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Social networks, self-denial, and median preferences: Conformity as an evolutionary strategy

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Abstract

Attitudes of conformity can be understood as a product of adaptation. Existing models of conformity invoke preference falsification with individuals hiding their true preferences. We posit an adaptive mechanism for conformity. Because non-conformity leads to costs as a dissenting individual is shut out of social networks and majority coalitions, individuals have an incentive to sublimate their original preferences to a meta-preference for conformity. However, this adaptation is not costless. Resisting original preferences imposes self-denial costs that may exceed the benefits of conforming. Further, a conforming individual foregoes the small probability that his first-best original preferences will be realized.

JEL classification: K10; D70

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1. Introduction

The private benefits of conformity have been recognized by a number of economists. Broadly speaking, two sources of conformist behavior have been identified in the economics literature. In the work on herd-behavior, conformity is the result of economizing on information, rather than any preference for conformity *per se* (e.g., Banerjee, 1992; Bikhchandani et al., 1992). Work on conformity and social institutions stresses status concerns or the cost of social stigma as the source of conformist behavior (e.g., Bernheim, 1994; Kuran, 1995). In this line of work, individuals are assumed to falsify their underlying preferences in order to improve their standing in their social groups.

Herd-behavior and cascade models of choice provide an information-based explanation of conformism. We provide an alternative explanation of conformism that is more closely related to the preference falsification models than it is to the information models. However, we do not envision conformists as falsifying their individual preferences so much as tempering or retraining their individual preferences in order to fulfill a more deeply ingrained meta-preference or value for conformity. Given the social and political benefits that accrue to conformity, it is plausible that humans have evolved such a meta-preference for conformity and attendant mechanisms for preference modification.

Drawing on the psychological literature regarding hedonic adaptation, we present a model in which individuals adapt their effective preferences to the consensus positions of their social groups. With "preference adaptation" individuals change their inherent preferences. By modifying their tastes, individuals decrease their disutility from the consumption

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of a bad, perhaps even adapting their taste to the point of transforming a dislike into a preference for something they did not originally care for. To the contrary, with preference falsification, individuals do not change their underlying preferences but undertake actions that run counter to their preferences, inducing others to believe that they hold preferences that are consistent with the undertaken action.

In a social context, the adaptation process can be rational since conformity increases the individual's embeddedness or security in his social networks. Conforming to the prevailing preferences of the group thus generates significant benefits. Also in the political sphere, conformity yields potential benefits. Given the structural advantage enjoyed by those with median preferences, adaptive conformity increases the expected utility of political participants. While scholars advancing preference falsification theories of conformity recognize the benefits of appearing to conform, they generally ignore the psychological adaptation that can take place to mitigate the personal costs of falsification.

Work on hedonic adaptation and desensitization in the psychology literature suggests that individuals, in many situations, become accustomed to negative stimuli through repeated exposure. This adaptive mechanism allows the individual to experience subsequent exposures to the negative stimuli as affectively neutral unless the intensity of the stimuli exceeds the adaptation level. In economic terms, the process of adaptation changes inherent preferences such that the disutility arising from the consumption of a bad decreases through repeated exposure. Although not directly discussed in the hedonic adaptation literature, a reasonable extrapolation might suggest that individuals can actually modify their tastes, perhaps even adapting a dislike into a preference, through repeated consumption of a good they did not originally care for.

In general, there would be no cause to undertake this modification of preferences for an isolated individual allowed to choose freely among alternative goods corresponding to his original taste. However, if access to or enjoyment of a given social network is conditioned on exhibiting certain preferences and the costs of falsification are higher than the costs of adaptation, individuals will have an incentive to invest in preference modification. They will exhibit a taste for real (as opposed to falsified) conformity.

Self-denial and internalization of external values and norms are ways through which individuals adapt their preferences. There is likely to be heterogeneity in the ability of individuals to adapt their preferences or, put differently, individuals will differ in their self-denial and internalization costs. We can think of these differences as differences in the meta-preference for conformity. We operationalize this notion by including self-denial costs in the adaptation process. However, given the social benefits to conformity, we speculate that conformity meta-preferences are themselves subject to evolutionary selection increasing the fitness of individuals with lower self-denial costs.

