

Diffusion of the Idea of Beyond War

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Our purpose here is to explore the diffusion of ideas like beyond war. There is a huge tradition of research on the diffusion of innovations, over 4,000 studies to date. Almost all of these studies, however, deal with technological innovation, new ideas that have a material referent such as a product, hardware, or equipment. The present essay deals with the logical extensions of the diffusion framework to the particular case where the innovation is an idea without a direct material referent.

Diffusion of Innovations Research

Diffusion research began in the United States in about 1940, when a general theoretical model of diffusion was first formulated. (1) Beginning about 1960, this diffusion model was applied widely outside of the United States, especially in many Third World nations, initially without adequate questioning of how appropriate the model might be in these new contexts. For example, only in the 1970s did scholars begin to assess the distinctiveness of Third World conditions. The diffusion model has been usefully incorporated into development programs in Latin America, Africa,

and Asia. It fits well with the desire of many national governments to convey new ideas in agriculture, health, family planning, and education to their people.

A tremendous body of research has accumulated over the past forty years on the diffusion of innovations. From these investigations have come a series of generalizations about such issues as the characteristics of innovations that influence the rate of adoption and the characteristics of individuals who are likely to adopt an innovation first. (1) We summarize these findings here under the four main elements of the diffusion model: innovation, communication channels, time, and the social system.

Innovation

It should not be assumed, as has sometimes been the case, that all innovations are basically the same. To do so is a gross oversimplification. As illustrated in Figure 1, the rate of adoption of innovations differs widely. The rate of adoption is positively related to several characteristics of the innovation as they are perceived by the members of the system in which the innovation is diffusing:

1. Relative advantage, the degree to which the innovation is perceived to be superior to the idea that it replaces;
2. Compatibility, the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters;
3. Complexity, the degree to which an innovation is perceived as difficult to understand and use;
4. Trialability, the degree to which an innovation may be experimented with on a limited basis; and
5. Observability, the degree to which the results of an innovation are visible to others.

These factors help us to understand why most preventive innovations are characterized by a relatively slow rate of adoption: Adopters have difficulty in determining the preventive innovation's relative advantage; preventive innovations often are not very compatible with individuals' values, attitudes, or lifestyles; the cause-and-effect relationships involved are complex; trial is difficult or impossible; and the innovation's results are not very observable since they are delayed. The idea of beyond war is preventive in the sense that it seeks to prevent future armed warfare (beyond war also involves a global vision), and this preventive quality of beyond war may help explain why we would expect its early diffusion to face certain difficulties. An individual must make a decision to adopt a preventive innovation now, in order to prevent a future unwanted event from occurring (which may not occur anyway). We expand on the distinctive qualities of preventive innovations in a later section of this essay.

Communications Channels

A communication channel is the means by which messages get from one individual to another. Mass media channels are more effective in creating knowledge of innovations, while interpersonal channels are more effective in forming and changing attitudes toward an innovation and thus in influencing the individual's decision to adopt or reject the innovation. Most individuals evaluate an innovation, not on the basis of scientific research by experts, but on the basis of the subjective evaluations of near peers who have already adopted the innovation. These peers serve as models whose behavior is imitated by others in the social system. Thus imitation and social modeling are essential elements in the diffusion process. Diffusion is essentially a social process, involving social relationships among individuals in a system.

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It is the activation of peer communication networks that leads to the “take-off” in the rate of adoption shown in Figure 1. The most important part of the S-shaped curve is soon after it begins. It stops increasing at a rather slow rate and suddenly begins to increase at an increasing rate. That makes the curve take-off in an S shape. Its shaded area is the point of greatest interest to diffusion scholars. We get very excited at the shaded part of the curve because that is where the mystery gets solved of why diffusion happens. Once an innovation is accepted by about 15 to 20 percent of the total population involved, such as the total population of the US or of the USSR, it cannot be stopped. Then no matter how you try to slow further diffusion, the innovation continues to diffuse. This self-generating quality of the diffusion process has been found in a wide range of conditions, and for a large number of innovations that have been studied.

