

INTRODUCTION: TERRORISM AS BEHAVIOR

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The world currently faces a multitude of new problems for which we have little or no direct experience to draw upon in our search for solutions. We have, for example, the risks of space exploration and its cost/benefit uncertainties; the worldwide depletion and/or poisoning of natural resources, along with the deterioration of the planet's protective atmospheres; the health and moral uncertainties involved in the genetic modification of crops, livestock, and—impending—of people; the increase in human longevity, with its unforeseen health and social complexities; the toxic side effects of new curative pharmacologic agents, along with the life-wasting tragedies brought about by drug addiction; the social, economic, and political consequences of rapid, universally available communication that the internet and other computer-related developments have made possible; and, finally, what seems to many the most immediately compelling issue we face, terrorism.

In its newly emergent destructiveness, repetitiveness, ruthlessness, and unpredictability, in its sponsorship by national governments as a means of both internal and international coercion, in its justification by religious factions as a form of morality and spiritual commitment, and in its potential use of the internet as a means for disrupting communication, commerce, military operations, and government functions, terrorism has indeed created a set of emergencies that compel immediate action. What actions are likely to prove effective?

In trying to answer that question, we see that terrorism differs from most of our other emergent problems. Although they are all new, all without precedent, each of the others (with the exception of drug addiction) can be viewed in the context of scientifically validated theoretical and practical knowledge that is universally recognized as relevant. In attempting to deal with the problem of terrorism, however, no established science is generally viewed as a source of information from which to derive solutions.

With respect to space travel, for example, we already knew enough astrophysics and materials science to place mankind on the moon on our very first attempt; since then, much more has been learned. With regard to the preservation of natural resources, the pertinence of theoretical and practical atmospheric and geophysical sciences is well recognized, along with measurement techniques that allow us to evaluate both the likelihood of ecological disasters and suggested approaches to prevention. Genetics and the health sciences have given us well-established theoretical and empirical bases for understanding and attacking pharmacologic side effects, the concomitants of aging, and the consequences of gene modification or substitution. Mathematics, logic, and microelectronics provide universally acknowledged resources for the generation, modification, growth, and protection of the Internet and more advanced avenues of

communication. In contrast to our established knowledge bases in these and other currently compelling problem areas, however, no theoretical or applied sciences are universally recognized and accepted as sources for the analysis and solution of the issues that terroristic activity raises.

The absence, or at best, the tentativeness of any scientific approach to those issues arises from the fact that terrorism is a behavioral problem. To solve it requires an understanding of what causes people to act as they do and of how to change their actions. Basic and applied sciences of behavior are needed, from which to draw principles and practices of known validity and effectiveness. Human behavior, however, remains generally unaccepted and, in many circles, even unacceptable as a subject matter amenable to the methods of natural science. Traditional conceits like self-determination, control from within, and most generally, the presumed centrality of the human mind in the known universe, have prevented widespread acceptance of the possibility that our behavior, like our other biological functions, might be studied and understood by means of the same procedures and criteria that have proven themselves in the recognized natural sciences. The relevant behavioral sciences—they do exist—have, therefore, gone largely unrecognized or, if recognized, have been rejected by the general public, by related medical, genetic, biological, and psychological sciences, and by those who set policy in governmental, military, educational, and other basic social institutions. What are those behavioral sciences, and what do they have to offer?

The Sciences of Behavior Analysis

The following discussion will confine itself to some general considerations, in the hope of encouraging further exploration into the available resources. Science-based solutions to the formidable problem of how to deal with terrorism must offer not just a theoretical foundation but also a set of technical operations that cannot be carried out by rote; behavioral engineering always has to be fine-tuned to fit particular actions and the contexts in which they occur. General principles of behavior, however, serve both to direct attention to relevant factors and to suggest areas within which to seek remedies for specific behavioral problems.

Also, although all likely sources of potentially effective approaches to the problem of terrorism should be examined, attention will be directed here to fields that are most generally known to their practitioners as the sciences of Behavior Analysis: the Experimental, Theoretical, and Applied Analysis of Behavior (see, for example, Catania, 1992; Skinner, 1953). Several distinctive features recommend appeal to those sciences whenever the solution to a problem will require changes in human conduct.

