

SUGGESTIONS OF THE POSTMODERN SELF: VALUE CHANGES IN AMERICAN HIGH SCHOOL STUDENTS, 1976–1996

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ABSTRACT: *Following Allen and Turner's suggestion "to bring data to bear on the claims of postmodern theory," this article evaluates one aspect of Kenneth Gergen's theory of social saturation. In The Saturated Self, Gergen proposes that the postmodern self can be seen in the increase in the number and diversity of values that individuals hold to be important. This "populating of the self" also leads to an abandonment of modernist ideas about truth and absolute knowledge. Using data from a nationally representative sample of American high school seniors, I test Gergen's theory about change in the values of individuals. Between 1976 and 1996 the importance of most values in the survey has increased, with only one of the fourteen values (finding meaning in life) declining in importance. These results support Gergen's theory of social saturation and provide an example of an empirical evaluation of a postmodern theory.*

Kenneth Allan and Jonathan H. Turner (2000) argued that if we are to evaluate the often controversial claims of postmodern theory, then we must find ways to "translate" the theoretical statements of postmodernists into testable hypotheses. Although their attempt was greeted with some skepticism (Lemert 2000), the basic premise that postmodern theory may be amenable to some forms of traditional positivist thinking is at least plausible. It is the goal of this article to follow Allan and Turner's call to "bring data to bear on the claims of postmodern theory" (p. 364) and by doing so, evaluate one claim about the changing self in the postmodern world.

Since the 1970s there has been extensive discussion about whether fundamental changes in the everyday lives of individuals are leading to the development of a "postmodern" social world. Some social theorists claim that Western society has made a distinct break from the modernity that characterized most of the twentieth century (Baudrillard [1976] 1993; Lyotard [1979] 1984). Others have proposed that the transition from the modern to the postmodern is a more gradual process, in

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which elements of both exist together (e.g., Jameson 1991). Yet other theorists have argued that there is no new social order at all, and that theories of postmodernity are essentially the latest version of the emperor's new clothes (e.g., Giddens 1990).

Many of these theories of postmodernism, particularly the less radical versions, associate this new cultural order with the continued development of capitalism and the ongoing technological revolution that it has fostered over the past two centuries. Jameson (1991:46) describes postmodernism as "the cultural dominant of the logic of late capitalism," the stage of capitalist production in which all items are subject to the logic of the market. Similarly, Best and Kellner (1997:13) state that "the postmodern turn is intimately bound up with globalization and the vicissitudes of transnational capitalism." Therefore, if postmodernism is the new manifestation of the social world, it is most likely to be taking hold in advanced capitalist areas, such as the United States and western Europe.¹

As Allan and Turner identify, one shortcoming in the debates over the extent of the postmodern shift is that there has been a significant gap between theory and research on the subject of postmodernity. It should be no surprise that in an area that contains so many diverse ideas about the topic of analysis, the many theories about postmodernism vary greatly in their suitability for evaluation using traditional social scientific tools. "Radical" postmodernists, such as Lyotard and Baudrillard, would most likely reject the idea of measuring postmodernity and its effects (as does Lemert [2000], responding to Allen and Turner). However, members of the middle ground of postmodern theorizing and the proponents of the continuation of modernity theory are more likely to accept the idea that we can empirically assess the alleged progress of postmodernity into the lives of individuals.

One theory about postmodernism that may be subjected to empirical examination is Kenneth Gergen's (1991) "saturation theory." Gergen proposes that technological advances have exposed individuals to a broader set of cultures and values, that has in turn led to the development of the "postmodern self" in the late twentieth century.² However, Gergen's theory has not been evaluated empirically to date and remains largely unknown to sociologists. This article reviews Gergen's theory of the "saturated self" and tests the claim that individuals are increasingly characterized by a postmodern "multiplicity of self-investments" and an abandonment of the concept of universal, modernist truths.

THE SATURATED SELF: GERGEN'S POSTMODERN THEORY OF VALUE CHANGE

Although Gergen is primarily known as a psychological social psychologist, *The Saturated Self* (1991) is of great potential influence in many areas of sociology. Gergen's theory of social saturation incorporates aspects of role theory, postmodernism, symbolic interaction, and theories of the self. The central question is the classical sociological issue of the relationship between society and the individual, specifically, how communication technologies that facilitate relationships affect the individual's construction and perception of self.

Gergen's main conclusion is that contemporary change in Western societies has led to the "saturation" of the individual, who has been exposed to an increasing

number of social inputs as a result of the rapid development of communication technologies. "For much of the world's population, especially in the industrialized West, the small, face-to-face community is vanishing into the pages of history" (p. 61). Instead, people now maintain many spatially disparate relationships and are exposed to more cultures than ever before. Previously, the limited number of relationships and value systems to which a person was exposed allowed her to maintain a small set of roles and identities, but the conditions of contemporary society lead to the development of "multiphrenia."

