

ON WAR: CONCEPTS, DEFINITIONS, RESEARCH DATA - A SHORT LITERATURE REVIEW AND BIBLIOGRAPHY

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1 WAR: CONCEPTS AND DEFINITIONS

1.1 Introduction

Even casual inspection of the literature reveals the following, incomplete, list of 'war' terms: limited war and total (or all-out) war, cold war and hot war, local war and world war, controlled and uncontrolled war, accidental war and premeditated war, conventional and nuclear war, declared and undeclared war, aggressive or offensive war and defensive war, general war and proxy war, international war and civil war, tribal and civilized war, preventive or pre-emptive war, protracted war, absolute war, war of liberation, war of conquest, war of commerce, war of plunder, revolutionary war, political war, economic war, social war, imperialist war, guerilla war, psychological war, strategic war, counter-insurgency war, dynastic war, monarchical war, ritual war, agonistic war, sacred war, instrumental war, genocidal war.

Much of the complexity stems from the fact that the epithets refer to different aspects of, and perspectives on, war: e.g. war as condition, techniques of warfare, alleged motives and/or objectives of war, or assumptions about belligerent behavior and the causes (causative factors, determinants, conditions, etc.) of war (cf. Grievés 1977). War is a species in the genus of violence; more specifically it is collective, direct, manifest, personal, intentional, organized, institutionalized, instrumental, sanctioned, and sometimes ritualized and regulated, violence. These distinguishing features and dimensional delineations are not limitative. It should be perfectly clear, however, that war, or the state of belligerence, is a very special category of violence (van der Dennen, 1977).

Some of the listed war terms reflect concern for attitudes and behaviour, linked with assumptions about the cause of war. The term 'imperialist war' reflects both an attitude about the root causes of the war and an assumption about which States are guilty of having caused it. Also, much of the 'nature of war' is found not on the battlefield, but in the hostile behaviour and attitudes that characterize a state's foreign policy. Q. Wright (1942; 1965) calls attention to the discussion of this psychological aspect of war in Hobbes' 'Leviathan', where the oscillations of war and peace are compared to the weather:

As the nature of foul weather lieth not in a shower or two of rain, but in an inclination thereto of many days together; so the nature of war consisteth not in actual fighting, but in the known disposition thereto during all the time there is no assurance to the contrary. (Hobbes, 1651)

Hobbes' view raises an interesting question for modern students. Can peace be defined simply as the absence of war (using 'war' in the sense of actual military combat) (Grievés, 1977)?

1.2 Formal and material distinction of peace and war

The important point is that peace and war as facts differ formally rather than materially, and are distinguishable by their locus and implements rather than by their intrinsic

qualities as human behavior. Peace, it would appear, is the aggregation of chronic, diffuse, unorganized domestic conflicts: war is conflict, acute, organized, unified and concentrated at the peripheries of a society's habitat. (Kallen, 1939)

War and peace differ not in the goals pursued, only in the means used to attain them. (Barbera, 1973)

Clausewitz's formula - war is the continuation of policy by other means - has been replaced by its opposite: policy is the continuation of war by other means. But these two formulas are, formally, equivalent. They both express the continuity of competition and the use of alternately violent and non-violent means towards ends which do not differ in essence. (Aron, 1966)

... the nature of war itself has changed. In particular there is no longer a dividing line between a state of peace and a state of war. (Eccles, 1965)

Behind both phenomena, war and peace, lies the same dimension of power. (Barbera, 1973)

Many political realists point out that the common basis of policy in both peace and war, namely the quest for power, makes them two inseparable parts of the same social activity. Blainey (1973) contends that the causes of war and peace dovetail into one another: "War and peace are not separate compartments. Peace depends on threats and force; often peace is the crystallization of past force." Or formulated most succinctly: "In a system of power politics, there is no difference in kind between peace and war". (Schwartzenger, 1950)

War is a means of achieving an end, a weapon which can be used for good or for bad purposes. Some of these purposes for which war has been used have been accepted by humanity as worthwhile ends: indeed, war performs functions which are essential in any human society. It has been used to settle disputes, to uphold rights, to remedy wrongs: and these are surely functions which must be served... One may say, without exaggeration, that no more stupid, brutal, wasteful or unfair method could ever have been imagined for such purposes, but this does not alter the situation. (Eagleton, 1948)

These formulations are reminiscent of Ambrose Bierce's sardonic definition of "peace" as: "a period of cheating between two periods of fighting" (Devil's Dictionary), or Orwell's famous dictum from *1984*: "Peace is War".

Diametrically opposed to the vista of peace and war as a bipolar continuum is the view of a sharp and clear-cut borderline existing between the two conditions, thus implying a boundary-transgression in the transition from one state of affairs to the other. Brodie (1973), for example, states:

Although war represents human violence in its most intensive form, it is not simply human violence. It is something else besides, something with a distinctive and quite special configuration. The characteristics of this configuration cover a wide variety of phenomena, including the following: First, wars have tended, since antiquity, to have a clear and sharp beginning and an equally clear and sharp ending; and various ceremonials have been involved both in the initiation and the termination of war.

The most outspoken advocate, perhaps, of this view is Wells (1967), who succinctly affirms: “Notions of some limbo between war and peace are either contradictory or unintelligible”. Or, as it was stated in classical times: “Inter bellum et pacem nihil medium”.

1.3 The socio-political definition of war

According to international law, war, in principle, can only take place between sovereign political entities, that is, States. War is thus a means for resolving differences between units of the highest order of political organization. The majority of those who have been concerned with war as a socio-political phenomenon have also adopted as their basic premise that there is a fundamental difference between domestic conflicts, for which there are normally mechanisms for peaceful resolution, and international conflicts, which occur in a state of anarchy. Wars have been seen to involve directly State institutions, such as the foreign office and the armed forces. Since war is put in an international context, the stakes of war may be the life and death of States (Aron, 1966).

This general outlook on war as an international or inter-State phenomenon has been shared by many students, regardless of their professional background as political scientists, historians, sociologists, psychologists or military analysts. The school of political realism maintains that nation-States can only realize their national interests by demonstrating their willingness to fight and by making use of wars of various degrees of magnitude as an instrument of national policy to achieve legitimate ends (Lider, 1977; Nobel, 1977).

Von Clausewitz (1911) defined war as “an act of violence intended to compel our opponents to fulfil our will”, and elsewhere he emphasized the continuity of violence with other political methods: “War is nothing but a continuation of political intercourse, with a mixture of other means.”

Sorel (1912) defined war as a “political act by means of which States, unable to adjust a dispute regarding their obligations, rights or interests, resort to armed force to decide which is the stronger and may therefore impose its will on the other”.

Kallen (1939) seems to favour a political definition of war when he writes: “If war may be defined as an armed contest between two or more sovereign institutions employing organized military forces in the pursuit of specific ends, the significant term in the definition is ‘organized’.” He further adds that this organization of the contending armed forces extends back behind the battle lines and tends in modern wars to embrace all civilian activities, such as the industrial, productive, and commercial, and also the social interests and individual attitudes.

Kallen (1939) criticizes von Clausewitz’ (1911) definition of war as “an act of violence for the purpose of compelling the enemy to do what we will” as too general and indefinite. He says that “this definition might apply also to much that is called peace, particularly in sport, business and finance. It might apply to anybody’s act of violence, whenever it occurs. As limited to war, it applies to pre-Napoleonic and pre-industrial times and intentions, when war was a castle enterprise, and a gentleman’s game”.

A. Johnson (1935) defines war as “armed conflict between population groups conceived of as organic unities, such as races or tribes, states or lesser geographic units, religious or political parties, economic classes”. This definition may, according to Bernard (1944), be regarded as approximately sociological because it does not limit the armed conflict to political units but

includes any type of population units which is capable of resorting to arms as a method of settling disputes. Perhaps the definition is too general, since it does not specify the duration of the conflict or the magnitude of the conflicting parties. As it stands this definition could be made to include riots.

B. Russell's (1916) definition of war as "conflict between two groups, each of which attempts to kill and maim as many as possible of the other group in order to achieve some object which it desires" is even more general and uncritically inclusive. Russell states the object for which men fight as "generally power or wealth".

Wallace (1968) considers war to be "the sanctioned use of lethal weapons by members of one society against members of another. It is carried out by trained persons working in teams that are directed by a separate policy-making group and supported in various ways by the non-combatant population".

Ashworth (1968): "Mass or total war may be defined as a type of armed conflict between large nation-States in which populations and resources are rationally and extensively organized for conquest. It is important to note that populations are mobilized both in terms of activities and psychological states: the former implies comprehensive military and civilian conscription; the latter implies the systematic development of belligerent and hostile attitudes towards the enemy among all or most of the population."

Deutsch and Senghaas (1971): "By 'war' we mean actual large-scale organized violence, prepared and maintained by the compulsion and legitimacy claims of a State and its government, and directed against another State or quasi-State, i.e. a relatively comparable political organization".

Barringer (1972) considers war to be "one possible mode of policy activity aimed at effectively and favourably resolving an ongoing conflict of interests. In this sense war is but one of numerous conflict procedures, others being negotiation, conciliation, mediation, arbitration, and adjudication. It is merely a particular subset of the larger set of all conflict modes, encompassing all the socially (if not legally) recognized situations in which armed hostilities of considerable magnitude are conducted on a systematic and continuing basis by the armed forces of two or more political factions, organizations, nations, governments, or States. Because the term 'war' carries legal implications and connotations that no political body cares any longer to suffer or risk publicly, the *de facto* situation of war will be referred to as 'hostilities'.

Bernard (1944) attempts an all-purpose definition of war which is neither so general that it is indefinite and vague nor so detailed that it is confusing. It may be stated as follows: "War is organized continuous conflict of a transient character between or among collectivities of any sort capable of arming and organizing themselves for violent struggle carried on by armies in the field (or naval units on water) and supported by civil or incompletely militarized populations back of the battle areas constituted for the pursuit of some fairly well-defined public or quasipublic objective."

This objective is of course not always defined to the satisfaction of all concerned and it is liable to change according to circumstances during the continuance of the struggle. But upon the popular understanding of these objectives depends in large measure the degree and loyalty of the people's support. While the war is between or among organized groups or

collectivities, the fact of organization implies leadership (generals, military staffs, civilian economic, political and moral organizers and leaders) and collective effort, both military and civilian. The need for discipline and coordination also implies obvious regimentation within the army and of the belligerent populations as wholes, as well as more subtle manipulation of the psychological and social factors contributing to both military and civilian morale (Bernard, 1944).

Beer (1974) presents a minimum definition of war as “the presence of direct international violence”.

Crew (1952) defines war “as organized, intraspecific conflict, in which force, coercion is displayed”.

Similar concise “political” definitions are presented by White (1949), Malinowski (1936; 1941), Mead (1964), Bouthoul (1959; 1962), Sokol (1961), Nieburg (1963), Valkenburgh (1964), Withey and Katz (1965), Plano and Olton (1969), van Doorn and Hendrix (1970), Czempiel (1971), Krippendorff (1971), Zsifkovits (1973), Barbera (1973), Harrison (1973), Van den Bergh (1978), The Encyclopaedia Britannica, Oxford Dictionary, etc.

Bozeman (1976) has argued that the term “international war” no longer refers exclusively to violent conflicts between States. Rather, he says,

It now stands also for a broad spectrum of armed belligerence within the State, ranging from sporadic urban guerilla activities to civil wars, wars of liberation and secession, insurrections and other revolutionary uprisings, many of which are initiated and maintained in behalf of causes espoused by foreign principals. Moreover, this interpenetration of the domestic and foreign environments effaces altogether the conventionally accepted lines between legitimate and illegitimate force, and puts in question the theoretically established distinctions between war and peace. These interlocking conditions support the conclusion that the State, having forfeited important controlling functions customarily ascribed to it in world affairs, can no longer be regarded as a reliable medium for realistic differentiation among types of war and between the conditions of war and peace.

Next, the erosion of the State as the fundamental, shared norm of political organization, together with general acquiescence in the coexistence of States and anti-State bodies as equal actors in foreign policy arenas, has gradually but ineluctably led also to the devaluation of the two State-based superstructures that provide the context for official foreign relations: (1) the world society of sovereign, equal States and (2) the law of nations, which stipulates the rights and obligations of these States.

Bozeman proposes civilization as an alternative:

Today, several factors combine in support of civilization as the proper focal point of war research. As preceding comments on the variegated forms of war and violence throughout the modern world have suggested, the Occidental model of the State has ceased to be a reliable indicator or measure of such phenomena as international war and internal war. Indeed, a survey of actually functioning power centres makes it doubtful whether one can still legitimately view the nation-State as the politically controlling, and hence unifying, organizational norm in international relations. Observations such as these, together with reflections on the conspicuous failure of recent war-related policies of the United States,

imply rather that we have entered an era in which the interacting, independent units are so disparate that references to an “international order” are invalid. These symptoms of the erosion of the State seem to make it mandatory that we find other or additional ways to determine the configuration of an alien society.

