

interests of those who hold political power, civil war between these groups with opposing interests is much more likely than in the past.

There is still another way in which a solution to the war problem is more urgent today than in the past, at least from the perspective of ordinary citizens. There was a time, as late as the 18th century, when anyone who didn't want to participate in a war could simply ignore it. Armies employed by kings fought against each other and did little to disturb ordinary citizens, who for the most part were completely indifferent concerning whether they were to be subjects of King A or King B. But, as we have noted, that is no longer the case. Now even civilian jobs have military significance, and during a war any citizen is likely to be the subject of an enemy attack. As we have already pointed out, in modern warfare the number of civilians getting killed greatly exceeds the number of military personnel getting killed. World War II meant a gigantic upheaval in the lives of millions of people, but there were some places (part of Latin America and Africa) where the war made little difference, at least directly, to the lives of the people there. If there is a World War III with nuclear weapons, however, no one will escape. Even people in nations which have no involvement in the war will be affected by radioactive fallout, by large amounts of dust and smoke in the atmosphere, and by the alteration of the ozone layer which protects them from excessive amounts of ultraviolet radiation from the sun.

Smaller wars now have a wider impact, too. Americans learned in 1973-74 that war in the Middle East made a great deal of difference in the availability and price of oil. The same was true with regard to the civil war in Iran in 1978-79 when the price of gasoline again rapidly increased. Civil wars in Central America may have an impact on the prices Americans pay for coffee or fresh fruits and vegetables. On the other hand, such wars may eventually open up new opportunities for people in some less developed countries — education, medical care, and better housing.

Solving the problem of war is more urgent now than in the past also because the higher cost of war preparations must be borne by the general public. For example, in the United States, even though the Cold War is over, in 1998 military expenditures averaged over \$80 per month per person (\$320 per month for a family of four),⁴⁴ and that does not even count the huge amount needed to pay off the national debt, a large proportion of which is due to past military spending. This cost of preparing for war even in peacetime means less goods and services for everyone both directly and in terms of less productivity in the long run. In less developed countries as well as more advanced ones, military spending means less much-needed government money for schools, medical care, police and fire protection, roads and public transportation, and other social services.

Today no persons anywhere on earth can truthfully say that solving the war problem makes no difference to their own lives.

Part Two. Causes of War

4. The Cause of War: General Considerations

Our basic assumption is that war is a disease of society. It is a sickness that we would like to eliminate. This analogy leads to the expectation that perhaps wars could be prevented if we learned more about what causes them. As a result of this pattern of thinking, a great deal has been written and said about what causes wars.¹ In dealing with this issue it is worth pausing to consider exactly what is involved in saying that one kind of event causes some other kind of event. Then we need to look at the phenomenon of individual human aggressiveness and consider what relationship, if any, it has to those violent conflicts we know as wars.

Investigating the Cause of War

There are at least four senses in which the word "cause" can be used: (1) a necessary condition, (2) a sufficient condition, (3) a necessary and sufficient condition, and (4) a contributory factor.

(1) A "cause" in the sense of a *necessary condition* means that the effect cannot occur if the cause (whatever it is) is absent (that is, not present). If the necessary condition of something is known, one will then know how to prevent that event from occurring. For example, the presence of oxygen is a necessary condition for materials such as wood and paper to burn and keep on burning. It follows that one can extinguish such a fire by using a gas such as carbon dioxide, which is much heavier than

oxygen, to prevent oxygen (the necessary condition) from getting to the burning wood or paper. The carbon dioxide smothers the fire by keeping oxygen from getting to it.

(2) A "cause" in the sense of a *sufficient condition* means that the effect must occur whenever the cause (whatever it is) is present. If the sufficient condition of something is known, one will know how to make it occur. For example, the flow of electricity through a wire made of a metal such as aluminum or copper is a sufficient condition to produce heat. It follows that one can make heat (for a toaster or an electric blanket, for example) by producing a flow of electricity through a metal wire (the sufficient condition).

(3) A "cause" in the sense of a *necessary and sufficient condition* means *both* that the effect cannot occur if the cause (whatever it is) is absent *and* that whenever the cause (whatever it is) is present the effect must occur. If the necessary and sufficient condition of something is known, one will know both how to prevent it and how to produce it. For example, the flow of electricity through the filament of an incandescent light bulb is the necessary and sufficient condition of the bulb giving off light. One can stop the bulb from glowing by cutting off the supply of electricity (the necessary condition), and one can make the bulb glow by letting electricity flow through the filament (the sufficient condition).