Multiphrenia, the outcome of the social saturation made possible by technology, is "the splitting of the individual into a multiplicity of self-investments" (pp. 73–74). One way that this may be observed is by examining the value structures of individuals. The saturated self attempts to hold an increasing number of values with an increasing level of importance as the number of competing (and sometimes conflicting) relationships and cultures in which the person operates increases.

The key to understanding the additive effect of values on the individual is to recognize that values do not exist in a zero-sum structure. "The problem with values is that they are sufficient unto themselves. To value justice, for example, is to say nothing of the value of love. . . . No one value in itself recognizes the importance of any alternative value." As a result, the "chorus of social ghosts" that carries those values from the society to the individual can multiply and intensify independently of one another (p. 77).

One of the effects of the development of the saturated self is that the meaning of language and other communicative tools comes to be recognized as situationally determined rather than universal. "As the social world loses its homogeneity, the 'objective fact'. . . slowly gives way to 'mere opinion'" (p. 84). As a result, while individuals are attempting to hold most values with increasing importance over time, the importance attached to universalizing, "modernist" concepts, such as "truth," declines. This is not because values exist in a zero-sum structure but because the factors that lead people to hold more values as important also lead them to hold essentialist concepts in lower regard.

Gergen's theory can be framed as consisting of two causal relationships. First, advances in technology facilitate the increased exposure of individuals to diverse cultural systems. Second, the increased exposure to the diverse sets of values and ideas in those cultures leads to the development of a "postmodern self." This self is characterized by the simultaneous increase in the number of values that are held to be important to the individual and abandonment of the modernist idea that some universal truths can be found among the many ideas and values that the individual absorbs from his or her cultural exposures.

The major shortcoming of saturation theory at this time is a lack of empirical analysis. The first two elements of the model (technological development and increased social exposure) are taken by Gergen to be largely self-evident and are demonstrated in his book through anecdotal evidence. The assertion that communication technology has increased exponentially over the past century can probably be considered obvious. The hypothesis that the increase in communications technology leads to exposure to a wider set of ideas and values is also somewhat apparent and is assumed here to be true.³

The section of the theory that is tested here is the last element, the “multiplicity of self-investments” and the concurrent decrease in the belief in fundamental truths. There have been few tests of the claim that individuals are taking on more values and identities with higher importance over time. However, this is not because such a hypothesis is untestable; in fact, what sets this element of Gergen’s theory apart from many claims about the postmodern self is that it can be subjected to empirical evaluation using quantitative data.

Modern and Postmodern Approaches to Values Research

Contemporary values research generally follows the model that was established by Milton Rokeach in the 1960s. Rokeach (1973) argued that values can be understood as the set of judgments that motivate individuals to choose particular courses of action. Behaviors are the manifestation of a comparison of the desirability of certain outcomes, with the chosen action being the one that represents the value of higher importance. In this formulation, values are always considered relative to one another. The importance of a particular value can only be assessed in the context of competing values. Toward this end, Rokeach developed his Value Survey (1967) as a tool for measuring the value structure of individuals. The survey presented the respondent with two sets of eighteen values (“instrumental” and “terminal”) that were to be placed in rank order. No ties are allowed between values, and no independent measure of the importance of each value is collected.

A second influential scholar in contemporary value research is Ronald Inglehart, who has focused on value change in advanced industrial nations. He proposes that there was a shift in the value structure of western Europeans from a materialist orientation to a postmaterialist orientation that was due to the growth of economic security in advanced capitalist nations since World War II (Inglehart 1977). His primary measure of value orientation is a four-item list, from which the respondent is asked to indicate the two items to which she or he believes the government should pay most attention. Consistent with Rokeach, values are defined as inherently competing and therefore involved in a zero-sum equation: if one value becomes more important, another must decline in importance.

In contrast, Gergen does not believe that increasing the importance placed on one value must decrease the importance placed on another value. In the postmodern conceptualization of the self, values vary in their importance independently of one another. It is on this point that the contrast between the modernist assumption of finite emotional and psychological resources and the postmodern view of unrestrained choice is most clear. A result of this theoretical break is that it is impossible to use the traditional tools of measurement, such as the Rokeach Value Survey and the Inglehart battery, to evaluate Gergen’s theory of the postmodern self. Zero-sum tools of evaluation cannot detect the hypothesized increase in the importance of many values because they only register changes in relative importance. One value may become more important than another not only when one increases in importance and the other decreases; they may also change in rank order when both increase in value or both decrease. In addition, one value may increase in importance while the other decreases, yet they may retain the same

relative position in a rank order. Therefore, a theory of the postmodern self not only represents a shift in the anticipated results of empirical research, it also requires a change in the tools that are used to measure values and value change.

