

# The Paths to Narrow Identities

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## I. MULTIDIMENSIONAL IDENTITIES

Up until the first agricultural revolution 12,000 years ago, the population of *homo sapiens* lived in small bands of nomadic families consisting of 25–50 members (Henrich 2015). They were hunter-gatherers, highly egalitarian, did not engage in economic exchange, and divided labor based on age and sex. Marriage was exogamous and patrilocal. When a band grew too large, it split. Identity was based on rules tied to ancestral lineage, and the scope for identity choice was limited. Since humans began to permanently settle and to domesticate plants and animals, there has been a dramatic increase in social complexity driven by the invention of writing, money, cities, democracy, world religions, scientific and industrial revolutions, nuclear power, space travel, and the internet, among many other developments. These products of cultural evolution have provided people with immense scope within which to develop and project ideas of who they are and what is their place in the world.

Our identities, both personal and social, are structured in a particular way, with multiple dimensions such as ethnicity, gender, class, religion, nationality, sexual orientation, political preferences, and cultural tastes. We might interact with a neighbor based on our geographic proximity and mutual interest in cooperation without any attention paid to, though possibly with full knowledge of, the other aspects of our identities which do not exactly match. This is not a surprise to anyone. It is a universal human experience and could be described as a natural state. What is puzzling is that at certain points in history, a dimensionality reduction takes place, and society becomes suddenly and radically simplified. Social interactions and conflict become narrowly organized around one salient dimension of identity, with all other dimensions switched off. A personal example may help to illustrate.

As a child in Sri Lanka, my family were caught up in the 1983 riots, which came to be known as Black July. When the riots broke out in our

area, my grandfather was at the family businesses. Before my father attempted to reach my grandfather in person, he phoned and told my grandfather that if he did not arrive by a specific time, my grandfather should leave and seek shelter in the neighboring Sinhalese-owned business. My grandfather knew the owner well and had rescued him financially on several occasions, so this arrangement was assumed to be safe. When my grandfather entered the premises, the owner, who was surrounded by several others, addressed him in the Tamil language, telling him curtly to 'sit down there'. In this way, my grandfather was marked out as Tamil, the ethnic minority being targeted by the communal violence. The peculiar thing is that, though my grandfather was indeed of Tamil ethnicity, he did not identify as such. As a member of the liberal cosmopolitan class, he almost never spoke the Tamil language (certainly never to his Sinhalese friend). In fact, all languages except for English were prohibited at home. The complex identity that he had built over the course of his life—businessman, film critic, husband, father, and so forth—had in a few hours of rioting been collapsed into one aspect, which he did not choose and which was neither central to his self-conception nor, up to that point, to his social identity. We can surmise that this sudden and imposed narrowing of his identity had as profound an impact on him as the looting and burning of his businesses. After meticulously organizing his life around work for over forty-five years, he never worked another day.

Unfortunately, such narrow identification—an extreme phenomenon—dominates theoretical and empirical work in economics to the point at which readers may lose sight of the broad identities they encounter everywhere in their daily lives. Understanding identity is an important step toward broadening the scope of economics to encompass the social and political environment in which market behavior is embedded. Inspired by the seminal work of Akerlof and Kranton (2000, 2010), economists are now examining the effect of identity on many forms of economic behavior. However, the concept of identity that has been mostly employed is unidimensional, with notable exceptions such as Sen (2006), Akerlof (2017), Sambanis and Shayo (2013), and Carvalho and Pradelski (2021). This is an important omission, and not just in the study of conflict. For example, Carvalho and Pradelski (2021) show that standard approaches to reducing structural inequality that treat identity dimensions as independent can be counterproductive. Due to spillovers across identity dimensions, such as race and gender, interventions that aim to reduce inequality along one identity dimension can increase inequality along another. What is re-

quired are more holistic approaches that account for the multidimensionality of identity and the connections between identity dimensions.

Nobody has done more than Amartya Sen to call such issues to the attention of economists and bring them within the scope of economic analysis. Sen shows how historical episodes of conflict are triggered by identity-based concerns and in particular “the odd presumption that the people of the world can be uniquely categorized according to some *singular and overarching* system of partitioning” (2006, xii; emphasis in the original). Sen’s proposed solution is simple. Identity-based conflict, Sen proposes, can be solved through epistemic means by escaping (mentally) from a singular conception of identity. Narrow identification is seductive and can be exploited by “artisans of terror” (2006, 2). The solution is to switch to the right, more complex conception of identity through individual will. Identity should not be viewed purely as inherited, but also as shaped by individual choice. I wholeheartedly agree with Sen that narrow identification is the exception, not the rule. It is not a natural state from which we must plot an escape route, but rather an extreme and unnatural one from which we must wonder how we got there. But then the question arises: if we have plural identities, why do narrow identities emerge at all? A clearer map of the paths to narrow identities will tell us how to better avoid identity-based conflict. Dasgupta and Goyal take up this question in their paper titled “Narrow Identities” (2019; henceforth DG).