Civilization recommends itself in this respect because it is more comprehensive as an ordering concept than the State: it can cover a host of political formations - armed bands, liberation fronts or empires; anarchies or despotisms; transterritorial commonwealths of commodity producers, financiers or religionists; as well as multinational political parties. Next, also in contrast to the State, a civilization is more enduring in time, even as it is usually less precisely defined in space. And finally, civilization is today a more neutral reference than the State because, contrary to the latter, it is not associated with typically Occidental norms and values. (Bozeman, 1976)

1.4 Quantitative criteria in the definition of war

If we are to take this view that war is simply one form of political intercourse, how do we know when the line dividing nonviolent conflict from violence has been meaningfully crossed? We probably will not know because of the subtle shades of progression, but following the Clausewitz line of thinking, perhaps the dividing line is immaterial, as war is ultimately a question of political attitude and subject to all the vagaries of time and place. One interesting attempt to fix the threshold quantitatively was made by Richardson (1960) who tried to arrange all “deadly quarrels” on a continuum of violent conflict, ranging from one killed (murder) to ten million killed (Second World War). The threshold of war was crossed when deaths went over 1000.

Singer and Small (1972) and Deutsch and Senghaas (1973) call “war” any series of events that meets the following three criteria:

- (1) Size: it results in at least 1000 battle deaths (not counting, therefore, the indirect victims through famine, lack of shelter, and disease).
- (2) Preparation: it has been prepared in advance, and/or is being maintained, by large-scale social organizations through such means as the recruitment, training and deployment of troops the acquisition, storage and distribution of arms and ammunition, the making of specific war plans and the like, and
- (3) Legitimation: it is being legitimized by an established governmental or quasi-governmental organization, so that large-scale killing is viewed not as a crime but as a duty.

The definition just given would exclude small incidents among organized forces, large but unorganized, poorly legitimated and transitory riots. It would include, however, many large and sustained civil wars, since the parties to such wars tend to assume quasi-governmental functions in preparing, maintaining, organizing, and legitimating the process of large-scale killing.

While qualification is helpful in standardization, the cut-off points for various categories are likely to remain highly arbitrary. Besides, the basis for quantification (in this case deaths) may not take into account other equally significant dimensions of the use of force. Economic war or psychological war may, for example, produce drastic and far-reaching political and military consequences not measurable by battlefield casualties (Grievies, 1977).

1.5 The judicial conception of war

Closely related to a political definition of war is the judicial conception. Q. Wright (1942; 1965) describes war as “a legal condition which equally permits two or more hostile groups to carry on a conflict by armed force”. The Marqués de Olivert is quoted as declaring that “war is a litigation or suit (*litigio*) between nations that defend their rights, in which force is the judge and victory is the judicial award”. This analogical and figurative characterization of war is perhaps more literary than factual (Bernard, 1944).

Eagleton (1933), after quoting numerous legal definitions of war from Cicero to the present, comes to the conclusion that “the preceding discussion leaves one with a great deal of uncertainty as to the meaning of war... [and that] to define war [juridically]... would present difficulties. Furthermore, it is desirable to eliminate the word, with all its unpleasant psychology, from the vocabulary of international affairs”.

Q. Wright (1926) defined war in the legal sense as “a condition or period of time in which special rules permitting and regulating violence between governments prevail, or a procedure of regulated violence by which disputes between government are settled”, and war in the material sense as “an act or a series of acts of violence by one government against another, or a dispute between governments carried on by violence”.

In his classic “A Study of War” (Q. Wright, 1942; 1965) war in the broadest sense was defined as “a violent contact of distinct but similar entities. In this sense a collision of stars, a fight between a lion and a tiger, a battle between two primitive tribes, and hostilities between two modern nations would all be war”. He therefore proposes a narrower definition: “the legal condition which equally permits two or more hostile groups to carry on a conflict by armed force”. He also noted the convergence with the traditional legal concept of war:

International lawyers and diplomats have usually followed Grotius’ conception of war as “the condition of those contending by force as such”, though they have often excluded from the conception duels between individuals and insurrections, aggressions, or other conditions of violent contention between juridical unequals. Furthermore they have insisted that “force” refers to military and naval activities, that is, to “armed forces”, thus excluding from the definition contentions involving only moral, legal, or economic force. With these refinements, the legal concept of war becomes equivalent to that adopted here.

Kelsen (1942) has distinguished two basic modern interpretations of war, and in each of them it is assumed that the existence of war is a matter for objective determination. His concern is with the legal status of war. According to the interpretation war is neither a delict nor a sanction. It is not a delict because war is not forbidden by any general international law. It followed, thus, that any State could war against any other State without violating any law. Obviously no State would violate its own laws in going to war, and, in the absence of international law forbidding war, there could be no question of a delict. On the other hand, war cannot be a sanction either, since there is no international law authorizing war. While every State authorizes its own wars and condemns its enemies, this hardly constitutes a legal state of affairs. War is, thus, beyond legal praise or blame.

The other position held that there was a general international law forbidding war on principle, except where an illegal act, a delict, had been committed. On this account war is either blameworthy, because it is a delict, or praiseworthy because it is a sanction.

In summing up this matter of the legal definition of war, Grob (1949) concluded that “there can be no such notion as war in the legal sense”. And Wells (1967) adds: “If there were some sense in the expression ‘legal war’, the existence of some international body which assigned the criterion for legality would at the same time make the expression otiose or contradictory”.

1.6 The legal definition of war

Those who stress the legal aspects of war maintain that a belligerent status implies sovereignty. A struggle can be considered a war only if the contenders are sovereign political units (tribes, fiefs, empires, nation-States, etc.). A rebellion against a sovereign authority may assume the character of a war, an internal one, only if the rebellious party succeeds in establishing a structure for asserting the sovereign power it claims. A certain amount of ambiguity is involved, however, in defining the warring parties as both sovereign and political. The point can be illustrated in the work of Quincy Wright.

In “A Study of War” Q. Wright (1942; 1965) tries to combine the legal, sociological, military, and psychological views of war and offer a synthesis. The resulting definition holds that war is a state of law and a form of conflict involving a high degree of legal equality, of hostility, and of violence in the relations of organized human groups; in a simpler wording: war is the legal condition which equally permits two or more hostile groups to carry on a conflict by armed force. Similar definitions are presented at other points in his study. In one, he asserts that war may be regarded “from the standpoint of each belligerent” as an extreme intensification of military activity, psychological tension, legal power, and social integration; and “from the standpoint of all belligerents” as an extreme intensification of simultaneous conflicts of armed forces, popular feelings, jural dogmas, and national cultures; he also repeats here the definition of war as a legal condition (p. 698). In another place he writes that war is at the same time an exceptional legal condition, a phenomenon of intergroup social psychology, a species of conflict and a species of violence (p. 700). In all three definitions, each of the four viewpoints is represented, but prominence is given to the legal aspect.

In a later study (Q. Wright, 1955), he distinguishes between “war in the legal sense” and “war in the material sense”. The legal conception, which he calls the narrower of the two, describes situations in which the participating groups are equally permitted to combat each other with the use of armed force. If war is seen in a material sense as armed struggle of considerable magnitude without regard to the legal status of the contenders, then, Wright concludes, “war has usually been employed by States as a method of international politics; it has also been employed by insurgents and rebels to gain independence, by governments to suppress domestic and colonial revolts, and by international organizations to suppress aggression”. This is a description of war as a political instrument. A general definition of war has been added: “War is the art of organizing and employing armed force to accomplish the purpose of a group”. In an article (Q. Wright, 1968), however, he once more repeats the assumption of the primacy of the legal concept of war.

It may be suggested (Lider, 1977) that the ambiguity of Wright’s position derives from his combining the constituent elements of war as a social phenomenon (war as a phenomenon of intergroup psychology, as a species of conflict, or a species of violence) with certain legal regulations to which war was submitted as it became institutionalized (cf. Kotzsch, 1956). The general impression that remains from his very valuable contribution to the study of war is

nevertheless that he was most concerned with what legal conditions had to be met before an armed conflict could be called war.

In a more obvious legal approach, Reves (1945) proposes the “social law” that war, which he defines as fighting between units of equal sovereignty, takes place whenever and wherever such units come into contact: the corollary to this view is that war ceases the moment sovereign power is transferred from the fighting equal units to a larger or higher unit. His conclusion is that the problem of the transfer of sovereignty is the sole cause and object of war.

This is surely an excellent example of the dangers of legalism. Reves’s definition of war is so narrow that it excludes the great majority of, what are commonly called, wars. Moreover, his contention that the transfer of sovereignty to a higher unit is the only result of each war is clearly invalidated by any fair test. His thesis may imply that the only way war can be prevented is by merging nations into a world-State, the single and highest sovereign power (Lider, 1977).

A legal definition of war is also presented by Stone (1959): “War is a relation of one or more governments to at least one other government, in which at least one of such governments no longer permits its relations with the others to be governed by the laws of peace”.

More extended and less explicitly legal is Sorokin’s (1937) concept of war as “the breakdown of the crystallized system of relationships” between the States; and Elliott and Merrill’s (1961) “the formal disruption of the relationships that bind nations together in (uneasy) peacetime harmony”.

Also the following two definitions seem to imply a judicial perspective (as a disruption of a normal, rule-governed, more or less peaceful state of affairs):

Fried (1967) defined war as “the... condition which... permits two or more hostile groups to carry on a conflict by armed means”.

E.O. Wilson (1978): “War can be defined as the violent rupture of the intricate and powerful fabric of the territorial taboos observed by social groups”.

With minor variants, the most current legal definition of war is the following: War is “ein zwischenstaatlicher Gewaltzustand zwischen zwei oder mehreren Staaten, unter Abbruch der friedlichen Beziehungen” (Menzel, 1959; Verdrosz, 1964). Or, more comprehensive still: “krieg ist ein völkerrechtlicher Gewaltzustand unter Abbruch der diplomatischen Beziehungen” (Zsifkovits, 1973).

1.7 Multifactoriality of war causation

War as a complex multi-dimensional social phenomenon has so many sources and causes that no theory of a single cause can explain its nature. One cannot find a single necessary condition and a single sufficient condition; one can only try to find sources, factors, conditions important for the occurrence of war (R.M. Williams, 1972). “No major conflict has ever had one simple or single cause that has been adduced” (Crawford in Wallace, 1957). “No two wars will manifest precisely the same configuration of causal variables” (Corning, 1973). “Every war is fought for more than one motive, spurious or real, appreciated or unrealized” (Turney-High, 1949). “No two wars take the same form” because of the variety of

military-technical correlates (Kingston-McCloughry, 1957). “Why wars take place is not at all clear... even more problematic is why a given war occurs between the given States at a given time” (Levi, 1974). “... any theory of the causes of war in general or of any war in particular that is not inherently eclectic and comprehensive, i.e. which does not take into account at the outset the relevance of all sorts of diverse factors, is bound for that very reason to be wrong” (Brodie, 1974). Similar “agnostic” visions may be found in the works of Rapaport and Aron.

In recent years, many attempts have been made to place war in some other perspective in which the State as actor is not the only unit of analysis. One approach has been to choose another main actor, for example, the system (e.g. Midlarsky, 1975). Another has been to achieve a synthesis by combining kinds of actors- men, State, and the international system (e.g. Waltz, 1959) - or by including internal wars as part of a synthetic concept of war (e.g. Rosenau, 1969).

One of the most important challenges to the concept of the State as an actor has come from the contention that the behaviour of States is really the behaviour of the men who act in the name of the State. Those who have power may not represent the national interests but rather the interests of those groups whose views the decision-makers consider relevant. The role that interest-groups have in the making of foreign policy of developed countries is a subject of recurrent interest. Three different groups have been indicated. The first group is big business which it is maintained, gains by war through the close ties between business magnates and political leaders. Secondly, special interest has been devoted to the arms industry, which through its direct contact with military establishment constitutes an important lobby. The literature concerning the activity of the “merchants of death” or the “military-industrial complex”, as this combination is called, is quite large. Finally, in some analyses those who carry out the foreign policy are mentioned as having many opportunities to influence it, and as being liable to act in the interests of the ruling class. Moreover, it has been suggested that the rules by which international diplomacy is carried out give diplomats an interest in creating tensions, crises, and even war.

On the other hand, some scholars deny that the influence of interest groups, although important, is decisive for the explanation of war (e.g. Deutsch, 1966).

1.8 Typologies of war

Q. Wright (1942; 1965) has developed a typology of war which distinguishes among four categories: (1) the civil war, which takes place within the boundaries of a sovereign nation; (2) the balance of power war, in which members of a State system are at war among themselves; (3) the defensive war, which acts to guard a civilization against the intrusions of an alien culture; and (4) the imperial war, in which one civilization attempts to expand at the expense of another.

In this set of distinctions, the boundary conditions of the conflict appear to be the primary criteria of classification. Whether a war is categorized as an imperial or civil war apparently depends upon the extent to which the conflict is contained within, or extended beyond, certain boundaries, implying the presence of both structural differentiation and participation (Midlarsky, 1975).

Singer, Small and Kraft (1965) follow Wright's classification in distinguishing among civil, colonial and international wars, but with a more focused emphasis in that wars between civilizations are not explicitly introduced.