Research Evidence of the Saturated Self

Because of the dominance of the zero-sum technique of value measurement and the relative obscurity of Gergen's work in sociology, few studies exist that relate to the hypothesis tested in this study, and none that specifically refer to Gergen. Nevertheless, partial evidence can be taken from previous studies that suggest the development of the saturated self.

One study offers evidence to support the hypothesis of general increases in value importance. Simmons and Penn (1994) administered a survey to approximately two hundred undergraduate students in 1970, 1980, and 1990 that asked them to rate the importance of each of one hundred value statements. While their initial focus was on the stability of the rank ordering of the values, the rating tool allowed the authors to examine the individual importance of the items in the scale. They found that the grand mean of the items had increased significantly across the three surveys. This suggests that the successive waves of college students have been attempting to hold more values with more importance over time rather than trading off the importance of some values for others.

A study by Peterson and Kern (1996) provides evidence that Americans are being exposed to and adopting an increasingly broad cultural repertoire, as Gergen predicts. Comparing data from 1982 and 1992, they found that there was an increase in the number of music genres that individuals liked. The increase was greater for those who had been expected to be most resistant to cultural diversity (those with "highbrow" taste) but was present for all groups. They suggest this tendency to value more types of music may be due to "the historical trend toward greater tolerance of those holding different values" (p. 905), which is what Gergen argues happens to individuals as they are exposed to greater cultural diversity.

A study that examined value change in Europe found support for the hypothesis that there was a shift to a "postmodern value orientation." Gibbins and Reimer (1995) used the 1981 and 1990 waves of the European Values Survey to test whether individuals were increasingly likely to express values that were postmodern in nature, namely, expressivism combined with either humanism or instrumentalism. Of eleven nations for which data were available in both waves, ten had an increase in the mean scores for "humanist postmodernism" and nine had an increase in the mean score for "instrumental postmodernism." Although this study defined the postmodern self differently from the definition used here, it suggests that modern selves may be giving way to postmodern selves.

DATA AND METHODS

Identifying the Postmodern Era

As with most issues regarding postmodernism, there is no generally agreed on answer as to when postmodernism dawned in American society. While Lemert

(1990) suggests 3:32 p.m. on July 15, 1972 (the moment of destruction of the Pruitt-Igoe housing project in St. Louis), most theorists of postmodernity are less specific. According to Best and Kellner (1997:5), the "theories of the postmodern turn . . . developed in the 1970s." The first writings on postmodernism were published in the middle and late 1970s (Baudrillard [1976] 1993; Lyotard [1979] 1984), which suggests that the cultural shifts that were indicative of the new social order had first come into public view in the previous decade or so. Many of the major economic and technological changes (globalization, deindustrialization, dominance of symbol production) that are commonly associated with the rise of postmodernism also became prominent in the 1970s (Bluestone and Bennett 1982; Frobel, Heinrichs, and Kreye [1977] 1982; Reich 1991). Of course, there were elements of postmodernism present before the 1970s and elements of modernism that existed beyond the 1970s, but the mid- to late 1970s can be identified as a reasonable point at which to start looking for signs of the postmodern self.

In this study, changes in the importance of a series of values are measured for American high school seniors between 1976 and 1996. Between these two dates, the technology available to most high school seniors increased dramatically, including the popularization and expansion of cable television in the earlier part of the study period and the development of the Internet in the latter part. These technological developments, combined with the expansion of the curricula of most educational systems in the United States to incorporate more of the diversity of the American population and the world, are likely to have led to a consistent increase in the "populating of the self," Gergen's (1991:69) term for the process of absorbing the multiple cultures to which one is exposed. This article assesses whether these changes in the level of cultural exposure encountered by most high school students over the past quarter century have led to an increase in the importance of most values as well.

Data

Since 1975 the Institute for Social Research at the University of Michigan has conducted a survey of high school seniors known as the Monitoring the Future (MTF) study.⁴ The survey is conducted annually at approximately 130 high schools, with half of the schools replaced each year. Up to 400 hundred students from each high school are included in the study, and the number of subjects has ranged from 14,824 to 18,924 students in a year. The study is designed to be nationally representative, and the response rate has been between 75 and 86 percent each year. The most significant bias in the sample is failure to account for high school dropouts, but the national high school dropout rate and demographic profile of dropouts have been consistent throughout the span of the study (Johnston, Bachman, and O'Malley 1998).