## II. THE DASGUPTA-GOYAL MODEL OF NARROW IDENTITIES

DG recognize that narrow identities form through social interactions and that groups play an important role in this process. This is a major advance. Because narrow identities are an equilibrium phenomenon they cannot be undone through individual will and right thinking alone. Specifically, DG’s model consists of a finite population of individuals,  $N$ , and two groups,  $A$  and  $B$ . Individuals and groups are *ex ante* identical. Individuals can choose to join one or both of the groups. Only the extensive margin (membership) is considered, not the time or effort devoted to each group. The payoff from joining group  $k \in \{A, B\}$  is increasing in the size of group  $k$  and is also a function of the size of the other group  $k' \neq k$ . An individual  $i$  is said to have a narrow identity if  $i$  joins only one of the groups. Society can be said to have narrow identities when each individual  $i \in N$  joins exactly one group. Note that narrow identities can exist in a monomorphic equilibrium (where all individuals join one group) or a polymorphic equilibrium (where different individuals join different groups). Disregarding membership costs, narrow identities do not occur without the interven-

tion of group leaders, who maximize aggregate group payoffs. The main conclusion of the paper is that narrow identities emerge as an equilibrium when (i) groups impose negative externalities on each other that are increasing in group size (for example, competition for scarce resources) and (ii) group leaders respond to this by imposing restrictions on dual membership to limit the size of the other group.

The DG model is a club model in the tradition of Iannaccone (1992) and the subsequent literature on religious clubs (Iannaccone 1998; Iyer 2016; Carvalho 2019). There are, however, notable differences. In the DG model, as in the religious club model, rules governing outside activity by group members play a critical role. There are two types of rules explored in the religious clubs literature. The first is stigmatizing behavioral practices and proscriptions imposed by religious groups, which act as a tax on outside activity (Iannaccone 1992; Aimone et al. 2013; Carvalho 2013; Carvalho and Koyama 2016). These rules contribute to reducing outside activity even when inputs to the club (for example, religious effort) are difficult to monitor. Second, religious clubs can impose a minimum participation constraint on group activity or, equivalently, cap the amount of time or money group members spend on outside activity (Carvalho 2016; Carvalho and Sacks, forthcoming). The restriction on group membership that arises in equilibrium in the DG model is closer to the second type of rule. The difference is that the DG model focuses on the extensive margin and does not consider the intensive margin, that is, the amount of time, effort, or money devoted to the group. The focus on membership choice, however, allows the authors to study participation in multiple groups, something not explored by religious club models. The purpose of membership rules in the DG model also bears some resemblance to the purpose of membership rules in the literature on religious clubs. In the religious club model, restrictions on outside activity play a strategic role in screening out uncommitted types and inducing club members to divert resources to the club. In this way, restrictions on outside activity limit the standard free-rider problem in collective production. In the DG model, they limit negative externalities generated by other groups. For example, in a conflict setting, restrictions on membership in the DG model mean that individuals need to ‘pick a side’, and cannot benefit regardless of which side wins. The difference is that the religious club model focuses on *intragroup* externalities while the DG model focuses on *intergroup* externalities, an important distinction to which I will return below.

### III. Extensions

There are three immediate ways one can build on the work of DG in studying narrow identities and identity-based conflict. First, identities can be made explicitly multidimensional, as suggested by the context I have provided above. Of course, it is possible to interpret DG's model in this way, with each group  $k \in \{A, B\}$  representing one dimension of an individual's identity. By choosing both groups, an individual identifies with both aspects of their identity. Otherwise, they have a narrow identity. Since each individual has the same choice set,  $\{A, B\}$ , this interpretation applies only to homogeneous populations. Second, the very notion of identity suggests *ex ante* heterogeneity, which could be built into the model. Third, multidimensionality and heterogeneity point to different means of defining narrow identities.

