STRUCTURAL SOURCES OF CONFLICT

Bernard Guerin,
Psychology Department, University of South Australia, Australia

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Contents

Summary

The basics of life are the resources we need and the following sections and articles under Topic 1.40.2 trace the multi-stranded links between resources and our social and individual lives. There is no simple reductionist way to link every action by an individual directly to resource conflict but the analysis of those links is most fruitful when the full, and complex, contexts are described. Even the complex and agency-like actions of individuals can be analyzed according to the structuring and allocation of resources, once the types of resources are analyzed beyond the simple matters of food, water and shelter. This article analyzes simple forms of resource structuring and the conflicts and cooperations this produces. Even in these simple cases, some complex and highly strategic behaviors emerge. In pure competition, or zero-sum games, resources are structured or allocated so that if one party gets the resource the other does not. This produces a diversity of behaviors as strategies for living in such structures. In more realistic mixed-motive games, the resource outcome for any player depends upon the actions of the other players, thus creating interdependencies that show the beginnings of more complex social behaviors. In social dilemmas, what is the best resource strategy for an individual becomes the worst for everyone if all individuals follow what is in their best interest. This enables analyses of some complex environmental dilemmas.

1. Introduction to Conflict

All conflict can be analyzed as conflict over resources. Conflict can occur because:

resources are perceived to be allocated unevenly;

there may be scarce resources for a given group;
there might be a number of resources that interfere with each other when all are pursued; and there might be a careful allocation of resources with respect to some groups but this has unwanted side-effects for the resources of another group.

Clearly, then, there are three main points for analyzing conflict:

the resources that people are attempting to obtain;
the size or availability of those resources; and
the number of people who are sharing those resources.

While the resources typically thought of are food, water, clothing, housing, and reproduction, in all human groups it is the *access to resources* that is most important when analyzing human social behavior, since few people now produce all these resources themselves. In particular: politics is about allocating and getting access to resources; forming small groups is about gaining access to all the resources that a cooperative group can produce; and in western capitalist countries gaining access to money or economic credit is about gaining access to resources. The typical or direct resources, such as food, therefore might rarely appear as an explicit factor in social science analyses of human behavior in conflict.

Attempting to trace all conflict back to the basic resources or "needs" has usually proved fruitless in the social sciences since there are such complicated pathways in real life situations. While it might be theoretically possible to analyze playing golf with one's work boss back to food and shelter, such analyses rely on too many "ifs," "buts" and possibilities ("Just So Stories") to be useful. Saying this is not to deny that material resources are intimately involved, just that such analyses are not productive for the social sciences. It is like doing carpentry and trying to map out the molecular structure of every piece of wood before cutting or gluing.

For example, most small groups and communities have "ritual" actions that members perform that seem to have no direct usefulness. The group members do not seem to gain any material benefits and often they lose out in the immediate situation. For example, a gang of boys might have a ritual that new members get beaten up for two minutes as an initiation. Nothing seems to be gained and there is much pain and risk from this ritual. Consider, however, what would happen if someone in that group or community did not carry out the ritual. They would become ostracized and lose access to the many and varied resources they obtain through that group or community. Asking what would happen if someone did *not* do what they are doing usually produces useful analyses of human behaviors, since avoidance is a common strategy of social life (see Alliances: Sanctioning and Monitoring).

When the people involved are asked, however, they often cannot pinpoint the particular resources they would lose from being ostracized, since the resource outcomes from being a member of a group or community are so many and so varied. The boy in the gang could not list all the resources he might gain from being a member of that gang; most likely he would reply, "I just want to be a gang member," "It'll get me things," or "I just like being a gang member." Similarly, people could not easily say what they would lose if they lost their good reputation or high status, despite these being simultaneously both abstract notions and very real notions. So we can expect conflict over access to resources to be typically hidden in forms such as conflict over reputations or status ("who is the coolest?") even though participants themselves might not be able to tell us what exactly and concretely is being fought over.

Analysis Lens: To begin an analysis of conflict we must look for the likely resources in conflict given the historical and social context, the way those resources are allocated, the size and composition of the populations or groups in conflict over resources, and the ways those groups of people are organized. We begin here with the structure of conflict as the allocation of resources.

