

Chapter 11

Authoritarianism, Religiousness, and Conservatism: Is “Obedience to Authority” the Explanation for Their Clustering, Universality and Evolution?

Thomas J. Bouchard, Jr.

Abstract Authoritarianism, Religiousness and Conservatism are among the most studied social attitudes in modern psychology. Measures of the three attitudes consistently correlate between 0.50 and 0.70. These strong correlations suggest that they form a higher order factor that I call Traditionalism. I review evidence that supports the idea of such a higher order factor distinct from other attitude factors and comparable higher order personality traits. I propose that an underlying cause of Traditionalism is the disposition to obey authority and more broadly to respond positively to symbols of authority. Contemporary research shows that variance in this trait is due to genetic factors and not due to patterns of childrearing. There is suggestive evidence that this trait facilitates reproductive fitness, but the evidence is very indirect and appropriately designed studies are needed to answer the question. The predisposition to obey authority is consistent with constructs in two other major evolutionary theories: Haidt’s theory of the evolution of moral intuition and Simon’s theory of “docility.” I further argue that while obedience to religious authorities can be seen as a form of exploitation, and may well be in some cases, the disposition to obey authority probably evolved in the context of reciprocity.

11.1 The Structure of Social Attitudes

Three major dimensions of attitudes and beliefs typically studied by psychologists are Authoritarianism, Religiousness and Conservatism. Various measures of these constructs correlate between 0.50 and 0.70. These correlations are sufficiently high to suggest a higher order factor with a common underlying cause. The most comprehensive study of this topic is that of Saucier (2000) whose findings illustrate the trends found in the psychological literature. Saucier gathered 266 -isms from the dictionary and wrote items based on their definitions (some -isms generated more

T.J. Bouchard, Jr. (✉)

Psychology Department, University of Minnesota, Minneapolis, MN 55455, USA
e-mail: Bouch001@umn.edu

than one item). Four hundred items were presented to a college student population ($N=500$). The data were subjected to a variety of factor analytic procedures. He presented data for both a three- and four-factor solution and a selection of the -isms that best characterize the three factors psychologically. A selection of these -isms and their loadings (correlations with) on the factors are shown in Table 11.1.

Saucier does not label the factors, except with Greek letters, so I have taken the liberty of naming them. I call the first factor Traditionalism, the second factor Materialistic Hedonism, and the third factor Liberal/Spiritual. The third factor in the three-factor solution divides into Liberalism and Spiritualism factors in a four-factor solution and they are also shown in Table 11.1. The first factor, Traditionalism, is a bi-polar factor and it clearly highlights the fundamental conflict between secular humanism and revelation.

I will not discuss Materialistic Hedonism. The Liberalism/Spiritual factor, however, deserves brief discussion. It is widely believed that spiritual and religious mean much the same thing and the two concepts are very often conflated. The psychometric evidence strongly supports two rather distinct constructs, at least in the populations studied by psychologists (Saucier and Skrzypinska 2006). The philosopher Stace in his book on *Mysticism and Philosophy* (Stace 1960) comes to a similar conclusion on the basis of the examination of a quite different literature.

Saucier carried out a replication study using a smaller set of representative items and gathered additional attitude and personality measures. The sample was again made up of college students. He included additional social attitude and personality measures in order to see if he could demonstrate discriminant validity. That is, show that not all attitudes simply correlate highly with each other or that they could be explained by well-known personality traits. This validity information for his factors is shown in Table 11.2.

The first finding to notice is the very tight cluster formed by Religiousness, Right-Wing Authoritarianism (RWA) and Conservatism. The Religiousness measure is a composite of two adjectives (*religious* and *nonreligious*) rated on a nine-point scale. The RWA scale is that of Altemeyer (1996, 1988, 1981) and is considered by many to be the best measure of the Authoritarianism construct put forward in the book, *The Authoritarian Personality* (Adorno et al. 1950). The Conservatism measure is a variant of the widely used Wilson-Patterson Conservatism scale (C) (Wilson 1973). The Social Dominance Orientation measure (SDO) is from Pratto (Pratto et al. 1994). The Machiavellian (Mach) scale is from Christie (Christie and Geis 1970). SDO is sometimes called “the other authoritarianism” and treated as a measure of political conservatism (Jost et al. 2003). This data suggests that while SDO correlates very modestly with RWA it does not correlate with Religiousness or with Conservatism. The Mach scale correlates only very modestly with the other four measures. It is clear that Social Dominance Orientation and Machiavellianism are not part of the cluster. In addition to forming a tight cluster Religiousness, RWA,, and Conservatism correlate very highly with Traditionalism. Saucier, concludes that “as in previous studies, Religiousness, Conservatism, and Authoritarianism form a mutually correlating cluster. . .” (p. 375).

