Discussion

On Ritual and Cooperation[1]

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Sosis and Ruffle's recent paper (CA 44:713–22) demonstrates possibilities for the use of experimental techniques in anthropological research. The theoretical justification of the experiment presents a consensus among social scientists relevant to the structural-functionalist research paradigm of a past generation. The researchers assume that group prayer, a feature of Orthodox Jewish ritual behavior, is more conducive to solidarity than interaction in Jewish secular communities. The study uncritically posits a core axiom of Durkheim and latter-day functional theorists—that "unintended consequences of action" have functions, goals, or purposes. Yet, the fallacy of functionalist theory is now recognized to be that "social systems have no purpose, reasons, or needs whatsoever, only human individuals do" (Giddens 1994:7). While social action can have effects not intended or even anticipated by actors, contemporary philosophers of social action assert that humans have agency and therefore create and reproduce societies within "bounded conditions of rationalizations," for example, historical context, consciousness, and unconsciousness (pp. 112, 250). Therefore, it is perplexing that the report does not mention that the goals of Jewish rituals are reflexive and necessary for the maintenance of self or that failure to follow the *mitzvot* (sing. *mitzvah*) "divine commandments" results in psychic stress (Rozen 2003).

Issues of validity emerge when we attempt to interpret the results of the experiment outside of the context of actual social relationships. The experiment involved a game in which two people in separate locations were asked to withdraw sums of money from a known quantity in an envelope. The assumption was that the person who withdrew less demonstrated a greater concern for cooperation and the common good than his/her counterpart. However, I have trouble conceiving of anything's being an instance of "cooperation" when people are not engaged in some sort of interaction. Rather, I consider the game a hypothetical case of anticipatory self-serving profit optimization, not an indication of commitment to one's community and willingness to cooperate for its benefit.

While, technically, some statistically significant differences were observed (sometimes at levels as liberal as between .1 and .05), the differences were so minor as to be probably of no practical significance. Since the religious men and the secular men and women all withdrew 30 shekels on average and the religious women only 3-plus more, it does not seem appropriate to conclude that there is a religious-secular difference, even if statistically significant.

Intersubjective knowledge accessed through ethnographic research techniques prints to cultural reasons that secular and religious Jews might perceive the experiment differently. The *mitzvah* has become a cultural metaphor for a good deed, and religious Jews are known for altruistic concern for persons who experience poverty or misfortune. A person who gives money to a poor person is said to have performed a *mitzvah*. It is possible that the religious Jews might deliberately have left more in the envelope because they thought they were doing a *mitzvah* by leaving a gift to benefit others.

Another interpretive problem is the researchers' failure to present the social form *minyan* from an emic (insider) rather than simply an etic (outsider) point of view. Religious Jews view the *minyan* in a narrow, legalistic fashion. The Jewish Code of Laws stipulates that certain prayers cannot be recited unless specific requirements are met, including the presence of a minimum of ten praying Jewish men. Unlike the *mitzvah*, the *minyan* as a symbolic form has little or no emotive valence. *Minyan* members may be and frequently are total strangers. An etic definition of the *minyan* is not the same as the emic concept, and any solidarity it involves is an "unanticipated effect of action" not intended by the social actors.

If there is conventional wisdom in the social sciences, it is that rituals are symbolic systems of communication (Cohen 1976). Symbolic forms mediate concrete sociopolitical relationships and cultural systems (values and norms), but rituals are more than just information about society: they are "blueprints or models" *of a society* (Geertz 1973:92). Rituals are a medium for communicating core symbolic forms and passing traditional cultural information from one generation to the next. Solidarity, ethnic identity, and the solution of practical problems may all be consequences of ritual behavior, but from the actor's perspective rituals are powerful systems of communication about the very essence of reality.

1. I thank Howard Stein and Ed Knop, who read the manuscript and provided helpful comments and suggestions.

Reply

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We thank Rozen for his interest in our work, although we regret the various misunderstandings of our research that he advances. Rozen is needlessly concerned that we are reviving a "structural-functionalist research paradigm of a past generation." Our paper was not motivated by Durkheimian functionalism, nor did we describe our results as support for this paradigm. We simply pointed out that he was among the first in a long line of social scientists, the majority of whom were not structural-functionalists, to have posited a relationship between ritual performance and group solidarity.