Although the primary focus of the study is drug use, extensive data are collected on values and behaviors of the students. All students are asked a core set of approximately one hundred questions, and six different forms are used to collect the remainder of the data (five forms were used before 1989). As a result, most of the variables that are only on one form, including those to be used in the study,

are collected from approximately 3,000 students each year. For the twenty-one years of the study that are used in this analysis, a total of 62,850 students answered the questions of interest, with a decrease in the number of students per year toward the end of the survey period, largely due to the addition of the sixth form.⁵

The variables used in this study are taken from a series of questions asking students to indicate the importance of fourteen values (the specific items are listed in the Appendix). The set of values were preceded by the introduction, "How important is each of the following to you in your life?" Responses were on a four-point scale, with a rating of 1 indicating "not important" and a rating of 4 indicating "extremely important." All of the questions were asked in this format throughout the study period. The valid response rate for these questions ranged from 98.4 percent (CHILD) to 99.2 percent (HOBBY). The means and standard deviations of these variables and the control variables that are used in the analysis are provided in Table 1.

Each of the fourteen variables is sufficiently independent to warrant separate evaluation. Of the "within-year" Kendall's tau-b correlation statistics, 92 percent (84 of 91) have an absolute value below .25. The highest correlation between two variables is .36 (SOCIETY and LEADER), and the mean of the absolute values of the correlation coefficients is .12.⁶ Using MTF data from 1976 to 1986, Easterlin and Crimmins (1991) combined some of the variables in the study to generate indexes of what they concluded were underlying common factors. However, none of the standardized Cronbach alphas for any combination of three or more variables is greater than .70 using the 1976–96 data.

Methods

Two methods are used to evaluate the change in the importance of the values over the time of the survey. First, the changes in the annual means are presented graphically to represent changes in the means of the variables across the twenty-one years of the study. Second, time slopes for each value are computed using multilevel ordered logit models to evaluate the statistical significance of the changes over the time period. A multilevel model is the most appropriate format for examining changes in the data over time, as the structure of the data consists of individuals within years while the focus is on the change in the means of the values across years. Because the distribution of a number of the dependent variables is skewed, a base ordered logit model is preferable to the standard linear regression model used in most hierarchical analyses.

The multilevel design better captures the changes in the variables over time than does an OLS regression in two ways. First, an OLS model that uses all of the observations will misspecify the degrees of freedom in the equations as based on the approximately 63,000 individuals rather than the twenty-one years. Therefore, using a multilevel model provides a more appropriate—and stricter—test of the significance of the slope than a least squares regression. Second, the multilevel model is preferable to an OLS model that uses the 21 annual means as the values because multilevel models factor in the standard errors around the mean of each year, while OLS models can only use the mean itself as the basis for fitting the best curve to the data.⁷

TABLE 1
Weighted Means of Variables

	<i>Mean</i>	<i>St. Dev.</i>	<i>Minimum</i>	<i>Maximum</i>
WORK	3.633	0.621	1	4
MARRIAGE	3.613	0.768	1	4
FRIEND	3.521	0.696	1	4
SUCCESS	3.484	0.709	1	4
MEANING	3.436	0.788	1	4
CHILD	3.432	0.776	1	4
HOBBY	2.932	0.798	1	4
MONEY	2.761	0.884	1	4
EXPERIENCE	2.704	0.872	1	4
SOCIETY	2.669	0.856	1	4
EQUALITY	2.250	0.893	1	4
CLOSE	2.207	0.931	1	4
LEADER	2.062	0.934	1	4
MOVE	1.865	1.050	1	4
Year	85.420	5.870	76	96
Age	18.277	0.555	14	23
Sex	1.513	0.500	1	2
Mother's education	3.590	1.259	1	6
Father's education	3.726	1.432	1	6
Mother's work status	2.440	1.160	1	4
White	0.713		0	1
Black	0.120		0	1
Other/missing race	0.168		0	1
Northeast region	0.230		0	1
North central region	0.275		0	1
South region	0.305		0	1
West region	0.190		0	1
Size of nearest city	3.768	1.347	1	6
Whether suburban	0.233		0	1
School track	1.582	0.715	1	3
Grades	4.805	1.940	0	8
School ability	4.872	1.154	1	7
Intelligence	4.966	1.134	1	7
Single	0.914		0	1
Married	0.020		0	1
Engaged	0.060		0	1
Divorced	0.006		0	1
Hours worked	4.002	2.324	1	8

The multilevel design consists of equations at two levels: a series of models of individuals within each year and then an analysis of the coefficients of the models for each year. The base, or level one, model of individuals within years is a standard ordered logit equation. The general ordered logit model takes the form

$$\log(\varphi_m / (1 - \varphi_m)) = \beta_0 + \sum_{q=1}^Q \beta_q X_q + \sum_{m=2}^M \delta_m + e \tag{1}$$

where φ_m is the probability that the individual will be at or above response option m in the ordered list of response options for each dependent variable y . β_0 is the intercept, β_q and X_q are the coefficients for and values of each independent variable q , δ_m is the threshold value that separates each category m from the category below it, $m - 1$, and e is a randomly distributed error term (Long 1997).