Table 11.1 Three and four factor solutions for items written to represent the 266 philosophical -isms found in The American Heritage Dictionary (-isms are used to represent items). The third factor divides into factors four and five

Traditionalism	Factors and loadings							
	Materialistic Hedonism	Liberal/Spiritual	Liberalism	Spiritualism				
Ecclesiasticism	0.79	0.61	Liberalism	0.61	Liberalism	0.55	Hinduism	0.54
Pietism	0.75	0.56	Environmentalism	0.55	Individualism	0.53	Bergsonism	0.46
Creationism	0.75	0.54	Individualism	0.54	Humanism	0.48	Transcendentalism	0.44
Religionism	0.69	0.53	Existentialism	0.48	Constitutionalism	0.48	Asceticism	0.41
Salvationism	0.68	0.53	Humanism	0.46	Environmentalism	0.44	Spinozism	0.40
Institutionalism	0.68	0.52	Meliorism	0.45	Intellectualism	0.44	Neoplatonism	0.38
Monotheism	0.64	0.52	Intellectualism	0.43	Hedonism	0.41	Taoism	0.38
Legalism	0.62	0.52	Patriotism	0.40	Utilitarianism	0.40	Zen Buddhism	0.37
Traditionalism	0.57	0.46	Hedonism	0.38	Meliorism	0.40	Animism	0.36
Secularism	-0.52	0.45	Zen Buddhism	0.38	Functionalism	0.39	Totemism	0.36
Evolutionism	-0.57	0.43	Constitutionalism	0.37	Credentialism	0.36	Pacifism	0.35
Atheism	-0.58	0.42	Pacifism	0.35	Holism	0.36	Spiritualism	0.33
Humanitarianism	-0.58	0.42	Realism	0.35	Moralism	0.36	Spiritualism	0.33
Secular Humanism	-0.63	0.41	Antisemitism	-0.35	Physicalism	0.32	Agrarianism	0.31

Table 11.2 Correlations between Saucier's attitude measures and independent measures of attitudes and personality

	Attitude measures				Personality mini-markers						
	Religiousness	RWA	Conservatism	SDO	MACH-IV Total Score	Extra-version	Agreeableness	Conscientiousness	Emotional/ Stability	Intellect/ Imagination	Nine-Item openness
Right-Wing Authoritarianism (RWA)	0.51	-	-	-	-	-	-	-	-	-	-
Conservatism	0.59	0.77	-	-	-	-	-	-	-	-	-
Social Dominance Orientation	-0.04	0.22	0.09	-	-	-	-	-	-	-	-
Machiavellianism (MACH)	-0.28	-0.21	-0.31	0.21	-	-	-	-	-	-	-
Traditionalism	0.69	0.74	0.76	0.05	-0.27	0.03	0.17	0.05	0.02	-0.17	-0.31
Materialism	-0.23	-0.01	-0.16	0.29	0.40	-0.12	-0.19	-0.07	-0.15	-0.16	-0.21
Liberal/Spiritual	-0.14	-0.29	-0.21	-0.21	-0.11	0.06	0.19	0.05	0.03	0.11	0.47
Liberalism	-0.10	-0.13	-0.16	-0.08	-0.13	0.04	0.18	0.15	0.10	0.08	0.28
Spiritualism	-0.07	-0.24	-0.16	-0.19	0.06	0.02	0.06	-0.15	-0.15	0.00	0.34

Note: N = 303. Factor scores are regression estimates. Coefficients of at least 0.25 in magnitude are printed in boldface type. All data from Saucier (2000, Tables 4 and 5).

The personality mini-markers consist of 40 adjectives (eight items for each factor) and nine items selected especially to measure Openness. The negative correlation between Traditionalism and Openness replicates a widely known finding. The point of this part of the table is to illustrate the fact that social attitudes are at best only modestly correlated with the major higher order personality traits. Social attitude measures and personality measures constitute distinct domains.