Our interest in that relationship arose out of the evolutionary work of Cronk (1994) and Irons (2001), who develop a costly-signaling model of religious behavior. Bliege Bird and Smith (n.d.) outline four necessary conditions for the evolutionary stability of a costly signal in a population: (1) there is within-group variance in some unobservable attribute; (2) observers can benefit from reliable information about this variance; (3) higher-quality signalers can benefit from accurately broadcasting this information, but lower-quality signalers have the potential to achieve benefits at the expense of recipients through deception; and (4) the cost or benefit to the signaler of sending the signal is correlated with the signaler's quality. Sosis (2003) has argued that religious behaviors meet these conditions: (1) the intensity of religious beliefs varies within communities and this variance is unobservable; (2) individuals benefit from accurate information about this variance because intensity of belief is related to one's commitment to the group and its goals, committed members being more likely to be cooperators and thus preferred social interactants; (3) religious groups offer various benefits for members that are mutually provided and are at risk of exploitation by those not committed to group goals; and (4) the perceived cost or benefit of ritual performance, which can include payoffs received in an afterlife, is correlated with intensity of belief. Thus, religious behavior can be understood as a costly signal that reliably advertises the unobservable condition of religious belief and group commitment. The time, energetic, material, and opportunity costs of religious activity serve to deter those who lack sufficient belief from displaying the signal.

Although these insights initially motivated our research, ultimately our data could not rule our alternative mechanisms that might explain the relationship between ritual performance and cooperation. Therefore we set a more modest goal of documenting the existence of this relationship in a controlled environment. Our results, however, are certainly consistent with costly-signaling interpretations of synagogue attendance as a reliable signal of cooperativeness (see Ruffle and Sosis n.d., Sosis 2004, Sosis and Alcorta 2003, Sosis and Ruffle 2004). We agree with Rozen that rituals are symbolic systems of communication; indeed, Alcorta and Sosis (n.d.) have argued that ritual played a critical role in the evolution of symbolic communication in the human lineage. Costly-signaling theory offers one possible mechanism through which symbolic ritual communication is achieved, and our results offer some support for this understanding of religious behavior.

It should be noted that evolutionary explanations such as costly signaling are indeed functionalist. In contrast to structural-functionalism, however, evolutionary explanations of course do not assume that communities or social systems have needs, nor do they lack a causal theory that can explain the feedback loop inherent in functional explanations. Evolutionary theorists can posit, for example, that hunger pangs function to alert us that our bodies need food because they have a causal theory, namely, the theory of natural selection, which can explain a phenotypic trait in terms of the benefits it offers with regard to fitness (see Smith and Winterhalder 1992 and Wilson 2002 for useful discussions).

Our findings are not trivial or an aberration as Rozen implies; they parallel patterns observed in other communal societies. In a sample of 200 nineteenth-century U.S. communes Sosis (2000) found that religious communes were two to four times more likely to survive in every year of their life course than secular communes, a testament to their ability to sustain long-term cooperation despite the inherent potential for free riding and resource exploitation in communal societies (also see Kanter 1972). Among religious communes in this sample, Sosis and Bressler (2003) found a positive correlation between commune survivorship and the behavioral constraints imposed on members. On average religious kibbutzim have been more economically successful than their secular counterparts, and this disparity has increased over time (Fishman and Goldschmidt 1990). Explanations for this are undoubtedly multifaceted, but, given that many of the rituals maintained by religious kibbutz members inhibit economic productivity, this relative economic success may seem surprising. In addition to a complete cessation of money-making labor on the Sabbath and many holidays, Jewish law, for example, imposes significant constraints on agricultural productivity. Fruits cannot be eaten during the first several years of the life of a tree (*orlah*), fields must lie fallow every seven years (*shmittah*), and the ends of fields can never be harvested (*pe'ah*) but must be left for society's poor. If the costly ritual behavior of religious kibbutz members increases intragroup cooperation, however, there may be an overall net economic gain from adherence to these rites (Sosis 2000).

Rozen is concerned that our experimental design did not allow kibbutz members to interact with one another.