(4) A "cause" in the sense of a *contributory factor* means that the effect is *more likely*

to occur because of the presence of something, but the relationship is *not a necessary one*. It is possible for the cause to be present and the effect not to occur, and it is also possible for the cause to be absent and the effect to occur anyway. If a contributory factor of something is known, one will be able to make it more probable or less probable but will not be able to guarantee any results. For example, smoking cigarettes is a contributory factor to developing lung cancer. That means that smoking cigarettes makes it *more likely* than one will develop lung cancer. Nevertheless some people smoke cigarettes and don't get lung cancer, and others don't smoke but still get lung cancer. There is no *necessary connection* between smoking cigarettes and developing lung cancer, but there is a *probabilistic connection*.² Those who smoke cigarettes are *increasing the probability* that they will get lung cancer, and those who don't smoke cigarettes are *decreasing the probability* that they will get lung cancer.

How do these four different senses of "cause" apply to the problem of the cause of war? It seems that if our goal is to prevent wars, we should search for some *necessary conditions* of war. We could then eliminate war by eliminating any one of these necessary conditions. The problem is to discover some necessary condition that we could and would want to eliminate.³

Our definition of "war" mentions several things that must be present in order to have a war. These things are necessary conditions. Consider, for example, that the existence of war as we have defined it requires the existence of groups of people. If we eliminated all people or somehow made it impossible for people to form groups, we would eliminate war. But these proposed cures are worse than the disease. We need to find something less drastic.

According to our definition war is large-scale violent conflict between organized groups. It seems that if we eliminated all conflicts between groups, we would then also have eliminated war, that is, *violent* conflicts between groups. Trying to eliminate all conflicts between groups is certainly less dras-

tic than eliminating all groups. But the problem with this approach is that eliminating *all* conflict between groups is even more difficult than simply eliminating the large-scale violent conflicts which constitute war. Those who think that the only way of eliminating war is to eliminate *all* conflicts of interest between groups are focusing on an even more difficult problem than they had to begin with. Furthermore, as we have previously noted, in some situations conflict may even be desirable.

What is to be said about the view that since individual human aggression is a necessary condition for the carrying on of war, the way to eliminate war is to eliminate *all* individual human aggression? Once again, it seems that eliminating all human aggression is a more difficult task than eliminating war. We need not achieve that virtually impossible goal in order to rid the world of war.

Since it seems that we cannot find any necessary condition for war except those whose elimination would either be undesirable or even more difficult than the elimination of war itself, we need to look elsewhere for ideas on how to prevent wars.

Let us consider this problem of preventing war in terms of the "cause" of war in the sense of a *sufficient condition*. It seems that what we need to find is not the sufficient condition to produce war but rather the sufficient condition for producing peace. Is there anything which when present always produces peace? Theodore Lentz, the father of peace research, observed that just as medical researchers interested in preventing disease sometimes focus their attention on unusually healthy groups of people to learn what produces such good health, so peace researchers should focus their attention on peaceful societies to learn what produces them.⁴ Efforts to find peaceful societies have reached the conclusion that most of these peaceful societies are pre-industrial.⁵ The search has just begun, however, and there are some nations such as Switzerland and Sweden which seem to have very good records in avoiding wars with other countries during the past 200 years. Investigators are also turning their attention to the

cause of peace *within* countries. There are many nations which have been relatively free from internal strife for long periods of time (including Switzerland and Sweden). We need to examine these societies and their institutions to try to discover the cause of peace within these communities. In the second chapter we tried to find something which is "an alternative to war" on the basis of changing the word "violent" to "nonviolent" in our definition of "war" (see Chapter 2, page 15). If that discussion is on the right track, it seems that a properly functioning democratic society where leaders are chosen by a vote of the people might be a sufficient condition of peace.⁶

Since the concept of "cause" as "necessary and sufficient condition" does not involve any issues not already discussed in connection with the separate concepts of necessary condition and sufficient condition, only the concept of *contributory factor* remains to be considered in our quest for understanding the cause of war. The use of the word "cause" to mean "contributory factor" is most likely to be relevant when one is considering the causes of some very complex phenomena, and there can be little doubt that war is a very complex phenomenon. When people say that *nationalism* is a cause of war or that *individuals who make profits from selling arms* are a cause of war, they are most likely using the word "cause" in this sense of *contributory factor* rather than in the stronger sense of necessary condition. They are claiming merely that if nationalism were reduced, or if the profits from selling arms were reduced, the likelihood of war would be reduced. They are *not* claiming that one cannot have a war unless nationalism is present or that one cannot have a war unless some people are making profits from selling arms. Nationalism and profiting from arms sales are things that may make war *more likely* but they are not causes in the sense of necessary conditions for war.