The multilevel model calculates separate sets of level one coefficients for each of the level two units, which in this case is the year of the observation. The level two model then estimates the effect of the year on the coefficients in the ordered logit models (Raudenbush et al. 2000). Since the interest in this article is the change over time in the means of the dependent variables, the key equation in the second level is the effect of the linear variable YEAR on the intercepts, β_{0j} , across the set of years j (equation 2b). The full multilevel model is

$$\log(\varphi_{mij} / (1 - \varphi_{mij})) = \beta_{0j} + \sum_{q=1}^Q \beta_{qj} X_{qij} + \sum_{m=2}^M \delta_m + e_{ij} \tag{2a}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{YEAR})_j + u_{0j} \tag{2b}$$

$$\beta_{qj} = \gamma_{q0} \tag{2c}$$

The effects of the level one independent variables (the control variables) in each second-level model are fixed across years (equation 2c), as are the thresholds that are yielded by the calculation of the ordered logit models.⁸ The resulting coefficient for the YEAR term in the second-level model of the intercept, γ_{01} , indicates the trend in the response distribution across years for each dependent variable y . Where the coefficient is positive, the distribution of the responses has shifted toward higher levels of importance over time during the survey, holding constant the Q independent variables. Where the coefficient is negative, the importance of the value has been decreasing over time.⁹

RESULTS

If saturation theory is correct in proposing that people have been attempting to hold more values in high importance, then we would expect to find that most of the value measures had increased across the time of the study. The only exception would be the variable MEANING, which is a measure of the importance of finding purpose and meaning in life, a modernist concept that Gergen hypothesizes would decrease in importance as social saturation increased.

Figure 1 shows the changes in the means of each of the variables across the twenty-one waves of the survey. The figure shows that most of the values in the study have increased in importance over time and that only MEANING has clearly declined over the time period. This pattern of change is consistent with the expectations set forth in Gergen’s theory.

An important piece of evidence in evaluating the data is the decline in importance of “finding purpose and meaning in my life.” First, the decrease in MEANING

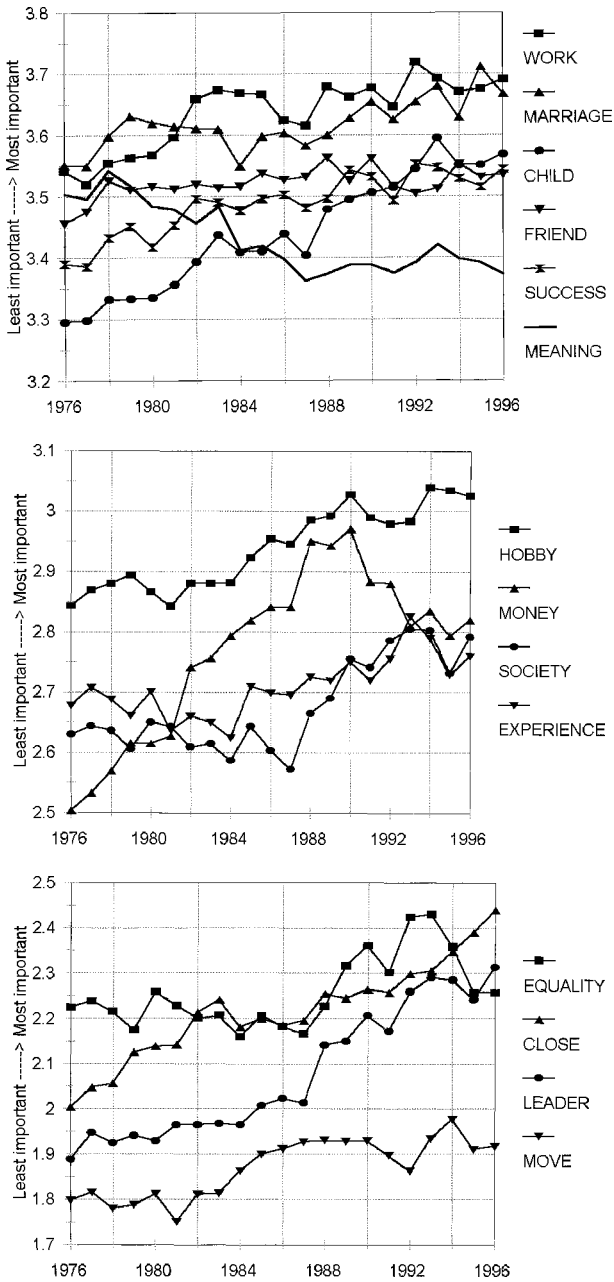


Figure 1
Changes in Importance of Values, 1976–1996

reduces the likelihood that measurement error or some form of social desirability bias is the cause of the increase of the thirteen other variables. Were all of the variables to increase simultaneously in the study, it would raise questions as to whether the pattern was the result of some design flaw or actual changes in the values of the students. However, the decrease in the importance of finding meaning in life indicates that the patterns of change in the data are not likely to be the result of either systematic measurement error or the effects of a social desirability bias that has strengthened over time.