11.2 The Traditional Moral Values Triad

I have called the Religiousness, Authoritarianism, and Conservatism cluster the Traditional Moral Values Triad (TMVT) (Koenig and Bouchard 2006). Figure 11.1 shows how I conceptualize the TMVT.

As humans evolved into social animals and achieved high levels of intellect requiring long periods of parental care they had to solve the fundamental problem of how to relate to each other in families as well as others in the local kin group.

I, among others (Bouchard et al. 1996), have argued that “autopredation” was one of the selective forces that led to the large increase in intelligence in our species. As Finn and Alexander (2007) have pointed out, social selection of this sort can “runaway” and depends on a species having achieved “ecological dominance.”

Numerous adaptations came into being during this period (extended parental care, pair bonding, skeletal changes that allowed the birth of babies with larger brains, etc.). The adaptation I would like to focus one here is the mechanism or propensity toward “obedience to authority” I argue that it answers three questions faced by a child in a complex social context. These questions are: “Who is in charge?” “What does he/she want?” “What do I do?” With regard to families and the local kin group “the authority” is a concrete agent. It is easy to see how such a mechanism can be generalized to the adult problem of explaining ones relation to the physical universe. The agent or agents in charge is/are less visible and palpable, but as Boyer (2001) has shown human agency detectors are a plausible mechanism for justifying the existence of Gods. I develop a more detailed rationale for the evolution of “obedience to authority” below.

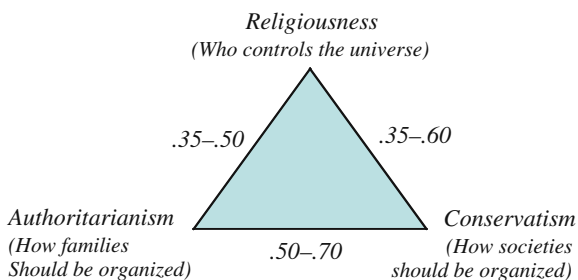


Fig. 11.1 The Traditional Moral Values Triad

The standard measures of the three traits all confound aspects of each other as they contain overlapping item content. Consequently, it has not been clear to what extent they correlate because they share items or because they assess the same underlying construct. Saucier's work, cited above, strongly supports the idea that the correlations are not due solely to item overlap. My choice of the term Traditionalism to characterize the higher order factor is not an accident as my colleague Auke Tellegen worked on this question for a number of years as he developed the Multidimensional Personality Questionnaire (MPQ) (Tellegen and Waller in press). The MPQ is a carefully developed and well regarded personality assessment instrument. It contains a scale called Traditionalism. During the course of development of the MPQ Traditionalism scale Tellegen found that the items sample seven facets of behavior: advocates high moral standards, condemns selfishness, endorses religion, endorses strict child rearing, has positive regard for parents, opposes permissiveness, and values propriety. Because the focus was on behavior in the personality domain none of the item content of the MPQ Traditionalism scale deals with orientation towards governmental/social institutions. I have factored the MPQ scales and the Traditionalism scale is the only one of the 11 that can be factored into parts – religious/moral items and family items. Consequently two of the three domains in the TMVT (religion and family) are clearly represented.

If we look at the items of Altemeyer's RWA scale we see that it covers much the same ground, except that it contains numerous items dealing with patriotism/law and order and thus contains items that focus on how societies should be organized. A common psychometric complaint against the RWA scale is that the statements are complex and confound important distinctions. An example is, "It is always best to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds." This is a classic "double-barreled statement" that confounds government and religious authorities. Nevertheless, it captures the core idea underlying the construct of Traditionalism, namely Obedience/Rule Following/Law and Order.

The Wilson-Patterson Conservatism scale utilizes what is called the "catch phrase" method. Single items are presented and the respondent is asked to choose to indicate agreement or disagreement by choosing "Yes," "No," or "?" Sample items are Death Penalty, X-rated movies, Foreign aid, Federal Housing, Abortion, Immigration, Divorce, etc. Many of the items deal with policy issues that are under the control of local, state, or federal governments and address activities deemed "moral" or "immoral" by their proponents. My interpretation is that a conservative score indicates a strong preference for authoritative rules that must be obeyed, with obedience being enforced by the proper authorities.