I will suggest one possible definition. Let each individual  $i$ 's identity be denoted by a vector  $\mathbf{x}_i = (x_{i1}, \dots, x_{ik}, \dots, x_{iK}) \in \mathbb{R}^K$ , where  $x_{ik}$  is a coding of  $i$ 's identity in dimension  $k$ , for example, gender (male = 0, female = 1) or race (white = 0, black = 1). The distance between two identities  $\mathbf{x}_i$  and  $\mathbf{x}_j$  is not the standard Euclidean distance. Rather, each individual has a (weighted) perceived distance from every other individual.<sup>1</sup> Let  $i$ 's perceived distance from  $j$  be given by

$$d_i(\mathbf{x}_i, \mathbf{x}_j) = \sqrt{\sum_{k=1}^K \theta_{ik} (x_{ik} - x_{jk})^2},$$

where  $\theta_{ik} \in [0, 1]$  is the weight  $i$  assigns to identity dimension  $k$  and  $\sum_{k=1}^K \theta_{ik} = 1$ . The broadness of  $i$ 's identity is captured by the distribution of weights over the identity dimensions. An identity is narrow if an individual assigns almost all weight to one identity dimension (for example, ethnicity).<sup>2</sup> Note that in some circumstances the weights are best thought of as homogeneous:  $\theta_{ik} = \theta_k$  for all  $i \in N$ . In other circumstances, they are likely to vary across individuals.

Now consider a repeated population game in which players are matched in pairs and the payoff to a player  $i$  from interaction with  $j$  is decreasing in the perceived distance  $d_i(\mathbf{x}_i, \mathbf{x}_j)$ . In addition, for each player  $i$ , we can let

<sup>1</sup> In addition to requiring comparability across dimensions, this requires that identity be measured in each dimension according to an interval scale.

<sup>2</sup> One specific measure of the broadness of  $i$ 's identity is entropy (Shannon 1948):

$$H(\theta_i) = - \sum_{k=1}^K \theta_{ik} \log(\theta_{ik}).$$

the weights  $\{\theta_{ik}\}_{k=1}^K$  evolve as a function of the history of play, including past choices in pairwise interactions, individual investments in identity, and political interventions. Thus, individuals can reduce their perceived social distance to some members of the population and increase their perceived social distance to others. In this way, the ‘singular and overarching system of partitioning’ described by Sen (2006) can come into being.

Note that DG allude at the end of their paper to a variant of their model in which individuals choose between exclusive (that is, narrow) identities, which increase social distance, and shared identities, which reduce social distance. This variant can be interpreted as a reduced-form version of the model suggested here. A version of it has already been studied by Carvalho (2017, section 3.1), who examines the conditions under which exclusive equilibria are stochastically stable. By analyzing a richer model of multidimensional identity, we could make further progress in understanding how narrow identities emerge.

### III. PATHS TO NARROW IDENTITIES

While a formal model is beyond the scope of this comment, one can still distinguish between two different paths to narrow identities. Narrow identification is an extreme outcome, and extreme outcomes typically arise from positive feedbacks. The two paths correspond to positive feedback processes operating between and within groups. Similarly, Carvalho and Sacks (2021) analyze a dynamic model in which identity-based organizations can, under certain conditions, strengthen identification within an identity group over time. This can occur via different paths, most notably through biased cultural transmission (within-group) and endogenous discrimination (between-group). However, identity in their model is unidimensional, so the narrowing of identity is not examined.

#### III.I. Intergroup Dynamics

To illustrate, suppose each individual  $i$  can take an action  $e$  that is helpful or an action  $h$  that is harmful to their partner in an interaction. We know that individuals care more about ingroup than about outgroup members, even when there are minimal differences between groups (Chen and Li 2009). With multidimensional identities, we can suppose that action  $e$  yields a larger payoff to  $i$  than  $h$  if and only if the perceived social distance between  $i$  and  $j$ ,  $d_i(\mathbf{x}_i, \mathbf{x}_j)$ , is sufficiently small. For each individual  $i \in N$  and identity dimension  $k = 1, \dots, K$ , the identity weight  $\theta_{ik}^t$  increases at time  $t$  if  $i$  is matched with a player who has a different identity

in dimension  $k$  and who chooses  $h$ . If  $e$  is chosen, the identity weights remain unchanged.

Consider a state in which identification is 'broad', that is,  $\theta_{ik}$  is equally distributed across identity dimensions. Then  $e$  could be chosen by all players, and identification would continue to be broad. Let us now shock the system. Suppose that individuals either have identity 0 or 1 in dimension  $k$ , and let there be, for some reason, a sequence of plays of  $h$  whenever 0 and 1 types (in dimension  $k$ ) are matched. Then  $\theta_{ik}^t$  rises for all players in such matches. Eventually,  $h$  could become a best response. In this way, persistent conflict emerges between the 0-s and 1-s in identity dimension  $k$ , regardless of all they might have in common along other dimensions. The negative shock setting society down this path can come from decentralized forces. However, it can also be, and often is, engineered by political entrepreneurs. For example, in the case of Black July in Sri Lanka, electoral rolls and lists of Tamil-owned businesses were released to rioters so they could efficiently target Sri Lankan Tamil homes and businesses. This event itself was preceded by a gradual escalation of ethnoreligious conflict and led to a full-blown civil war (Tambiah 1992; Powell and Amarasingam 2017). This path to narrow identification through intergroup dynamics is the closest to the DG model of narrow identities.