Second, the decrease in MEANING is consistent with Gergen’s argument that the concept of knowable truths, such as finding meaning in life, is becoming less important to individuals as they become saturated with information and relationships. Therefore, it not only appears that values are changing in importance independently of one another, but that Gergen’s theory of the saturated self is an appropriate description of the changes observed in the data.

Multilevel Models

While Figure 1 presents a compelling visual case for saturation theory, the statistical significance of the changes can only be assessed with a formal model. As discussed previously, a multilevel ordered logit model is most appropriate for assessing the statistical significance of the change in the values over time. The coefficients for the level two time variable (YEAR) are provided in Table 2, as are the standard error and statistical significance of the slope of each curve. As expected, the slopes are positive for all of the values except MEANING and all of the coefficients are significant at the level of $p < .05$, with all but one (FRIEND)

TABLE 2

Multilevel Ordered Logit Model Results for Annual Changes in Mean Importance of Values

<i>Variable</i>	<i>YEAR Coefficient</i>	<i>Standard Error</i>	<i>Significance</i>
WORK	0.028	0.004	***
MARRIAGE	0.009	0.003	**
FRIEND	0.006	0.002	*
SUCCESS	0.023	0.002	***
MEANING	-0.017	0.003	***
CHILD	0.041	0.002	***
HOBBY	0.022	0.002	***
MONEY	0.038	0.007	***
EXPERIENCE	0.012	0.003	***
SOCIETY	0.021	0.003	***
EQUALITY	0.018	0.004	**
CLOSE	0.034	0.002	***
LEADER	0.043	0.003	***
MOVE	0.017	0.002	***

*** $p < .001$; ** $p < .01$; * $p < .05$.

significant at $p < .01$, and eleven of the fourteen significant at the level of $p < .001$.¹⁰ This confirms the general pattern observed in Figure 1.

An alternative explanation for the change in values is that it is due to social and structural changes over the period of the study that are unrelated to the development of postmodernism. Changes in family structure, the educational system, and the demographics of the workforce may all have effects on values that are independent of the factors that have led to the saturated self. For example, the increase in the importance of having success in a career may be explained largely by the increase in the labor force participation of mothers or the fact that students in later years were more likely to be in college preparatory tracks, as opposed to vocational tracks. To evaluate this hypothesis, control variables were added to the multilevel models. The control variables are age, mother's and father's education, whether the mother worked, race, region, urban status (size of nearest city and whether suburban), sex, average grades, number of hours worked, marital status, self-ratings of school ability and intelligence, and school track. The means, standard deviations, and ranges of the variables are shown in Table 1.

Over the past two decades, the means of many of the control variables have changed considerably. There have been substantial increases in both mother's and father's average levels of education and the amount of paid work done by mothers, and the average number of hours worked by students has decreased. The school programs of students in the sample have shifted away from vocational tracks toward college preparatory tracks. While there has been some minor variation in the marital status of students, the overwhelming majority of high school seniors have reported being unmarried and not engaged or divorced in all years. There have been small increases in self-ratings of intelligence relative to peers, self-ratings of school ability, and average grades. Population distribution has shifted toward the South and West during the survey period, and the size of the nearest city has increased, although the likelihood of being in a suburb has not changed. The sex ratio and percentage of blacks in the survey have remained consistent, but the percentage of students in the "other" racial category has increased. Students in the later years of the survey have been slightly older on average than those in the earlier years of the study.¹¹

These control variables may be an imperfect measure of the influence of non-postmodern factors on values, but it is possible that they are biased in either direction. To the degree that they are an incomplete list, they will result in an underestimation of the influence of exogenous factors. However, it is also possible that the changes in some of these variables are endogenous to the rise of postmodern culture. For example, the shift from vocational to college preparatory courses may be due to the shifts in the economic system away from manual labor toward knowledge production. In cases in which the controls are accounting for structural changes that are due to postmodern factors, the result is an underestimation of the amount of change due to the rise of postmodern conditions.

Recognizing the possibility of indeterminable bias, the control variables were added into the individual level of the multilevel models as additional Q variables in equation 2a. The resulting coefficients of the YEAR term, their standard errors, and statistical significance are presented in Table 3.¹²

TABLE 3
 Multilevel Ordered Logit Model Results for Annual Changes in Mean
 Importance of Values with Controls

<i>Variable</i>	<i>YEAR Coefficient</i>	<i>Standard Error</i>	<i>Significance</i>
WORK	0.029	0.004	***
MARRIAGE	0.010	0.003	***
FRIEND	0.004	0.002	+
SUCCESS	0.018	0.003	**
MEANING	−0.023	0.003	***
CHILD	0.042	0.002	***
HOBBY	0.022	0.002	***
MONEY	0.039	0.007	***
EXPERIENCE	0.007	0.003	*
SOCIETY	0.013	0.003	**
EQUALITY	0.009	0.005	+
CLOSE	0.035	0.002	***
LEADER	0.036	0.003	***
MOVE	0.015	0.002	***

*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$.