The first adopters of an innovation, called “innovators,” are usually perceived as atypical members of their local community, and their example is not immediately followed by others. The innovators tend to be high in socioeconomic status, have considerable mass media exposure, and travel over a wide area. The next category of individuals to adopt the innovation are called “early adopters.” They are people who occupy a key position in the local communication network and are seen to embody the norms of the social system. The early adopters are treated with respect and their behavior is followed by many others in the local system.

Certain individuals in a social system play an especially important role in the interpersonal diffusion of innovations. They are called “opinion

leaders.” Opinion leadership is the degree to which an individual is able to influence informally other individuals’ attitudes or overt behavior. Diffusion programs have often sought to identify the opinion leaders in a community and to obtain their assistance in diffusing innovations to others in the system. Once the rate of adoption for an innovation has reached 15 or 20 percent (that is, when the opinion leaders have adopted it), it is usually impossible to prevent further diffusion of the innovation (as stated previously).

“ . . . it is usually unrealistic to expect the mass media to persuade individuals to adopt an innovation. At best, the media can bring about behavior change indirectly. . . ”

The mass media also have an important role in the diffusion of innovations. The media are unique in being able to quickly reach a mass audience with a standard message. The media can thus create awareness or knowledge of an innovation and may be able to provide “how-to” information. But it is usually unrealistic to expect the mass media to persuade individuals to adopt an innovation. At best, the media can bring about behavior change indirectly, when mass communication influences opinion leaders whose decisions then affect others in the social network.

Time

The element of time is important in several ways: in the innovation decision process by which individuals pass from first awareness to adoption or rejection; in the innovativeness of an individual or other unit of adoption (that is, the relative earliness or lateness with which the person adopts); and in an innovation’s rate of adoption (measured as the number of members of a system who adopt an innovation in a given time period).

The Innovation-Decision Process

Now let’s look at the adoption of an innovation by an individual, as opposed to a system. We go through stages; the first is “knowledge,” which occurs when your consciousness is raised about a problem and you begin to search for some solutions. At the persuasion stage, you form an attitude, a predisposition to action; you change your attitude toward the innovation. The decision stage leads to adoption or rejection of the innovation. The mass media play a major role in creating knowledge of a new idea. They also help set the tone (the agenda) for that topic, making it something that can be discussed, that people could talk about. Discussions in near peer networks, that is, talking about the new idea with someone very much like yourself, is crucial in adoption decisions. Paradoxically, the less technically

expert these peers are, the more convincing their experience is to you.

My neighbor across the street is an English literature professor, who adopted a home computer two years ago. His experience made me decide to accept a computer. What convinced me is that my neighbor is not much of an expert on computers, so if he could use a computer to write a book, I could probably do it myself. And indeed, I did.

There are five main steps in the innovation-decision process:

1. Knowledge, which occurs when an individual or some other decision-making unit is exposed to the innovation's existence and gains some understanding of how it functions;
2. Persuasion, which occurs when the individual forms a favorable or unfavorable attitude toward the innovation;
3. Decision, which occurs when the individual engages in activities that lead to a choice to adopt or reject the innovation;
4. Implementation, which occurs when the individual puts the innovation into use; and
5. Confirmation, which occurs when the individual seeks reinforcement of an innovation decision already made (although he or she may reverse this decision if exposed later to different messages about the innovation).

Innovativeness

Innovativeness is the degree to which an individual or other unit of adoption is relatively early in adopting new ideas compared to other members of a social system. Innovativeness is often broken up into five adopter categories: innovators, the first to adopt; early adopters; early majority; late majority; and laggards. Some characteristics of the innovators and early adopters were mentioned previously. The late majority and laggards, in contrast, are low in socioeconomic status and are the most parochial and traditional in their perspectives.