One must remember, however, that being a cause of something in the sense of being a contributory factor is not just a matter of being correlated with that thing. For example, suppose that for many different na-

tions over some period of time one finds a positive correlation between (1) military spending and (2) the number of casualties suffered in war. That is, (1) spending more on the military and (2) having more war casualties are things that seem generally to go together. Does this prove that high military spending *causes* a nation to get involved in war and suffer many casualties as a result? Saying that it is *more likely* that a nation with high military spending will be engaged in war and suffer casualties is not the same as saying that high military spending *causes* (is a contributory factor to) involvement in war and casualties. For example, there may be tension between two nations which leads them to increase their military spending. A war accompanied by high casualty counts may follow. But such a war might have occurred even sooner and been even bloodier if one of the nations had not increased its military spending in the face of tension. The positive correlation between a country's military spending and its casualties from war might be the reflection of some common cause for both (increased tension) rather than a causal connection between military spending on the one hand and the occurrence of war on the other.

There is still another point related to the issue of causation which needs to be considered in seeking to discover the cause of war. We have previously noted the analogy which can be drawn between war and disease. Suppose that some physicians were to address themselves to the cause of disease. They would probably begin by noting that there is no cause of disease *in general* but only particular diseases with particular causes. They would probably note that some particular diseases can be put into classes on the basis of their various causes — diseases caused by bacteria, diseases caused by viruses, diseases caused by genetic factors, diseases caused by toxic chemicals in the environment, and so on. They would then note that any attempt to make statements about *the cause* of all these various kinds of diseases is bound to fail.

Couldn't a similar point be made with regard to the subject of the cause of war? Perhaps it is inappropriate to try to make any

judgments about *the cause of war in general*. Perhaps one should begin by examining particular wars and the particular causes of those wars. Then one could try to classify these cases of wars on the basis of their different kinds of causes. World War I and World War II may be superficially similar in that they are the only two world wars in history, but in terms of their causes they may in fact be very different. Trying to discover some cause of war which is operative in both World War I and World War II (as well as all other wars) may be an exercise in futility. Furthermore, even in particular wars there seem to be several contributory factors with little expectation of deciding in a particular war which ones were most decisive.⁸

Once particular wars had been classified on the basis of their causes (if indeed that could ever be done with any kind of consensus), the next step would be to identify symptoms that appear before each kind of war actually breaks out. Then the knowledge about the various kinds of wars could be used to try to prevent particular wars. The situation would be similar to that of a physician who is familiar with different kinds of diseases and their symptoms and who can thus diagnose any developing particular illness and prescribe the right medicine for it. Ideally one could learn what type of "medicine" to use when symptoms of a particular kind of war appear so that the threatened war could be avoided. Even if such knowledge ever became available, however, it is questionable whether a knowledgeable "physician" of society would be consulted by political leaders or that anyone would pay much attention to taking the "medicine" which the "physician" of society prescribed.⁹ In any case, it is evident that we are far from being able to deal with the problem of war in this manner. Previous efforts to classify wars have usually focused on their size rather than their cause, a situation comparable to classifying diseases in accord with the number of persons who suffer from them. Focusing on the *effects* of war or of disease is not likely to help us to discover the *causes*.

Before we leave this analogy between war and disease, we should note that there are some particular diseases such as some kinds of

cancer where there are no known necessary and/or sufficient conditions. The only kinds of causes that are known are some contributory factors. Here we have a closer analogy with the situation of finding the causes of various kinds of wars. The best that can be done is to compile a list of the factors which make war more likely and then try to minimize each of them.¹⁰

What has been said in this section on the various meanings of the word "cause" is directly relevant to the examination of various theories concerning the cause of war to be undertaken in Chapters 5 and 6. All these theories must be viewed as being about *contributory factors* which are purported to be operative in some wars but not necessarily in all wars. We will be aiming to make true statements about the causes of war in the sense of some things which seem to be contributory factors in some wars. It is somewhat regrettable that our discussion of the cause of war will be carried on in such an imprecise way, but the present state of our ignorance permits no other approach.¹¹

Individual Human Aggression

Aggression can be defined as "*any form of behavior that is intended to injure someone, physically or psychologically.*"¹² It is important to realize that when we use the term in this sense being "aggressive" is quite a different thing from being "assertive." One can be assertive without intending to injure others. Our meaning of aggression is also different from "breaking the rules." There are often rules about not injuring others, but it is the injuring of others which is crucial to the behavior being classified as "aggression," not the breaking of rules. Note also that when the aggression is carried out *in order to accomplish some other goal* such as coercing other persons to do something they don't want to do or gaining the approval of others or punishing a child, it will be classified as "*instrumental aggression,*" but it is still aggression. It also is worth noting that it is quite possible to commit aggression, especially instrumental aggression, without being angry. If the intent of an act is to harm

someone, the act is aggression even though no feeling of anger has occurred. The term "violence" refers to a particular kind of aggression. *Violence* is an "extreme form of aggression, a deliberate attempt to do serious physical injury."¹³ Thus violence can include actually killing the other individual.

