

■ Notes and Insights

Terrorism: A Systemic View

Russell L. Ackoff^{1*} and Johan P. Strümpfer²

¹*The Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania, USA*

²*Graduate School of Business, University of Cape Town, South Africa*

Broadly speaking, 'terrorism' is regarded as extremely violent behavior by what is normally considered to be a minority subgroup of society. The value system in which terrorism is imbedded is not universally shared within the larger society from which it emanates. Terrorists form a movement that pursues a cause defined by its aims which, in turn, are defined within a value framework that may be political, religious, social or economic. Its objective is to obtain acceptance of its value system and its aims. In pursuit of this objective it applies violence aimed at creating terror and anxiety in one or more target societies.

A major factor in the success of terrorism lies in the fear and social paralysis it induces. Through the media, particularly television, the terror produced is rapidly disseminated through a large part of the world. Instantaneous global dissemination by the media, particularly television, of news of terrorist acts promotes the aims of terrorism. Terrorists thrive on exposure of their message. The connections created by the media between most parts of the world directly favor terrorism. There is no better example than CNN and the September 11 attacks on the USA, which allowed a global audience to witness first hand terrorism in progress, in real time. Through violence, terrorism conducts what is primarily a psychological war directed at affecting the mind and the behavior of the public.

Those who sympathize with terrorists see them as freedom fighters. They create an environment in which terrorist movements are supported and flourish.

In practice there is usually a mixture of political, social, economic and religious values involved in terrorist movements. The Israeli problem is due to a combination of these forms of terrorism, each reinforcing the other. The freedom fighter form of terrorism, as was experienced in South Africa, was motivated by an inability of the majority of its population to deal with the complexity of their 'oppression' and quashing of their civil and personal 'rights.' The terrorism currently emanating from some Muslim societies is a reaction to the 'oppression' or suppression of religious values and 'rights,' among other things.

Although almost all terrorists are fundamentalists, less than a majority of fundamentalists are terrorists. Therefore, to understand terrorism it is necessary to understand the nature of fundamentalism and its principal manifestations.

FUNDAMENTALISM

Fundamentalism is a response to a rapidly changing and increasingly complex environment, a chaotic or turbulent environment, and the uncertainty it breeds. Fundamentalists cannot cope with such an environment and, therefore, remove the need for doing so by accepting a set of beliefs that identify an exhaustive set of meaningful questions, answers to them, and the acceptable modes of behavior to which the answers

*Correspondence to: Russell L. Ackoff, The Wharton School, University of Pennsylvania, Philadelphia, PA 19104, USA.
E-mail: rlackoff@aol.com

imply. All other questions are dismissed as irrelevant and all other answers and acts are considered to be wrong. There are no alternatives worth consideration. Therefore, this set of beliefs relieves those who accept it of the need to think and choose among alternatives. Acceptance of the doctrine is not a matter of thought but of uncompromising faith. This doctrine becomes dogma, the only 'truth'.

The fundamentalist dogma is usually the product of a living or dead guru of whom the followers are disciples. The disciples often form a cult that further separates them from others in their society. Their cult-like behavior increases the chasm between them and the 'others.'

The increased connectedness of the parts of the world has increasingly confronted previously isolated fundamentalist groups with external forces and influences that they cannot manage given their constraining worldviews. They cannot deal with the ambiguity and diversity presented to them. They cannot manage within a society in which ambiguity and diversity prevail without resorting to a change- and complexity-reducing doctrine—one that does not require them to change, to adapt.

Not only do the fundamentalists reject prevailing value systems, but the societies with which they engage also reject their value systems. This conflict cycle is aggravated by the increasing connectedness of the world. In the past, due to distance and less immediate communication, local belief and value systems were more isolated and were not confronted with the demands and differences of a wider, more 'advanced' set of beliefs and values. It becomes increasingly difficult to hold onto a belief and value system that is at variance with that of the main stream of thought.

British psychiatrist Ronald Laing saw the attitude of fundamentalists as follows:

The brotherhood of man . . . seldom extends to all men. In the name of our freedom and our brotherhood we are prepared to blow up the other half of mankind, and to be blown up in turn.

