

**An Atlas of Interpersonal Situations.** Harold H. Kelley, John G. Holmes, Norbert L. Kerr, Harry T. Reis, Caryl E. Rusbult, and Paul A.M. Van Lange. Cambridge, England: Cambridge University Press, 2003, 506 pages, \$38.00 paper.

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At the 1995 meeting of the Society for Experimental Social Psychology in Washington, D.C., Harold H. Kelley gave a presentation describing the notion of distinguishing all possible 2x2 situations (two persons interacting, each with two behavioral options) and the corresponding patterns of social interaction. “The meeting participants had enjoyed a dinner reception at the French Embassy, with dancing and champagne. Holmes, Kelley, and Rusbult had returned to the hotel and were standing on the corner, when Reis leapt off a later bus and ran up to them saying, ‘Why don’t we get a grant from the Rockefeller Foundation to go to the Bellagio Center on Lake Como and think and write about all those situations?’”

The result of this endeavour, carried out by individual work and joint debate of the six authors, who consider themselves co-authors of the entire volume — and without grant from the Rockefeller Foundation — is *An Atlas of Interpersonal Situations*. It appeared shortly after Kelley’s death in January 2003. The tome is entitled *Atlas* because it contains freestanding descriptions of 21 frequent and familiar situations (“specialized maps”) that together display the social structure of the world. Far from claiming conclusiveness, the authors compare their work to sixteenth century maps of the world, freely admitting its provisional nature with much *terra incognita* left to discover. Part One of the publication presents a comprehensible introduction to the theoretical framework of the *Atlas*; Part Two contains the descriptions of the 21 prototypical situations to which the framework is applied. The specialized maps of Part Two form the main body of the *Atlas*.

The *Atlas of Interpersonal Situations* draws on the conceptual framework of interdependence theory introduced by Thibaut and Kelley (1959) and elaborated in Kelley and Thibaut (1978) and Kelley (1984). In a manner similar to game theory, interdependence theory abstracts from concrete events (e.g., going to the cinema) by focusing on the value of these events to each actor. In the 2x2 case there are two actors each with two options. This generates four possible combinations of behavior, i.e., four possible events. Numbers representing the respective value of the four events to one actor are called outcomes. Within the framework of independence theory the situations are defined by the outcome matrix of the actors.

In Part One the authors show how all possible  $2 \times 2$  situations can be conceived of as specific combinations of three basic patterns of interdependence between the outcomes of each actor: bilateral actor control, mutual partner control and mutual joint control. Actor control refers to each person's effect on his or her outcomes; partner control refers to the other person's control over the actor's outcomes; and joint control refers to the joint effect on a person's outcomes. Any  $2 \times 2$  outcome matrix can be obtained by superimposing three basic matrices that, taken in isolation, represent one type of control each. These basic matrices can be combined in different ways: their magnitude can vary and they can be combined in a concordant or discordant way. The prisoner's dilemma game, for example, can be constructed by combining a high degree of mutual partner control and a smaller degree of bilateral actor control in a discordant orientation to one another.

The authors take it that the nature of an atlas is not only to compile specialized maps, but also to establish the relations between them according to degrees of similarity. The decomposition of the outcome matrix into three basic matrices makes it possible to locate all symmetric situations (i.e., those in which the outcomes of both individuals are subject to the same kinds of controls and to the same degree) in a three-dimensional space. These dimensions are called by the authors degree of interdependence (given by the relative importance of mutual partner control and mutual joint control taken together, in comparison to bilateral actor control), the basis of interdependence (the mutual joint control component leading to coordination problems, while mutual partner control gives rise to exchange problems), and the covariation of interests (where potential conflict arises from conflicting mutual joint control or from discordant orientations of the bilateral actor control and mutual partner control components). Asymmetry is analyzed as a fourth dimension. Situations of increasingly asymmetric patterns are visualized as columns erected perpendicularly to the surfaces of the three-dimensional solid defined by the set of all symmetric  $2 \times 2$  situations. These columns depart from symmetric situations of which they are asymmetric variants. That way of representing the space of all possible  $2 \times 2$  situations has the nice effect that the development of the parent-child relationship (with increasing symmetry) or of a friendship (with increasing or decreasing degree of interdependence) can be described as a journey through this space. To the degree in which this journey is controlled by one of the persons or both ("situation selection"), preferences over types of situations (e.g., for competitive or cooperative situations) can come into play. However, this conception suffers from the fact that a four-dimensional situation is located in a three-dimensional space.

The decomposition of the outcome matrix in its bilateral actor control, mutual partner control and mutual joint control components is an attractive way of classifying all possible  $2 \times 2$  situations. It might, however, be criticized on the basis that it is sensitive to the introduction of irrelevant alternatives, e.g., of interaction patterns that only arise if the other person chooses a strongly dominated strategy. This results from the fact that the bilateral actor control, mutual partner control and mutual joint control components are calculated independently for each person. These concepts refer to the relationships that hold between the four outcomes of one actor and not to those between the outcomes of different actors and are therefore not sensitive to changes concerning the outcomes of the other person.