2. Analyzing the Structure of Conflict

Having emphasized the importance of tracing out the historical and social context of any conflict, we will now look at structural approaches that try to get rid of any contextual detail. The idea is that conflict arises over how resources are allocated, and if we change the allocation or structure of resources then we can change the conflict, hopefully into cooperation. As we will see at the end in some particular examples, using structural models in real cases always requires looking into the historical and social contexts, and there is no magical way around this. This is like the relation between physicists devising bare equations for force and engineers turning those abstract equations into a practical method for building real bridges. The contexts need to be included, just like real concrete and imperfections are part of construction methods.

There is an extremely large area of social science research on how individuals behave differently when the structure of resource allocations is changed. This is called *Game Theory* and it includes simple cooperation and competition. It also can involve groups competing with each other, and we will deal with that later. The research spans several of the social sciences, and the research areas of conflict management, operational research, and peace studies. Game theory has been used by psychologists, animal behavior researchers, political scientists, computer simulators, industrial/ organizational psychologists, social anthropologists and others (for mathematical descriptions of game theory methods see Articles 1.40.4.1 to 1.40.4.7 as well as the Topic-level paper 1.40.4). Whenever there is conflict, a useful way to begin analyzing what is happening is to find out the resources that are disputed, and how those resources are allocated between the parties involved under different conditions. What social scientists have to add to this, however, is the idea that the resources are not just food, water and money; they can also be such phenomena as reputation, affection, exam marks, social attention, status, and identity. Typically, game theory analyses are conducted with the resources being only money or fictitious point values. But anything that is said here can apply to any of the resources and access to resources that are important to people. For example, siblings

who are allocated varying amounts of parental attention can have their social behavior analyzed through game theory. As will be shown in Alliances: Sanctioning and Monitoring, The Language of Conflict, this is one of the reasons why analyzing human behavior is more difficult than systems of inanimate objects.

What game theory does is to analyze how resources are arranged among people, what the outcomes or consequences are, and how particular allocations of resources change people's social behavior. If you can do this then you will have a better understanding of what people are fighting about and how to resolve the conflict.

There are three or four different arrangements of resource allocation that have been studied in great detail because they occur frequently but this does not mean that they are the only possibilities. If you are analyzing a specific conflict in the world, then you might need to invent your own form of "game" and not one that has already been studied. The point here is not for you to learn some particular game structures and force the world to fit into those categories. Game theory is perhaps most useful when used to *sensitize* you to the resource basis of all conflicts. You might even successfully analyze what is going on in some conflicts, and perhaps even change them, without knowing exactly what were the resources or what was the category of game.

2.1. The Practical Aims and Limitations of Game Theory

For game theory, producing conflict in social behavior is easy—just make the resources scarce between people. For example, if only two houses in every street could claim money from a tax return, there would be conflict to be one of those houses chosen. In real life, typically the strategies used would be verbal, such as lobbying politicians for your house to be chosen, or lobbying to change the law itself.

The *practical* aim of game theory has been to find resource allocation conditions that *reduce conflict* or *promote cooperation*. It must be kept in mind though that cooperation might mean different things for different resource allocation arrangements. Cooperation in a competition can be different from cooperation in a Prisoner's Dilemma game, for example. This is often overlooked, but keep it in mind as we go along.

The first and most obvious solution in a resource conflict is to increase the amount of that resource until there is sufficient for everyone. We will assume that this is not possible, however, because in most real situations more resources would have already been allocated if that were possible as a solution. If a community group and a multinational corporation have a conflict over the ownership of some land, the simplest solution of just making more land is not possible. Moreover, because of the ways that groups are organized, increasing resources often means that people then require more and more, because "needs" are socially constructed and linked through "reputation" and "status" to the resources. So just adding more resources does not always work even when it can be done.

A second way to change a resource conflict is to convince the people involved to behave differently, or to make verbal rules or policies for people to follow. While these are very common solutions, such verbal approaches require special conditions to work, however,

and are covered in other articles (see, for instance, The Language of Conflict). But keep in mind that this is what typically happens in governments and committees—verbal rules and policies are enforced to change resource allocations. Governments make the tax laws and the governments' budgets specify how the money will be allocated. Governments make laws or rules about land ownership and how one party comes to possess land and not another. In this case, the special conditions involve the government getting and maintaining authority over the people in conflict.