The matter is of life and death importance in the most urgent possible sense, since it is on

the basis of such primitive social fantasies of who and what are I and you, he and she, We and They, that the world is linked or separated, that we die, kill, devour, tear and are torn apart, descend into hell or ascend to heaven, in short, that we conduct our lives. (Laing, 1967, pp. 93–94)

Brian Eno, interviewed by Dan Joy, characterized fundamentalism as follows:

Fundamentalists say, 'My picture of the world necessarily will answer every question.' Necessarily. There is not a type of question that couldn't be covered by this theory, whatever it happens to be. . . . The pragmatist is saying: 'Well, look, it doesn't work. I don't care what you believe, this is not working.' And the fundamentalists say: 'It must work. It will work.' . . . What normally happens is that when it doesn't work, and it's conspicuously not working, they say, 'It's because we're not doing it right. It's not, because the theory is wrong. It's because we aren't doing it with enough purity.' (Joy, 1994, pp. 12–15)

Types of Fundamentalism

Fundamentalists are of two basic types, introverted and extroverted.

Introverted fundamentalists want to be left alone to follow their beliefs in privacy. They try to minimize interactions with non-believers and live in collective solitary confinement. They do not try to proselytize or otherwise affect 'outsiders,' but they do invite inquiries and conversions. They are non-violent. Examples are the Amish and Carmelite nuns.

Extroverted fundamentalists try to convert non-believers in order to create a supportive environment. They include missionaries who try to convert non-believers peacefully. Those who use force either to convert non-believers or to expel them from their environments are terrorists. Hitler's Nazis, the members of Hamas, and the Klu Klux Klan in the United States are examples of fundamentalists who resort to violence.

RESPONSES TO TERRORISM

Actual and potential victims of terrorism tend to respond to terrorism in several different ways: by the use of violence against them, by their capture and imprisonment, and by protecting possible targets.

The Use of Violence against Violence

Most efforts to deal with violent terrorists consist of turning violence back onto them. Witness Israel in Palestine, South Africa's past war on black liberation forces, and the United States in Afghanistan. In this way a continuing tit-for-tat exchange is initiated which tends to exacerbate the conflict and take it further away from the possibility of a peaceful settlement of differences. Violence turned onto terrorists tends to strengthen their resolve and make their recruiting easier, especially when the violence used against terrorists has innocent civilian victims.

Amongst people who have a loose identification with the fundamentalist cause, a violent response increases sympathy with the movement and its aims because the response is seen as unjust. Responding with violence to a fundamentalist movement simply demonstrates to its sympathizers that the terrorists' position and claims are justified. A violent response therefore tends to increase local support of terrorism, especially among those who are potential victims of retaliatory violence.

Apprehension and Imprisonment of Terrorists

One way of dealing with terrorists is directed at capturing and incarcerating them. The United States makes such an effort despite the fact that such treatment of criminals has failed completely. The United States has a higher percentage of its population in prison than any other industrialized nation. Nevertheless, it has the highest crime rate. Convicts released from US prisons have a higher probability of committing a crime than they had when apprehended, and the crime they are like to commit is more serious than the

one for which they were put in prison. Prison, it turns out, is a school for criminals. There is no reason to believe that captured terrorists whom are treated in the same way or worse than criminals will respond differently. Capture plus punitive imprisonment is very likely to begin a tit-for-tat strategy with individual terrorists. Moreover, unlike a released prisoner who usually receives little or no encouragement from society to give up a life of crime, the released terrorist is often treated in the society to which he/she returns as a martyr and is encouraged by others to re-engage in terrorism. The harsh treatment of terrorists significantly increases their dedication to their cause and grass roots support of their efforts.

Protecting Potential Targets

Efforts to protect potential targets of terrorists from attack are futile for two reasons. First, there are more such targets than can possibly be effectively protected and, second, it is always easier to destroy something than prevent its destruction, particularly when terrorists are willing to sacrifice themselves in a destructive act. It is virtually impossible to protect against suicide bombers and assassins.

An effective short-term defense against terrorism has yet to be developed. Furthermore, those that appear to have some deterrent value are a financial burden that few nations can afford.

This is not meant to imply that we should not make terrorist attacks as difficult as possible and that we should not prepare to minimize the harm caused by their attacks when they occur. But such efforts will not 'solve' the problem.

To make the tasks of terrorists as difficult as possible we have to think like terrorists, not like anti-terrorists. For example, terrorists are not likely to be using sophisticated econometric models to select vulnerable targets, as is being done by some who are trying to protect against terrorist attacks. In fact, terrorists are unlikely to attack a national economy directly for two reasons.

First, the institutions and behavior that make up a national economy are dispersed and robust.