11.3 Causal Analysis of Social Attitudes

It is worth noting that initial work on Authoritarianism (using the Fascism or F-scale) was psychoanalytically based and focused extensively on socialization

(childrearing) as a cause of the specific development of this trait. The childrearing practices of low socio-economic status (SES) families were the culprit. As Scarr has put it,

The standard explanation of these results was that socioeconomic factors determined life experiences that lead to higher authoritarianism, lower IQ scores, and lower education levels. The implicit causal model led from social status to the other three variables. (Scarr 1981, p. 400).

The typical research design that led to this conclusion involved administering a child-rearing inventory to parents and correlating the scores with offspring F-scale scores. An example of how this data has been interpreted can be found in Eckhardt (1991). At the end of a review of the broad construct of authoritarianism he concludes,

This conservative pattern seems to be a function of rigid and restrictive childhood training, reinforced by similar disciplines in churches, schools, factories, offices, etc. (Eckhardt, p. 108)

This interpretation assumes a correlation is an index of causation. The causal confound here has been known to social scientists since the work of Galton (1865). This simple design does not discriminate between two sources of influence. Parents pass on genes that may influence behavior, as well as provide an environment that includes child-rearing practices. The extent to which each contributes to the development of a disposition such as Authoritarianism is an empirical question. This problem has not gone away. The interpretation of correlations gathered from biological families and interpreted as causal is almost as prevalent today (Johnson et al. submitted; Keller and Whiston 2008).

The evidence in support of such a causal pattern for the TMVT is very weak at best (McCourt et al 1999). In addition there is now a large body of evidence demonstrating considerable genetic influence on all three members of the TMVT (Bouchard et al. 2004; Alford et al. 2005; Bouchard et al. 2003). The role of childhood training as an important source of variation on the Traditional Moral Values Triad, independent of genetic influence remains to be demonstrated.

11.4 Assortative Mating for Attitudes and Beliefs – Selection Versus Homogamy

An interesting and biologically important feature of the TMVT, relative to personality variables, is their high level of assortative mating. Some representative examples are shown in Table 11.3, where they are compared to personality and other contrast variables.

Right-Wing Authoritarianism, Religiousness and Conservatism yield correlations in the range of 0.50–0.60. In contrast the personality correlations are much more modest. Assortative mating for a genetically influenced trait increases the total genetic variance in the population for that trait relative to a random mating popula-

Table 11.3 Representative assortative mating coefficients for the traditional moral values triad, personality traits, and some contrast variables

Variable	Correlation	Sample size
Authoritarianism		
Right-Wing Authoritarianism, McCourt 1999	0.62	79
Traditionalism, Lykken and Tellegen 1993	0.48	269
Weighted mean	0.51	–
Religiousness		
Waller et al. (1990)	0.56	53
Feng and Baker (1994)	0.62	305
Sutton (1993)	0.55	222
Watson et al. (2004) (Newly wed couples)	0.63	276
Botwin et al. (1997) (Newly wed couples)	0.60	107
Weighted mean	0.60	–
Conservatism		
Bouchard et al. (2003)	0.60	93
Feather (1978)	0.68	103
Eaves (1999)	0.62	4,692
Feng and Baker (1994)	0.54	301
Watson et al. (2004) (Newly wed couples)	0.75	276
Botwin et al. (1997) (Newly wed couples)	0.49	107
Weighted mean	0.62	–
Personality		
Mean of ten MPQ Scales (Traditionalism omitted)	0.08	269
Mean of four Eysenck Personality Questionnaire scales	0.10	4,815
Mean of Big-Five (Newly weds)	–0.03	276
Meta-analysis of Eysenck scales, 1989	0.12	889
Weighted mean	0.10	–
Contrast variables		
Age	0.77	–
Years of education	0.56	–
IQ	0.33	–

tion. The one large study with sufficient power to estimate this parameter for a member of the TMVT suggests that between 12 and 22% of the variance in Conservatism (W–P scale) is due to assortment (Eaves et al. 1999). These correlations are higher than one would expect from simply being matched at random within one's everyday social environment, such as church group, educational peers, or neighborhood (social homogamy or propinquity). IQ similarity of spouses, about 0.30–0.40, on the other hand appears to be explicable to a considerable degree by social homogamy (Tambis et al. 1993). For attitudes and beliefs it seems likely there is some direct selection. In a study of a newly wed sample by Watson et al. (2004), correction for education and age did decrease the correlation for IQ, indicating social homogamy, but it did not decrease the correlation for Religiousness or Conservatism. The correlations for newlyweds do not differ from those found in other samples, which are largely made up of couples married for various durations. Consequently, convergence with time is not a likely explanation of the overall findings, a con-

clusion consistent with analyses conducted by Watson (Watson et al. 2004). Eaves (Eaves et al. 1999) argue that

We still do not understand the adaptive significance of assortment for social attitudes in contrast to the essentially random mating we see persistently for personality (p. 78).