The resemblance of this approach to game theory is, in the authors' own words, only superficial. Naked self-interest is rejected as narrow assumption, as being only one motive among many. Here, the authors seem to be equating utility maximization with self-interest. In standard game theory, however, the numbers in the

matrix (payoffs) include possible social concerns of the players. They are conceived as a description of the players' preferences, be they egoistic, altruistic or otherwise.

The authors give a very different interpretation to the numbers in the matrix. They distinguish two levels of outcomes. The matrix concerns the basic or "gut level." It expresses the "given situation," defined by the environment and by basic abilities and needs of the persons that give rise to behavioral options and simple personal preferences, the latter only reflecting self-interest. The authors take the basic outcomes to be objective, not subjective properties of the situation. They contrast their methodology with approaches that take the subjective meaning of the situation to the actors as starting point of an analysis. Subjectivity comes into play at the "higher level" which is the result of a transformation of the given situation by the individuals, mainly achieved by taking into account symbolic payoffs that reflect among other things the interpersonal significance of the situation.

The authors take as an example the standard illustration of the so-called chicken game. At the gut level the matrix looks quite unusual: it is basically a situation in which two persons risk a serious car accident (e.g.  $-20$  for each) unless at least one of them swerves ( $0$  for each). The matrix acquires the defining form of a chicken game only if both persons transform the situation into a test of the relative courage by including the corresponding symbolic payoffs. The transformation of this game and the resulting interaction pattern reveal what the authors call the (social) person factors, which include habits, motives, thoughts and values, some of them being relationship-specific while others may be social norms. Quite remarkably, the person factors come into play only when the person's behavior departs from the situation as defined on the gut level. This leads to a second insight of this perspective: personal factors can manifest themselves only if the given situation makes their expression possible, i.e., if the situation *affords* their expression, in Gibson's (1979) terminology. For example, the altruism of a person can show up only if there is a certain amount of conflicting interests in a given situation. In this respect, the two-level analysis is more fine-grained than the standard game theoretic procedure in which the personality is already priced in the payoffs.

Part Two of the *Atlas* contains one chapter for each of the 21 situations. For every situation, the authors explain why they have included it, give everyday examples, provide a formal analysis in terms of interdependence theory, discuss some variants (in most cases concerning sequential structure and information conditions), locate the situation in the three-dimensional space by exploring some similarities and differences with regard to other situations, and, most interestingly, provide an overview of research results from the social and psychological sciences concerning patterns of interaction and the person factors revealed in them (e.g., dispositions of persistence or trust, competitiveness). This includes examples from economic life, but the focus of the book lies on child development (e.g., attachment theory) and private relationships with special consideration of romantic relationships. This may be the reason why the authors focus on the "resolution" of the problem which the situation poses, dealing much less with conflict and exploitation. Resolution seems to imply that the result should be somehow acceptable for both actors.

The tendency to focus on resolution becomes obvious in the discussion of a game commonly named battle of the sexes. The authors not only judge the reasons for this naming to be "somewhat obscure" — quite remarkably, they also rename the game, calling it turn-taking game.

The first four situations discussed in Part Two are all given by one of the three basic patterns of output interdependence taken in isolation: pure bilateral actor

control, pure mutual partner control, pure corresponding mutual joint control, and pure conflicting mutual joint control. Situations 5 to 11 display patterns that can be derived by combining two or three of the basic patterns. The authors deal mainly with standard games from game theory, including the prisoner's dilemma game and the chicken game. Situation 11 is a prototype of asymmetric situations. Situations 12 to 14 are characterized by time-extended patterns, which include the iterated prisoner's dilemma, investment situations and a situation referred to as delay of gratification. Sections 15 to 18 concern situations with incomplete information, including negotiations, and a situation called "encounters with strangers." As a benchmark case, the authors discuss everyday waiting room situations. As it is difficult to specify the set of options and the outcomes for these situations, the authors derive no outcome matrix. For similar reasons, Ickes (1982), who experimentally investigated human behavior in waiting room situations, characterized them as unstructured. In his experiments, a variety of characteristic patterns of interaction have been observed. Observed behavior was highly sensitive to birth order, gender, ethnicity, and personality measures. Making reference to Gibson's concept of affordance, the authors argue that this situation should not be conceived of as being unstructured, but rather as being hyperstructured, because it makes possible the expression of many person factors.

Situations 19 and 20 are n-person situations (with effects on third parties and with the n-person prisoner's dilemma, respectively), while the last section discusses situation selection. It could be argued that situation selection represents nothing other than a choice in a bigger game, the situation itself being a subgame. The authors themselves point out the similarities with the time-extended patterns discussed earlier in the book. However, the concept of situation selection makes sense to the degree that persons display preferences with regard to types of situations which cannot be reduced to maximization of payoff. This is, of course, impossible by definition in standard game theory because payoffs express the preferences of the players. Given the proposed distinction between simple personal preferences versus higher level preferences, the concept of situation selection might be empirically relevant. The authors in fact provide some evidence for that.

In sum, *An Atlas of Interpersonal Situations* provides an introduction and interesting application of interdependence theory which opens some surprising perspectives on personal interdependence. It also offers a broad overview of empirical results of the social sciences and psychology, mainly concerning private interactions. Readers may find it worthwhile reading the discussions of the 21 situations selectively, as they are in fact freestanding and include some repetitions in their formal discussion.

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