In Section 2 of this paper, we review the existing economic literature on conformity, focusing on the preference falsification variant, highlighting its failure to consider the adaptive mechanisms individuals employ to conform without resorting to continual falsification. Section 3 discusses the psychological literature regarding hedonic adaptation, and Section 4 uses the insights of hedonic adaptation to suggest a preference adaptation model of conformity. Section 5 offers a discussion of how preference adaptation might be distinguished from preference falsification empirically, and Section 6 concludes.

2. Preference falsification and adaptation

Economic models of conformity, aside from those invoking information cascades and herd-behavior, suggest that individuals pretend to share the preferences and beliefs of a particular social group in order to gain some benefit and/or to avoid punishment for being different. Conforming individuals are thought to falsify their inherent preferences when they provide signals to members of the social group, acting as if their inherent preferences and the dominant preferences coincide.

In Bernheim's (1994) article, individuals are assumed to care about status and intrinsic utility. In Bernheim's signaling model, while status depends upon public perception of an individual's underlying preferences, the public cannot observe those preferences directly. Instead, the individual's actions provide information about the underlying preferences. The equilibrium in the signaling game involves apparent conformity when status is sufficiently highly valued relative to intrinsic consumption/activity values in the individual's utility function. In his framework, individuals trade-off satisfying their intrinsic preferences in order to send signals that imply they hold the preferences that are highly valued by society in order to gain status.

Bernheim justifies his assumption to include status in an individual's utility function by citing empirical evidence in the psychology literature that individuals directly value status. Also, he argues that evolutionary pressures reinforce

the tendency to value status, since more highly regarded individuals will have increased opportunities to reproduce. Social institutions may also evolve to increase the payoff to having preferences for esteem since such preferences may facilitate coordination. Bernheim's signaling game, however, does not consider the possibility that individuals might actually adapt their underlying preferences. Instead, although he does not use the term, the behavior he describes is essentially what Kuran refers to as "preference falsification," as an individual undertakes actions that diverge from his intrinsic preferences to induce others to infer that he holds the socially favored preferences.

In Kuran's work,[1] individuals face pressures to indicate their support for the dominant political positions in their society, regardless of their underlying political beliefs and preferences. Though individuals gain utility from expressing their underlying beliefs and preferences, they also face social costs if they dissent from the dominant position. If the expected costs of revealing private preferences exceed the internal benefits of being truthful, the individual will falsify his preferences. In Kuran's model, many individuals may hold similar underlying preferences that run counter to the reigning political position, but, because of wide-spread preference falsification, each may be afraid to dissent from the status quo.

Kuran uses this framework to develop a theory of unanticipated revolutions. Specifically, although a given regime might appear to command popular support, the appearance may be the result of preference falsification. Once enough individuals reveal their true preferences, individuals who had previously chosen to falsify their preferences now face lower costs of dissent. Because of this, expressed popular opinion can reverse itself relatively quickly once a spark of dissent is revealed.

Although it seems clear, both from common experience and from the case studies Kuran presents, that individuals do falsify their preferences to a degree to gain social benefits or to avoid social punishment, assuming that all underlying preferences are fixed misses the importance of adaptive mechanisms. That is, in both Bernheim and Kuran's models, falsification has a cost that is incurred each time a private preference is falsified in public. Presumably, over time, individuals might develop strategies to reduce this cost. The most direct strategy might be to modify one's original preferences to coincide with the dominant preference. Such a strategy not only lowers the disutility generated through falsification, but it also lowers the probability that the social network will discover the individual's deception. Although the idea of preference modification is largely foreign to the economics literature and may appear to be a mere semantic trick in which an individual engages in internal preference falsification or self-deception, psychologists have documented the phenomenon of preference adaptation.

3. Hedonic adaptation: developing a taste for scotch, cigarettes, and opera

Although economists often assume stable tastes and preferences (e.g., Becker and Stigler, 1977), this is clearly an assumption of convenience as opposed to one borne of realism. Throughout an individual's life, there are many changes that occur in terms of changing preferences for goods and services that are unrelated to exogenous changes in relative prices and disposable income. For instance, while many children appear to enjoy eating dirt (or, even worse, cotton candy), few retain this preference into adulthood. Similarly, there are many goods enjoyed in one's adult years that are entirely unattractive to most children, such as fine art or gourmet food.