I suggest the hypothesis that positive assortative mating for the TMVT is related to reproductive fitness, with couple high on all three variables having earlier marriages of longer duration and producing more offspring than couples less well matched on the TMVT.

11.5 Reproductive Fitness

I find it remarkable that few evolutionary psychologists who discuss the evolution of religion refer to its fitness consequences. They seldom even bother to collect relevant data. In my opinion this is because of an over-commitment to the view that humans are “adaptation executers” (reverse engineering approach) as opposed to “fitness maximizers” (derisively called “baby making”). While the distinction is important and has been productive, it seems to me that ignoring fitness completely in favor of a theoretical construct – strong modularity – particularly at this stage of research is a mistake (cf. Panksepp and Panksepp 2000). As Mulder (2007) has argued the two approaches are not in opposition and each approach can throw light on important questions. As Eaves and his colleagues have pointed out,

The dearth of empirical data relating difference in human behavior to variation in fitness is a significant “missing link” between our genetic analyses of human behavior and the theories of sociobiology (Eaves et al. 1990, p. 564).

The provocative article by Penke et al. (2007) and the commentaries on it illustrate the fact that integrating quantitative behavior genetics and the modularity approach to evolutionary psychology will be a very difficult enterprise.

In any event there seems to be little doubt that, at the current time, some religious groups are clearly out reproducing secular groups. Blume (this volume) presents relevant data from the Swiss Census 2000. Hout et al. (2001) provide data for the United States. According to them,

Evidence from the General Social Survey indicates that higher fertility and earlier childbearing among women from conservative denominations explains 76% of the observed trend for cohorts from between 1903 and 1973; conservative denominations have grown their own. (p. 458)

This author argues that

The explanation for the changing shape of U.S. Protestantism is, therefore demographic, not ideological. The sociology of religion has long known that the surest source of new members for any denomination is the children of today’s membership (Greeley 1969).

I have little doubt that this explanation is in part correct, but their exclusion of ideology (social attitudes) is illogical. The question remains: What drives the socialization process and what drives fertility and earlier childbearing? Fertility is

heritable (Rodgers et al. 2001, 2000; Kirk et al. 2001) and, as argued previously, so are the relevant social attitudes. The TMVT may be linked environmentally and/or genetically. Work on this question is currently underway. Longitudinal twin data on the reproductive fitness correlate with social attitudes, which would allow the disentanglement of direction of causation (do children cause conservatism or does conservatism cause children?), would be extremely informative. Of course the results presented in this chapter and any longitudinal findings may be specific to the modern environment in which the populations studied now develop. As Blume (this volume) has suggested, “The reproductive relevance of religiosity may seldom have had a weight comparable to today and the cultural reawakening of religiosity may have just begun.” Nevertheless, to the degree fitness is significantly related to the TMVT, it will influence the evolution of the relevant populations. There is increasing evidence of recent Darwinian selection in human populations, some of it related to behavioral traits (Wang et al. 2007; Hawks et al. 2007).

11.6 Innate Intuitions and Moral Psychology

In spite of my label, “The Traditional Moral Triad,” I have said very little about “moral psychology” to this point, but it is worth pointing out that most of the ideas about Traditionalism that I have presented are consistent with an important facet of Haidt’s theory of the evolution of moral intuition. He suggests there are five foundations of moral intuition upon which human cultures construct their moral communities, each with a separate evolutionary origin. They are “harm,” “fairness,” “ingroup–outgroup dynamics and the importance of loyalty,” “intuitions about bodily and spiritual purity and the importance of living in a sanctified rather than a carnal way,” and “intuitions about authority and the importance of respect and obedience” (Haidt and Joseph 2007; Haidt 2007). It has not escaped my attention that Saucier’s Liberalism factor incorporates the concepts of “harm” and “fairness,” whereas the Materialistic Hedonism factor incorporates the concepts of a carnal way of life and ingroup–outgroup dynamics (Ethnocentrism, Racism). In the Saucier study Spirituality appears to be a different factor than the bodily and spiritual purity construct in Haidt’s scheme. The conceptual pie is being split in slightly different ways by the two methods of study, but much of the same content is apparent. More importantly both agree on the importance of a construct that involves “obedience to authority,”