Subject matter. First of all, the sciences of Behavior Analysis take observed conduct as their primary datum. In particular, their major interest is the frequency of behavior: how often does any particular action occur? This emphasis contrasts with, for example, Psychology, which considers actual conduct to be only a secondary phenomenon that reflects states of mind or biological processes that go on in the nervous system or elsewhere. Therefore, whereas a psychologist might

ask, “How can we get terrorists to change their minds about suicidal killings?” a behavior analyst might simply ask, “How can we decrease the frequency of suicidal killings?” These two kinds of questions lead to fundamentally different remedial approaches. Although both must use the same data, the number of suicidal killings, to evaluate the success of their recommendations, the psychologist, before deciding what is actually to be done, must go through the extra steps of developing and validating a theory of mind, including units of measurement that are independent of the observed behavior. The behavior analyst, on the other hand, just wants to know what can be done to stop people from engaging in suicidal killings. The scientific subject matter here is the observed behavior itself, along with its observable determinants and not its mental or biological determinants.

Behavioral consequences. This emphasis on observables leads directly to a second major difference between behavior analysis and other possible approaches. Behavior analysts look for determinants of conduct in the behavior’s immediate physical and social environments and in his/her behavioral history: that is to say, in current and past relations between a person’s actions and the environments in which those actions take place. Although they acknowledge other kinds of influence than environmental—for example, genetic, physiological, neurological, and so on—our current understanding of, and control over, variables that arise from these other sources does not yet promise immediately available solutions to the problem of reducing the frequency of terroristic activity. The basic behavior analyst asks, “How does the environment enter into the control of behavior? What factors in the past and current environments generate and maintain suicidal killings?” The applied behavior analyst asks, “How can we change those environmental determinants in ways that will, in turn, produce changes in the behavior?”

A primary principle of behavior analysis is that *behavior is determined by its consequences*. In attempting to understand and to change behavior, this is the first behavior-environment relation a behavior analyst looks for; what effect(s) in the physical and/or social environment does the behavior lead to? Although some object to this principle on the grounds that it removes the regulation of behavior from inner agencies to external sources, that it denies us the control of our own destinies, the reciprocal relation between conduct and consequence is, in fact, the basis for our survival not only as individuals but as a species. Where would we be if we were insensitive to the consequences of our behavior? Living beings who could not adapt their behavior to a constantly varying environment like ours could survive only in an environment that was itself unchanging—like *Limulus* the crab, living in a sea of mud. Derivable though it is even from commonsense considerations, the principle of behavioral determination by consequences, when applied rigorously and consistently, provides a powerful tool for the analysis, understanding, and management of behavior problems.

One type of consequence is termed *reinforcement*. A reinforcement follows an act and, in turn makes that act more likely in the future. To be classified as reinforcement, the consequence of an act must lead to more acts of the same kind.

Whenever we see an action occurring frequently, we can assume that it produces (or has produced) reinforcing consequences. In seeking an explanation for terroristic activity, therefore, the behavior analyst looks first at its consequences. The identification of reinforcing consequences will suggest a way to reduce future terroristic actions: eliminate those consequences, those outcomes of terrorism. For example, (Sidman, 2001):

Reinforcement, used ineptly, has helped foster terrorism. The payment of ransom, whether money, prisoner exchanges, transportation, armaments, or any other positive return, has ensured that the taking and killing of hostages will continue. Responding to anguished pleas from the families of hostages by paying ransom for the release of one group has guaranteed that others will later be taken. This is not a matter of personal opinion; it is the way ... reinforcement works. As long as we pay terrorists for what they do, they will be happy to keep on obliging us with more of the same.

Another source of strong ... reinforcement that helps perpetuate terrorism is the intense television, radio, newspaper, and magazine coverage of every terrorist act. Terrorists have discovered that throwing a small stone can make a worldwide splash, with ripples extending not only into every council of state but also into every household. ... Only the Superbowl and the international soccer finals get as much publicity.