Although the definition of "aggression" we are using focuses on doing harm to and possibly even killing another person, we don't want to overlook the relation between aggression and seeking status or dominance over others. One way for an individual to establish dominance is through the use of physical force or even violence against others, but it is not the only way, especially among humans. An individual can achieve higher status or dominance over others by being very clever or by being good at some highly-regarded skill such as peace-making or by being able to persuade others.¹⁴ In many species of animals, including primates, there is competition for status or dominance, especially but not exclusively among males. This dominance can be mainly physical, but there are cases where a super-aggressive physically dominant individual is simply forcibly driven out from the group by collective action.

One can see parallels here between the role of aggression among individuals and the role of war among groups. *Individuals* within a group may use physical force or even violence to compete for status or dominance, and in war it is the *groups* which use physical force and even violence to compete against one another for status or dominance. Just as cleverness and other abilities, not just pure physical force, can be used by individuals to gain status and establish their dominance, so technological knowledge, sophisticated intelligence gathering, and other capabilities, not just pure physical superiority, can be used by groups such as nation-states to gain status and establish their dominance. And just as with individuals, if one dominant group becomes too aggressive, the others can join together to subdue it.

In chapter two we defined "war" as "large-scale violent conflict between organized groups which already are governments or

which seek to establish their own government over some territory." Even though war consists of group fighting against group, ultimately the fighting must be done by individuals. These individuals will be using violence against the individuals in the opposing group. In war that extreme form of aggression is instrumental since its goal is to get the other side to capitulate. It is important, however, to distinguish between the aggressive behavior of *individuals as individuals* on the one hand and the aggressive behavior of *individuals as representatives of groups* which are at war with each other on the other. The explanation of the former type of behavior may have very little to do with understanding the latter type of behavior. The motives for the aggressive behavior in the two cases may be very different. Giving causes for the aggressive behavior of individuals as individuals is definitely not the same as giving causes for war.¹⁵

Although there is a question about how relevant the study of *individual human aggression* is to the war problem, it is appropriate to discuss the topic simply because many persons addressing the war problem have thought that it is relevant.¹⁶ Furthermore, even if the relationship between individual aggression and warfare is not as direct as some writers have assumed, whatever relationship does exist can be better understood once the basis of individual aggression is understood.

Three main groups of theories have been advanced to account for individual aggressive behavior. The first group sees aggression as rooted in the biological nature of human beings. The second group sees aggressive behavior as instigated by the unpleasant feelings that accompany frustration. The third group of theories sees aggression as the result of one's social conditioning. These three approaches to the issue of why individuals are aggressive¹⁷ are sometimes considered to be mutually exclusive, but they aren't. In fact, often proponents of one view note the need to incorporate the insights of the other approaches. For example, one supporter of Konrad Lorenz and the biological approach pointed out that it is a "fallacious idea that what is inborn cannot be affected by education."¹⁸ The issue is rather

how much emphasis to put on each kind of theory when one tries to understand aggression or control it.

According to the biological-instinctual theories, humans, like other animals, are born with a propensity or drive to be aggressive. Such behavior may be triggered by specific kinds of situations, such as defense of one's territory, but it may also, according to Konrad Lorenz and others, just "explode"¹⁹ with no external stimulation. Sigmund Freud wrote of an instinct of destruction.²⁰ Robert Ardrey links aggressive behavior with what he calls "the territorial imperative"²¹ and writes of the "weapons instinct"²² which he believes developed in the killer apes from which humans are descended. Another proponent of this ethological approach is Desmond Morris.²³ A quite different version of the biological-instinctual approach has been put forth by Peter Corning. He emphasizes the evolutionary adaptiveness of the various inborn aggressive responses to specific kinds of situations.²⁴

Biological-instinctual theorists rely to some extent on ethology, that is, on studies of animals in their natural environment. They find that aggressive behavior is exhibited primarily in three kinds of situations. First, there is aggressive behavior, primarily but not exclusively among males, for status or dominance in the "pecking order" within the group. Second, there is aggressive behavior among males of territorial species for individual territory within the group's overall territory. Third, there is collective aggressive behavior by males to defend the group and its territory from other groups. Defense of the young, primarily by females, may be mentioned as a fourth specific situation where aggressive behavior occurs, but among the theorists mentioned above only Corning seems interested in this particular manifestation of aggression.