### ***III.II. Intragroup Dynamics***

A second path, not considered by DG, is created by interactions within groups, as exemplified by the formation of cults. A cult is a strict sect whose doctrine is at variance with the mainstream culture in which it is located (Stark and Bainbridge 1985). Absorption into a cult can be thought of as a process of narrowing identity:

The same story makes the headlines again and again. An anguished family is trying to 'rescue' its child, who has, the parents charge, been 'stolen' by a cult, sometimes after only a single weekend of involvement. The parents describe the child as a humorless 'zombie' — where formerly he or she was self-possessed, intelligent and completely 'normal.' (Collins 1982, B5)

The three main theories of cult formation described by Bainbridge and Stark (1979)—the psychopathology model, the entrepreneur model, and the subculture-evolution model—have two common elements. Firstly, the cults provide *compensators*, that is, relationships, experiences, or material goods that members find missing in their regular lives. Perhaps

the most important compensator produced by such groups is a sense of meaning and belonging (Carvalho, forthcoming). Secondly, these group-specific goods are produced through social interaction within the group. In particular, the subculture-evolution model views cults as “the expression of novel social systems, composed of intimately interacting individuals who achieve radical cultural developments through a series of many small steps” (Bainbridge and Stark 1979, 283).

This can be modeled within the framework suggested here as follows. Each individual chooses whether to join one of a number of groups or to interact in an unrestricted manner in mainstream society. Suppose there is a set of individuals  $G \subset N$  whose members have a rare trait in dimension  $k$ , for example, a rare cosmological belief. (They could well have mainstream traits in all other dimensions.) Suppose also that interacting in a group increases the weight on identity dimensions in which there is low within-group variation but high between-group variation. Then, if members of the set  $G$  were to find each other and form a group,  $\theta_{ik}$  would rise for  $i \in G$ . This shift in identification makes the group more valuable to members. As such, a group leader could elicit larger contributions to club goods, making group membership even more valuable (see Carvalho 2016, 2020). Through such a process, the group can gradually become more cohesive and group members more narrowly identified with their rare dimension- $k$  identity. This is one possible model of cult formation. Note that such groups are mostly nonviolent. However, under certain conditions, strict clubs can transition to violent activity (Berman 2009; Berman and Laitin 2008) or be infiltrated by militants (Carvalho, forthcoming).

#### IV. CONCLUDING REMARKS

DG’s paper is an important advance in understanding identity formation and conflict. As narrow identities are formed through social interactions regulated by groups, narrow identification cannot be undone through individual will and right thinking alone. In the DG model, narrow identities emerge as an equilibrium when groups impose negative externalities on each other that are increasing in group size and group leaders respond to this by imposing restrictions on dual membership to limit the size of the other group. By examining membership in multiple groups, DG perform an extension of the standard club model in the economics of religion. The DG model paves the way for a fuller, dynamic analysis of the formation of narrow identities. In this comment, I have made several suggestions for extensions, including (1) explicitly multidimensional identities,

(2) heterogeneity, and (3) a new definition of narrow identities. In terms of dynamics, there is an important distinction to be made between positive feedback effects within and between groups. Of course, much more needs to be done, both theoretically and empirically, to flesh out these models. Such work could enrich our understanding of identity formation and thereby help to mitigate identity-based conflict.