Neoclassical economists have acknowledged the importance of preference formation and change. From an analytical standpoint, economists have considered these changes in tastes and preferences, although there is not much consensus on how to go about modeling the phenomenon. Becker and Murphy (1988) assume that past consumption activities shape our current experiences. In turn, current activities affect future choices, and change our preferences in the future through the accumulation of human capital. Other authors have introduced the concept of "multiple selves" to describe situations where individuals have competing preferences (Thaler and Shefrin, 1981). For example, an individual has one "self" who wants to smoke competing against his/her non-smoking self. Laux (2000) considers that these "multiple selves" correspond to different stages of the lifecycle and considers the role of government intervention in protecting future selves against present selves. See also the philosopher Elster (2000) on the strategies of self-binding to protect the "current self" against a "future self."

[1] Kuran (1995) incorporates earlier articles (Kuran, 1987a,b, 1989, 1990, among others) that lay out the structure and implications of preference falsification.

In these models, the preference modification is at times involuntary and in other cases intentional. One possible way to model involuntary changes in tastes and preferences is to incorporate a stochastic element to the utility function to represent exogenous changes. However, from our perspective, the potential randomness in an individual's tastes is less interesting than the teleological variation in tastes. An example of the latter can be found in Becker and Mulligan (1997) who assumed that people may intentionally invest in changing their time preference.

The present paper contributes to the literature on teleological changes in taste. In essence, we wish to examine how individuals develop tastes for goods that they do not naturally enjoy and why they undertake that development. Also, presumably, there is a symmetric process involved in abandoning some natural preferences that one wishes not to have. As indicated above, some of the most obvious preference transitions occur as one moves from childhood to adulthood, such as developing a taste for alcohol, tobacco, or culture, but there is no particular reason why preference transitions would be limited to moving between these life stages. Preferences often change within childhood and within adulthood too.

We first will address the question of how an individual changes certain preferences, and then we will speculate about possible reasons for endogenous transformations of individual preferences. The psychological literature on hedonic adaptation sheds some light on how an individual goes about developing a taste that is at odds with his initial position regarding a particular good.

Hedonic adaptation involves a reduction in the affective intensity of an adverse circumstance. The mechanisms of adaptation can be physical, behavioral, or cognitive. For example, an individual's sense of smell may adapt to repeated exposure to a foul odor by perceiving it as less intense as time goes on, decreasing the unpleasantness of being exposed to the odor or the individual may learn to direct his thoughts elsewhere to distract himself from the unpleasantness of the odor (Frederick and Loewenstein, 1999).

Reduction of the subjective intensity of a particular stimulus through hedonic adaptation can take two general forms. Shifting adaptation levels involves changing the stimulus level that is perceived as neutral, while desensitization reduces the subjective intensity generally. That is, while shifting adaptation changes the point at which the marginal effect on utility of changing the level of exposure to the stimulus is zero, desensitization lowers the magnitude of the marginal effect of exposure on utility at all exposure levels.

To operationalize this adaptation, Helson (1947, 1948, 1964) posited that individuals exhibit an adaptation level equal to the average level of exposure they have experienced with respect to a stimulus. Current utility is then a function of the difference between current exposure and the adaptation level. Others have modified the model to allow for an adaptation level that is a weighted average of past exposure, with more recent exposure levels carrying greater weight (e.g., Hardie et al., 1993).

Although empirical evidence suggests that hedonic adaptation can actually turn a negative stimulus into a positively perceived stimulus, little attention has been given to this interesting phenomenon in economic theory. In empirical studies, this effect has been observed most frequently in studies involving exposure to negatively perceived foods. Rozin and Schiller (1980) claim most adults enjoy at least one good that they found offensive at one time. Goods fitting this description include beer, coffee, chili peppers, strong spices, and tobacco. This finding implies that, for some goods at least, repeated exposure yields both adaptation and sensitization. Empirical studies finding this flipping effect include Torrence (1958), Pliner (1982), Birch and Marlin (1982), Beauchamp et al. (1983), Crandall (1984), Kahneman and Snell (1990), and Stevenson and Yeomans (1995). Each of us can think of additional anecdotal evidence of similar processes of transformation relating to food and many other areas, including evolved taste for clothing, music, and social conventions, as well.

In some contexts, changes in preferences are triggered by irreversible transformations of the external environment. A divorce or separation may trigger a new taste and appreciation for single life. Individuals that liked the rural countryside get themselves to like the lifestyle brought about by a residential or commercial development in their home village.