Strong evidence that there is at least some biological, hormonal basis for aggression comes from the different levels of aggressive behavior between males and females, both in humans and non-human animals.²⁵ This sex difference is apparent even in young children. Although various hormones may be involved, the most important one for aggression seems

to be the male sex hormone testosterone.²⁶ It affects both the development of the brain and the activation of the physiological mechanisms for certain behavior patterns. Even pre-natal females exposed to testosterone while in the uterus will display a greater tendency to aggressive behavior. There also seems to be a definite positive correlation between levels of testosterone in the blood and the degree of aggressive behavior in males, although this correlation is not as great in better educated, higher income males. Most criminal behavior in virtually all societies, especially that which involves physical attacks on other people, is committed by males after puberty and before old age, that is, when levels of testosterone are highest. Nevertheless some research is raising questions about whether the presence of more testosterone in the blood is something which produces aggression, something which merely exaggerates aggression, or possibly something that is the result of successful aggression.²⁷ The higher testosterone levels of dominant males may be the effect of achieving high status rather than something that causes it, and levels of aggressive behavior seem to reflect what is socially approved or disapproved as much as levels of testosterone. Nevertheless there is a strong correlation between levels of testosterone and amount of aggressiveness suggesting that there is at least some relation between that hormone and aggressive behavior.

Advocates of the biological-instinctual approach also appeal to careful observations of behavior by anthropologists and others which show striking parallels between what animals do and the behavior of humans, especially children and primitive peoples.²⁸ These many instances, it is claimed, show beyond doubt that there are genetic factors greatly influencing human aggressive behavior, including not only individual aggression but also intergroup warfare. That does not mean that the behavior cannot be modified by experience, but it does mean that those who want to make such modifications should know about the biological base on which they must build.²⁹ For example, we should realize that humans do have natural inhibitions against killing our own kind but these have been undermined by at

least three developments: (1) the cultural development of viewing other ethnic groups as if they were not humans but members of another species, (2) the technological development of weapons that allow us to kill at a distance without perceiving our individual victims, and (3) the development of knowledge which allows the psychological manipulation of soldiers to nullify their natural inhibitions not to kill other humans.

A second group of theories about the cause of individual human aggression are those which view aggressive behavior as the result of hostility brought about by frustration. According to this approach, human beings are viewed as goal-oriented organisms. As long as they are making adequate headway in achieving their ends they do not become frustrated and aggressive, but when they are blocked from reaching their goals they become more irritable. This theory developed by John Dollard and his colleagues at Yale claimed that any kind of frustration leads to aggressive behavior.³⁰ Leonard Berkowitz has developed a revised version of the theory which emphasizes that frustrations generate aggressive tendencies only to the extent that they are unpleasant and that the unpleasantness depends on our expectations for satisfaction.³¹ He also notes that people learn how to react to such frustrations on the basis of what kind of behavior pays off. If behaving aggressively gets us what we want, then we will learn to be aggressive while if some kind of nonaggressive response gets us what we want, we will learn to behave nonaggressively. Frustration leads to the disposition to be aggressive, but experience teaches us what kind of behavior works in dealing with this aggressive disposition. Readiness to allow for such learning on how to respond to feelings of frustration shows movement in the direction of accepting the social learning view, but proponents of this second approach continue to maintain that without frustration there wouldn't be aggression.

The third group of theories about individual human aggression emphasizes the role of social conditioning in aggressive behavior. According to this approach it is a mistake to

assume that humankind has some fixed biological nature that makes people either aggressive or nonaggressive.³² Human beings have the capability of learning to behave in many different ways depending on what kind of behavior is observed and consequently imitated, as well as on what kind of behavior is rewarded. Although this view is particularly associated with behaviorist psychologists such as John B. Watson and B.F. Skinner, many psychologists of other schools of psychology also favor the social learning theory. Anthropologists such as Margaret Mead, Ashley Montagu, and Geoffrey Gorer also are supporters of the social learning approach to explaining human aggressive behavior.