Rate of Adoption

Rate of adoption is the relative speed with which an innovation is adopted by members of a social system. When the cumulative number of individuals adopting a new idea is plotted over time, the resulting distribution is an S-shaped curve (Figure 1). As stated previously, preventive innovations generally have a slower rate of adoption than do other new ideas whose relative advantage is more apparent.

Social System

A social system is a set of interrelated units that are engaged in joint problem solving to accomplish some goal. The structure of a social system affects an innovation's diffusion in several ways.

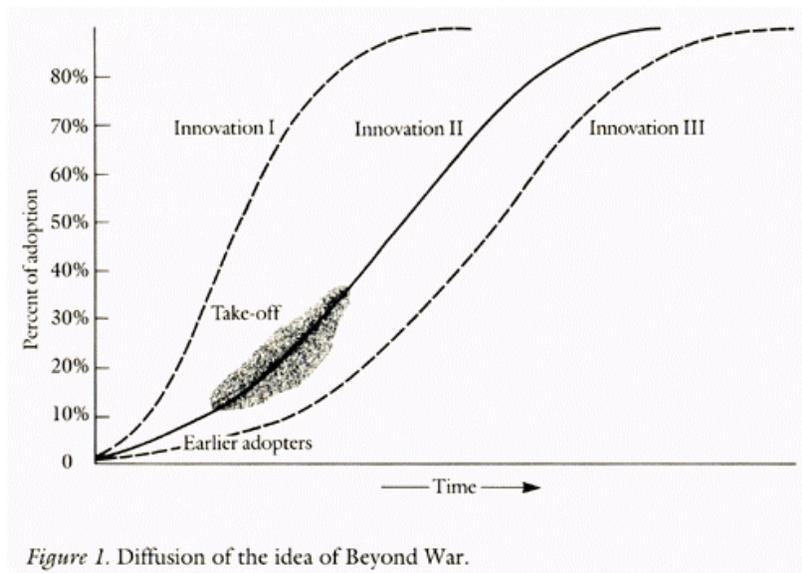


Figure 1. Diffusion of the idea of Beyond War.

Norms are the established behavior patterns of the members of a social system. They define the range of tolerable behavior and serve as a guide or standard. Norms can be a barrier to diffusion, such as religious or cultural norms that affect food habits.

Obviously, an innovation has little effect until it is put into use. Neither researchers nor officials in charge of diffusion campaigns have paid much attention to the consequences of the innovation for the social system; they have usually assumed that it will produce only beneficial results. Often, this has not been so.

Consequences are not unidimensional; they can be classified along at least three dimensions: desirable versus undesirable; direct versus indirect; and anticipated versus unanticipated.

Desirable consequences are the functional effects of an innovation on an individual or social system. Undesirable effects are dysfunctional. Understandably, people want to obtain the functional consequences (like increased effectiveness, efficiency, or convenience) and to avoid dysfunctional effects (such as disruptive changes in social values and institutions). Not all consequences are equally important. Every system has certain qualities that should not be destroyed if the welfare of the system is to be maintained: respect for human life and property, maintenance of individual dignity, and appreciation of others. Many other sociocultural elements can be modified, discontinued, or supplanted with little effect. Most innovations cause both desirable and undesirable consequences.

Consequences may also be classified into those that are direct or indirect.

Direct consequences are the changes that occur in immediate response to an innovation. Indirect consequences are the changes that occur as a result of direct consequences.

The indirect consequences of an innovation are often unanticipated. Anticipated consequences are changes due to an innovation that are recognized and intended by the members of the social system. Unanticipated consequences are changes that are neither intended nor expected. A system is like a bowl of marbles; move any one of its elements and the positions of all the others are changed. Usually, the anticipated consequences are also direct and desirable; the unanticipated consequences are usually undesirable and direct.