In other contexts, changes in preference are triggered by changes in implicit prices. Changes in these implicit prices may be generated by law, such as the case of mandatory safety precautions or prohibitions of certain behavior. When preferences adjust to reduce the disutility from undertaking the mandated behavior or the disutility from refraining from the prohibited conduct, laws play a preference-shaping role (see, for example, Bar-Gill and Fershtman, 2004; Cooter, 1998; Dau-Schmidt, 1995, 1998).

Given that individuals can change at least some of their preferences, the important theoretical question that remains to be asked is why such a change would occur. In some situations, the need to change may be exogenously placed on the individual, such as an individual who is shipwrecked on an island with only coconut milk to drink. However,

for most of the goods covered in Rozin and Schiller (1980), the change would appear to have been undertaken voluntarily.

One reason for investing in preference modification involves fitting in with a particular social group or network. That is, if social interactions and the attendant benefits of belonging to a social network are conditioned on engaging in a certain activity, such as drinking beer in a college fraternity, it may behoove an aspiring individual to develop a taste for beer.[2] Of course, as suggested by the work of Bernheim (1994) and Kuran (1995), the individual could simply pretend to like beer to reap the benefits of the social network, however the repeated costs of this preference falsification (or, similarly, the likelihood that network members will not be fooled) may make preference modification an attractive alternative.

In effect, undertaking capital expenditures to modify preferences serves as a substitute for repeated falsification. If the discounted flow of falsification costs exceeds the capital expenditure required for modification, the individual will invest in modification instead of engaging in preference falsification. Factors contributing to the relative attractiveness of modification include the efficacy of monitoring by the network members, risk-aversion on the part of the individual, and low self-denial costs relative to falsification costs.

In the political sphere, there are similar benefits to modifying one's preferences to meet those of the median voter. By doing so, an individual ensures that all collective decisions will conform to his ultimate, if not necessarily his inherent, preferences. Thus, he reduces the risk of being part of an outvoted minority that gets exploited by the winning majority in a democratic system. In contrast to the case of social networks, preference modification and preference falsification are not substitutes in the world of politics. While Kuran's (1995) examples show how individuals may falsify their preferences to avoid retribution from those who would be their political rivals absent falsification, to really derive utility from political choices, an individual's preferences must coincide (or not differ substantially) from the collective choice.

4. Rational conformity

For simplicity, assume that an individual lives for two periods. In period one, he is not a part of the dominant social network. In period two, the dominant social network observes with perfect certainty whether or not the individual likes to consume good x.[3] If he does not enjoy consuming x, the network imposes a cost on the individual such as shaming him or barring him from receiving the network's benefits.

In the trivial case, an individual with an inherent preference for x will act according to his original taste and automatically avoid censure from the group. However, the more interesting case involves the individual who naturally dislikes x but wishes to avoid group censure. If effective preferences are malleable, albeit at some cost, the individual will obviously undertake any cost of preference adaptation up to the cost of the group's punishment.

To add some realism to the problem, while retaining the two period structure, we move from all or nothing network inclusion to a situation where the sanction imposed on an individual by the network in period two is an increasing function of the distance between the network's favored value of x in period two (x_{G2}) and the individual's effective desired level of x in period two (x_{i2}). Further, the network's favored value of x is stochastic, such that $x_{G2} = x_{G1}$ with probability p and $x_{G2} = x_{i1}$ with probability $1 - p$ where x_{i1} is the exogenously determined initial preference over x for the individual. The individual has some cost function C which represents his cost of adaptation and it increases in the distance between his initial preferred level of x and his effective preference for x in period two.

If we assume that the network sanction S is proportional to the square of the differential between x_{G2} and x_{i2} and the adaptation cost is proportional to the square of the differential between the individual's inherent preference x_{i1} and his induced preference x_{i2}, the cost minimization problem is as follows:

$$\min_{x_{i2}} p \cdot S \cdot (x_{G1} - x_{i2})^2 + (1 - p) \cdot S \cdot (x_{i1} - x_{i2})^2 + C \cdot (x_{i1} - x_{i2})^2 \quad (1)$$

[2] For a more developed discussion of why groups condition membership on individuals' exhibiting certain characteristics and preferences, as well as why it is beneficial for individuals to provide evidence of satisfying the conditions of membership, see, for example, Carr and Landa (1983).