The evidence for the social learning view about the cause of aggressive behavior comes mainly from two sources: psychological studies which show how people's behavior and attitudes can be modified by conditioning and education, and anthropological studies which find very different behavior patterns in different cultures. Anthropologists can point to some societies, such as the Eskimos, where individuals are pugnacious but there is no group warfare; among others such as the Pueblo Indians, individuals are not pugnacious but there is group warfare.³³ This situation would suggest that both individual aggressiveness and group aggressiveness must be learned — separately. The social learning theory is supported also by the fact that adopted individuals reared from infancy in a culture different from that of their natural parents will display the attitudes and behavior patterns of the culture in which they are reared rather than that of their biological parents.

When the social learning theorists say that the environment causes the presence or absence of aggressive behavior, they mean that except in extreme cases of genetic abnormality or the like, the aggressiveness of an individual will be the result of the social conditioning to which the person has been exposed. The evidence about sex differences in aggressive tendencies mentioned in connection with the biological-instinctual theory cannot be ignored, but the social learning theorists claim that these inborn tendencies can be completely

overcome by the proper training, as is demonstrated by the existence of many nonaggressive societies.

The casual observer might question the social learning approach on grounds that certain individuals, even offspring of the same parents, are very different in their aggressiveness though reared in the same environment. The social learning theorist responds that no two people, even children in the same family, have exactly the same environment. For example, there is a great difference between being a boy with a younger brother and being one with an older brother even when the boys are in the same family. It seems that, even though there may be some slight differences in the inborn tendency to aggressive behavior among individuals and even though people may be more likely to behave aggressively when frustrated, the most important factor determining the degree and kind of aggressive behavior displayed by individuals is their social conditioning.

The social learning approach is supported by evidence that aggressive behavior is displayed even in the total absence of any frustration or hostility by persons who are merely obeying orders to be aggressive. Such aggression would be classified as instrumental aggression, but it is still aggression. Furthermore, the context is somewhat similar to that which occurs during war. Stanley Milgrim conducted a classic experiment on aggression in the early 1960s which showed that people will administer what they believe are very strong injurious electric shocks to others just because they were told to do so. He concluded:

Although aggressive tendencies are part and parcel of human nature, they have hardly anything to do with the behavior observed in the experiment. Nor do they have much to do with the destructive obedience of soldiers in war, of bombardiers killing thousands on a single mission, or enveloping a Vietnamese village in searing napalm. The typical soldier kills because he is told to kill and he regards it as his duty to obey orders. The act of shocking the victim does not stem from destructive urges but from the fact that subjects have become integrated into a social structure and are unable to get out of it.³⁴

Experiments by Milgrim and others indicate that the intensity of aggression dis-

played by individuals in these experimental situations is totally independent of how frustrated they are.³⁵ In fact, in some experiments the amount of aggression displayed seems to depend much more on (1) the strength of the attack which stimulated the aggressive response and (2) what kind of reaction those behaving aggressively expected from others witnessing their aggression.³⁶ Such evidence challenges the validity of the frustration-aggression theory. It may be that on some occasions frustration produces hostility which produces aggressive behavior, but that viewpoint neglects the fact that aggressive behavior may be brought about by other factors which have no connection to frustration.³⁷ People can behave aggressively without being angry, especially when taking orders from someone in authority as they do in the armed forces.

So what kinds of conclusions can we draw from these three different views about the source of human aggression? Each has something to contribute, and it is a grave mistake to assume that any of these views is false just because another one is true with regard to what it affirms. The *biological-instinctual view* seems to be correct in affirming that there is a biological basis for human aggression (just as for many aspects of human behavior). When people have been hurt, especially when badly hurt physically, their natural reaction is to either flee or strike back depending on their anticipation of how successful they would be in a fight. The less able they are to flee from aggression against them, the more aggressive they become. Other things being equal (which often is not the case), males are more likely to fight than females. But even the best known of the proponents of the biological-instinctual view such as Freud and Lorenz recognize that this genetic component of human behavior is modifiable by cultural and environmental factors.³⁸

The *frustration-aggression view* is correct in noting that frustration increases aggressive behavior, especially when one recognizes that frustration is not merely a reaction to any failure to attain some goal but depends on what is expected. Think of the different reactions to losing a game when one expects to win as

opposed to the reaction when one does not expect to win. On the other hand, the frustration-aggression view is demonstrably wrong if it holds that frustration is the only source of aggressive behavior. People can engage in very aggressive behavior simply because someone they regard as an authority has told them to do so.

