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ANOTHER SELECTIVE LOOK AT FUTURE SOCIAL
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We know that the future is never the past or the present exactly repeated. Nevertheless, whatever social phenomena evolve over time, in whatever form they may present themselves, they do not come out of a void, suddenly appearing. The evolution is always rooted in past and present conditions.

This is true of social crises. We can grant that many crises which have been projected to appear in the 21st Century by many scholars and researchers as well as our self, will, differ in significant ways from those the world faced in the Century (for examples, see many of the articles in this very volume in which this paper will appear; see also, Quarantelli 1996, 1999). They will be different in important aspects from past and present crises. Nevertheless, those newer crises that are starting to appear in fuller and fuller form, can be seen to have predecessors of some kind in the past and in the present. There is not and could not be a sudden transformation of the characteristics of older crises into the features of the newer social crises.

Given that, what can we say about the four questions that have been posed to us? 1) What is the most likely *scenario* of a future crisis? 2) What are the most salient institutional constraints on governmental coping capacity? 3) What are the most likely improvements in crisis management tools and methods? And 4) What are the future possibilities of crisis *prevention*? Of course, our brief discussion will be highly selective and does not constitute a systematic analysis of even all

major questions and issues that could be considered. The Bibliography lists the major sources in the social science disaster research literature that we used.

1. What is the most likely *scenario* of a future crisis?

In our view, there cannot be just a single, likely scenario. The term "crisis" encompasses a variety of different social occasions, ranging from a one time plane crash stemming from bad weather to the collective and long-lasting multitude of activities occurring during a war. As we have written before, while all crises have something in common, that commonness has to be treated at a very abstract level. A typology of crises is badly needed (Quarantelli 1997). Given the present absence of such a formulation, we will use as an example for purposes of discussion here, a crisis not associated with conflict or natural disaster sources.

In our view, we recently had a very good exemplar of many future social crises. This was the supposed Y2K problem at the start of the year 2000, the possibility that there would be widespread computer and related failures because only a two-digit rather than a four-digit number had been used to indicate dates in various software and hardware programs involved in the technology. To be sure, as it turned out, there were very few serious social consequences from the problem.

Nevertheless, we would argue that the situation had many of the characteristics that have been projected for many but not all future social crises. All four of the social trends projected as likely to create future crises were present (see chapter one in this volume by Rosenthal, Boin and Comfort). The Y2K crisis clearly was rooted in recent technological developments. It was posited as being transnational in impact. The crisis was obviously mass media driven. And it reflected to some extent, the weakening of the nation state in coping with such situations.

For our purposes, however, there were three interesting features of the response to the

crisis. First, it was seen as a crisis that could be prevented by relatively simple technical measures, changing some parts of software and hardware computer programs. But more important was the social consensus on what could be done, who would do whatever had to be done, and also that needed resources would be provided. Without social agreements on these matters, the availability of a technical solution would have come to naught. That this is crucial can be noted by observing that it is possible in principle in many cases to build earthquake proof buildings. But there is no agreement at all on what this should be done, by whom or that the substantial societal resources for such purposes ought to be made available (In contrast, while different figures have been cited that were expended for dealing with the Y2K problem, it was very large, in the hundreds of millions of dollars).

Second, the effort evoked considerable and lengthy cooperation between the public and private sectors, and also among different governments and organizations. There was surprisingly little conflict over addressing the problem. To be sure many nation states never attempted to do anything about the problem, but nonetheless that did not become a matter of much dispute as such. Those that worked to prevent a crisis worked together on a rather large scale.

And third, apparently the steps that were taken, worked. We leave aside here that the probability of the crisis might have been considerably overstated in the first place, by different parties for different reasons. But that aside, what was done appeared to have prevent a crisis.

Given what happened, we would speculate that this could be seen as one possible scenarios for future crises, especially those rooted in technology. It should be noted that the medical area has similarly prevented the emergence of certain health crises by the development of vaccines often created in a cooperative effort by many groups. (In fact, the possibility of a smallpox epidemic has all but been eliminated in a world wide cooperative effort that cut across many different conflicts and cross-cultural differences). That certain means or mechanisms are

available, is not enough for action. What is sometime called the “political will” to do so must also be present so appropriate means, personnel and resources can be mobilized. In the future, the same relative enabling social conditions or circumstances which allowed things to happen in the past, will be needed.

