroup analyses, which is the next stage of the project.