Luard (1968) introduces a somewhat different perspective in his treatment of war; he places greater emphasis on the motives of nation-States in their initiation of war, although implicit in these reasons for expansion are the notions of complexity and participation. Luard divides "Wars of Aggression" into four categories. Expansive wars are defined as those concerned with the "conquest of foreign territories not previously controlled". The Japanese invasions of Manchuria and China are examples of this type, as are the German and Soviet invasions of various European countries in the interwar period. Irredentist wars are, according to Luard, "directed against territories inhabited mainly by people of the same race as the conquerors". The Nazi occupations of Austria and the Sudetenland belong in this category. Strategic wars, as a third category, may be motivated by a desire on the part of a nation to enhance its logistic and military position vis-à-vis some real or imagined threat. The Soviet invasion of Finland in 1939 may have been induced by such a perceived threat, and the Israeli participation in the Suez campaign might have been similarly motivated. Finally, Luard speaks of coercive wars as those which entail the placing of constraints on the operations of a sovereign government. Examples of this type provided by Luard are the Arab invasion of Israel in 1948 and the Soviet repression of the Hungarian uprising in 1956.

Midlarsky (1975) developed a classification of wars, based on a combination of the premises of rank order and scope, along with the explicit use of the variables "structural differentiation" and "participation". In addition, two variables specific to political violence are included. These are the intensity of violence in the form of the number killed, and duration, as a temporal indicator. Finally, the motivation of actors is taken into account.

Table 1: Varieties of War:

Type of war	Structural differentiation (a)	Participation (b)	War duration	No. killed	Motivation of at least one set of protagonists
Normative	High	High	Long	Very high	Fundamental change in the policy framework within nations and within the international system
Coercive	Moderate	Generally moderate	Moderate	High	Fundamental change in the policy framework within nations and within a particular region
Regional	Low to moderate	Moderate generally	Moderate	Low to moderate	Moderate changes within a regional policy framework
Territorial	Very low	Limited to two	Short to moderate	Low to moderate	Territorial change

(a) Alliances and/or military-industrial organization

(b) Protagonists and size of armies

Following the ordering principle of structural differentiation or complexity, the simplest unit in international warfare is chosen as the basis for the lowest level of warfare, the territorial war. This form of conflict concerns the authoritative administration of a given territory. The contested territory acts as the primary focus of conflict, and seldom do other issues intrude into the principal focus of attention. Conceptually, this is the simplest and most primitive of wars since the protagonists are in conflict over one of the most tangible, visible, and necessary of human commodities. In addition, the protagonists do not exceed two in number and, therefore, participation is at a minimum. Examples of this type are the Chaco War between Bolivia and Paraguay, as well as the Italo-Turkish War of 1911-1912. In the former conflict, the Chaco Boreal, lying between Bolivia and Paraguay, was the territory at issue, and in the second, the political control of Libya was the primary source of conflict.

A second category, the regional war, has also as a point of issue the administration of a given territorial entity. However, the policy framework and power relations of an entire region may be involved, and the protagonists generally exceed two in number. The presence of additional participants and their policy goals increases both the participation and complexity of this type of war. The War of the Pacific between Bolivia and Peru on the one hand, and Chile on the other, may be illustrative of this category, as are the First and Second Balkan Wars. In each of these instances, the crucial issues not only involved the authoritative administration of given territories, but also concerned the specific policy framework governing a given region. Chilean dominance of the Pacific coastal region following the War of the Pacific replaced prior Bolivian and Peruvian control of trade and economic development in that area. The consequences of the two Balkan Wars included a reduction of Turkish and Bulgarian importance in the determination of policies and international relations for that region. The coercive war as a third category depends somewhat on the number of participants, but more so on the extent of transformation of policy both internal to a nation-state and in its regional environment. Thus, the complexity of policy issues, as well as additional participation, are present here. Whereas the regional war may alter a policy framework, the coercive war transforms it. The intention of at least one of the protagonists is to reshape drastically the existing state of relationships among a small number of nations. As in the territorial and regional wars, the authoritative administration of certain geographical entities is also at issue. Examples of coercive wars are the Franco-Prussian War of 1870-1871 and the Sino-Japanese War of 1937-1941. In the former, the objective of German and French diplomacy was not simply the control of certain territories such as Alsace-Lorraine, but the future of the policy framework for Western Europe. Moreover, as a result of this war, the structure of diplomatic relationships in the region was drastically altered by the attendant unification of Germany. Indeed, the emergence of a unipolar diplomatic system centered at Berlin has been observed to be a consequence of this war. The Sino-Japanese War of the late 1930's was, in its essentials, a conflict for the control of the Chinese heartland and all of East Asia. Japanese hegemony within the region was the goal of that country's policy makers.

Finally, the normative war includes the coercive aspects of the previous category, and in addition, includes elements of rebellion against an international normative framework. As such, the number of participants is larger than for any of the other categories, and the intensity and scope of desired change on the part of one set of protagonists also are greater. As before, the element of territoriality also is germane to the conflict. The Thirty Years' War, ending only in the Peace of Westphalia in 1648, and the Napoleonic Wars are earlier examples of this type. In both World Wars I and II, the norms governing international discourse were challenged by a group of nations, and in the second of these wars in particular, the explicit

rejection by the Axis Powers of the Treaty of Versailles and League Covenant constituted a challenge to the dominant norms of the international system.

Perhaps it is only when human beings clash over important abstractions and modes of civilization that the most widespread and intense wars occur, just as the bloodiest civil wars are fought over the “appropriate” forms of domestic socio-political relationships. In any event, four categories are posited for the occurrence of international warfare. These form a rank-ordered set in which each element in a lower rank also is found at all levels above it.

Midlarsky (1975) points to certain similarities between his categorization and those developed for internal violence. For example, Rosenau (1964) lists three types of internal war, “Personnel” wars, seen as fought only over the issues as who is to occupy the roles of government (as in many Latin American coups); “Authority” wars, seen as fought in addition over the arrangements for occupancy of these roles (such as electoral methods or opportunities for indigenous as opposed to colonial persons to occupy them) (e.g. the struggle in Rhodesia); and “Structural” wars, seen as fought over the social and economic structure of the society as well as the other two issues (as in the French or Russian revolutions, or the Spanish Civil War).

Lasswell and Kaplan (1950) made the same distinction fourteen years earlier, naming the three types Palace, Political, and Social Revolutions, while Huntington (1962) distinguished Governmental, Reform and Revolutionary Coups in essentially the same way.

Table 2: Typology of behavioral Violence (Eckhardt & Köhler, 1980)

Symmetric Relations	<u>Imperial Involvement</u>	<u>No Imperial Involvement</u>
	<u>Imperial Power Conflicts</u> Involving one or more imperial powers on both sides of the conflict, such as the two world wars in this century; and also imperial intervention on both sides of a civil conflict, such as the Spanish Civil War.	<u>International Conflicts</u> Without any active, military involvement of imperial powers, such as the Chaco War, 1928-35. All border conflicts were placed in this category
Asymmetric Relations	<u>Imperial Conquests</u> of nonimperial nations or territories, such as the Sino-Japanese War, 1937-45	
	<u>Imperial Civil Conflicts</u> involving one or more imperial powers on one side of the conflict only, such as the Vietnam War, 1960-74.	<u>Civil Conflicts</u> with no apparent imperial involvement of an active, military nature, such as the Civil War of Nigeria 1967-70.

2 WAR: RESEARCH ON DATA

2.1 Statistics of deadly quarrels

An effort to examine and classify violent deaths was made by Lewis F. Richardson, a mathematical physicist and meteorologist, who devoted many years to the careful collection and analysis of statistics on violent deaths from all causes. Quincy Wright and C.C. Lienan prepared the manuscript of Richardson's "Statistics of Deadly Quarrels", published after Richardson's death in 1953. Before he died, Richardson had collected exhaustive statistics on violent conflicts from 1820 to 1929 and supplemental statistics on those from 1930 to 1949. The magnitude of a fatal quarrel is defined to be the logarithm to the base ten of the number of people who died because of that quarrel. The magnitude will be denoted by μ [mu]. The range of magnitude extends from 0 for a murder involving only one death, to 7.4 for the Second World War. Other well-known wars had magnitudes as follows: 1899-1902 British versus Boers 4.4; 1939-40 Russians versus Finns 4.83; 1861-65 North American Civil War 5.8. The magnitude of a war is usually known to within ± 0.2 ; so that a classification by unit ranges of magnitude is meaningful. The ranges have been marked off at 7.5, 6.5, 5.5, 4.5, 3.5, 2.5, 1.5 and perhaps at 0.5 and -0.5.

Steinmetz (1907; 1929) formulated the "law of relatively diminishing war casualties". Discussing the casualty figures from wars, Q. Wright (1965) notes the following:

A fifth trend has been toward an increased human and economic cost of war, both absolutely and relative to the population. The human cost of war is a difficult problem to get data upon. The proportion of persons engaged in a battle who are killed has probably tended to decline. During the Middle Ages 30 to 50 percent of those engaged in battle were often killed or wounded. In the sixteenth century 40 percent of the defeated side might be killed or wounded and about 10 percent of the victors. The latter cut down the members of the defeated army as they ran away. Thus at the beginning of the modern period the average casualties in battle were probably about 25 percent of those engaged. In the three succeeding centuries the proportion has been estimated as 20, 15, and 10 percent, respectively, and in the twentieth century about 6 percent. Prior to 1900 about a quarter of the battle casualties died, and in the First World War about a third; thus the proportion of those engaged in a battle who die as a direct consequence of the battle seems to have declined from about 6 percent to about 2 percent in the last three centuries. The proportion of the population engaged in the armies, however, has tended to become larger, and the number of battles has tended to increase. As a result, the proportion of the population dying as a direct consequence of battle has tended to increase. The losses from disease in armies has declined. Dumas and Vedel-Peterson (1923) give figures of the Napoleonic period suggesting that 80 or 90 percent of the total army losses were from disease. Von Bloch (1899) states that in the nineteenth century this proportion averaged 65 percent. In the First World War, while disease accounted for 30 percent of the losses in the Russian army and 26 percent in the American army, in the German army only 10 percent of deaths were from this cause. It has been estimated that, of 1,000 deaths in the French population in the seventeenth century, about 11 died in active military service. The corresponding figure for the eighteenth century is 27; for the nineteenth, 30; and for the twentieth, 63. For England the corresponding figures for these four centuries are 15, 14, 6, and 48. (Q. Wright, 1965).

Further, “taking all factors into consideration, the proportion of deaths attributable to military service and to hostilities have probably increased among European countries from about 2 percent in the 17th to about 3 percent in the 20th century” (Alker and Bock, 1972). Sorokin (1937) noted that even before the Second World War, the casualty figure for the first quarter of the twentieth century in Europe exceeded “the total casualties for all the preceding centuries taken together... The curse or privilege to be the most devastating or most bloody war century”, Sorokin said, “belongs to the twentieth; in one quarter century it imposed upon the population a ‘blood tribute’ far greater than that imposed by any of the whole centuries compared”.

Relative casualties also seemed to rise. Casualties as proportions of the general population and of civilians generally go up. There is a dip which is particularly pronounced in the nineteenth century, but then a sharp upsurge in the twentieth. Interestingly, the proportion of casualties in the armed forces moves almost continuously upward.

This trend in relative casualties is matched in part by the development of what has been called the “military participation ratio” (Andreski, 1968) - the proportion of the army to the population. This goes up through the seventeenth century, dips in the eighteenth and nineteenth, and then rises slightly again, lending some support to the hypothesis that the military participation ratio is an important determinant of war. Nevertheless, the relatively small increase in the relation of the military participation ratio in the twentieth century is not enough to explain the sharp upsurge in casualties. Earlier wars caused massive casualties in civilian populations. If we take the Thirty Years War as an example, one estimate reports an absolute decline in the population of the German Empire from 21 to 13.5 million between 1618 and 1648 (Leckie, 1970).

In contemporary times, heavy civilian casualties have resulted from technological advance. In particular, techniques of aerial bombardment, not previously available, have taken a significant civilian toll. At the same time modern medicine and logistics have probably worked to bring down indirect mortality (Beer, 1974).

Table 3
The total number of persons who died because of quarrels during the 126 years from 1820 to 1945

Ends of range of magnitude	Total numbers of deaths in millions
$7 \pm \frac{1}{2}$	36.00
$6 \pm \frac{1}{2}$	6.70
$5 \pm \frac{1}{2}$	3.40
$4 \pm \frac{1}{2}$	0.75
$3 \pm \frac{1}{2}$	0.30
$2 \pm \frac{1}{2}$	0.40
$1 \pm \frac{1}{2}$	2.20
$0 \pm \frac{1}{2}$	9.70
	Total 59.00

A remarkable feature of the above table is that the heavy loss of life occurred at the two ends of the sequence of magnitudes, namely the world wars and the murders. The small wars

contributed much less to the total. The total deaths because of quarrels should be compared with the total deaths from all causes. There are particulars given by de Jastrzebski (E, Death Rate), and in the Statistical Year Books of the League of Nations, which allow the total to be estimated. A mean world population of 1.5 times 10^9 and a mean death rate of 20 per thousand per year would give during 126 years 3.8 times 10^9 deaths from all causes. Of these the part caused by quarrels was 1.6 percent. This is less than one might have guessed from the large amount of attention which quarrels attract. Those who enjoy wars can excuse their taste by saying that wars after all are much less deadly than disease (Richardson, 1960).