The *social learning theory* is correct in recognizing that ultimately people's aggressive behavior along with their standards of approval or disapproval of it is the result of what has been learned from experience. This learning comes from observing and imitating the behavior of adults and from one's own experience of whether aggressive behavior has paid off or not. People can also be intentionally taught new ways to deal with conflict and aggressive behavior on the part of others. From their experience they learn when aggression is not appropriate as well as how much and what kind of aggressive behavior is acceptable. Consequently, they learn rules which are very important not only with regard to what kind of behavior is acceptable for themselves but also for others. Children learn such rules even while young and then tend to follow them and expect others to do likewise, even their parents.³⁹

In 1986 an international team of biologists, psychologists, ethologists, geneticists, and others adopted a statement in reaction to the belief of some people that war cannot be eliminated because it is a biological necessity. It is known as the Seville Statement because the meeting where it was first adopted was in Seville, Spain. This statement, which reflects support for the social learning view on the basis of aggression, has subsequently been endorsed by many organizations of scientists around the world, and in 1989 was officially adopted by UNESCO. Here are a few excerpts:

It is scientifically incorrect to say that we have inherited a tendency to make war from our animal ancestors....

The fact that warfare has changed so radically over time indicates that it is a product of culture. Its biological connection is primarily through language which makes possible the coordination of groups, the transmission of technology, and the use of tools. War is biologically possible, but it is not

inevitable, as evidenced by its variation in occurrence and nature over time and space....

It is scientifically incorrect to say that war or any other violent behavior is genetically programmed into our human nature.... Except for rare pathologies, the genes do not produce individuals necessarily predisposed to violence....

It is scientifically incorrect to say that in the course of human evolution there has been a selection for aggressive behavior more than for other kinds of behavior.... "Dominance" involves social bondings and affiliations; it is not simply a matter of the possession and use of superior physical power, although it does involve aggressive behavior.... When ... experimentally-created hyper-aggressive animals are present in a social group, they either disrupt its social structure or are driven out. Violence is neither in our evolutionary legacy nor in our genes.

It is scientifically incorrect to say that humans have a "violent brain."... How we act is shaped by how we have been conditioned and socialized. There is nothing in our neurophysiology that compels us to react violently.

It is scientifically incorrect to say that war is caused by "instinct" or any single motivation.... Modern war involves institutional use of personal characteristics such as obedience, suggestibility, and idealism; social skills such as language; and rational considerations such as cost-calculation, planning, and information processing. The technology of modern war has exaggerated traits associated with violence both in the training of combatants and in the preparation of support for war in the general population. As a result of this exaggeration, such traits are often mistaken to be the causes rather than the consequences of the process.⁴⁰

Our own investigation of these issues is completely consistent with this very important statement about biology, violent behavior, and war adopted by scientists from around the world.

Individual Aggression and War

Having discussed various views about the basis of individual human aggression, let us turn our attention to the issue of how such *individual* aggression may be related to that violent *group* conflict we call war. Three rather different situations need to be considered. The first deals with the aggressiveness of group leaders who have a great deal of influence on the behavior of the groups they lead. The second deals with the ways in which hostility, built up in members of a group...

frustration, may be directed against other groups. The third deals with the way in which soldiers are conditioned to actually engage in acts of violence against the enemy.

There is a remarkable incident involving rhesus monkeys that gives support to the notion that a particularly aggressive individual leader can be a cause of war. Robert Ardrey relates⁴¹ how ethnologist C. R. Carpenter had transported several groups of rhesus monkeys from India to Santiago Island off Puerto Rico to observe their behavior in a natural environment. One matter which he wanted to study was the dominance relationships of the males in the various groups of monkeys. The usual pattern of dominance among these monkeys is such that the top male monkey prevails in disputes about four or five times as often as the bottom male monkey. While making his observations Carpenter was surprised to find that one group of monkeys began conquering territory from five neighboring groups. In such struggles between groups the usual pattern was much threatening, little actual fighting, and no exchange of territory; but this situation was different. Furthermore, there seemed at first to be no explanation for the expansionist activity since an adequate food supply was distributed to all the groups each day and the size of all the groups was roughly the same.

But Carpenter soon found an explanation. The conquering group was led by an extremely strong, courageous, and domineering male. His factor of dominance over the second male in the group was the 5:1 ratio usually found between the top male and the bottom male. This commanding leader had a dominance factor of about 50:1 over the bottom male in his group. It was he that led his group on the warpath against the neighboring groups. When Carpenter removed the master monkey from the group, it went back to its own territory and stopped attacking its neighbors. When he returned the master monkey to the group, it again began imposing on the territory of its neighbors. One could not ask for a more striking case of the effect of an aggressive leader on the behavior of a group. In this case the master monkey was both the neces-

sary and the sufficient condition for aggressive behavior on the part of the group as whole. This incident suggests that the individual aggressiveness of leaders may be a very relevant factor in the causation of war.