There is no small number of economic targets destruction of which can bring an economy down. Witness the attacks on the World Trade Center in New York City.

Second, by spreading terror among consumers, as terrorists are doing in Israel, they can have a much greater impact on an economy than by attacking economic institutions.

Finally, the CEOs of some of the major corporations in the United States are doing much more to hurt the US economy than any number of terrorists' attacks could.

The world has become a much more tightly knit system. This makes it more vulnerable to disruption when a part (an airport, an air traffic control system, electricity supply, water supply, a city, etc.) is disrupted. There are virtually an unlimited number of targets destruction of which can have a large impact on the containing society and others. These targets are increasingly accessible with large amounts of information about them readily available. Developed societies for the most part are more open and more vulnerable than less developed societies such as those from which terrorists seem to arise.

Disruptive Responses to Terrorism

Since 9/11 there have been many legal, economic and related interventions aimed at disrupting the functioning of al-Qaeda. The assumptions underlying even short-term, quick-to-results, but less fundamental responses, require rethinking.

One of the most important assumptions that requires rethinking is the way we think terrorism is organized. The importance of the organizational models or metaphors we entertain, mostly implicitly and unconsciously, in our responses to terrorism must not be underestimated. The models of organization we use to make sense of our business, public institutions, and even social movements are not appropriate for comprehending the 'organization' of terrorism movements. These movements should be seen as *networks*, not *organizations*, of collaborating and communicating communities. Whereas organizations consist of essential parts any one of which, if destroyed, disrupts the functioning of the whole, networks

have no parts on which functioning of the whole depends. (Removal of a motor from an automobile—a system—prevents it from operating, but breaking a telephone line between two cities—a link in a network—does not eliminate communication between them. They can communicate through a third city with links to both cities affected.)

Terrorist networks consist of groups that, loosely or more tightly, share a set of values and norms. The members of the network are mostly members by birthright, or from long-term demonstrated acceptance of the norms, values and required behavior of network members. Between nodes of the network there is a sense of sharing in an overall cause. The nodes communicate and collaborate not only around the cause, but also around dealing with various needs as they emerge. Trust, kinship, duty and loyalty play a dominant part in determining membership.

It is important to understand the difference between a network and an organization. The importance in developing responses to terrorism is illustrated by the privacy protection laws of the United States. These laws were used to prevent the FBI from obtaining a search warrant for Moussaoui on the grounds that there was no proof that he was a member of a known terrorist organization (Elliot, 2002, p. 36). The notion of membership in an organization (in contrast to being part of a network) is inappropriate when dealing with terrorists.

Attacking the Causes of Terrorism

The ways of combating terrorism described above attempt to reduce its effects; *they do not address its causes*. Addressing the causes of terrorism requires a change of focus.

A metaphor illustrates what we mean. When a body's immune system is weakened through stress, an opening for an opportunistic disease to take root is created. This metaphor translated means that the inability to promote development within a society makes it susceptible to the infection of terrorism. Awareness of this is necessary for developing a long-term sustainable approach to terrorism.

Terrorism is a problem that cannot be addressed successfully within any one nation. It is a global problem that can destroy society faster than pollution or the exhaustion of resources. The 9/11 attack on the World Trade Center in the United States is the first, not the last, attack on the nation. Even if the United States succeeded in eliminating al-Qaeda it would not thereby eliminate terrorism. But it cannot even eliminate al-Qaeda acting alone.

A principal (but not the sole) producer of terrorism is the inequitable distribution among nations of wealth, quality of life, and opportunities to improve either. This is reflected in a recent study by the Heritage Foundation (*The 2002 Index of Economic Freedom*) which found that the production of terrorists by nations is negatively correlated with their economic freedom which, in turn, is correlated with their economic development. The bottom six nations are Iran, Laos, Cuba, Libya, Iraq, and North Korea.

To be sure, Western institutions such as the IMF and World Bank have been trying to encourage and facilitate development of less developed countries. However, they have been doing so in a way based on two false assumptions: (1) that they know best what less developed countries should do to accelerate their development, and (2) if they did know this that they should tell the less developed countries what to do.