One of our well-known newspaper columnists ... argued that acts of terrorism have become largely unsuccessful in accomplishing broad political or social aims. But he went on to point out, "Terrorism ... has been filling the news for most of our lives, and will doubtless go on demanding the attention of our children and grandchildren as well. What's new is how rarely it achieves its goals these days." In spite of his clear recognition of the broad media response to terrorist acts, this columnist, like almost everybody else, fails to recognize that the media response is itself a goal of terrorism. It does not matter what terrorists say their goals are or whether they achieve those stated goals. The fact remains that conduct is governed by its consequences, and [a] main consequence of terrorism is media attention.

Imagine the feeling of power and grandeur in the breasts of terrorists as they see themselves and hear their achievements discussed on channel after channel and page after page of the news media. What must it mean to people whom the world has treated with contemptuous disregard to discover that they have been able virtually to wipe out the international tourist industry just by detonating a couple of bombs in airports? Are there simpler ways to make your existence felt than by kidnapping and killing a few defenseless individuals, or planting a time bomb, or machine-gunning a prominent politician or industrialist? Have the deeds of any hero ever gained more recognition?

... Recognition both of its role in reinforcing acts of terrorism, and of its own danger [threatened censorship], should therefore engender a certain amount of responsible self-restraint by the news media. The excuse that all the news must be reported is patently false; it has never been possible to report everything. Editors have always had to choose what to publish. The real problem is that the media have never developed criteria for deciding what to report and what to leave unsaid. Taking account of the behavioral consequences of their practices would help provide rational and objective bases for such decisions. ...

As far as government policy on terrorism is concerned, the first thing to be done there, too, is to stop the reinforcement. End all negotiations, even “quiet diplomacy.” Stop enhancing the prestige and power of governments that make the support of international terrorism a matter of national policy. ... To use a technical term that is nevertheless apt, terroristic activity and its support must be *extinguished*, not reinforced. (pp. 285-287)

The Use of Coercion

Our environment exerts much of its control over our conduct by coercing us. That is to say, it threatens or actually causes discomfort, pain, suffering, loss, damage, and so on. Whatever we do that prevents or eliminates such events will be reinforced. That is to say, avoidance or escape behavior will then occur more frequently: if we see clouds, we are likely to take an umbrella when we go out, or if we are rained upon, we are likely to open the umbrella; if our body aches, we are likely to seek medical help; we have well-established behavioral patterns by means of which we prevent or escape floods, fires, earthquakes, storms, volcanic eruptions, and so on.

Coercive control comes, however, not only from our physical surroundings, but also from our social environment. Other people, acting as individuals or as agents of institutions—governments, family groups, schools, police and military forces, churches, professional organizations, and so on—exert most of their control over our behavior by threatening us or by actually punishing us. The debate over whether or not threatened or actual punishment works is an old one that cannot be treated fully here (but see Sidman, 2001). It is, however, pointedly relevant to the problem of terrorism, if only because coercive measures currently constitute the universal reply to terroristic activity.

In brief, coercion is indeed a powerful way to influence behavior, although we do not always recognize the full scope of that influence. Threat does “work,” in that it quickly gets people to act in ways that avoid a threatened consequence; punishment does “work” in that it almost immediately gets people to stop performing a punished action. Such observations describe reinforcing consequences for the behavior of people who threaten and punish others, and help to explain why coercion persists in most societies as the primary means of controlling the behavior of others.

Threat and punishment, however, also “work” in ways that do not reinforce the behavior of those who do the threatening and punishing. That is to say, coercion also produces additional effects, which often occur long after the primary effects that have reinforced the behavior of the coercers. For example, we eventually find ways to escape and avoid places in which we are threatened and punished—ways that our coercers do not necessarily deem acceptable (students leave school or run away from home, prisoners escape, workers quit, citizens go into exile); we learn to shun people who threaten and punish us (we divorce our mates, refuse to communicate with our parents, avoid policemen); we also destroy places in which we have experienced threats and punishment (schools are burned, public structures are defaced); we take advantage of opportunities—we even create

opportunities—to attack our coercers (workers strike, employers fire strikers, citizens riot or revolt); another outcome of coercion comes when we learn to exert countercontrol, or countercoercion, by devising methods to control the behavior of those who have controlled us through coercion (slowdowns in the workplace, tax revolts, armed revolution); and if we can come up with no measures to reduce the coercive pressures that we experience, we may go into a depression, unable to behave adaptively and becoming noncontributing individuals (alcoholism, neurosis, suicide). A time-tested principle of behavior states that such delayed consequences have much weaker effects on conduct than do immediate consequences, so coercers remain unaware of the connection between what they have done and what looks to them like unrelated willful opposition.