[3] Posner's (1998) work on norms and symbols in a signaling game context provides a potentially more realistic context for the network's ability to observe underlying preferences. Specifically, the network may adopt a norm or symbol that imposes a very high cost on individuals who do not share the network's preferences. In the signaling game then, the costs of preference falsification will be very high which is analytically equivalent to a network having strong monitoring capabilities.

which, assuming an interior solution, generates the following first order condition:

$$\frac{x_{i2} - x_{i1}}{x_{G1} - x_{i1}} = \frac{p \cdot S}{S + C} \tag{2}$$

The left hand side of the first order condition (2) can be interpreted as the degree to which the individual adapts his preference. That is, what fraction of the original gap between the individual's inherent preference and the group preference ($x_{G1} = x_{i1}$) will the individual choose through preference adaptation. An intuitively attractive implication of this decision rule is that the individual's degree of adaptation will decrease as his self-denial cost C increases. Further, the higher the probability that the group preference will remain stable, the greater the degree of adaptation. Lastly, for any $p > 0$, the individual's degree of adaptation is increasing in the network sanction S.

Allowing even more generality, such that the consensus preference takes the form of a continuous variable and the individual exhibits a concave utility function (as generally assumed in economics), as long as there is some inertia to consensus opinion such that significant movements between consensus preference at $t - 1$ and t are low probability, the intuitions of the previous results will still hold. Further, given the concave utility function, all things equal, individuals exhibiting greater risk-aversion will choose greater adaptation rates. That is, because of the greater certainty, they prefer the lower net payoff from adaptation to taking the gamble that group opinion will move toward their inherent preference.

Also, allowing for more generality along the group selection dimension, it is clear that the greater an individual's options outside the dominant group are, the less adaptation he will exhibit. This can be seen even in the simple model above if we interpret the group sanction variable S as the group shutting an individual out of its benefits. If another network is available, the effective cost of S is reduced, implying lower adaptation levels.

5. Distinguishing preference adaptation from preference falsification

Preference falsification, to be effective, needs to conceal true preferences and simulate adaptation. This makes preference adaptation and falsification difficult to distinguish by outside observers. This difficulty is exacerbated by the fact that in a more general model of behavior, it is likely that an individual engages in both adaptation and falsification to varying degrees.

From an empirical point of view, these difficulties may be partially overcome by looking at the durability of adapted preferences. When the preferences favored by the dominant social network change or a new network replaces the previously dominant network, an individual engaging in falsification can and has the incentive to switch his stated preferences immediately upon learning of the changed network values. There would in fact be no reason to continue to conceal true preferences if such preferences are consistent with the current network values. An individual who has actually invested in preference adaptation, however, will need to re-adapt his preferences to the newly dominant preferences.

For example, when U.S. culture switched from favoring smoking as a social activity to treating smokers as pariahs, some individuals were able to quit the habit quickly, while others had to wean themselves from smoking in order to avoid social condemnation. While one might argue that the difference arose from differential addiction propensities or heterogeneity in the value individuals derived from smoking (i.e., those deriving low benefits from smoking quit when social pressure begins to mount against smokers, while those deriving high benefits from smoking wait until the pressure increases), it could be the case that individuals who had falsified their preference for smoking changed their behavior right away, while adapters had more difficulty in changing their revealed preference.[4]

Allegiance to sports teams may be illustrative here as well. Some individuals, upon moving to a new locality quickly abandon their allegiance to their previous hometown team and embrace their new local team. Such behavior reveals some degree of preference falsification. The individual might have previously overstated his preference for the old hometown team or may overstate the preference for the new team, in either absolute or relative terms. Other individuals, instead, upon moving, find it difficult to adopt a new team even though doing so would provide benefits

[4] Chaloupka (1991) describes how men reacted to changing social pressures and negative publicity about smoking more quickly than did women. Further, he notes that women have much higher failure rates in smoking cessation programs than do men. To distinguish the differential addiction propensity claim from the falsification/adaptation claim in light of these facts, it would be necessary to show that men have lower falsification costs and or women have lower self-denial costs relative to the other sex, controlling for any differential physiological addiction propensities.

in terms of social acceptance and networking. A transition that occurs slowly, if at all, is indicative of preference adaptation.