The most common way to change a resource dilemma is *to change the structure of the resource allocation*. This can be done by simply changing the environmental situation, or by providing a larger context for the resource game. The main questions we will have to answer in reviewing the areas of resource allocation are these two: what are the conditions that produce competition, conflict or cooperation, and how can we change them? For each common type of resource dilemma, examples will be provided about the conditions that are present to cause the dilemma, and some illustrations of how to change the social behavior away from a conflict situation (for a conflict model of the Sustainable Development Game see Section 5.2 in the Theme 1.40 paper on Conflict Resolution).

Before outlining some of the common games or conflicts from game theory, it is worth pointing out some of its limitations so these can be kept in mind. First, the historical and particular contexts for conflicts are removed in game theory to make bare models that are supposedly generalizable. It is worth remembering that sometimes the particular details of a conflict are all important and can overshadow the bare-bones game structure.

The second limitation is that while simple games can be modeled, such games are rare in real life. This is one reason why books about game theory tend to use the same real examples; there are not many others available. Most real conflicts, once the historical and social context are taken into account, involve multiple games and multiple strategies. Given that we have also said that resources can be difficult to pinpoint in real life situations, this makes using game theory in a moment-by-moment way to analyze a conflict not very practical.

Keeping these limitations in mind, one should envision game theory as a way of highlighting the main conflict components out of the morass of real details, and as a way of sensitizing one to seeing resources and resource allocations in a given situation. Every conflict will have slightly different resource structures and strategies for proceeding to cooperation. To see these different details, game theory is helpful in capturing the larger and repetitive patterns.

Analysis Lens: Game theory is a good way of starting to analyze conflicts. It sets out the broad patterns of resource allocations and shows how conflict arises from the allocations and highlights potential solutions to those conflicts. There are three or four commonly used games, but every real situation will be unique in the multiple games involved, the resources being disputed, the historical and social contexts, and the specific make-up of the groups involved.

2.2. Pure Competition/ Zero-Sum Games

A simple competition is called a *zero-sum game* in game theory. The resource allocation structure is that *if one party gets the resource, then the other loses the resource*. Such resource competitions are probably rare, however, because most of the situations that we commonly call competition, particularly sports competitions, are not as simple as this. Most often in these sorts of competitions there are collective group resources or social capital, such as reputation, status, and group identity, that are controlling the social behavior, not the competitive outcomes alone. Indeed, the trophies of most sports competitions are not worth the amount of time and effort that are put into playing the games. But gaining reputation as a good player or as a good sports club is in itself an important resource that is worth more than the value of a trophy. As a simple example, becoming the world's best tennis player gives you access to commercial sponsorships that earn a great deal of money – more than you would earn by just winning a tennis match, and certainly more than what the tennis trophy would be worth if you sold it.

There is not a great deal of research on pure competition, therefore, but we do know that whether the parties compete aggressively or not depends upon the history, culture, and socialization of the people, whether the competition can be turned into a mixed-motive game, and whether the competition is a one-off or is repeated regularly. Level of aggression can also be a function of the potential for exploitation during cooperation, the size of the resource, and the availability of alternatives (and amount of deprivation). Some illustrations of these points are now given.

Socialization. Many studies have explained how differences of culture or socialization affect competition, although these studies are not without problems in interpretation. Bonta (1977) reviewed many nice examples of peaceful or cooperative cultures and how they train for minimal competition, and the good and bad consequences of such an up-bringing. Here is one of his examples about the Kadar people:

A traditional tribal people who subsist on hunting, gathering, and trading near the southern end of the Western Ghats mountain range in India, the Kadar almost never have physical fights: For example, a wife might berate her husband for not having enough Western material comforts or people might accuse others of taking their money, but fighting does not result. U.R. Ehrenfels (see the paper by Bonta (1977)) found that there was no memory among the Kadar of murder or violent acts of revenge, and local forestry or police officials confirmed that crime was totally absent.

Changing the competitive structure. The best way to stop competition is to change the competitive structure. This can be seen in studies of children's games, since games can be competitive (one winner) or cooperative (all win something). Studies find that when the competitive structure is changed the social behavior changes, and studies even find that with competitive toys there is less cooperation between children both in the game situation and back in the classroom setting. In real life, however, it is often difficult to change the competitive structure. For example, if a community gets some land then the multinational corporation usually loses it. It is possible, however, to change such a competitive structure so that the community gets the land but allows some limited and controlled access to the multinational corporation.