While two of the slope coefficients (EQUALITY and FRIEND) are now statistically significant only at $p < .10$, the general pattern of change in the variables was not affected by the application of the control variables.¹³ The other eleven variables with positive slopes are statistically significant at $p < .05$, and only MEANING has a negative slope value, which is also statistically significant. In fact, the value of the MEANING slope becomes 36 percent greater (−.023 with controls; −.017 without controls) after the application of the control variables, indicating that the demographic changes have actually counterbalanced the decrease in the MEANING variable.

Overall, it appears that changes in values held by the students cannot be accounted for by the changes in the social and demographic characteristics of the population that were measured in the study. Thirteen of the fourteen values are still significantly increasing in reported importance between 1976 and 1996, and the only one that has decreased in importance declined even more rapidly after controlling for changes in the sample. Even after controlling for these possibly exogenous factors, the increasing importance of most of the values and the decline in the importance of finding meaning and purpose in one’s life both support Gergen’s theory of social saturation.

DISCUSSION

This article represents a first step along two paths. Specifically, it offers support for Gergen’s claim that social saturation is a characteristic of contemporary, “post-modern” selves. Generally, it follows Allan and Turner’s argument that the claims

about postmodernity and its effects on individuals can, and ought to, be explored with positivist tools of social science. The development of the postmodern self is not a purely theoretical issue. If individuals are adapting to a new social order, whether it is a radical break or an evolutionary development, sociologists should be able to evaluate the presence, pace, and extent of these changes. The present analysis is not a comprehensive test of Gergen's theory, but it makes the case for his conclusions, even though the data in the analysis were not collected for the purpose of testing the theory. It should be apparent, however, that such data can be collected, and further research can more specifically test the complete model of technological exposure, cultural absorption, and the self.

It might be asked whether these findings from a high school sample, along with Simmons and Penn's results from a college student sample, ought to be generalized to the entire population. In fact, high school students may be especially useful in a study of the relationship between technology and the individual. Borrowing the age-period-cohort concept from demographic analysis, we can see that the "period effect" of increasing technology assists this analysis in two ways. From a cohort point of view, we can assume that each cohort of high school students has a greater level of exposure to technology and diversity of cultures than previous cohorts. Comparing today's high school students to those of the 1970s should make this point apparent. From an age point of view, we can see that as each cohort grows older, they will also be exposed to higher levels of cultural diversity through technology. Comparing the high school student of the 1970s to the middle-aged adult of today demonstrates the continuing increase in technological and cultural exposure. While there are some curvilinear effects in exposure to technology and culture in later life stages, we can still see that the use of successive cohorts of high school students is an appropriate way to measure the value changes that are of concern to Gergen.

Two value measurement issues must also be addressed regarding the structure of the study. The first is in reference to the comprehensiveness of the values in the study. Although the list of values in the Monitoring the Future study does not represent the full spectrum of private and public issues that individuals encounter in their lives, it provides a sufficiently broad set of values to approximate the overall value structure. It is possible that other unmeasured values may have decreased in importance over the same period, and it should not be forgotten that some of the values increased in greater amounts than others. However, the likelihood is small that an equally broad set of unmeasured values all decreased to balance the increase in the measured values. Among the measured items, such seemingly opposing values as living close to one's family/moving away and being successful in a career/finding time for hobbies and friends simultaneously increased. This suggests that the pattern found is not a result of biased variable selection. In addition, it ought to be remembered that Simmons and Penn used a list of one hundred values and also found an increase in the mean importance between 1970 and 1990.

The second issue relates to the general question of how values are measured, as many values researchers have used ranking scales, whereas a rating system is used here. Ipsative rating systems presume a zero-sum structure of the value structure of individuals, and therefore researchers using such tools as the Rokeach

Value Survey (Rokeach 1967) would argue that the rating system fails to force the respondents to decide between competing values. In this study, however, an ipsative system would not allow for the determination of how each of the variables changed in importance over time. A rating system is necessary so that each of the values can vary independently. This does not require the values to be noncompetitive; in fact, Gergen is clear that the increase in the number of values requires more effort on the part of the individual to maintain a coherent value structure.