## REFERENCES

- Aimone, Jason A., Laurence R. Iannaccone, Michael D. Makowsky, and Jared Rubin. 2013. "Endogenous Group Formation via Unproductive Costs." *The Review of Economic Studies* 80 (4): 1215-1236.
- Akerlof, George A., and Rachel E. Kranton. 2000. "Economics and Identity." *The Quarterly Journal of Economics* 115 (3): 715-753.
- Akerlof, George A., and Rachel E. Kranton. 2010. *Identity Economics: How Our Identities Shape Our Work, Wages, and Well-Being*. Princeton, NJ: Princeton University Press.
- Akerlof, Robert. 2017. "Value Formation: The Role of Esteem." *Games and Economic Behavior* 102: 1-19.
- Bainbridge, William Sims, and Rodney Stark. 1979. "Cult Formation: Three Compatible Models." *Sociology of Religion* 40 (4): 283-295.
- Berman, Eli. 2009. *Radical, Religious, and Violent: The New Economics of Terrorism*. Cambridge, MA: The MIT Press.
- Berman, Eli, and David D. Laitin. 2008. "Religion, Terrorism and Public Goods: Testing the Club Model." *Journal of Public Economics* 92 (10-11): 1942-1967.
- Carvalho, Jean-Paul. 2013. "Veiling." *The Quarterly Journal of Economics* 128 (1): 337-370.
- Carvalho, Jean-Paul. 2016. "Identity-Based Organizations." *American Economic Review* 106 (5): 410-414.
- Carvalho, Jean-Paul. 2017. "Coordination and Culture." *Economic Theory* 64 (3): 449-475.
- Carvalho, Jean-Paul. 2019. "Religious Clubs: The Strategic Role of Religious Identity." In *Advances in the Economics of Religion*, edited by Jean-Paul Carvalho, Sriya Iyer, and Jared Rubin, 25-41. Cham: Palgrave.
- Carvalho, Jean-Paul. 2020. "Sacrifice and Sorting in Clubs." *Forum for Social Economics* 49 (4): 357-369.
- Carvalho, Jean-Paul. Forthcoming. "Religion and Terrorism: The Religious Utility Hypothesis." In *Handbook of the Economics of Terrorism*, edited by Atin Basuchoudhary and Gunther Schulze. Cambridge: Cambridge University Press.
- Carvalho, Jean-Paul, and Mark Koyama. 2016. "Jewish Emancipation and Schism: Economic Development and Religious Change." *Journal of Comparative Economics* 44 (3): 562-584.
- Carvalho, Jean-Paul, and Bary Pradelski. 2021. "Identity and Underrepresentation: Interactions between Race and Gender." Working Paper; first version January 2, 2019; revised May 3, 2021. Available at SSRN. <https://ssrn.com/abstract=3299477>.
- Carvalho, Jean-Paul, and Michael Sacks. 2021. "Radicalization." Working Paper; first version December 26, 2018; revised March 6, 2021. Available at SSRN. <https://ssrn.com/abstract=3297267>.

- Carvalho, Jean-Paul, and Michael Sacks. Forthcoming. "The Economics of Religious Communities." *Journal of Public Economics*.
- Chen, Yan, and Sherry Xin Li. 2009. "Group Identity and Social Preferences." *American Economic Review* 99 (1): 431–457.
- Collins, Glenn. 1982. "The Psychology of the Cult Experience." *The New York Times*, March 15, 1982, B5. <https://www.nytimes.com/1982/03/15/style/the-psychology-of-the-cult-experience.html>.
- Dasgupta, Partha, and Sanjeev Goyal. 2019. "Narrow Identities." *Journal of Institutional and Theoretical Economics* 175 (3): 395–419.
- Henrich, Joseph P. 2015. *The Secret of Our Success: How Culture Is Driving Human Evolution, Domesticating Our Species, and Making Us Smarter*. Princeton, NJ: Princeton University Press.
- Iannaccone, Laurence R. 1992. "Sacrifice and Stigma: Reducing Free-Riding in Cults, Communes, and Other Collectives." *Journal of Political Economy* 100 (2): 271–291.
- Iannaccone, Laurence R. 1998. "Introduction to the Economics of Religion." *Journal of Economic Literature* 36 (3): 1465–1495.
- Iyer, Sriya. 2016. "The New Economics of Religion." *Journal of Economic Literature* 54 (2): 395–441.
- Powell, Christopher, and Amarnath Amarasingam. 2017. "Atrocity and Proto-Genocide in Sri Lanka." In *Understanding Atrocities: Remembering, Representing, and Teaching Genocide*, edited by Scott W. Murray, 19–47. Calgary: University of Calgary Press.
- Sambanis, Nicholas, and Moses Shayo. 2013. "Social Identification and Ethnic Conflict." *American Political Science Review* 107 (2): 294–325.
- Sen, Amartya K. 2006. *Identity and Violence: The Illusion of Destiny*. New York, NY: W. W. Norton.
- Shannon, Claude E. 1948. "A Mathematical Theory of Communication." *The Bell System Technical Journal* 27 (3): 379–423.
- Stark, Rodney, and William Sims Bainbridge. 1985. *The Future of Religion: Secularization, Revival and Cult Formation*. Berkeley, LA: University of California Press.
- Tambiah, Stanley Jeyaraja. 1992. *Buddhism Betrayed? Religion, Politics, and Violence in Sri Lanka*. Chicago, IL: University of Chicago Press.

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