Thus, during that 126-year period, less than two out of every hundred deaths appear to have been due to lethal violence. Even if one includes suicides, plus unintended deaths from starvation and disease, the deaths traceable to lethal violence appear to be fewer than three out of every hundred. Indeed, one striking fact that Richardson's data underline is that the greatest risk from even this degree of lethal violence over the 126-year period was from very large-scale wars. World Wars I and II together account for 36 million out of the entire 59 million deaths in his table. Apart from these two conflicts, a person's chance of dying from the direct results of any form of lethal conflict was far less than one in one hundred. The chance of eventually dying as a murder victim was a little over one in four hundred (Prosterman, 1972).

2.2 Incidence and frequency

In modern civilization - since about 1500 - Q. Wright (1942; 1965) found there had been at least 284 wars and some 3,000 battles. He defined a battle as involving more than 1,000 casualties on land or more than 500 at sea; a war was a hostile encounter which involved more than 50,000 troops or which was legally declared as war. But, he warned, these were inadequate measures of human violence. The United States, for instance, had been involved in only 165 of the "official" battles but it had fought in more than 9,000 hostile encounters. "There have probably been over a quarter of a million such hostile encounters in the civilized world since the year of 1500, an average of over 500 a year".

Table 4
Sorokin's estimate of war casualties in Europe, by centuries, 1000-1925 (000's omitted)

Country	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	Average since 1600
France	1	4	11	59	61	107	658	1,055	1,769	3,682	1,791
Austria		8	11	7	100	257	1,560	1,505	226	3,000	1,573
G. Britain	1	7	17	64	86	91	160	310	141	3,095	901
Russia	5	12	29	37	38	118	119	752	777	6,371	2,005
Germany								360	459	6,060	2,293
Spain						160	559	94	166	44	216
Netherlands						64	290	170	34		124
Italy							17	41	54	1,783	474
Poland ¹						66	91	348	219		219
Total	7	31	68	167	385	863	3,454	4,635	3,845	24,035	
Per 1,000 population		2	5	8	10	15	37	33	15	54	

¹ Poland and Lithuania

Table 5 shows some of the main statistics of war over the past four centuries.

Century	16th	17th	18th	19th	20th
No. of wars	63	64	38	89	30 (to 1964)
No. of battles	87	239	781	651	> 1,000
No. battles/war	1-2	4	20	7	> 30
Average length of war (years)	2.9	2.7	2.7	1.4	4.0
% time at war	65	65	38	28	18
Average no. nations/war	2.4	2.6	3.7	3.2	4.8
Average size forces on each side	18,000	22,000	22,000	35,000	100,000 (to 1940)
% battles outside Europe	0	0	2	13	25 (to 1964)
% of forces killed	-	25	15	10	6
% of warring nation killed	1,5	3,7	3.3	1,5	8.8
Violence Index	180	500	370	120	3,080

Wars: those legally declared or involving more than 50,000 troops.

Battles: those involving more than 1,000 casualties on land or 500 at sea.

Table after Clarke (1971) based on data from Q. Wright (1942; 1965), Sorokin (1937) and Institut Français de Polémologie, "Périodicité et intensité des actions de guerre (1200 à 1945)" in *Guerres et Paix*, Vol. II, 1968.

The "Violence Index" (intensity of wars) shows that even before the Second World War violence was more than 25 times greater in this century than the last; it was more than 150 times greater than in the twelfth century.

Battles, as well as becoming more frequent, are becoming much larger - as their names reveal. "They were once called after the bridges or towns where they took place. By the time of the First World War they were named after rivers - the Battle of the Somme - or even regions - the Battle of Champagne. By the Second World War they were called after countries or oceans: the Battle of Britain, the Battle of France and even the Battle of the Atlantic. The trend appears to lead inevitably to the nuclear holocaust that would be the Battle of the Globe (Clarke, 1971). Also Klingberg (1966) discovered how quickly violence was escalating:

Table 6: The escalation of violence

War	Date	Average deaths per day
Napoleonic	1790-1815	233
Crimean	1854-1856	1,075
Balkan	1912-1913	1,941
World War I	1914-1918	5,449
World War II	1919-1945	7,738
(Hiroshima)	August 6th, 1945	80,000

So far nearly 90 people out of every thousand have been killed as a direct result of war in this century compared with only 15 in the last. The number of people involved in the increasing number of battles is also getting much larger. The battles themselves last much longer than they used to. Since the Second World War about 20 million men have been under arms, roughly 7 out of every 1,000 (and this excludes the huge numbers of people employed in war industries of various kinds). In seventeenth-century Europe only 3 in every 1,000 were under arms (Clarke, 1971).

Finally, there are signs that war has recently become more common. Greaves (1962) has counted no less than 14,542 wars in the period 3600 B.C. to 1962 A.D. He found that there

was an average of 2.61 new wars every year up to the beginning of the Second World War. Since it ended, however, the average has risen to 2.94.

According to Kende (1971 et seq.) 116 wars, both international and internal, have occurred since the Second World War, involving 81 States. Approximately 25 million people were killed in those wars.

“There is a more widespread opinion than in any other period of history that war has not functioned well in the twentieth century”, Q. Wright (1942; 1965) concludes with scholarly understatement. “From being a generally accepted instrument of statesmanship, deplored by only a few, war has, during the modern period, come to be generally recognized as a problem”.

Stefflre (1974) utilized the Richardson (1960) and Singer and Small (1972) data for long-term forecasting:

Table 7: War forecasting data

Period	Richardson war casualties				Singer & Small No. combatants killed	
	Median population thousand millions	Number of countries in system	Number killed	Proportion of population killed	Number killed	Proportion of population killed
1815-45	1.05	27.1	364,400	0.00032	244,700	0.00024
1846-75	1.20	37.4	5,050,750	0.00421	889,800	0.00074
1876-1905	1.50	37.7	1,067,000	0.00071	600,100	0.0004
1906-35	1.80	55.0	18,949,700	0.01052	9,084,300	0.0050
1936-65	2.50	80.4	23,178,300	0.00927	18,370,800	0.0073
1966-95	5.00 (est)	180 (est)	-	-	-	-

Stefflre concluded:

From these data, one could easily hypothesize the following rule: for each interval in which the human population doubles, there occur wars in which ten times as many people are killed as are killed by wars in the previous such interval. One way of “formalizing” this rule is through the following equation.

$$\frac{Y_{t+1}}{10} / Y_t = \frac{X_{t+1}}{2} / X_t$$

where Y_t = number of people killed by wars in the interval (t = 1,t)
 X_t = population of the earth at time t.

It is estimated by extrapolation that 10% of the 1950-1999 median population will be killed during that period, or about 400,000,000 people.

Beer (1974) tried to calculate the sum total of human lives sacrificed to war. He presented a sophisticated extrapolated estimate of more than 14,000 major and minor wars in world history (5,595 years) with an estimated grand total of one billion direct war casualties. Beer (1974) adds the following comment:

If the trend we have suggested is correct, it carries somewhat paradoxical aspects for the past, the present, and the future. First, the distant past may have involved more wars but fewer casualties - people fighting more but killing each other less.

A second paradox concerns the present. Our times may include both more peaceful life and less peaceful death than the past. Progressive war concentration also implies peace concentration. If wars were more numerous, long, and frequent in the past, peace was necessarily shorter and more fragmented. If today wars are indeed fewer, less frequent, and shorter, peace by definition is longer and more continuous. Increases in individual life expectancy resulting from developing technology complement the peaceful effects of war concentration.

At the same time, there is also more war-related death. In the past the absolute number and relative proportion of those who met warlike deaths were smaller than today. While today the absolute amount of peaceful life may be greater, the chances of the average citizen completing his life in peace are also reduced. Finally, a historical trend of war concentration and aggravation has paradoxical implications for the future. Declining general incidence of war or the termination of any particular military conflict is obviously welcome. Yet they do not necessarily imply the elimination or even reduction of the human or material costs of war. Instead, longer interwar periods may be way-stations for subsequent wars which may inflict even greater casualties than the ones which preceded them. In the last quarter of the twentieth century, we may see more peace, but war will continue to be a problem of much more than historical interest.

Eckhardt and Azar (1978) compiled a list of 265 major world conflicts and 105 major interventions for the years 1945 to 1975. The list was analysed as to the regional, temporal, and typical distributions of conflict-years, intervention-years, and intervening years of external parties.

The finding that most major conflicts from 1945 to 1975 were happening in the Third World was quite consistent with the results of other authors. The finding that major conflicts were increasing from 1945 to 1970 was also quite consistent with the results of previous studies. The finding that the various types and sub-types of conflict were increasing at a relatively equal rate was a new finding which questioned Kende's (1971) emphasis on the relative increase in civil anti-regime wars. Admittedly, Eckhardt and Azar's civil types of conflict did not necessarily coincide with Kende's civil anti-regime wars, but there was presumably considerable overlap between them. The measure of intervention followed the same temporal pattern as the measure of conflict, which questioned Kende's (1971) emphasis on the relative increase in foreign interventions, but this emphasis was changed by Kende (1977). Although these interventions did increase from 1945 to 1970, they did not increase any more than the increase in conflicts.

Finally, Eckhardt and Azar's finding that both conflicts and interventions decreased in 1971-1975 questioned SIPRI's (1975) contention that conflicts were continually on the increase up to 1974. This new finding, however, was quite consistent with Kende's (1977) results. This new finding was extremely important in suggesting that something new was happening in the world since 1970. This new happening in 1971-1975 was associated with relatively more conflicts in the Middle East and far fewer conflicts in both regions of Asia, fewer internationalized civil conflicts, more self-management of major conflicts in the Middle East, and less Western intervention in world conflicts generally. These findings for 1971-1975 may be compressed into two basic phenomena: (1) less conflict in the world in

general, and (2) even less Western intervention of the overt military kind in world conflicts (Eckhardt and Azar, 1978).

Kende's (1978) general examination of the wars of the last ten years partly confirms his earlier findings, partly discloses and proves new phenomena. The overall pattern has not altered, he reports. The picture is still characterized by the fact that the wars are parts of the great international processes and are far from having ceased. Their arena is still the Third World. They are, as before, primarily internal wars which gain their international character from the activity, often coupled with military participation, of the armed forces of countries far away. However, another change has also taken place: the decreasing war trend, a fundamental characteristic of the last ten years.

A further change is the fact that one of the fundamental motives of the wars of the last 32 years - the determination of the colonial people to attain independence - has largely ceased. The world atlas is today covered almost exclusively with the colours of independent national States. As a practical consequence, the cause of internal conflicts within the frontiers of the country will increasingly be rooted in social, class, etc., conflicts and anti-regime fights. The achievement of national independence and the transformation of certain regions into national States lead necessarily to the intensification of internal power conflicts, which may result not only in the outbreak of anti-regime wars of a social character; it also leads to the intensification of other internal-tribal, minority, religious-conflicts which again can easily lead to war.

Q. Wright (1965) claims in the second edition of *A Study of War* that "conditions relevant to war have changed more radically since 1942... than in any equal of human history". Yet, as seen above, many of the measures of war have not changed appreciably since the end of the Second World War. Conflicts may have become somewhat more frequent, but as they have also been waged on a lesser scale, there is doubt that the overall level of violence is higher today (Wood, 1968). Even the outcomes of conflicts have been shown to be little different in the 1945-1965 period from the 1919-1939 period (Holsti, 1966).

There is general consensus, however, that during this period there has been (1) a decline in conventional inter-State wars, in wars fought for territorial gains, in colonial-imperial wars, and in wars fought in Europe or America, and (2) an increase in ethno-national (including irredentist and secessionist) wars, fought within the boundaries of a single State, and in wars fought in Asia, Africa, and the Middle East (for short, the "Third World") (Denton, 1966; Kende, 1971 et seq.; Huntington, 1962; Luard, 1968; Wood, 1968; Q. Wright, 1965). Most of these assertions are supported statistically, but there is argument over the meaning of the figures. Is it true, for example, that internal wars have increased significantly since 1945? Wood (1968) examines 128 conflicts since 1898, of which 84 took place since 1939. Of these 84, only 28 were inter-State conflicts while the remainder were insurgencies, civil wars, or coups d'état on a scale large enough to meet his operational definition.

Wood's figures show that conflicts in Asia, Africa and the Middle East have in fact outnumbered those in Europe and the Americas during every decade since 1898 except 1908-1917. The prominence of Third World conflicts is therefore not new, though the nature of wars in that area has changed. Moreover, some of the reasons cited for the rise of Third World violence are not proven. Rosecrance (1963) believes that internal instability may be a lesser cause of foreign aggression now than in the nineteenth century, since better means of internal control exist.

Contrary to the view that rapid growth causes internal and external instability (Olson, 1963), Haas (1965) found a higher incidence of foreign conflict among States at both ends of the development scale.

2.3 Periodicity

Attempts have been made to discern macroscopic patterns in the history of war. In 1923, a Russian astronomer and archaeologist, Tchijevski, published what he called an "Index of Mass Human Excitability". His information was collected from 72 countries and covered the period 500 B.C. to 1922 A.D. His principal conclusion was that humans behave excitedly - and violently - in waves which break upon society nine times every century. Each wave, he claimed, lasted for 11.1 years and reached its peak one year before the time of maximum sun-spot activity. An American psychologist, Wheeler, followed up with a similar study in 1943. His conclusions were no less startling. Civil wars, according to Wheeler, occurred in waves with a 170-year period. Every third wave was more severe than the other two, giving a cycle of drastic civil violence every 510 years. The cause, he claimed, was not sun-spots but droughts - which also occurred every 170 years. In the meantime Sorokin (1937) discounted both linear and cyclical theories of change in warfare: "the curve just fluctuates, and that is all".