When we look at human history, we are struck by the names of individual aggressive leaders who led their people along the path of conquest—Alexander the Great, Genghis Khan, Napoleon Bonaparte, Adolf Hitler, and so on. It may be too simplistic to believe that a single aggressive human leader makes all the difference as was the case with the rhesus monkeys, but the role of the individual leader in determining whether a given human social group will go to war deserves more attention than it usually gets. Having made seven case studies of wars fought in the twentieth century, John Stoessinger in *Why Nations Go to War* concludes:

With regard to the problem of the outbreak of war, the case studies indicate the crucial importance of the personalities of leaders. I am less impressed by the role of abstract forces, such as nationalism, militarism, or alliance systems, which traditionally have been regarded as the causes of war. Nor does a single one of the cases indicate that economic factors played a vital part in precipitating war. The personalities of leaders, on the other hand, have often been decisive.⁴²

Bruce Bueno de Mesquita in *The War Trap* succinctly describes the critical role of the leader for initiating war as follows: "the approval of the key leader is necessary for war, while his disapproval is sufficient to prevent his nation from starting a war."⁴³ Since the aggressiveness of the individual leader may be a significant factor in whether a society goes to war and since it seems that women generally are less aggressive than men, an interesting question is whether having more women leaders might mean less war.⁴⁴ On the other hand, perhaps even women would need to be somewhat aggressive in order to get into leadership positions.

A second way in which individual aggression may be related to the problem of war involves the psychological phenomenon called "displaced aggression."⁴⁵ A person who is frustrated may not be able to direct his hostility toward the real source of his frustration and

may, consequently, take it out on others. The typical example of displaced aggression is the man who is frustrated in his job by his superiors. He may become angry, but he cannot direct his hostility toward his superiors without losing his job or damaging his chances for promotion, so when he gets home he acts aggressively toward his wife, who then acts aggressively toward her children, who then act aggressively toward the pet dog.

The phenomenon of displaced aggression can be related to war in the following way. If there is widespread frustration among the members of a society, possibly because economic conditions are bad, a leader may be able to direct the resulting hostility toward some particular group, possibly toward some minority within the country or toward some foreign nation.⁴⁶ When economic conditions were very bad in Germany in the early 1930s, Hitler's attacks on the Jews gained a considerable following while just a few years earlier, during prosperity, very few persons paid any attention to him. Today we can expect that when the anticipation of rapid economic advancement in less developed countries is disappointed the hostility toward the richer nations will be great, but since the people of these poorer nations are unable successfully to attack these rich countries their hostility is likely to be directed toward their own leaders or toward their poor neighbors.⁴⁷ In fact, the leaders of these frustrated nations may deliberately direct their people's hostility toward neighboring countries in order to keep it from being directed toward themselves. It is an old device of political leaders to protect themselves from troubles at home by starting a crisis abroad, but the 1982 experience of Argentinian leaders with regard to the Falkland Islands—Malvinas indicates why political leaders adopting such a strategy ought to make sure they take on a weak enemy rather than a strong one.

All of the above suggests that prosperity is likely to make peace more probable while economic adversity is likely to produce hostility and war, even though the hostility and

4. The Cause of War: General Considerations

war may not be directed against the real source of frustration. It should be noted, however, that this phenomenon of displaced aggression seems to be more closely related to the issue of how leaders get their followers to participate in a war than to the issue of how the wars get started. Still, persons who call for aggressive action are more likely to make their way into leadership positions when the population as a whole is frustrated, and leaders are much more likely to embark on a course of action which will lead to war when they feel their followers are ready and eager for the effort.

A third way individual aggressiveness is related to war is in the preparation of soldiers to do the actual fighting of a war. This matter has nothing to do with how wars get started, but only with how individuals are induced to engage in violent behavior once the leaders have decided to go to war. Both the frustration theory of aggression and the social learning theory of aggression are relevant. Much of military training, especially basic training, is based on the principle that a frustrated soldier is more likely to be a hostile person and therefore an aggressive person. The task then becomes one of directing this aggression against the enemy rather than the military leaders in charge of the training or the political leaders who have been responsible for pulling the young person away from his personal pursuits to fight for the glory of his country. A frequently used device is to describe atrocities committed by the enemy. There is also an effort to get the soldiers to view the enemy soldiers as less than human and thus not deserving of the respect usually accorded to humans. A concerted effort is made to get these soldiers to follow orders without questioning them. Of course this military training is supported by a long prior period of social conditioning leading the young soldiers to identify with their country and to place a positive value on the idea of losing their life for their country.⁴⁸ This identification with the national group, nationalism, is one of our subjects to be addressed in the next chapter.

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