As an example of changing the environmental structure to produce *more* competition,

Bolin (1990) presents the case of an area in the Andes for which the villages upstream had a better water supply but the lower villages had better climate, soil and markets. Overall, there was a balance of power. An irrigation system was built, however, that provided more water to the lower villages, and this upset that balance of (resource) power. While the irrigation project seemed a good one to help the water-short villages, this caused social problems and it increased competition and general hostilities between the two areas.

Change the outcomes. Sometimes it is possible to change the outcomes in a competitive resource structure and thereby change the conflict. This is one reason that most competitions have second and third prizes, to reallocate the resources away from the winner-takes-all structure. Typical compromises can be an equal solution, so each party gets half instead of all-or-nothing, and an equitable solution, so that each party gets part of the resource depending upon some other factor such as the amount of effort put into producing the resource in the first place.

Competing within and between groups. As mentioned earlier, in real-life competitions we often find that what would seem to be the key resource -- that is, the focus of a competition, the prize -- is not always the situation. In such cases, it seems that the resource being competed for has rather to do with the relative status of two competing groups. In the Olympic Games, for example, the prizes do not even come close to covering all the expenses of competing, yet countries continue to enter teams at great expense. Clearly, other resources are the focus of such competitions, not the prizes.

One way that some cooperation is produced in pure competition situations is for members of a group to cooperate with each other when competing with another group. While this does not stop the competition *per se*, some cooperation is produced. When the formation of groups and alliances is discussed, however, it will be seen that strong ingroup/ outgroup situations can make for protracted competitive conflicts with many nasty side-effects (see Alliances: Sanctioning and Monitoring, The Language of Conflict, and Small Groups and Conflict). So while it is tempting for governments, mediators and people in authoritative positions to get things done productively by stressing ingroup cooperation, we need to be aware of the potential hazards of such a strategy in the long run.

Risk of exploitation when cooperating. One of the properties of cooperative social behavior is that we almost always put ourselves at some risk of exploitation. The other person can renege and take more. While this will be pursued in more detail below on Mixed-Motive games, in which there is a specific motivation to renege that is captured by game theory, the problem arises commonly in situations of pure competition.

If there is a pure competition resource structure, it becomes very risky for one party to begin suggesting to the other party that they might find a compromise. This can easily lead to the second party going along and then reneging on the compromise, because of the all-or-none character of the game. So if a mediator is vying for a solution to a competitive conflict, he or she needs to be aware that both parties will be taking a great risk if they begin the process of compromising. As we will see when reviewing Mixed-Motive studies below, the possibility that the other person can renege changes the entire

game. Building reliable or multiple networks of social consequences -- what we call trust when addressing the formation of alliances -- is extremely important in overcoming these problems of competition (see Why the Social Sciences are Different II: Generalized Exchanges or Embeddedness in *Alliances: Sanctioning and Monitoring).*

Competition and Aggression. People often link competition and aggression; it is thought that competition leads to aggression. While the two phenomena are not necessarily connected, they do seem to appear together frequently in real life. When there is competition for scarce resources, we seem to notice more aggression. "Road rage" is an example of this, since a scarcity of open road and movement may lead to aggression.

One reason for people commonly linking competition and aggression is probably that most competition conflicts get resolved quickly and we only observe those competitions that are difficult and protracted, as those that are more likely to end in aggression. Another reason is that the threat of competition is in itself a powerful strategy in playing competition games (and also in Chicken games). So players who are in a competition conflict can utilize the common social “knowledge” of a link between competition and aggression as a threat. It will usually appear as a verbal influence strategy: “If you continue to obstruct me then I will get very, very angry” (see The Language of Conflict).

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Biographical Sketch

Bernard Guerin is Professor in psychology at the University of South Australia. Before this he studied at the University of Adelaide, took a Post-Doctoral Fellowship at the University of Brisbane, and taught at James Cook University in Townsville, Australia. His interests span the entire realm of social science, and he has been concerned for some years about the superficial barriers erected between the "different" social sciences. He has finished two new books: one on integrating the social sciences and one on practical interventions to change the behavior of both individuals and communities, again incorporating all social science approaches. He has published over 45 peer-reviewed papers, and has presented this integrative material on invited visits to Japan, Mexico, Brazil, Hungary, Sardinia, and across the United States. His two earlier books are *Social Facilitation* (CUP) and *Analyzing Social Behavior: Behavior Analysis and the Social Sciences* (Context Press).