11.7 Docility and the Evolution of “Obedience to Authority”

As my characterization of the TMVT makes clear the fundamental issue is how human beings, during their evolution, have dealt with three questions: “Who is in charge?” “What does he/she want?” “What do I do?” A part of the answer is the evolution of (selection for) a disposition to obey authority. Once humans evolved into social animals with a modicum of intellect these questions applied to the physical

world (universe), the family, the local kin group, and in recent evolutionary time the nation state.

The answer to the question, “Who is in charge?” when applied to the universe was (is) supernatural beliefs, often a God or Gods, interpreted in a myriad of ways but generally as an agent or agents who exist in a world beyond the visible and palpable. In my view this was a rationale interpretation given the knowledge base and intellectual tools available. Indeed for a long period of time, my favorite entities, genes, were causal agents who existed in a world beyond the visible and palpable. Latent underlying constructs are common in science. The answer for the family was the parents and/or responsible adult kin; and the answer for the tribe was the “chief,” “warlord,” or adult tribal elders.

The answer to the question, “What does/do the agent (s) want?” is straightforward – obedience. The capacity to obey, which may entail a process as simple as following, as in imprinting in lower organisms, has enormous survival value for any immature organism. The process can be mediated through olfaction, visual signaling, or as in human by additional mechanisms. Simon (1990) has argued for a “docility mechanism” and has linked it to the spread of altruism. Here I only discuss the docility construct, but the altruism construct is also of considerable importance:

We will use the term “docile” (in its dictionary meaning of “disposed to be taught”) to describe persons who are adept at social learning, who accept well the instruction society provides them. Individuals differ in degree of docility, and these differences may derive partly from genetic differences. There are differences in intelligence (cognitive ability to absorb what is taught) and in motivation (propensity to accept or reject instruction, advice, persuasion, or commands).

Docile persons tend to learn and believe what they perceive others in the society want them to learn and believe. Thus the content of what is learned will not be fully screened for its contribution to personal fitness. This tendency derives from the difficulty – often an impossibility – for individuals to evaluate beliefs for the potential positive or negative contributions to fitness. For example, many of us believe that less cholesterol would be beneficial to our health without reviewing (or even being competent to review) the medical evidence. Hundreds of millions of people believe that behaving in a socially acceptable way will enhance the probability of enjoying blissful immortality.

Belief in large numbers of facts and propositions that we have not had the opportunity or ability to evaluate independently is basic to the human condition, a simple corollary of the boundedness of human rationality in the face of a complex world. We avoid most hot stoves without ever having touched them. Most of our skills and knowledge, we learned from other (or from books); we did not discover or invent them. The contribution of docility to fitness is enormous. (Simon 1990, p. 1666)

Except for the assumption that individuals may actually “evaluate beliefs for the potential positive or negative contributions to fitness” (they generally do not) I largely agree with Simon. I also prefer his reasoning to that of his competitors with regard to this issue (Cavalli-Sforza et al. 1982; Cavalli-Sforza and Feldman 1981; Henrich and Boyd 1998) largely because of their aversion for the evidence supporting the idea that social attitudes (actually virtually all behavioral traits) are to a considerable degree under genetic influence (Martin et al. 1986; Bouchard 2004). Rather than emphasize social learning as Simon does, I would emphasize the features of the second definition of “docility” given by the Oxford English Dictionary – Amenability to training or treatment; submissiveness to management; tractabil-

ity; obedience – as, in my view, it describes the behavior of extreme traditionalist and gets at the core construct – submissiveness and obedience to authority – somewhat better than does Simon’s definition. Nevertheless, most of the synonyms for “docile” in Roget’s II: The New Thesaurus meets my needs. The first two, meek and mild, are defined as “easily managed or handled.” The next five, compliant, submissive, biddable, tractable, and obedient, are defined as “Willing to carry out the wishes or others.” Because of our “bounded rationality” broad social attitudes serve as “satisficing heuristics” – procedures for arriving at a decision but not necessarily infallible.