1. We thank Candace Alcorta, Sharon Feldstein, Sam Martinez, and Eric Smith for valuable comments.

If we had permitted communication between participants, our interpretation of their claims would have been confounded with their identities, the relations between them, the content of their conversation, and possibly many other factors unobservable to us. Conducting the game as we did provided experimental control, allowing us to interpret a participant's claim as a measure of cooperation with an average fellow kibbutz member. Contrary to Rozen's impression, there are countless contemporary examples of cooperative behavior in which individuals act unilaterally; donating money anonymously to charities, recycling plastics, and playing the stereo at a volume inaudible to neighbors are just a few examples. Protocol-based interviews revealed that among the many cooperative challenges kibbutz members face, the excess consumption of common-pool resources (e.g., gas, electricity, food, water) is the most salient. This consumption problem motivated the design of our experimental game.

Rozen also raises concerns about the statistical significance of some of our results. While the raw numbers point to minor differences in the cooperative behavior of religious and secular kibbutz members, controlled regression analyses reveal that these differences are large and robust.[2] The additional regression results presented in Sosis and Ruffle (2004) and Ruffle and Sosis (n.d.) confirm the strength and robustness of the religious-secular distinction and all of our findings. Rozen inaccurately implies that we were liberal in our acceptance of significant p values. We reported p values between .05 and .1 to inform readers of marginally significant variables; all of our main findings were supported by p values less than .05. Our goal was to evaluate empirically the relationship between ritual and cooperation as described in the theoretical and ethnographic writings of many anthropologists; testing hypotheses using statistical methods is a replicable, reliable, and objective procedure to accomplish this.

We find Rozen's alternative explanation of our results, namely, that religious kibbutz members believed they were performing a *mitzvah*, unlikely and incapable of explaining the differential claims of religious males and females. Our own post experiment interviews and conversations with kibbutz members, conducted by randomly assorted religious and nonreligious interviewers (observable by dress in Israel), revealed no differences in the explanations offered for claims between religious and secular kibbutz members or between males and females. Religious kibbutz members did not report that they were engaging in the *mitzvah* of *tzedakah* (charity). Rozen claims that "religious Jews are known for altruistic concern for persons who experience poverty or misfortune." Data from the National Jewish Population Survey suggest that American Jews do indeed contribute significant time and finances to charitable causes. However, while Orthodox Jews give more time and money to Jewish institutions than non-Orthodox Jews, they contribute significantly less than non-Orthodox Jews to non-Jewish causes (Lazerwitz et al. 1998). For our study, however, the issue is irrelevant, since kibbutz members' experimental partners were not poverty-stricken but anonymous fellow members who enjoyed a standard of living very similar to their own.

Rozen asserts that we did not pay attention to the context in which our experiments were conducted. It is true that in large Jewish communities *minyanim* often do occur among individuals who otherwise have little social interaction. Indeed, the reason that the "anonymous *minyan*" (Heilman 1983:23) has received any sociological attention is that it contrasts sharply with normal synagogue life. Kibbutz members live, work, and socialize together in a well-defined community; their synagogue life could hardly be more different from the ephemeral anonymous *minyan*.

Rozen concludes that "solidarity, ethnic identity, and the solution of practical problems may all be consequences of ritual," which was exactly the point of our report and what we were able to demonstrate empirically. It is likely that there are diverse social and ecological conditions in which ritual can both assuage psychological anxieties, as he maintains, and promote group cohesion. Contrary to his contention, we never claimed that solidarity was an intended goal of Jews who attend *minyanim*. We agree with him that traditional Jewish law (*halachah*) defines and motivates ritual as well as mundane behavior among religious Jews. His claim that "from the actor's perspective rituals are powerful systems of communication about the very essence of reality" does not challenge or contradict our findings, nor is it surprising that ritual performers have a different perspective of their behaviors from social scientists. Certainly, emic views are critical for understanding variance in human behavior; yet were these views to hold exclusive explanatory rights in academic discourse, the analytical strength of the social sciences would be remarkably limited.

2. We take this opportunity to correct an error in our article. We inaccurately report from table 2 that "controlling for a variety of explanatory variables, religious males on average claim 5.8 shekels less than females" (2003:716). As we discuss in n. 6, however, Tobit regression coefficients need to be transformed to interpret them as marginal effects such as OLS estimates (the transformation has no effect on their significance). The appropriate transformation indicates that religious males on average claim 5.1 shekels less than females, not 5.8 shekels.

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