However, Q. Wright (1942; 1965) also found cycles in human hostilities. "Tabulations of the dates at which battle honours have been given to British regiments show a remarkable fifty-year fluctuation in the frequency of such battles". He found similar evidence from other battles and in the war casualty rate in England, France and the United States. This 50-year cycle Q. Wright attributes to the passage of two generations - the first is thought to regard war as undesirable and the second believes it to be romantic.

In his *Statistics of Deadly Quarrels*, Richardson (1960) found a similar cycle from 15 to 30 years long: "We may suppose that the generation who had not fought in the earlier war, but who were brought up on tales about its romance, heroism, and about the wickedness of the enemy, became influential from 30 to 60 years after the war ended and so delayed the process of forgiving and forgetting". What started as a sun-spot explanation in the 1920s has now become a "human" explanation, which is far more understandable. In the last analysis all wars are declared by humans and so caused by them (Clarke, 1971).

Using the Richardson data, Denton (1966) detected a cyclical recurrence of international conflict for the period 1820-1949. In a later study, Denton and Phillips (1968) tested both the Richardson and the Q. Wright data for the period 480-1900, for evidence of short-term and long-term fluctuations in war and peace. They found a regular upsurge of violence every 25 years on average (about 20 years before 1680, and 30 years after this date), and also a more extended fluctuation every 80-120 years. They also explained the shorter cycle as a "generation effect".

They account for the longer cycle in terms of an "action-reaction" process, a regular alternation between periods of turmoil when philosophers emphasize the virtues of political stability, and times of peace when they grasp the opportunity to exalt change and the achievement of ideals.

Singer and Small (1972) analysed international wars for the period 1816-1965 as part of Singer's "Correlates of War" (COW) project. They concluded that the incidence of it seemed to be "neither waxing nor waning", with only a "modest increase in the severity and magnitude of war over the entire span". Their quantitative treatments also suggest a 20-40 year generational cycle in the level of world violence: "discrete wars do not necessarily come and go with regularity but with some level of inter-State violence almost always present; there are distinct and periodic fluctuations in the amount of that violence".

Re-analysis of the pattern of outbreaks in Q. Wright's wars (a peace period of about 50 years between major war outbreaks and concentrations) suggested two alternative interpretations - either sheer chance, or a much longer cycle than Wright had assumed, about 200 years from peak to peak (Sorokin, 1937; Richardson, 1960; Moyal, 1949; Singer and Small, 1972). Within particular regions cycles might also exist, with different momentum. For example, Chinese history seemed to show regularities between 100 and 200 years (Lee, 1931; Jouary, 1969).

Less extended analysis has been done on the length of war periods. Yet the study of escalation processes within wars also suggests interior regularities and peaking behaviour (Horvath, 1968; Voevodski, 1968; 1972). Some cyclic patterns in quantitative war phenomena have also been found by Houweling and Siccama (1977). See also Beer (1974).

2.4 Factors related to occurrence of modern wars

At various points in his text, Richardson (1960) in his "Statistics of Deadly Quarrels" attempted to relate the occurrence of wars to observed characteristics of the opposing groups, whether the groups were entire states or groups within states in civil conflict. His tentative conclusions are summarized by the editors (Q. Wright and Lienan) in their Introduction:

- States have varied from one another in the frequency of their participation in wars during this period (1820-1945), but each has varied so much during its history that none can be properly characterized as inherently belligerent or inherently pacific. The problem of war does not arise from the diabolism of one or a few States.
- States have tended to become involved in wars in proportion to the number of States with which they have common frontiers. Contiguity has been an important factor in war during this period.
- Common citizenship has not assured peace, nationalism has both induced and prevented wars, but there appear to have been pacifying influences such as common government, intermarriage, common fears, and common culture tending to prevent civil and local wars. The actual occurrence of war has been far less than would be expected from the opportunities for war presented by geographical contiguity. Such occurrences have been even less, proportionately, as the opportunities for war have increased through the advance of sea and air power.
- The longer groups have been united by common government, the less has been the probability of war between them.
- Allies in one war may become enemies in the next, but alliances seem to have had some influence in preventing war between former allies. That influence, however, declines with the passage of time since the war alliance.
- Desire for revenge seems to have been an important cause of war during this period, declining as the inciting war recedes in history but rising slightly after a generation.

- Economic causes seem to have figured directly in less than 29 percent of the wars since 1820 and have been more important in small than in large wars. Among such causes taxation of colonials and minorities; economic assistance to an enemy; restrictions on movements of capital, trade and migration; and dissatisfaction of soldiers have had an influence, the importance of which has been approximately in this order. The influence of all these factors together has been less than that of quarrels over territory which may be more political than economic. Relative wealth and poverty seem to have had very little influence during this period, contrary to the Marxian assumption that wars arise from class conflict.
- Similarity and difference of language seem to have had little influence on the occurrence of wars during this period, contrary to the belief of some advocates of universal languages, except that the Chinese language has been correlated with peacefulness and Spanish with warlikeness.
- Similarity of religion seems not to have made for peace, except in the case of Confucianism, but differences of religion have apparently caused war, especially the differences of Christianity and Islam. The statistics suggest, but do not prove, that “Christianity incited war between its adherents”.
- The larger the number of belligerents in a war, the more neutrals have tended to be drawn in. Wars with many participants have tended to be longer and less frequent.
- A trend for war to become indivisible, that is, for every war to become universal, has not been proved. Most wars have been localized. Neutrals have tended to become belligerents only if two or more world powers have been fighting each other. In proportion to their possible contacts for warmaking, sea powers seem to have been less belligerent than land powers.
- International relations cannot be considered a chaotic field with all nations equally likely to be infected by war. Geographical relations have exerted great influence. (Q. Wright and Lienan, in Richardson, 1960).

Geography has emerged as prominently associated with the probability of a State’s going to war. Richardson (1960) found that the number of wars fought by a State was proportionate to the number of bordering States. This result has been challenged by Rummel (1968) for the 1955-1957 period, but Wesley (1969) points out that “geographical opportunity” - a measure of the length of borders and population density along them - can also be used to explain Richardson’s result. Q. Wright (1965) determined that the probability of war between two States was a function of the distance between them and the policies pursued. In this case Rummel’s (1968) data also reflect a high correlation between total conflict and low geographic distance. Such results suggest that the ancient Indian theorist, Kautilya, was not far wrong in suggesting that between neighbouring States, enmity is the norm (see Kammler, 1970; Kautilya arthasastra, 1961), or, putting it in modern terms, that contiguity predisposes to conflict (Dowty and Kochan, 1974). Major causes of deviation from this norm are apparently (1) geographically ambiguous relationships (as when three States all border each other, as illustrated by Kammler (1970) in graph theory and defined by Dowty (1969), as “tension triangles”), (2) the overshadowing of local rivalries by a large common threat that forces or encourages the formation of a “security community” (Deutsch et al., 1957), and (3) ideological factors (Dowty and Kochan, 1974).

2.5 Societal development and war

Midlarsky and Thomas (1975) systematically examined the possible relationships between domestic social structure and international warfare. Specifically, they inquired into the relationship, if any, between societal development and war. They made a cluster analysis of 88 variables and 65 cases (historical political systems from ancient Greece until the industrial era). Perhaps the most surprising and potentially important feature of their analysis is “the virtual absence of any important effect of societal development on war. Whether a society is structurally complex and, therefore, differentiated appears to have little bearing on its war experience. The most traditional and/or ‘primitive’ society may have virtually the same probability of experiencing war as the most developed nations”.

Furthermore they found a significant effect of the military dimension on war duration. Whereas the bureaucracy variable has a strong, positive, and significant effect on battle casualties, it has a relatively strong and negative, although nonsignificant, effect on duration. Midlarsky and Thomas (1975) comment:

There exist some important implications of the lack of a relationship between societal development and war. Those who would hope for eventual peace through the development of nations appear to have little evidence to support their position, at least within the confines of the present study. On the other hand, there exist societal sectors, such as the military or bureaucracy which, in the contemporary world, may have a stake in the continuation of war. This pessimistic evaluation of the role of the nation-State in future peace-keeping efforts suggests that making peace through international institutions may have a better chance of success.

2.6 War and societal characteristics

In correlating variables indicating warlike behavior of States with some 200 societal characteristics, very few of the correlation coefficients have exceeded the level of +.40. Nevertheless, the higher and more statistically significant findings do reveal a pattern (Rummel, 1966 et seq.; Haas, 1972, 1974). Nondiplomatic, but nonviolent, foreign conflict is highly related to resort to international aggression. The use of military mobilizations, troop movements, high levels of military expenditures per GNP, threats and severances of diplomatic relations are more closely associated with such indicators as numbers of wars, persons killed in wars, and violent military actions short of full-fledged wars. Participation in foreign affairs per se seems to make a country more likely to become involved in war. Bloc prominence, for example, is associated with all types of foreign violence. High levels in receiving or contributing to foreign aid also are correlated with warlike behavior. Countries with many representatives at the United Nations find themselves involved in wars most frequently. Economic underdevelopment indicators are more in line with Plato’s recommendation for a Spartan economy. Aggressiveness is lower among countries with higher increments in per capita electricity production and with more economic equality. High unemployment makes for more aggressiveness, and high density in the use of railroads (rail freight/rail length) is associated with a lower incidence of war. Social unrest manifests itself in three main causes of death: suicides, homicides and alcoholism. Using time-lagged longitudinal correlations, Haas discovers that countries with high rates of suicides and fatal alcoholism are much more likely to be participants in arms races. Countries with rising rates of homicides, on the contrary, decrease their financing of military efforts.

The heterogeneity in composition of a population is consistently associated with the frequency of wars, military actions and foreign conflict casualties. Countries with many

different ethnic groups, language communities, nationality groups and religious and racial groups enter wars more often than homogeneous polities.

2.7 Power and war

The importance of direct power relationships as a determinant of international conflict has been underlined by some studies. Singer and Small (1970; 1972) have pointed out that major powers have been disproportionately involved in wars since 1816. Of the 237 conflicts in Dowty's (1969) study, all but 46 were either between contiguous States, including major powers, or were cases of a major power's expansion into non-contiguous areas (138 in the first category, and 53 in the latter). Dowty's research also tends to bear out the predominance among dyadic conflicts of cases in which a substantive quarrel (as opposed to such extraneous causes as alliance commitments) divides the conflicting States, and the predominance among substantive ("direct") conflicts of those in which a long-term underlying tension rather than a particular issue seems to be at stake. In fact, there is a strong suggestion in this research that most of the "overreaching" international conflict systems can be explained as a result of the converging strategic dictates of substantive dyadic tensions. In other words, the universal strategic imperatives growing out of bilateral conflicts seem to have more explanatory power in the four contexts examined than theories which relate conflict behaviour to specific structural types of overarching international systems (Dowty, 1969; 1971). Rummel (1964) correlated State "power" (in terms of physical size, population size, G.N.P., resources, railways, military personnel, total defense expenditures and political centralization) with foreign-conflict behaviour, and found a significant link, a result confirmed by Singer (1972) and denied by Singer and Small (1970). Various measures of a State's "values", the number of borders it has, and its military capabilities and armaments, likewise do not indicate a propensity in foreign conflict (Rummel, 1968). The question of number of borders was also examined by Richardson (1960) for the 33 States he detailed from 1820 to 1945, and he found a positive connection between this number and the number of wars where more than 7,000 people were killed. The discrepant results here, Rummel considers, are due to the greater generality of the DON findings, but until the question is further confirmed, he leaves it in doubt.

Singer, Bremer and Stuckey (1972) concluded that the concentration of major power capabilities exercised an impact on the incidence of war and that its impact has been a radically different one in the past and present centuries.

Wallace (1972) found that changes in armed forces levels have a direct - and very powerful - effect on international war. In one case, this factor accounts for almost 40 percent of the variance. While its effects are not always so large, the only variable besides status inconsistency to have a direct effect on war was the mean rate of increase in armed forces. All other variables - including, to some degree, status inconsistency itself - affect war only indirectly through arms levels. This very important result strongly underlines what Singer has termed "the perils of *para bellum*": increases in arms levels would appear the key factor in transforming the tensions generated by the structure of the international system into a tendency toward open belligerency. This would appear to discredit the widely held theory that armaments are not of themselves a cause of war, but only reflect the tensions generated by other factors which are the true causes. If this were the correct explanation, the relationship between armaments and war would have turned out to be spurious, an artifact of the relationships between the other explanatory variables and war. Such is very far from the case.

Huntington (1966), on the basis of a study of 13 arms races since 1840, challenges the conventional idea of an association between arms races and war. Naroll (1969) concludes that a defensive stance does not necessarily mean that a nation will engage in fewer wars, whether it has superior power or not; in other words, peace-loving nations are just as likely to end up fighting. Singer and Small (1972), however, find that relative weakness does tend to lead to war, including the case where a nation's strength is superior but declining.

2.8 Stratification approach

The most systematic efforts to relate power structure to international systems with the extent of international violence have been undertaken by Rosecrance (1963), Singer and Small (1968) and Haas (1970).

