Exploring regime interaction: a framework of analysis

Gehring, Thomas; Oberthür, Sebastian

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Regime Consequences

Methodological Challenges and Research Strategies

by

Arild Underdal
University of Oslo,
Oslo, Norway

and

Oran R. Young
University of California,
Santa Barbara, California, U.S.A.

Arild Underdal is the Rector and a Professor of Political Science at the University of Oslo. Oran Young is a Professor of Environmental Science and Management at the Donald Bren School of Environmental Science and Management at the University of California at Santa Barbara. Most of the work on this project was completed while the editors were in residence as research fellows at the Centre for Advanced Study in Oslo, Norway.

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Chapter 10

EXPLORING REGIME INTERACTION

A Framework of Analysis

THOMAS GEHRING AND SEBASTIAN OBERTHÜR
University of Bamberg; University of Bamberg/Ecologic

The international system is populated by a steadily growing number of international institutions. More than two hundred major regimes exist in the field of international environmental protection alone; with five major agreements being adopted per year since the 1980s (Beisheim et al. 1999; see also Sand 1992). While these institutions usually are separately established to respond to particular problems, they increasingly affect each others' development and performance. In some cases, "regime interaction" creates conflict.[1] Whereas the Word Trade Organization (GATT/WTO) promotes free international trade, several international environmental regimes, such as the Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Montreal Protocol for the protection of the ozone layer, establish new trade restrictions (see Petersmann 1993; Lang 1993; Moltke 1997). Likewise, the 1997 Kyoto Protocol to the UN Framework Convention on Climate Change provides incentives for establishing fast-growing mono-cultural tree plantations in order to maximize carbon sequestration from the atmosphere, whereas the Convention on Biological Diversity of 1992 aims at preserving biological diversity of forest ecosystems (see Gillespie 1998; WBGU 1998; Tarasofsky 1999; Pontecorvo 1999). In other cases, interaction creates synergistic effects. The global regime on the transboundary movement of hazardous wastes has been strengthened, for example, upon the establishment of a number of regional regimes addressing the same environmental problem (Meinke 1997).

Traditionally, regime analysts have tended to explore the establishment, development, and effectiveness of international regimes in isolation. The relevance of the growing "regime density" (Young 1996) that may generate

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a risk of "treaty congestion" (Brown Weiss 1993: 679) has been recognized only recently. Meanwhile, the number of studies investigating specific cases of institutional interaction is steadily growing (see, for example, Zhang 1998; Stokke 1999; Rosendal 2000; Oberthür 2001; Andersen 2002). These contributions focus particularly on environmental regimes because the institutional fragmentation of international environmental politics makes interaction a particularly widespread phenomenon in this field. Most of the research is empirical and descriptive. Despite some attempts to categorize phenomena of institutional interaction (Young 1996, 2002; Stokke 2000; Herr and Chia 1995; King 1997), the conceptual development of the analysis of regime interaction is still at an early stage. Not surprisingly, the influence that regimes may have on each others' development and performance has been repeatedly identified as a key issue for future research (Young et al. 1999; Breitmeier 2000; Young 2002).

This chapter aims at developing a conceptual framework for the analysis of interaction between regimes. [2] It concentrates on situations in which one or more international regimes exert influence on one or more other regimes or on issue areas related to other regimes. It does not address the impact of the growing universe of international institutions on a particular regime, nor the effectiveness-related problem of how to attribute an observed impact to different regimes. International regimes are considered as social systems that comprise, in addition to a catalogue of norms of behavior, a structured and institutionalized process of communication in which norms are molded and collective decisions made. This concept allows for the identification of the boundaries of an international regime on the basis of its specific communication process rather than the substantive problem(s) addressed. Hence, we may find, for example, a regional and a global regime addressing a virtually identical substantive problem, such as dumping of wastes at sea. Without further elaborating this concept here (see Gehring in this volume, Gehring 1994; Levy et al. 1995), we note that it basically reflects the understanding of the term "regime" as most widely used by policy-makers and in empirical research.

Influence between regimes is not limited to cases in which a regime's norms and institutional arrangements are modified upon interaction. It extends to all three levels of a regime's effectiveness: output, outcome, and impact (see Underdal in this volume). A regime will affect another regime's normative *output* if it causes changes of the latter's norms. It will exert influence on another regime's *outcome* if it results in behavioral adaptations that are relevant to the latter's performance. Finally, a regime will affect another regime at the *impact level*, if it directly influences the subject matter governed by the latter (e.g., the state of the environment in the case of environmental regimes). In any case, interaction between regimes is based

on a causal link between the source regime(s) and the target regime(s). Therefore, it is a core analytical task of studies addressing regime interaction to demonstrate that a causal connection exists between the regimes involved.

Unfortunately, empirical phenomena of regime interaction are frequently complex. They may include a whole set of regimes that interact with each other, or a co-evolution process in which influence runs back and forth. Under these circumstances, the establishment of clear causal pathways requires the identification of suitable units of analysis (section 1). Moreover, empirical evidence suggests that regime interaction constitutes a rather multifaceted phenomenon. Systematic research should be based upon factors that may be used to distinguish cases of regime interaction according to important criteria. In section 2, we therefore develop a number of conceptual categories of regime interaction that allow a systematic mapping of empirical cases of regime interaction and a more specific distinction of different types of regime interaction. Finally, we address the issue of establishing causality in section 3. It is indispensable for every identified case of regime interaction to demonstrate a causal pathway that clearly links the source regime with the target regime. In the absence of a causal link, regimes would merely co-exist, rather than interact. On the basis of the development of certain types of regime interaction, it may be possible in the longer run to develop generalized causal mechanisms for different patterns of interaction that spell out standard causal pathways and the conditions under which they become applicable.