Finally, it must be remembered that Gergen's theory contains more elements than are explored in this analysis. The end state, "populating of the self," has been shown here to be a growing phenomenon at the same time that technology and cultural exposure are on the rise. However, these data have not allowed for a direct test of whether the exposure to more cultures via technology is the cause of the increase in the importance of most values. Establishing the causation, as opposed to the correlation, represents the next step for the examination of Gergen's theory. As discussed above, the collection of data that are specific to this series of causal hypotheses is not beyond the design or execution abilities of sociologists; what is necessary is a commitment to the examination of the theories of postmodernity.

Gergen's theory of the saturated self is an appealing entrée into this project of evaluating the many theories of postmodernity. Some theorists may argue that postmodernity is inherently antithetical to the traditional research methods of the social sciences (e.g., Lemert 2000), but such a position leaves us with nothing more than unfalsifiable hypotheses. If we are to accept or reject the idea of the postmodern self and postmodern social order, then we must begin to analyze these claims. Gergen's theory is one such empirically testable theory of postmodernity, and, after initial review, it warrants further examination as a description of the postmodern self.

APPENDIX VALUES MEASURED IN THE STUDY

- Being successful in my line of work (SUCCESS)
- Having a good marriage and family life (MARRIAGE)
- Having lots of money (MONEY)
- Having plenty of time for recreation and hobbies (HOBBY)
- Having strong friendships (FRIEND)
- Being able to find steady work (WORK)
- Making a contribution to society (SOCIETY)
- Being a leader in my community (LEADER)
- Being able to give my children better opportunities than I've had (CHILD)
- Living close to parents and relatives (CLOSE)
- Getting away from this area of the country (MOVE)
- Working to correct social and economic inequalities (EQUALITY)
- Discovering new ways to experience things (EXPERIENCE)
- Finding purpose and meaning in my life (MEANING)

Response options:

- 1 = not important
- 2 = somewhat important
- 3 = quite important
- 4 = extremely important

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NOTES

1. This is not to say that all theories of postmodernism associate the cultural changes with the advance of capitalism. For example, Baudrillard's theory of the "code of production" argues that the production of physical goods has been surpassed by the production of cultural symbols, rendering capitalism and all other economic systems irrelevant.
2. It should be noted that Lemert (2000:391) describes Gergen as "radically postmodern," which would lead us to expect that his theories would be most resistant to positivist operationalization. Therefore, we might consider this a relatively strict test of Allan and Turner's proposition that postmodern theories can be transformed into testable positivist models.
3. This relationship could be tested empirically, but it would require a substantially different set of variables than is available in the data for this article.
4. The question of whether a sample of high school students can be used to generalize to the population in general is addressed in the discussion section.
5. For further information regarding history of the survey and procedures, see <http://monitoringthefuture.org>.
6. The full table of correlations is available from the author. The within-year correlation statistic is calculated using the individual's deviations from the annual means of the values. This controls for any correlation between the annual trends in the means of the values (the "between-year" correlations). Pearson product-moment correlations yield similar results, with a mean absolute value of .15.
7. In practice, the differences in conclusions that would be drawn from using the various alternative methods are not significant in this study. An OLS model using individual-level data generates higher levels of statistical significance, but significance levels are still high in the multilevel models. An OLS model using the means of the years generates similar coefficients and levels of statistical significance as the multilevel model. A multilevel model that uses a base linear regression model also yields results that are quite similar to those reported here. The main reason for using the multilevel ordered logit model is not the results generated by the models but the appropriateness of the model for the statistical analysis that is being performed. Results from the models using the alternative specifications are available from the author on request.
8. An additional model was run that allowed the thresholds to vary randomly across years. No substantive differences were found from the model with fixed thresholds.

9. Because the ordered logit function in HLM 5 is designed to estimate the likelihood of being in the category with the lower value, the coding of the response variables was reversed (Very important = 1; Quite important = 2; Somewhat important = 3; Not important = 4) in the models.
10. Models were also run with quadratic functions of the YEAR term, but these did not add sufficiently to the explanatory power of the models to warrant inclusion. The linear term explained at least 44 percent of the variance of the value across years in all cases except FRIEND (25 percent). The addition of the quadratic term explained no more than 30 percent of the total variance of any value and less than 10 percent of the variance for nine dependent variables. Therefore, the linear YEAR term was deemed sufficient for the analysis.
11. Descriptive statistics of the changes in the control variables are available from the author.
12. The full results of the models are available from the author. As in the models without controls, the need for quadratic YEAR terms in the models was explored and not found to contribute sufficient explanatory power to warrant inclusion.
13. The elimination of the significance of the coefficients may be due to excessive controls on the variables. Some characteristics may be at least partially a result of the values rather than their cause (i.e., the importance of having money may cause students to work at a paying job). When applying only ascribed characteristics as controls, the YEAR coefficient for both FRIEND and EQUALITY are statistically significant at $p < .05$. However, to apply the most rigid test to the hypothesis of generational succession as the cause of the value change, the full set of control variables were applied at the risk of overdetermination.

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