Guided by some elementary notions of general systems theory, Rosecrance established time boundaries for nine historical "international systems" between 1740 and 1960, each defined in terms of power stratification. With respect to power distribution, the lone unipolar system in his sample is fairly stable, but multipolarity is clearly more stable than bipolarity. Considering resources either as areas ripe for colonial and imperial expansion or as new states that may be targets for ideological or political proselytization, Rosecrance's codings reveal that the availability of unappropriated resources makes for stability; scarcity, for instability. Singer and Small (1968) pay closer attention to alliance configuration patterns. Starting with the hypothesis that the onset of war is associated with an increase in alliance commitments between countries, they assemble an impressive array of data on wars and alliances in order to test balance-of-power theory empirically. For the years between 1815 and 1945 they collect statistical indicators for each member of the family of nations. Singer and Small slice international systems in a manner somewhat similar to Rosecrance, for they analyse four sub-samples of international systems - a "central system" composed mostly of European countries for two eras, 1815-1899 and 1900-1945, and a "total system" of central and peripheral countries for the same two eras.

For the 1900-1945 period most correlations are positive, demonstrating that wars have been preceded by the formation of many alliances; between 1815 and 1899, in contrast, correlations are moderately negative, revealing that alliance involvement must have served as a deterrent to the expression of international conflict by military means.

Haas (1970), carving out 21 international subsystems in Europe, Asia and Hawaii, intercorrelates 68 variables, half of which pertain to international stratification and the other half of which index international violence. Among the 21 subsystems, unipolar power distributions are the most peaceful; most members of these systems prefer to engage in war outside their home region, if at all. Bipolarity is associated consistently with longer wars, and countries seeking to upset an existing distribution of resources are most successful in bipolar systems. Major powers in bipolar systems must be content to accept infrequent, localized yet prolonged conflicts during cold wars in which there is nibbling at the few ambiguous peripheries of superbloc domains. Tripolarity and bipolarity contain the highest rates in incidence of war, and most countries in such systems dispatch troops to battlefields. In sum: Unipolar and bipolar international arenas are more peaceful than those with tripolarity and multipolarity. States are more likely to settle their differences peacefully if they share compatibility in main values, a distinctive way of life, mutual responsiveness, a joint core area with rising capabilities, expect economic growth, have an unbroken social communication network with a wide range of transactions (Haas, 1972).

2.9 Rank-disequilibrium and war

A prominent contribution to the question of the systemic origins of conflict is the “rank-disequilibrium theory” proposed by Merton (1957), Shils (1960) and especially Galtung (1964) and developed empirically by East (1972), Midlarsky (1969; 1975); Wallace (1970; 1972) and Ray (1974). Galtung sees the world system as consisting primarily of nations that can be ranked for their comparative status either “T” (topdog) or “U” (underdog) along a number of scales - industrialization, for example, income per capita, military power, educational level and past glory: “... an interaction system is a multi-dimensional system of stratification, where those who have and those who have not, those who have more and those who have less, find, are given, or are forced into their positions”. Galtung argues that an inter-State system will be unstable if there are high levels of rank-disequilibrium or status-discrepancy in it, that is, if too many states are not rank-concordant, but are high on some scales but low on others.

Empirical studies have been done along these lines, and Singer (1972), for example, has found that the greater the discordant character of State rankings on dimensions of “capability” and “diplomatic importance”, the greater will be the systemic propensity to war.

Wallace (1971) has calculated the “achieved” status of a country in terms of its power capability (total population, urban population, iron and steel production, number of armed forces personnel and military expenditure), and its “ascribed” status in terms of attributed diplomatic importance (number of diplomatic missions received by a nation). He has determined the status inconsistency scores for each nation for the period 1920-1964, aggregated a measure of it for the system as a whole, and tested the relationship between this and the amount of war allowing for five-, ten-, and fifteen-year time lags. He has partially verified Galtung’s hypothesis, though, as he points out, in a strict sense nothing is explained thereby. A significant association was found between status inconsistency in the system and the amount of war that occurred ten to fifteen years later. This would suggest that the international hierarchy of power capabilities is a factor to be considered, but hardly, one would assume, on its own (Pettman, 1975).

In a subsequent study, comprising the period from 1825 to 1964, Wallace (1973) concludes “the findings as a whole strongly suggest that the hypothesis linking the amount of status inconsistency in the international system to the magnitude and severity of international war begun is confirmed”. However, “while the evidence strongly suggest confirmation of the hypothesis in the case of inconsistencies between ‘demographic or military’ capability on the one hand, and attributed importance on the other, there is little or no confirmation in the case of inconsistencies between ‘industrial’ capability and attributed status”. Another important conclusion is,

These findings would seem to suggest that influence of status inconsistency on the genesis of war has increased over the almost century and a half under study. Moreover, not only the magnitude, but also the nature of the relationship varies with the time-period; the later the period, the greater the relative importance of inconsistencies involving the urban and industrial dimensions of capacity, and the shorter the time lag needed to observe the maximum relationship.

Turning now to the hypothesis linking differential status mobility in the international system with the amount of war begun, we find on the whole far less evidence that would suggest confirmation if we examine the direct relationship only. Not only are the bivariate correlations generally rather low, but there is very little evidence that the several status mobility variables jointly predict well to war, and when one controls for status inconsistency the mobility-war relationship appears to be spurious in most cases. (Wallace, 1973)

Confirmation also comes from Midlarsky's (1975) study:

In the several multivariate analyses of the frequency, duration, and intensity of war in the form of battle deaths, the frequency variable was the most strongly predicted by the inconsistency variables, and also, in comparison with the other characteristics of war, was best explained by the dummy variable interaction analysis. This stands in contrast with the lower levels of explanation found for duration and intensity. The gap between ascribed and achieved status, the former originating in the system and the latter, a characteristic of nation-States, is therefore found to be strongly related to the onset of war.

East (1972) takes a much shorter time span: 1946-1964. He applies Weber's three dimensions of "class" (economic position, measured by total G.N.P.), "status" (prestige, measured by number of embassies in the State capital) and "power" (politico-military force potential, measured by total defence expenditure per year), to determine the extent of status discrepancy in the global system and the congruence of State rankings on these three scales. He tested for a link between rank discrepancy and international violence (variously measured) with one- and two-year time lags, and found a general and consistent pattern that confirmed the connection. Even stronger correlations were produced when the data were lagged and time lapses allowed for; the most peaceful world, he asserts, will be the most status-concordant one.

These findings, however, could not be confirmed by Ray (1974), who studied war involvement and status inconsistency in Europe, 1816-1970.

2.10 Dissimilarity, heterogeneity and war

Dissimilarity of national attributes between two States seems to have had little influence on the likelihood of their going to war with each other. Singer (1972) finds that most of the wars in the "Correlates of War" project were between nations in close geographical proximity and similar on most attribute dimensions. Studying national dyads for 1955-1957, Rummel (1966) found only slightly more conflict as attributes of the two nations diverged. Divergence in the ethos of the elites of different nations was found by Rosecrance (1963) to be neither a necessary nor a sufficient condition for instability in international systems since 1740. Likewise Richardson (1960) found similarity or difference of language of little influence on the incidence of war.

Haas (1972) has considered the "heterogeneity" of a State (in ethnic, linguistic, religious, racial and national terms) and found it to correlate consistently with frequency of wars, military actions, and foreign conflict casualties. Voting support in the United Nations, for either the East or West Cold War Bloc, is not associated with foreign conflict, though the extent of participation in foreign affairs (in terms of bloc prominence, giving or getting aid, and the number of representatives at the United Nations) seems to be correlated in a positive way (Haas, 1972).

The DON project results include the general observation that: “The more similar two nations are in economic development, political orientation, Catholic culture, and density, the more aligned their voting in the UN and the less conflictful their interaction will be”. Further: “the more dissimilar two nations are in economic development and size and the greater their joint technological capability to span geographic distance is, the more overt conflict they have with each other”. And finally that: “Racial distance is the most important characteristic distinguishing between peace and conflict in international systems” (Rummel, 1969).

Richardson (1960), on the other hand, found little relationship between economic inequality and a propensity for war, though the distance between States on the dimensions of language and religion did correlate in particular unambiguous ways.

Finally, Russett (1967), after a detailed study of inter-State integration, concludes that : “At best, cultural similarity and voting behaviour (in the United Nations) make essentially no difference in the probability of conflict... But countries belonging to the same groupings by organizational membership, proximity or trade are more than twice as likely to fight than are nations which belong to different groups, or to none”.

Richardson (1960) and Luard (1968) both found economic causes of minor importance in the wars they surveyed. Richardson also found relative wealth of little value in predicting war, but Rummel (1966), in his study of attribute similarities within dyads, found a high correlation between conflict and “high economic distance”. Generally, the clustering of States into regions does have significance in terms of the likelihood of war, and conflict and integration are related, though in a three-step way: when the States involved are mutually irrelevant, war is not likely to occur; however, it is likely to be common when “capabilities and salience are moderately and narrowly focused”. When capabilities are “numerous and varied”, though, war is unlikely again (Russett, 1967).

Rummel (1968) has attempted to correlate the amount of national cooperation (in terms of membership of international organizations, treaties, aid and diplomatic representation) and the level of a State’s international communications or transactions (in terms of mail, economic aid and trade measures) with foreign conflict behaviour, but has found very little connection. “Alliances” and foreign conflict have also been examined for covariant effect. Richardson (1960) concluded that previous alliance did reduce the likelihood of war between those who had been allied, though with many exceptions. Singer and Small (1968) have discovered a strong association between the number of alliance bonds which a nation has and the amount of war it subsequently experiences in the following years.

2.11 War and international organizations

Singer and Wallace (1970) as well as Rittberger (1971) carried out longitudinal studies of international organization-building and its effects on the incidence of international war for the periods 1815-1964 and 1865-1965, respectively. Singer and Wallace measured their independent variable, international organization-building, by counting and adding all intergovernmental organizations (IGOs) which existed during any given five-year period since 1815; in addition, they constructed two derived measures weighting individual IGOs on the basis of membership size and ascribed international status of their members. Rittberger, on the other hand, proceeded more selectively and focused on the UN system and its predecessor organizations only.

In both studies the results of the statistical tests showed unequivocally that, contrary to what one would hope, no negative association exists between measures of international organization-building and measures of incidence of international war for the time periods covered by these investigations. Rather, correlation coefficients are around zero in the case of frequency of war and even weakly-to-moderately positive in the cases of magnitude and severity of international war. However, further analyses revealed that these positive correlations are largely spurious: both the measures of international organization-building and the measures of magnitude and severity of international war are themselves positively correlated with a third variable, the advance of industrial civilization. This correlation simply reflects the growing destructiveness of war as a result of technological progress and its diffusion which has been made possible by the advance and spread of industrial civilization (Rittberger. 1973).

2.12 The domestic/foreign conflict linkage

Russell and Russell (1968) draw attention to a striking alternating sequence of domestic and foreign conflict which is provided by the story of the Plantagenet kings of England:

Henry III	Civil war
Edward I	Foreign war
Edward II	Civil war
Edward III	Foreign war
Richard II, Henry IV	Civil war
Henry V	Foreign war
Henry VI	Civil war

They comment:

This particular sequence, and its significance, were not lost on William Shakespeare, who made a very careful study of the English chronicles. He presented his findings in the longest and most impressive series of historical plays ever written. He saw clearly that the alternation was explained by mass direction, promoted by the more energetic rulers, and this time he smuggled the message past the censors. In the last act of Henry IV, Part II, he expressed in one and a half lines the underlying mechanism of these seven plays. "Be it thy course", says the dying king to his heir Prince Hal,

Be it thy course to busy giddy minds
With foreign quarrels...

The sequel, in the next play, is the battle of Agincourt - for Henry V took his father's advice.

Considerable work has been done on the characteristics of a national political system and its likelihood to engage in domestic or international violence. Some of these studies are based on a combination of theoretical analysis and intuitive selected historical evidence. Societies in deep crisis, it has been plausibly argued many times (e.g. Lasswell, 1930; Haas, 1968), are more likely to elevate psychopathological personalities to key decision-making roles, with consequences for their international behaviour. Societies which fail to provide security of income and status for large parts of their populations are likely to give rise to extremist political movements, and their rulers may then have to choose between letting the increased

aggressive attitudes of these groups explode in domestic strife, or assuaging them by rapid and far-reaching reforms, or channeling them into international conflict - with theory and history suggesting a preference for the third of these responses (Lasswell, 1935).

If this theory of alternative responses to domestic tensions were correct, then foreign conflicts would serve as substitutes for domestic ones. According to the “substitution theory”, the frequency of the two types of conflict ought to be inversely correlated. Unfortunately, another version of the theory predicts the opposite. High degrees of tension ought to create a higher demand both for domestic and for international violence. According to this “joint demand theory” or “spill-over theory”, the frequency of the two types ought to vary together. Finally, a mixed theory would suggest that the effects of substitution and joint demand ought just about to balance each other, and that there should be no observable correlation of any kind between the frequency of domestic and foreign conflict (Deutsch and Senghaas, 1973).