Many view terrorism itself as a long-term side effect of coercive political or economic control by more affluent nations over materially impoverished peoples. In that context, terroristic acts can be seen as coercion-induced aggression and/or attempts at countercontrol. Whether or not such aggression and countercontrol are morally justified is not the issue here. The behavioral analysis simply identifies a set of principles that help account for acts of terrorism; with respect to the laws of behavior, terrorists can be seen as acting lawfully. And then, in replying to terrorism with counteraggression, perhaps even with counterterrorism, we too are simply following established principles of behavior. The continued escalation of terrorism and counteraggression attests to the validity of those principles. Being a coercive technique itself, a terroristic act generates countermeasures from those who are subjected to it. Once set into motion, repeating cycles of coercion and countercoercion are hard to interrupt. Each side fears that any relaxation of its coercive pressures will leave it open to annihilation. Is it, therefore, too late? Can the cycles be stopped?

Whatever the historical causes of the current high frequency of actual and threatened terroristic activity may be, there can be no quarrel with our own need to defend ourselves, and there is much evidence to support the adage, “The best defense is a good offense.” It is no longer possible to avoid replying with violence of our own to those who attack us. Still, considerable evidence also supports the notion that coercion, even though it works in the short run, is no long-term solution. “No one should suffer the illusion...that anything permanently constructive can be accomplished that way. Coercion has brought a large segment of the world to a state of economic deprivation, social humiliation, and political repression. The rest of the world will have to reverse its reliance on coercive diplomacy if it is ever to eliminate the threat of desperate countercoercion” (Sidman, 2001, p. 287). We therefore face a dilemma: Can we defend ourselves in the short term through countercoercion, and at the same time, institute noncoercive measures that will achieve desirable long-term effects?

An empirical principle of applied behavior analysis is that undesirable behavior can often be eliminated noncoercively by first identifying its reinforcement and then providing that same reinforcement for desirable behavior. For example, if worldwide notice constitutes a reinforcement for terrorism, provide the same kind of worldwide reactions for friendly acts, instead. This is an

oversimplification, for sure, but the principle is powerful and needs only to be fleshed out in practical terms.

The sciences of Behavior Analysis have given rise to other principles, also, that are potentially applicable. For example, behavior analysts know how to create environments that support productive rather than destructive activity, but have never had an opportunity to apply that knowledge toward diplomatic ends. Also as yet unapplied is our understanding of the kinds of setting events and other precursors that determine whether and when particular consequences will act as reinforcers. For example, why do consequences like material destruction, murder, revenge, and so on become reinforcers in the first place? What can we do to disrupt that process? Behavior analysts have also begun to learn how words become the powerful symbols that they are, but have not yet applied that knowledge to help counteract the process by which even death by suicide, a purely verbal construction—it cannot possibly be based on personal experience—is converted into an equivalent action; in contrast to suicidal terrorists' expectation of eternal salvation in the afterlife, can they be offered a realistic hope for something more attractive in the present life? Could we eventually use what we know about behavior to replace our current self-defensive countercoercion with measures that will not themselves generate coercive reactions?

There is much work to be done here to move from principles to action. The experimental, theoretical, and applied sciences of Behavior Analysis are untapped resources in diplomacy in general, and in particular, with respect to the issue of terrorism. After all, the objectives of diplomacy are behavioral; its aim is to influence the conduct of those who govern other nations. Behavior analysts and experts in scientific methodology, perhaps forming a group of "foreign-service scientists," could help to implement our growing knowledge about the sources of human conduct, with the particular immediate aim of bringing about a cessation of terroristic activity and, in the long run, of facilitating international peace.

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