Now, if we have to pick another candidate for a likely future major crisis *scenario*, our guess would be that it could emerge from developments in the area of biotechnology. Sooner or later there will be the creation of or the escape from control of some altered organism that cannot be checked by presently known means. Our ability to custom design living organisms almost insures that one day there will be some almost Frankenstein like bacteria, plant or animal let loose on the world. We are not talking of an unreal move such as *Jurassic Park*, but of real possibilities. But even more than the Y2K problem, it is very likely that the risks involved will be mostly invisible to human eyes. Only the negative consequences are probably likely to be visible. But our major point is that sooner or later crises of a biotechnological nature will probably emerge. If so, it will be possible to see if the response or coping with these future crises will parallel what we have already seen with the Y2K problem.

2. What are the most salient institutional constraints on governmental coping capacity?

Until very recently, almost all planning and managing of large scale crises have been thought of as something within the province or control of national states. But as has been written, the nation state is becoming less and less important as a social actor (Horsman and Marshall 1993; Guehenno 1995). Now the nation state is not going to disappear. Just as religion and to some extent the family as institutional forms have increasingly become less important as organized actors on the social scene, neither has disappeared and is unlikely to do so in the conceivable future. We think the same will be true of the nation state. It will not disappear. But it will not be able to be the prime actor as it was in the past.

There are two major reasons for this. The newer social crises often cut across national boundaries, or at least their negative consequences do, as seen in the poisoning in early 2000 of the Tisa River by a cyanide spill which affected Romania, Hungary and Serbia and for a while threatened to contaminate the Danube River (and the earlier even larger pollution in the Rhine River which starting in Switzerland affected six different nations and polluted upriver for almost 800 miles). Then of course there was the radiation fall out from Chernobyl which affected many European countries. Once a threat passes a national boundary, the nation state involved is severely handicapped in dealing with the ensuing crisis. Or as been said:

the pace of technological change...has led many to question the future of the nation-state as the main building block of governance (Cable 1995: 23)

Second, nation states have been increasingly replaced by more powerful social actors operating at the international level. These include private transnational corporations, UN agencies, and amorphous groupings of activist elements. For example, it is now a commonplace observation that the flow of money and financial transactions has become so internationalized that national banking systems are increasingly less able to influence their activities even though they have billions of dollars, yens, marks, etc. at their disposal.

Given these newer institutionalized forms of social organization, crises that are at the supra international level will have to be handled at that level. In that respect, it is likely that the major limiting factor on national governments will be their inability to control or even affect many of the negative consequences that appear outside of their own formal boundaries. But it is also a question whether the agencies or corporations that currently operate at the international level have either the legitimacy as well as a motivated interest to take the lead in dealing with crises that cut across national boundaries. By default much of the leadership might be taken by activist citizen groups but it is difficult to believe they would be able to mobilize the necessary resources.

3. What are the most likely improvements in crisis management tools and methods?

Actually, in our view, the greatest improvement will come in the "newer" kinds of personnel who will be involved in crisis planning and managing. It is possible to see the professionalization of crisis planners and managers. Among other things, this means that we are seeing the first generation of highly trained and knowledgeable bureaucrats, officials specifically trained to handle crises of various kinds. This will accelerate in the 21st Century. Without doubt, this will raise substantially the level of preparations and responses to crises.

But leaving aside that there will be better personnel, the greatest improvement will come from the greater and more sophisticated use of computers and related technologies. It is not that such technologies are automatic panaceas for dealing with problems especially of a crisis nature. As we have written elsewhere, there are going to be many negative or unwanted consequences for crisis planning and managing that will stem from the greater and greater use of computer and related technologies (see Quarantelli 1997). However, on balance, the knowledge revolution based on computer and associated technologies will permit substantial improvement in preparing for crises. It will be possible to do things that were almost unheard of before.

Probably the impact will not be equivalent in all phases of crisis management. Our guess is that the consequences will be most important for mitigation (prevention) and recovery efforts. Contrary to widely held beliefs, we do not think that these technologies will be most useful for immediate preparations and at the height of the emergency time period of crises. In fact, an information overload may be an unwanted result at those time periods.

Perhaps a major breakthrough will come through the establishment of what is currently being called a Global Disaster Information Network (GDIN). The intent of a GDIN, according to a Conference in Turkey in April of the year 2000 is to:

adapt technological advances and negotiate institutional processes to promote global sharing of disaster information. GDIN will attempt to improve the effectiveness and interoperability of natural and technological

disaster information systems. GDIN will also foster better early warning and mitigation and more informed general public.