Several studies have dimensionalized domestic conflict behaviour by factor analysis (Rummel, 1963; 1966; Tanter, 1966; Feierabend and Feierabend, 1966; Bwy, 1968; Banks, 1972; Wilkenfeld, 1969; Gurr, 1968 et seq.). The results distinguish either two or three major dimensions of domestic conflict. In all orthogonally rotated factor analyses, a distinct turmoil dimension appears which is centred around strikes, riots and demonstrations. Terrorism and assassinations load on this factor but also load on the other two factors. The turmoil factor, therefore, involves disruptions with rather limited objectives and usually rather limited violence, though the violence can easily get out of hand as in the case of some riots. But widespread violence is not initially the explicit intent of the perpetrators (Finsterbusch, 1974).

The remaining domestic conflict variables produce either one or two factors. Rummel (1966) obtained a “revolution” factor involving coups, mutinies and plots, and a “subversion” factor involving civil war and extended violence. The latter is related to large-scale terrorism and riots. In Rummel’s (1963) and Banks’ (1972) factor analyses, the highest loading on the “revolution” factor is revolutions and on the “subversion” factor is guerrilla warfare. The Tanter, Wilkenfeld and Bwy factor analyses combine revolutions and guerilla warfare into a single “organized violence” factor and produced no significant third factor. These three analyses contained only 7 anti-establishment conflict variables as compared with 12 such variables in Rummel’s 1966 analysis and 14 variables in the Feierabends’ analysis. The second and third (or the two combined) factors, which we call, following Gurr, “conspiracy” and “internal war”, differ from the turmoil factor in terms of the purpose of the perpetrators. Turmoil events usually involve public demands by lower groups for relatively specific actions on the part of the persons or groups with authority or are relatively goalless spontaneous reactions to an accumulation of frustrations. The conspiracy and internal war factors are attempts to take over the centres of power. When conspiracy and internal war are differentiated, the basis is mainly the scale of operation (Finsterbusch, 1974).

Lee (1931) found that internal violence in China clustered before, during and after external wars. Sorokin (1937) carried out a massive, longitudinal analysis of the ancient empires of Greece, Rome, Byzantium and a number of European nations over 14 centuries (525-1927). Sorokin reported that although there seemed to be a slight indication that internal disturbances tend to occur more frequently during and around years of war, upon closer examination the two processes tend to be independent of one another. Sorokin’s analysis was based on time intervals of quarter centuries and centuries and thus does not yield very discriminant results, but rather explores gross trends for major outbreaks of internal and external violence. He

states: "So far as century periods are concerned, each process has led a course independent of the other without positive or negative association".

Cattell (1949 et seq.), in a number of attempts aimed at the discovery of culture pattern profiles, performed factor analyses on a number of variables representing national characteristics from 1837 to 1937. The first two studies (Cattell, 1949; 1950) used 69 nations and yielded 12 orthogonally rotated factors. The first two factors contain the variables of interest to the present study. The internal and external violence dimensions appear to be independent of one another. In a third study (Cattell, 1951), 29 nations, whose data coverage had been considered poor, were dropped from the analysis. The 40 nations that were left were chiefly comprised of the "modern industrial nations". This analysis yielded quite different findings. By limiting the sample population, Cattell found that the two processes were not as independent as the previous studies had shown, but rather that both tended to load highly on the same dimension.

A series of studies, which also utilized factor analysis and, in addition, multiple regression techniques, were initiated by Rummel in the Dimensionality of Nations (DON) Project. All subsequent research in the linkage between internal and external behaviour of nations has relied heavily on the DON project for either methodology and/or data base. The relationship between domestic and foreign conflict behaviour in these studies was based on an analysis of twenty-two variables for all nations with populations over 800,000 in the years studied. For the Rummel data (1955-1957) the sample was 77 nations, while the Tanter data (1958-1960), as a result of population growth and the inclusion of newly independent nations, included a universe of 83 (Stohl, 1976).

The first Rummel (1963) and Tanter (1964) studies found a slightly positive association between domestic conflict behaviour and the more belligerent forms of foreign conflict behaviour, although for the most part, the independence of the two were reconfirmed. Subsequently, the 1955-1957 data were annually reanalysed by Chadwick (1963) and, with one-year time lag, this independence was further supported. Tanter (1966) lagged the 1958-1960 data on the 1955-1957 data and found that there was a slight increase in the relationship. He suggested that: "There may be no simple relationship between domestic and foreign conflict behaviour, but there may be a causal relationship which is being obscured by other phenomena". The studies also identified separate independent dimensions within both the internal and external dimensions themselves. Rummel (1963) states: "The domestic conflict behaviour of nations varies along three uncorrelated dimensions: turmoil, revolutionary and subversive. The foreign conflict behaviour of nations varies along three uncorrelated dimensions: war, diplomatic and belligerent".

Tanter (1964) found that the revolutionary and subversive dimensions were subsumed under one internal war dimension, while the turmoil dimension and the foreign conflict behaviour dimensions compared favorably with the Rummel study. The early DON project data base did not include the majority of African nations, since they were not independent in 1955. Collins (1969), employing the same general research strategy put forth by Rummel and his successors, investigated the relationship between foreign conflict behaviour and domestic disorder in Africa in the period 1963-1965. In this study, the first to investigate the relationship within one "region", Collins reports that there were differences between his results and the preceding work: "Foreign violence is related to conditions of domestic disorder more so in African States than elsewhere, although the size of the correlations indicates that foreign

violence is a product of other factors as well, which have not been tapped in the present research”.

Using Richardson's (1960) data over the 1820-1949 period, Denton (1966) described a relationship between a civil conflict dimension and inter-nation conflict with peaks in the former preceding peaks in the latter, and Denton and Phillips (1968) used Q. Wright's (1942; 1965) data for 1480-1900 to arrive at a correlation of .39 between percentage of civil wars and an index of international violence (Dowty and Kochan, 1974).

Haas (1965; 1968) confirmed the low correlations between foreign conflict and both legitimate domestic conflict and illegitimate domestic conflict (revolution, guerrilla), and in a smaller sample of 10 nations from 1900 to 1960 found little support for linking “use of military means” to “internal stresses”, but he also uncovered a very high connection between foreign conflict and anomic domestic conflict (riots).

Feierabend and Feierabend (1966) and North and Choucri (1969) reported strong positive relationships between internal tensions or frustrations and external aggressiveness. Also Weede (1975) found domestic and international conflicts closely related in the fifties and sixties of the twentieth century. However, he concludes that it is false that domestically unstable nations tend to be aggressive against other nations. Instead, they become victims of superpower intervention.

Haas (1965) finds more foreign conflict in “non-constitutional” governments, a claim supported very indirectly, according to Dowty and Kochan (1974), by Kaplan's (1968) observation that in three historic international systems studied, the threat to stability always came from the “sub-system dominant, directive” actors, and by Naroll's (1969) conclusion from his broad historical survey that States with greater centralization tend to be involved in more wars.

There seems to be at least equal evidence, however, against a connection between warlikeness and type of regime. Richardson (1960) argues that no States in his survey can be properly characterized as inherently belligerent or pacific, and Luard's (1968) survey of 62 wars in the 1865-1965 period also offers “little evidence” of such a connection. On a broader level, Haas' (1972) study of the linkage between warlike behaviour and some 200 societal characteristics concludes that there is little support for any of the classic theories on such linkage.

Most important of these contra-indications is Wilkenfeld's (1968 et seq.) study of the hypothetical link between the nature of a State's political system and its foreign-conflict behaviour, including war. Rummel and Tanter did not differentiate between the States they used, and may have concealed thereby positive connections that run against their results. Working with 74 states, Wilkenfeld divided them into three factored groups-politically “personalist” (Latin American dictatorships for example), “centrist” (socialist and Middle Eastern regimes) and “polyarchic” (economically developed, Western and westernized) - and correlations were then carried out using these groups for all the possible pairs of foreign and domestic conflict dimensions that Rummel identified. Correlational tests were made using zero time lags and lags of one year and two. In the “personalist” group internal conflict was accompanied by foreign conflict of the “diplomatic” sort (diplomatic expulsions and troop movements). Using a two-year time lag a significant association was discernible between the “turmoil” dimension (demonstrations, riots, government crises) and external “belligerency”. Most interesting of all, however, was the occurrence of “war” and the apparent outbreak two years later of the subversive domestic activities of assassination and guerrilla revolt. This link

Rummel's (1964) study, in its generalized, perhaps overgeneralized way, explicitly denied. For the "centrist" group domestic "revolutionary" activity (purges, general strikes, revolutions and numbers killed within the State) was followed in one or two years by all the 13 types of foreign-conflict behaviour. Wilkenfeld's results here might support the traditional argument that foreign conflict is used by State elites to distract from domestic disorder. Finally, "polyarchic" States experiencing "turmoil" (anti-government demonstrations, riots and major government crises) engage in all types of foreign-conflict behaviour, and vice versa. The relationship is a mutually reinforcing one, which likewise supports the traditional view. Wilkenfeld's earlier results are further supported by those of Zinnes and Wilkenfeld (1971): the governmental structure of a State is important in predicting the relationships between foreign and domestic conflict behaviour.

Another finding, also generally consistent with Wilkenfeld's earlier study, is that some relationship exists between domestic conflict behaviour and foreign conflict behaviour. The relationship, however, is very specific. Internal warfare affects the transitions in the level of belligerency only for polyarchic States, while turmoil affects the transitions in the levels of belligerency only for centrist States. Again, there appears to be no relationship between domestic conflict behaviour and foreign conflict behaviour for personalist States.

A final result that emerged from the analyses was the effect of very extensive domestic conflict on international conflict behaviour. It was generally found that high levels of domestic conflict tended to be associated with a subsequent reduction in the level of international conflict commitments (Zinnes and Wilkenfeld, 1971).

In a third study Wilkenfeld and Zinnes (1973) employed Markov analysis to determine if foreign conflict behaviour affects the changes or transitions over time between levels of domestic conflict behaviour. Once again the Rummel and Tanter data were utilized and the factor scores were the data for the Markov analysis. When all nations were analysed "the foreign conflict behaviour war" was measured by the variables most highly loading on this factor (military actions, wars, mobilizations and foreign killed) affects transitions in domestic conflict behaviour as captured by the turmoil factor (strikes, riots, demonstrations) primarily when domestic conflict behaviour is at a very high level" (Wilkenfeld and Zinnes, 1973). When the nations were analysed by nation type it was again found that foreign conflict behaviour primarily affects transitions in domestic conflict for the personalist and polyarchic States.

Stohl (1971) reanalysed the Rummel (1963) data after dividing the nations into groups by political type corresponding once again to the Banks and Gregg study. Supporting Wilkenfeld's conclusion, political type of nation was found to play an important role in determining the conflict patterns within and between nations. The factor analysis of the measures of conflict behaviour found that there were different patterns of domestic and foreign conflict behaviour for each of the political types. Further exploration of the relationship, through multiple regression analysis with a one-year time lag, revealed moderately strong relationships in polyarchies, between diplomatic exchanges and general internal strife ($r = .54$), and between war and internal crises ($r = .45$). In the personalist nations increases in foreign conflict behaviour were associated with small increases in domestic conflict behaviour (multiple R^2 's - .25, .45, .33, .40); while in the centrist cluster, there was no relationship discovered. It was hypothesized that the two major factors differentiating the three groups, level of social control and decision latitude, could account for the differences. As degree of social control and decision latitude decreases, elites are faced

with greater pressure to justify their foreign conflict behaviour to their populations. It was suggested that higher information levels and inadequate elite justifications of behaviour may help to explain the higher associations between foreign and domestic conflict behaviour found in polyarchies and personalist nations (Stohl, 1976).

Stohl (1973; 1974; 1975) attacks the linkage problem via another route. Using a quasi-experimental design, he has looked for the effects of American war involvement on domestic levels of political violence. His results are mixed; there is no uniform pattern that holds both for each of the five wars (from the Spanish-American War to the Viet Nam War) and for each of the different dimensions of violence.

Two more recently reported studies of the relationship have attempted a more sophisticated analysis through the use of canonical analysis. Canonical analysis attempts to maximize the linear correlation between sets of variables. Phillips (1970), in a study of the impact of the conflict environment of nations via a regression analysis of the residuals in the canonical analysis of the DON data for 1963, found evidence for a relationship between internal and external violence. He states:

The conclusion here is that nations displaying domestic violence, having a low percentage of population in agriculture, who have tended to experience unlawful changes of offices in the recent past, and have a high cost-of-living index, tend to send more military violence to the environment than would be expected, given normal exchange with the environment. In other words, modernizing nations experiencing inflation and internal violence possibly associated with unlawful change of leadership, are likely to respond militarily to their environment.

It should be noted that these types of states more closely resemble the personalist type differentiated by Wilkenfeld and Stohl and the African States studied by Collins, lending support to those findings (Stohl, 1976).

The most ambitious use of the Rummel and Tanter data to date has been the attempt by Hazlewood (1973) to adapt this data for use within a general systems model. Hazlewood's main hypothesis concerning this chapter's interest was that "to the extent that internal variety is more extensive than internal constraint, the system stresses are likely to be manifested in foreign conflict behaviour at a later time period".