The propensity to obey in human children is undoubtedly an adaptation. A brief walk through the cliff dwellings of the American Southwest will quickly convince one of that simple fact. It is unlikely that most of the environments in which humans evolved were much safer. What about obedience in adults? Obedience of course has its limits, but these limits appear to be incredibly wide. Stanley Milgram (1974) in his work on obedience showed how wide it is in ordinary people. Baring evidence in favor of kin selection suicide bombers go beyond the limits of the Darwinian imperative and some appear to be prepared to kill off entire civilizations. How much wider can it be? Since it is now pretty well agreed that suicide bombers have been with us for a long time and they cannot be explained away as being mentally ill, deranged, etc. (Charlesworth 2003; Atran 2003), the mechanism underlying this behavior must be extremely powerful. Obedience indeed often appears to lead individuals, paradoxically, to behave in ways that are contrary to their own interests.

A highly provocative theoretical explanation of this paradox (if it is a paradox) is that of Voland and Voland (1995) who argue that conscience in children and by extension in adults has evolved as an extended phenotype of the parental “selfish gene.” Consequently, obedience on the part of offspring, while sometimes generating a fitness disadvantage, is advantageous to the parents. From this point of view suicide bombers can be considered “true altruists,” following their conscience and sacrificing their genes in the service of a broader cause. As Voland and Voland put it,

The lifetime fitness of the altruist who is guided by his/her conscience and who acts ethically is negative, but not so for this altruist’s manipulative parents, and therefore the genetic basis for the formation of a conscience was able to spread in the population. (p. 406)

There is, of course, no reason why two modes of selection could not be at work shaping the same underlying trait. Indeed, Milgram’s obedience studies and related work on indoctrinability (Eibl-Eibesfeldt 1998) converge on the conclusion that the propensity to obey authority taps biological mechanisms comparable to imprinting: “Humans follow a flag like an experimentally imprinted duckling, a ball” (Eibl-Eibesfeldt 1998, p. 38).

Given the discussion above, I find the argument that religiousness might be a spandrel or exaptation (Pinker 2006) difficult to digest and it certainly is not my first choice. Bulbulia (2007) has also taken a stance against the spandrel interpretation of religion on grounds that complement the arguments made here. Pinker (2006) has rephrased the question, “Why is religious belief so pervasive?” as “Who benefits?” His answer is the religion and its agents (Priests, Mullahs, Popes, Ministers, etc.). I

recognize that Pinker was explaining religion and I am attempting to explain obedience to authority, but I don't think there is an enormous difference in this instance and I would like to expand the scope of the argument.

First, accept the argument that there is a wide range of general cognitive ability (intelligence) in any human population and this has probably been true for a very long time. Second, assume it was likely that until fairly recently most individuals had minimal opportunity to develop their intellectual skills to their full extent. Under these circumstances we can ask: who were those few members of the population that did get a chance to develop their intellectual skills? They were the head of the tribe, the religious leaders, and the elders or "wise men." Of course it was in their interest of these individuals to manipulate their "followers" – they needed to eat also. But was this exploitation or reciprocity? Those in charge had "knowledge," fragile as it might have been, but still a valuable commodity, and it was in their interest to provide it, as their followers required, else of what value was it.

Vincent Sarich (1993) has elaborated on this point.

We have been interactively social for at least 40 million years, and interactive sociality only works to the extent that individuals within the social group practice voluntary reciprocal exchange, which means that the other individual in any social relationship is going to have to be able to do something for you better than you can for yourself. Otherwise the exchange, and therefore the social relationship, would have no reason for being, and interactive sociality would never have evolved. Clearly that selects for variation, insuring strong individuality.

11.8 Conclusion

"Obedience to authority" is a mechanism that explains, to a considerable degree, the correlation repeatedly found between three major attitudinal constructs – Authoritarianism, Religiousness and Conservatism – that I call the Traditional Moral Values Triad. I call the super-factor that dominates these three constructs Traditionalism. Traditionalism is largely independent of other attitudinal and personality constructs, is influenced to a very significant degree by genes, and appears to influence mate choice more directly and to a much greater degree than personality variables. It may well underlie, to some extent, reproductive fitness in a number of modern populations. The idea that there is a "propensity to obey authority" is entirely consistent with other important theories about the evolution of human sociality and morality, namely Haidt's theory of moral intuitions and Simon's theory of docility and it enlarges the range of phenomena which those theories purport to explain.

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