Another illustration of preference falsification/adaptation can be found in the field of sexual preference (homosexuality/heterosexuality) and political attitudes (see, e.g., Lieberman, 1956). Attitudes towards sexuality and politics vary greatly from place to place. An individual who leaves his home town and relocates to a new environment may face high social costs if he expresses views on such topics that are against the dominant local views. Such costs can be avoided through falsification or adaptation. Someone who falsifies his preferences to be accepted in the new environment could easily and quickly switch back and express his true preferences when he goes back to his home town for the holidays. On the contrary, someone who has adapted, internalizing the values and/or political views of the new community, would find himself at odds, and possibly would be uncomfortable, with the attitudes that dominate in his home town.

To use another example that is more in line with those utilized by Kuran, consider the public discontent that normally arises when an oppressive regime gains power. Although some individuals may oppose the oppressive regime, others will try to minimize their exposure by falsifying or adapting their preferences. To be effective, preference falsification should conceal true preferences, so as to render preference falsifiers indistinguishable from preference adapters. The two types, however, will tend to react differently to a fall of the oppressive regime. When oppressive regimes fall, those who endured oppression through preference falsification will quickly embrace their newly acquired freedom. Those who had adapted their preferences will act nostalgically and purport to miss the ways of the old regime, even if they would now seem to be better off by some objective criterion. Once again, such an example demonstrates that individuals substitute between adaptation and falsification, depending upon the relative costs of each strategy.[5]

Because it is not possible to observe an individual's falsification and adaptation costs directly, it might be useful to think about which situations are more likely to generate adaptation instead of falsification. Because adaptation is effectively a capital investment, it is reasonable to expect that individuals will compare the discounted stream of falsification costs which are incurred each time falsification occurs with the investment-like fixed adaptation costs in determining their optimal strategy.

On the margin, individuals facing greater, or more frequent, scrutiny will be more likely to choose adaptation over falsification. Thus, we might expect that individuals living in a dictator's stronghold will choose adaptation, while those living in the outlying areas will opt for falsification. Similarly, those individuals with daily contact with the regime such as servants or low level bureaucrats will be more likely to engage in adaptation, as opposed to falsification, than individuals who do not work in close contact with the regime's officials. When the dictatorial regime falls then, we would expect that individuals living close to the dictator's powerbase will resist change and will be slower to embrace new freedoms or alternate institutions, while the falsifiers further out will rapidly embrace the new environment.

Further, as for any capital investment, preference adaptation will be more likely when network preferences are expected to be stable overtime. Uncertainty and instability reduce the discounted expected return of the adaptation investment and will induce more falsification. Likewise, consistency of network preferences will be more conducive to adaptation, while high variance will induce more falsification. This implies that individuals emerging from a long-lived and uncontested dictatorial regime will be slower to adapt to democratic institutions than individuals emerging from a short-lived or contested dictatorial regime.[6] Perhaps the example of Germany is illustrative of this point. According to Applebaum (2004), 1 in 5 residents of the former East Germany indicate in surveys that they wish the Berlin Wall had never fallen a full 15 years after German reunification.

The previous considerations lead to an additional corollary. Given the fact that preference adaptation makes behavior more stationary, while preference falsification can quickly allow a reversion to old preferences and behavioral habits, it is plausible that networks may develop norms or institutions to screen preference falsifiers from preference adapters. Networks may look at commitment actions of their members that could signal true adaptation.[7]

[5] Vocal dissidents may represent the case where the costs of both falsification and adaptation lead to corner solutions in which the individual simply accepts the cost of being kept out of the dominant network.

[6] Recent events in Afghanistan and Iraq may fit this pattern. Even though neither had a recent democratic tradition, movement toward democratic elections and other institutions appears to have been embraced more readily in Afghanistan than in Iraq. Although there may be additional factors such as higher levels of literacy, better physical infrastructure, a superior educational system, and a more evolved "secular" tradition to explain this reality, these findings are also consistent with the falsification versus adaptation hypothesis—the regime variance was higher in Afghanistan, where the Taliban rule was in place for less than a decade, than in Iraq, where Baath party leadership had been in place since the late 1960s.

[7] This is related to the argument presented in Posner (1998).