Employing the Tanter and Rummel foreign conflict behaviour factors and subsequent canonical and path analysis, Hazlewood found that: "Existing internal variety (societal diversity and turmoil), even without extreme economic expansion to activate it, is strongly associated with external conflict behaviour. Economic stability, societal heterogeneity and internal turmoil predict best to war". However, the path analysis revealed that, "The strongest path in the model relates turmoil to war for 1958-1960 through prior warfare". This would indicate that past foreign conflict behaviour is more robust than domestic conflict in predicting war.

Kegley, Richardson and Richter (1978) isolated for further study the size and importance of the military as a coercive resource of a State. They thus focus upon Hazlewood's finding that relatively highly militarized States experiencing domestic turmoil are disinclined to engage in foreign conflict. The correlation of their militarization measure with internal conflict is .15 and with foreign conflict .24. These results indicate that the militarization variable is at most only modestly correlated with either sphere of conflict. Thus, the coefficients fall somewhere

between the contradictory results of, first, Haas (1974) and Rummel (1968), the latter concluding that “the military capabilities of a nation have little relationship to its foreign conflict behaviour”, and, more recently, Choucri and North (1975) who discovered instead a strong correlation between the same two factors.

Overall, the impression one gets from the evidence is that military armament levels tend slightly to co-vary with the incidence of foreign conflict, but that military preparedness is not a very reliable predictor of external hostility. Suffice it to suggest here that militarization appears to predict potentially to neither foreign nor domestic conflict in a direct fashion. The empirical question Kegley, Richardson and Richter (1978) finally raise is, “What happens to the domestic-foreign conflict linkage when we take into consideration government types as measured by differences in level of military spending?”. Here the 73 countries of their sample are divided into three subsets according to the levels of their military expenditures: low, medium and high; and the bivariate correlation between domestic and foreign conflict is computed separately for each of the three groups of countries. These coefficients are revealing.

The 39 polities comprising the “low” militarization category show a very small positive relationship between their domestic and foreign conflict behaviour, whereas those in the “medium” militarization group manifest virtually no relationship whatsoever between their domestic and foreign conflict propensities. To recapitulate, the bulk of the nations comprising the international system show moderate or low levels of military spending. And, for this large majority, internal strife does not appear to serve as a stimulus to or catalyst for foreign conflict. The picture quickly changes, however, when we turn to the highly militarized societies. For these 10 countries (14 percent of the population under investigation), the relationship between domestic and foreign conflict behaviour is inverse ($r = -.49$), and this association is significant at the .07 level, corroborating Hazlewood’s determination. This evidence tells us that in militarized countries, the higher the level of civil strife, the lower the level of external conflict and, conversely, that militarized nations experiencing low levels of domestic turmoil tend to be more conflictual in the behaviour they direct toward foreign targets. Moreover, the finding informs us more broadly that only in highly militarized societies does a patterned relationship between civil strife and foreign conflict exist.

In sum: when countries are grouped according to their relative efforts to militarize, civil strife is negatively related to (later) foreign conflict in the most militarized societies, consistent with Hazlewood’s inquiry into governmental responses to domestic stress (Kegley, Richardson and Richter, 1978).

Sloan (1978) studied dyadic linkage politics in Lebanon, and concluded:

There is a strong relationship between domestic conflict and conflict directed towards external supporters for the dissident elements in a national conflict, especially if the possibility of national ‘disintegration’, though not necessarily the disappearance of the nation as a political entity, exists. It is the direct threat to the political fabric of the State, and not a physical threat to the continued existence of the nation, that results in a strong correlational linkage between domestic conflict levels and dyadic external conflict.

The nature or state of a country’s economy has also been tested for the difference in the way it and foreign-conflict behaviour concur. Rummel (1968) finds no correlation between the two, measuring the economic development dimension in terms of telephones per capita,

G.N.P. per capita, energy consumption per capita and percentage of the population engaged in agriculture. He cites other studies that corroborate this conclusion.

Zinnes (1972), however, in reviewing Rummel's empirical results, notes a set of positive correlations within them that would seem to indicate that the more developed countries (measured by their G.N.P., rate of population increase, number of calories consumed in relation to the number nutritionally required, steel production and electricity generated) engage in more foreign-conflict behaviour, particularly of the protest, expulsion of lesser diplomatic personnel and troop movement sorts. Haas (1965), too, has found that "the most, and, to a lesser extent, the least developed countries, which one might expect to have a high degree of economic stability, exhibit more significant foreign conflict than do the underdeveloped and intermediate types".

Retesting this result, using U.N. data to estimate national wealth, Haas (1965) has confirmed that rich States have more foreign conflict than most developing countries. In a later study (Haas, 1968), however, he draws the opposite conclusion: "rural international systems", he says, "are more peaceful than transitional industrial international systems... [but as] industrialization proceeds, war is less necessary for solving internal problems". Here, however, indices of social "stress" and "strain" have intervened.

Haas (1965) in particular has developed a set of domestic measures in these terms, and looked for foreign-conflict correlations with them. In terms of "stress", he tested a limited sample of ten countries for the years from 1900 to 1960 and found a positive connection between "unemployment" and the frequency of war. Rural countries differed markedly from States with large urban populations in this regard, though the sample itself was loaded with industrialized nations.

Lacking an industrial base for prolonged or total war, rural states are much more aggressive in entering war as an immediate escape from sudden stress than are urban countries. Nevertheless, rural nations are so often isolationist... that they respond to few of their economic crises in a violent external manner. Urban countries are less immediately aggressive, but many of them find it convenient to eliminate the unemployment problem. And the effect of militarization by several countries has been to feed fears and suspicions of other States, thus triggering fateful arms races (Haas, 1965).

That stress and strain in a societal system might spill over into State behaviour on the international level is consistent with the evidence presented by Haas (1968) based on the analysis of 10 countries for the 1900-1960 period. He presents a theory of coping mechanisms linked to a continuum from rural to urban societies. A completely rural society is called Type I; a totally urban society is Type V; these are ideal constructs. Intermediate positions are Types II, III and IV. Forms of deviance, using Parsons' (1959) scheme, can be associated with each point on the continuum. Because revolutions and homicides are associated with rural settings, and suicides and alcoholism most prevalent in urban milieus, active orientations are located towards the rural end, passivity towards the urban end. In Type V, it is postulated that stress is eliminated before it is strainful, so conformity is its model orientation. This pattern is presented in table 8.

TABLE 8
Distance and the rural-urban continuum

Types of Societies	Deviant Orientations (Parsons)	Main Deviant Acts	Main Types of Wars	Examples
I. Rural-Agricultural	Active-Person Focused	Homicides	Outlet	Nomadic Tribes
II. Rural and Semi-Industrial	Active-Norm Focused	Homicides Suicides	Outlet Disunity	Finland 1900-1960 Japan 1900-1945 Norway 1900-1918 Spain 1900-1960
III. Mixed Rural-Urban	Passive-Norm Focused	Alcoholism Suicides	Arms Race	Australia 1900-1960 France 1900-1960 Germany 1900-1918 Japan 1946-1960 Norway 1919-1960 Switzerland 1900-1945 U.S.A. 1900-1918
IV. Mostly Urban-Industrial	Passive-Person Focused	Suicides	Arms Race Deterrence	Germany 1919-1960 U.K. 1900-1960 Switzerland 1946-1960 U.S.A. 1919-1960
V. Fully Urban-Industrial	None (conformity)	None (conformity)	Deterrence	Orwell's <i>1984</i>

The next problem is to fit coping mechanisms into the picture. "Outlet" wars are related to lack of mechanisms in rural and semi-industrial countries for handling stress directly; "arms race" wars are associated with the use of militarization as a means of dealing with economic crisis in the mixed societies; "deterrence" involves mostly urban industrial States. Accordingly, it may be argued that there are at least 5 distinct causal chains linking stress conditions with the use of military means of international conflict resolution, one corresponding to each type. An extended examination of the process of coping with stress is also presented by Haas (1968).

If societies and economies become very complex, a recent study has demonstrated according to Haas (1968), suicide, homicide and compulsive alcoholism are less socially available, but deaths due to ulcers and hypertension increase. Rudin (1963) found that the "need for power" is related to violent-demonstrative death rates ($\rho = .41$) and the "need for achievement" correlates ($\rho = .66$) with deaths due to inhibition and repression.

2.13 Population and war

In the Cattell (1949) study, population density has a +.32 score on the 'Cultural Pressure' factor, and urbanization has a +.78 loading; war participation had a +.62 position. In other words, war, population density and urbanism are highly intercorrelated with the dimension of societal stress. Logically war could not of itself breed high population density or urbanization, so one might infer that urban population density is one antecedent to wars.

Haas (1965) used the "Cross-Polity Survey" (Banks and Textor, 1963) to test this hypothesis. He concludes that: "the stress within overcrowded cities bears more relation to international conflict than the stresses associated with life in densely settled farmlands" (Haas, 1965).

In support here we might include Rummel's (1964) findings that demographic variables (population density, birth rate, infant mortality and rate of population increases) were the most important predictors of conflict within and between States. Instead of the expected correlation between the degree of foreign conflict and population density, Haas (1965) finds "a slight inverse relation" in his study of societal variables contributing to foreign conflict behaviour of nation-States. Finding no relationship between the rapid increase of world population from 1820 and 1949 and any proportionate increase in the frequency of, and losses from, war, Richardson (1960) concluded: "There is a suggestion, but not a conclusive proof, that mankind has become less warlike since A.D. 1820".

Singer (1972) too finds "no significant association between a nation's growth rate in population or density and its war-proneness" in his study of 93 international wars during the period 1816-1965.

There is no definite evidence that overpopulation or density per se leads to war. Empirical correlations are generally spurious and do not hold cross-culturally. Many densely populated areas in the world have been highly stable, and many States in Latin America and Africa with low population densities have been highly unstable (Weiner, 1971). However, the search for raw materials and markets has often been a prominent cause of international conflict. The interactive effects of the population growth, technological development and resource constraints have been traditionally associated with the extension of national activities outside of legal boundaries and with the ensuing competition for resource and territorial control. For example, nineteenth-century colonial expansion was accompanied by considerable population growth in Europe in combination with increases in economic productivity and technological capabilities (Weiner, 1971).

In a simulation model of international conflict Choucri et al. (1971) have shown that population growth, economic and technological development, resource utilization, national expansion and international behaviour are intensely interdependent and linked with requirements for basic resources.

Choucri and Bennett (1972) and Choucri and North (1972) use population figures as part of a more general equation that leads in a general way to foreign conflict and war. In this equation, however, there are at least two important intervening variables - the contemporary demand for resources, and the level of technology. An increase in population must bring about increased demands for resources and a greater level of technological development before "lateral pressures", competition and crisis are likely to lead to violent conflict.

In her monograph "Population Dynamics and International Violence", the most extensive quantitative analysis available to date, Choucri (1974) presents the following conclusions:

The qualitative evidence from Part I and the more systematic evidence from Part II both strongly suggest that population factors indeed have a pronounced effect upon the development of conflict situations, and can often be critical determinants of violence and warfare. But the linkages between population and violence are rarely direct: complex intervening networks are at work. Major wars, as well as local conflicts, often emerge by way of a two-step process: First, in terms of internally generated pressures and demands occasioned by growing needs associated with added population: and then in terms of reciprocal comparisons, rivalries and conflict for control over resources, territory, valued goods or spheres of influence. Each step is closely related to the other, and each can be traced to the interaction among the population, resource and technological attributes of a society. In those terms, population factors amount to critical determinants of violent conflict.

Furthermore:

There is no evidence to suggest that density by itself emerges as an important determinant of conflict and violence. Far more critical appears to be the location and distribution of population in relation to resources (as distinct from pressures upon resources) and location in relation to national borders. In the developing world, at least, these two factors emerge as critical in conflict situations. The location of population and its distribution in relation to resource may often exacerbate tensions between the resource-rich and resource-poor areas, making the task of developing a viable political community considerably more difficult.

2.14 In summary

Vasquez (1976) presented a synoptic inventory of null, promising and possible statistical findings. Among these the following are pertinent:

- There appears to be no strong relationship between the economic, social-cultural, political, health, geographical, communication, or educational characteristics of nations and violence between nations.
- There appears to be no strong relationship between the amount of internal stress within nations and violence between nations.
- There appear to be no strong relationships among the demographic--economic-geographical characteristics of nations, the level of internal stress within nations and violence between nations.
- There appear to be no strong relationships among the political characteristics of nations, the amount of internal stress within nations and violence between nations.
- There appears to be no strong relationship between the level of dependence of nations and violence between nations.
- There appears to be no strong relationship between inter-nation alliances and violence between nations.
- There appear to be no strong relationships among the military power of nations, inter-nation alliances and violence between nations.
- There appears to be no strong relationship between the isolationism/ participation of nations and violence between nations.
- There appears to be no strong relationship between the perceptions of national and non-national decision-makers and violence among nations and other actors.

- There appears to be no strong relationship between violence among nations and peace overtures among nations.

Vasquez comments: “the notion that the national attributes of a nation or internal stress within a nation may be related to international conflict is not supported. The notion that alliances or the balance of power are related to conflict or violence is not supported. The belief that transactions lead to peace is not supported”.

- There may be a strong relationship between the demographic characteristics of nations and violence between nations.
- There may be a strong relationship between the military power and status of nations and violence between nations.
- There could be strong relationships among the demographic-economic characteristics of nations, the military power of nations, inter-nation alliances and violence between nations.

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