No amount of evidence disconfirming the first assumption seems to shake it. The second assumption deprives the less developed country of the opportunity to learn from its mistakes, which is the most efficient way to learn. We do not learn from doing something right because, obviously, we already know how to do it. Repetition provides confirmation of what we already know and this has value but it does not constitute learning. Furthermore, although we can learn from others, it is not nearly as efficient as learning from one's own mistakes. For example, telling a child not to touch a hot stove is not nearly as effective as is the child touching it and getting burned. No amount of instruction on how to ride a bicycle is as good as trying to ride one and learning in the process. We learn a great deal more from our own experiences than we do from that of others, particularly

those who were raised in a different culture. In addition, instruction from those who consider themselves superiors to those that they instruct increases the feeling of inferiority and associated resentment among those being instructed.

The ability of individuals and groups to cope emotionally and conceptually with the increasing demands of a turbulent environment is directly related to their level of development. *We use 'development' to refer to an individual's and group's ability to effectively utilize available resources to satisfy their needs and desires, and those of others.* This includes, but is not limited to, the conceptual and emotional abilities required to deal with increasingly complex situations.

Value systems and frameworks or worldviews develop in response to the demands of a particular epoch. But every worldview and the pattern of thinking it involves eventually create dilemmas—problems that cannot be solved within that worldview. Einstein once noted that the problems created by our current way of thinking cannot be solved by that way of thinking. Competently dealing with these emerging dilemmas requires a paradigm shift, a shift in the way we think, in ways of conceptualizing reality, and in our value framework. Such shifts normally emerge out of social conversations. We use 'conversation' to mean a fundamental discourse aimed at revealing new ways of perceiving and dealing with a complex situation.

To illustrate this dynamic one can reflect on the situation in South Africa that gave rise to the apartheid policies, which in turn produced socially and politically motivated terrorism in that country. In essence, a value system, quite acceptable in the 1800s in 'Western' societies, was established in the southern end of Africa. Due to the lack of tight integration with the 'parent' societies these values systems influenced local politics while the value systems of the parent societies moved on. The world response to apartheid involved political, economic and cultural isolation of South Africa. This served to further isolate and sustain its then prevalent value system. Such isolation reduced the level of conversation with the outside world and ultimately retarded the development of an appropriate value system and worldview.

DEVELOPMENT AS AN ANTIDOTE TO TERRORISM

We know how to facilitate development of disadvantaged communities in both more and less developed countries.

We have done so in disadvantaged neighborhoods in developed countries (Ackoff, 1974) and in Indian villages in Mexico. The extension of the method employed in these small societies to larger social systems presents no problems that lie outside the minds of people.

The procedure involves five steps:

- (1) The more developed should make available to those less developed a pool of resources—financial, human, and equipment—that can be used in development efforts, but only in ways the recipients see fit, not the donors.
- (2) These resources can only be used for development.
- (3) Decisions on how to use these resources must be made democratically by those who will be directly affected by the decisions, and must be approved by others who will be indirectly affected by it.
- (4) No corruption is permissible. Its presence should be a sufficient reason for discontinuation of the development effort.
- (5) The effort should be monitored and evaluated by an objective group whose members are acceptable to both the recipients and the donors of the aid.

Now consider these conditions in some detail.

Resources: Each developed country should have an agency to administer development programs. It should receive and process applications for aid. A United Nations agency could help by directing applications to appropriate national and international sources. Action should be prompt. Negative responses should not preclude a proposal from being submitted to a different source.

A percentage of the income tax collected in each more developed country should be designated for investment in equalizing development among nations. Institutions and organizations receiving aid or contracts from the government of more developed countries should provide

human resources as required on projects. Personnel time and expenses as well as the cost of equipment should be paid for out of project grants.

Development: As noted above, by 'development' we mean an increase in the ability and desire to satisfy one's own needs and legitimate desires and those of others. A legitimate desire is one the fulfillment of which does not obstruct the development of any others. A need is a requirement for something necessary for maintenance of health or survival. It may or may not be desired. Calcium and zinc, for example, may be needed but not desired because of ignorance. On the other hand, many desires have no corresponding need—for example, the many luxuries enjoyed in a more developed society. Development, then, is an increase in *competence*. 'Omnicompetence,' the ability to obtain whatever one wants or needs, is an unattainable but continuously approachable ideal in which means and ends converge. It is necessarily an ideal for all of mankind, past, present or future, because no one can want anything, including the absence of desire, without wanting the ability to obtain it.