This would involve looking at actions that are more costly for someone who has engaged in preference falsification relative to someone who has adapted his preferences, in order to create a separating equilibrium. For example, a sports fan who paints his car in the colors of his team signals adaptation. This is because the subjective cost of driving such an odd-painted car is generally higher for someone who engages in preference falsification, rather than adaptation.

Screening of this sort may take place in several contexts. Organizations may screen members by observing behavior that signals true adaptation, such as the use of explicit permanent tattoos on visible parts of the body.[8] In a quite different context, universities and academic institutions attempt to sort out preference adapters and preference falsifiers. The identification of individuals that have truly developed a taste for academic teaching and research is indeed a fundamental ingredient of the tenure review process. Although the tenure process is ostensibly based on the assessment of academic output, such evaluations are often instrumental to the identification and selection of scholars that have fully developed a taste and appreciation of academic research.

Likewise, religious organizations may screen members on the basis of other signals of commitment, such as irreversible capital donations, and public professions of faith (Iannaccone, 1992). Similarly, committing a violent crime is easier for someone who has adapted his preferences to the culture of a criminal organization, than for someone who tries to falsify his preferences. Thus, a criminal organization may screen its members by requiring occasional acts of bloody violence (Shakur, 1993, pp. 8–13). A hierarchical dictatorial regime may screen its subordinates by occasionally requiring the execution of unreasonable orders, and so on.

6. Conclusion: the evolving taste for conformity

In this paper we suggest that human attitudes of conformism can be understood as the product of human adaptation. In an attempt to maximize their chances of success and payoffs from social interactions, humans tend to follow strategies of preference falsification or preference adaptation. We develop a model of endogenous preferences and self-conviction to show the conditions under which strategies of conformity are likely to dominate.

Unlike preference falsification, preference adaptation and conformity impose self-denial costs. By adapting their preferences through self-denial, individuals reduce the utility loss that may derive from collective decisions that do not correspond to their ex ante preferences. Likewise, self-denial allows conformist individuals to receive higher utility payoffs from outcomes that are dictated by external circumstances. Adapting their preferences, individuals reduce the disutility of complying with exogenous social norms or legal constraints and similarly reduce the risk of being subjected to hostile political outcomes dictated by a winning majority coalition.

The comparative statics of our model show that an individual's degree of preference adaptation will decrease as self-denial costs increase. Since in most circumstances individuals that have more malleable preferences enjoy an advantage over those who resist change, this leads us to formulate a hypothesis according to which meta-preferences for conformity might have an evolutionary explanation, with cultural evolution and group selection leading to a reduction in self-denial costs.

Self-denial imposes a present cost for the expectation of a future benefit. Stable group preference thus foster higher levels of adaptation, since any stability ensures that adaptation costs not go wasted as a result of subsequent shifts in opinion mode or changes in the exogenous constraints.

Further, uncertainty and individual risk-aversion may affect the choice of conformity. By endogenously adapting one's preferences, conformist individuals increase the probability of satisfaction but forego the ideal first best. When individuals do not adapt their preferences, they remain faithful to their original preferences and pursue their first-best levels of satisfaction, which however will be achieved with lower probability, rather than adapting their preference to reach a lower but more reachable net level of utility. In the face of such probability-magnitude trade-off, conformity may be a dominant choice for some individuals but not for others, according to their levels of risk-aversion. Our model of endogenous preference formation would thus suggest that, ceteris paribus, risk-aversion should be positively correlated with strategies of conformity and self-denial.

Lastly, conformity is deemed to increase with the magnitude of the network sanction. Individuals that live in communities with low exit (or entry) costs will face lower incentives to undertake self-denial and adaptation strategies.

[8] College fraternities, for example, often require tattoos or even branding of their members. See, for example, Oberman (2004).

Mobility of an individual from one community to another that more closely approximates his original set of preferences likewise reduces the benefits of preference adaptation and conformity.

If other networks are available, the effective social cost of non-conforming preferences is reduced, implying lower adaptation levels. Individuals with greater outside opportunities will thus exhibit less adaptation.

Future extensions should consider variants of our model, where initial preference falsification may reduce the cost of adaptation. It is indeed possible that a person that initially conceals his true beliefs may end up believing in the reasons he falsely embraced. Thus, falsification may actually be a stepping stone towards preference modification. These extensions could include the possibility of choosing intermediate forms of falsification/adaptation and to allow gradual shifts from falsification to adaptation overtime.

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