As to scope, GDIN will be global in operation. Involvement will be open to:

recognized experts, disaster organizations, and governments from all sectors of society who can provide, manage, or use disaster information. GDIN will manage thematic and organization content (data, information, and knowledge) about natural and technological disasters . . . GDIN . . . will adapt remote sensing, computer, communication, information, and network technologies to acquire, produce, and disseminate disaster information.

Now of course the above statements are from interested parties, advocating the establishment of a GDIN (Disaster Information Task Force 1997). The view expressed is probably on the optimistic side, and tends to ignore the more problematical aspects of the effort (for a critique and discussion of problems with GDIN, see Quarantelli 1998).

However, the idea of a GDIN, but not necessarily exactly what is being proposed at present, is good. More important, sooner or later, something like a GDIN will be created and institutionalized. A GDIN should particularly interest those who believe future crises will increasingly cross national boundaries. Something like a GDIN will be necessary to cope with such crises. If we were to speculate, we would say that it is probable that something such as a GDIN that was initially proposed late in the 20th Century will probably emerge in a manifest form by the middle of the 21st Century.

4) What are the future possibilities of crisis *prevention*?

If by prevention is meant creating the impossibility of the appearance of certain kinds of social crises (let alone all of them), we think that is a totally chimerical dream. We will not be able to prevent crises in that sense. Even the science fiction literature, which sometimes expounds a very optimistic view of what will happen in the future, consistently shows something going wrong

In our view, the best that will be possible is to reduce the negative results of crises and to improve the positive ones. In that respect, resiliency seems a much more likely possibility than the prevention of crises. Looked at historically, it is difficult to find examples of where many risks,

hazards or dangers have been eliminated or disappeared from the human scene (except for a few health threats but in turn this has been partly counterbalanced by the emergence of new health risks to human, such as AIDS, which apparently is a relatively new danger for the human race.

It is probable that the consequences of building resilience will be of a markedly *differential* nature. That is, it may very well be possible to bring about a reduction in the loss of lives and in injuries where such threats exist. In the United States and some other societies, it has been possible to reduce on the average fatalities and injuries from certain natural disasters such as tornadoes and some specific others such as ship disasters. In the health area of course there has been a considerable gain in postponing deaths and extending the average length of life.

There may be some gains in reducing property damage and destruction, but it is very difficult to see that there will be substantial reductions across the board. And even these gains will be balanced off by ever escalating losses in material things. The ever greater value of buildings, property and the infra structure thus insures greater economic losses.

And it is even less likely that future crises will not bring about social disruptions and psychological stresses. In fact, as we have noted elsewhere, we will be faced with more and more future disasters (and crises generally) that will not have many if any at all fatalities and casualties and do little direct physical damage. A case in point was the accident at the Three Mile Island nuclear plant. But as that crisis demonstrated, there were massive economic losses, damaging political consequences, widespread social disruptions, and extreme psychological stress, many of which continue to manifest themselves to this day (Slovic 1987).

From a historical viewpoint, it might be argued that the newer crises might be a partial repeat but on a larger scale of what happened in the middle of the last century with floods. At that time, planners and professionals concerned with certain hazards thought it would be possible to eliminate many of them through structural measures or engineering of different kinds. Thus, in

United States and certain European countries, assurance was given that the dam building, the construction of levees, the draining of low lying areas, would eliminate most flooding from river overflows. To be sure, even when such measures were being instituted, there were those around who strongly argued that such measures might reduce if not eliminate minor floods, but insured that massive floods would eventually occur (Morgan 1971). It is of interest that in the last decade, even some engineers have concluded that the major floods that have affect North America and Western Europe have been mostly the consequences of the flood prevention measures that were taken in the middle of the 20th Century (Geipel 1993).

This last historical point is not an argument to do nothing with respect to crises. But it is an illustration of how in the past the human race has been mislead about what could be accomplished through technological solutions to certain problems. Or as one scholar said, beliefs that advance in science and technology could:

Control and guarantee . . . almost no risk . . . proved illusory . . . Society is no longer sure that "magic bullets" exist for every problem of risk, and new values questioning the earlier assumptions have gained increasing strength (Tarr 1990: 95-96).

To turn this point around, anything resembling disaster prevention will have to be done by social means and mechanisms, and there will be limits to what can be done. While the future can be different, it would be wise to learn the limitations suggested by the past and the present.

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