Diffusion of Beyond War

The concept of beyond war is an ideal case for examination in the context of diffusion theory. Central tenets of the beyond war idea are that war is obsolete, as is nationalism, and that the world is one interconnected, interdependent global system. To date, the Beyond War organization has been relatively successful in launching the diffusion of this idea in the United States. The task ahead is to further diffuse this idea until a critical mass of adopters are reached. Then, diffusion theory predicts that the beyond war idea will continue to spread to a larger population under its own momentum.

However, certain features of this idea pose special difficulties for its diffusion. As stated previously, beyond war is an idea without a direct material referent. Further, beyond war is often perceived as a preventive-type innovation. One tends to focus on the antiwar aspect, at least in the early stages of awareness of this idea. Only a few studies in the diffusion tradition have looked at preventive innovations. Here the individual or organization adopts an innovation now (at time t_1) in order to avoid the possibility that an unwanted event will occur at some future time (t_2). Examples are smoking cessation to prevent heart disease, energy conservation, and the use of automobile seat belts to reduce the risk of injury. Two distinctive aspects of preventive innovations are that their expected beneficial effects are delayed in time, and difficult to assess because even without the precaution, the harm might never have occurred. A certain degree of uncertainty is always involved in the decision to adopt an innovation, because innovations represent new ideas. The uncertainty is especially great when the innovation is perceived as preventive in nature, as is beyond war.

Several other obstacles usually face the diffusion of prevention innovations.

1. The adoption of preventive innovations is seldom motivated by profit, either by the individuals adopting or by the organizations promoting such adoption (some exceptions are the sale of earthquake insurance, and exercise equipment for improved cardiac health). Instead, there is usually much greater financial benefit for those opposing the behavior change. An example is the profits made from the sale of arms, cigarettes, and unhealthy foods.
2. The training, rewards, and professional values in many fields discourage prevention. For example, in the medical profession, much greater value has been placed on curing health problems than on preventing disease, even though a preventive approach is much less costly for society.
3. Many people feel that it is impossible for their individual preventive actions to make much difference in affecting important outcomes. Adoption of an innovation like beyond war requires a very high degree of efficacy, a belief that one's actions can determine one's future. I have observed personally that many of the individuals who have adopted the idea of beyond war (by becoming members and/or leaders in this organization) are highly efficacious.

Conclusions

A number of general lessons can be drawn from experiences and research on the diffusion of preventive innovations, which may be applicable to the diffusion of beyond war.

1. Interpersonal communication through peer networks is very important for the adoption of preventive innovations. One of the most important functions of the mass media in prevention campaigns is to activate near peer networks. Most individuals evaluate innovations and decide whether or not to adopt them on the basis of the subjective experiences of their friends and other peers.
2. Changing the context for preventive innovations can sometimes encourage their adoption if program officials capitalize on such change. An illustration is provided by the heightened public interest in personal health and fitness in the United States in recent years, which greatly assists preventive health efforts like smoking cessation and physical exercise.
3. Patriotic appeals by government leaders asking the public to adopt preventive innovations are seldom effective. An example of this point includes energy conservation in the United States. Exhortations from on high do not persuade individuals to change their behavior in most cases.
4. The perceived credibility of the communication source partly determines the success of a prevention diffusion campaign. For instance, electrical power companies and oil companies were not perceived as credible sources of energy conservation information by the American public in the 1970s.
5. Decentralized diffusion systems (with wide sharing of decision-making power) can be effective in diffusing preventive innovations when the changes recommended are of a relatively low-technology nature (as, for example, in the case of solar and other energy conservation measures).
6. The mass media can create awareness/knowledge of preventive innovations

and convey useful information about the skills needed for behavior change, but they should not be expected to change strongly held attitudes and behavior.

The diffusion perspective has contributed significantly to the improved effectiveness of a variety of educational programs in past years. Preventive behavior is particularly difficult to bring about, and a considerable potential remains for improving diffusion campaigns for preventive innovations.

References

1. Everett M. Rogers, *Diffusion of Innovations* (New York: Free Press, 1983).