Pursuit of development has four necessary aspects:

- (1) *Science and technology:* The search for truth, knowledge which enables us to pursue our needs and desires efficiently.
- (2) *Economics:* The search for *plenty* (the cornucopia), the resources required to use the knowledge that science and technology provides.
- (3) *Ethics/morality:* The effort to promote *cooperation* and eliminate conflict within and between individuals and groups.
- (4) *Aesthetics:* The provision of (i) *inspiration*, the willingness to pursue ideals, objectives which can never be attained but can be approached without limit, and (ii) *fun*, the pleasure derived from whatever activity is engaged in, the pauses that refresh. Therefore, aesthetics has both creative and recreative aspects.

Development is a carriage drawn by these four horses. It can move no faster than the slowest of the horses. Therefore, effort and resources must

be allocated to each of the four aspects of development.

Democracy: Democratic decision making involves the following three principles:

- (1) Everyone who is directly affected by a decision can participate in making it either directly or indirectly through representatives they select. Advocates of their interests, for example, parents, should represent children and psychiatrists should represent the mentally ill.
- (2) Every decision-making body can do whatever it wants provided it does not affect any other individual or group. If what it wants to do can have such an effect, then approval of those affected must be obtained before it can be done.
- (3) Anyone in a position of authority over others in a decision-making body is subject to the collective authority of the others. That is, authority is circular, not linear, flowing up collectively as well as down individually.

Corruption consists of the appropriation for personal gain of resources intended for use in development of a group and its members. Corruption is rampant in many less developed countries, where it is a major obstruction to development. It also produces a feeling of futility in many and thus provides a fertile soil for terrorism. It should be disallowed and those guilty of it should be treated as criminals. Its presence should be sufficient ground for discontinuing a project.

Monitoring should be directed at facilitating learning by those whose development is intended. In order to do this a record should be prepared for each development-intended decision. That record should include (a) who made the decision, when and how; (b) the intended effects of the decision and when they are expected; (c) the assumptions on which these expectations are based; and (d) the inputs that were used in making the decision: the data, information, knowledge, understanding, and/or wisdom used.

The monitors should then track the expectations and assumptions. When a significant

deviation from these is found it should be diagnosed to find what produced it. The decision-making body should then take corrective action. A record should also be prepared for such a correction and should be processed just as the original decision was. This makes it possible not only to learn from a mistake, but also to learn from mistakes in correcting mistakes, therefore, *to learn how to learn*.

The development process described here provides a context within which there is an interaction and conversation by the wider society with its less developed parts. It enables a community to build new value frameworks, a new way of thinking, and a new worldview that enables its members to better deal with their needs and aspirations in their turbulent environments. This development process is a process of engagement and discourse, not one of rejection and isolation, which ultimately retards emergence of appropriate value systems.

Development is a matter of *learning*, increasing one's competence. Therefore, a development process must be rooted in education. However, societies that breed terrorism tend to be authoritarian, autocratic, or paternalistic at best, and such societies usually restrict or discourage education. They tend to prohibit discussion of alternatives to their current form of governance. These tendencies promote incompetence, exploitation and corruption. They also promote organizational forms that aid terrorism. They preclude the introduction of forms of societal organization that promote openness, good governance, and tolerance for democratic processes.

Development programs should involve a global collaborative effort. One of the characteristics of the world that terrorists exploit is its division by political boundaries. As long as the world remains politically fragmented it remains possible to find safe havens for terrorists. The reduction or elimination of terrorism requires a global response that addresses the roots of injustice and inequities within and between nations.

CONCLUSION

We have argued that a way to reduce terrorism is to promote development in societies that breed

terrorists. Movement toward equalization of wealth, quality of life, and opportunities to increase these would go a long way to reducing terrorism. But even if this were not the case, what would be accomplished is desirable.

Development projects should be designed and managed by those whose development is intended. They can learn more from their own trial and error than they can from the successes of others. However, they should have as much access to the expertise of others as they desire, but none that is imposed on them. Nevertheless, there are conditions that should be imposed on the recipients of the aid proposed here—conditions that assure learning and development. Engagement in the development process itself will contribute significantly to development.

A developed country can tolerate and incorporate introverted and non-violent extroverted fundamentalists but not terrorists, indigenous or foreign. A pluralistic democracy can house disciples of even fundamentalist doctrines. Conformity and consistency are virtues only to fundamentalists.

REFERENCES

- Ackoff RL. 1974. *Redesigning the Future*. Wiley: New York.
- Elliot M. 2002. They had a plan. *Time* 12 August: 24–37.
- Joy D. 1994. Interview of Brian Eno. *OPAL Information* No. 25: 12–16.
- Laing RD. 1967. *The Politics of Experience*. Ballentine: New York.