1. CHOOSING THE APPROPRIATE UNIT OF ANALYSIS

While description of observable social phenomena may be a valuable task on its own (King et al. 1994: 34 – 74), the analysis of regime interaction, like any exploration of regime consequences, is closely related to the examination of causal influence. Causal analysis requires the identification of one or more independent variables that exert influence on one or more dependent variables. It is thus based on the existence of a clear-cut direction of influence between variables. Moreover, it must allow the identification of a causal pathway that generates the observed effect. Accordingly, the causal analysis of regime interaction will generally require (1) the identification of one or more sources from which influence originates (independent variable), (2) the identification of one or more targets that are affected by an interaction process (dependent variable), and (3) a causal pathway connecting the independent variable to the dependent variable in a way that generates the observed effect.

Unfortunately, constellations of interacting regimes are frequently highly complex. A situation involving several source regimes and/or several target regimes connected by varying causal pathways, for example, may be described. In this case, however, the causal influence that drives interaction cannot be analyzed because it is not possible to identify independent and dependent variables. Therefore, such situations do not constitute appropriate units of analysis. Serious causal analysis of interaction phenomena requires that a complex interaction situation is analytically disaggregated into a number of *cases of regime interaction*. Each of these "cases" must fulfill the aforementioned conditions, namely they must allow the identification of a single source regime, a single target regime, and a unidirectional causal pathway connecting the two. While a case of interaction has to be based upon empirical observation, it is an analytical construction that does not exist independently of the analysis.

Disaggregation of complex interaction situations will be particularly useful in three cases: if more than one pathway is operative, if interaction constitutes a feedback (co-evolution) process, or if it involves a whole set of regimes. First, existing international regimes are normally complex. For example, the World Trade Organization (WTO) and the regime for the protection of the Baltic Sea govern broad issue-areas. Even an allegedly single-purpose institution such as the regime for the protection of the ozone layer controls the use of numerous chemicals and promotes a number of different abatement strategies. Moreover, modern international regimes regularly comprise auxiliary arrangements, including funding mechanisms (Keohane and Levy 1996) and systems of implementation review (Victor et al. 1998), that may exert influence on another regime separately from the core arrangements of the source regime. Complex international regimes may interact with each other in more than one way and interaction will then be based on several causal pathways.

For analytical purposes, we should disaggregate a complex interaction situation into a number of suitable cases. We may identify specific components of the source regime that have the potential of affecting the target regime. Consider the case of the international regimes on climate change and for the protection of the ozone layer. One component of the Montreal Protocol for the protection of the ozone layer reinforces international efforts to combat climate change by prescribing the phase-out of chlorofluorocarbons (CFCs) that do not only harm the ozone layer but are also important greenhouse gases. Another component of the ozone regime, namely the promotion of hydrofluorocarbons (HFCs) as substitutes for CFCs, affects the climate change regime adversely, because these substances are powerful greenhouse gases. Yet another component of the Montreal Protocol, its noncompliance procedure, provided a precedent for the

elaboration of a similar component of the climate change regime (Oberthür 2001), so that interaction was obviously based on a different causal pathway. Upon closer inspection, we might identify even more different forms of interaction between the two regimes. Interaction between these regimes is thus made up of a number of cases with rather different properties. Influence may be symmetrical or asymmetrical (Young 1996: 7).

The separate study of single cause-effect relationships promises to provide a much clearer picture of the overall interaction pattern than any aggregate analysis could. Obviously, the accuracy of the overall picture will increase with the number of cases explored. Constraints on time and money suggest that research should start with the most important and direct effects and gradually proceed toward cases with a more limited impact on the overall situation or with a less clear cause-effect relationship.

Second, *co-evolution processes* should also be disaggregated into a set of cases of interaction, before they are submitted to causal analysis. As modern international regimes exist over extended periods of time and tend to change more or less profoundly during their lifetime, the analysis of co-evolution of regimes promises important insights into the interaction patterns of regimes. For example, the regional Oslo Dumping Convention and the global London Dumping Convention co-developed for almost thirty years and appear to have been mutually reinforcing (Meinke 2002). If co-evolution involves feedback processes, neither of the regimes in question would exist in its current state without existence of the other. Influence may be bi-directional. We are thus confronted with a problem similar to the co-constitution of agent and structure that has been hotly debated in International Relations (Wendt 1992; Dessler 1989). Unfortunately, collapsing agent into structure and structure into agent (Carlsnaes 1992) renders causal explanation virtually impossible because it makes any invariable starting point for analytical reasoning disappear (see also Hollis and Smith 1991). Similarly, the observation that two or more co-evolving regimes are mutually constitutive does not help explain *how* these regimes exert influence on each other.

Therefore, we should disaggregate the co-evolution process into a suitable number of cases of interaction. The principal strategy is temporalization and phasing (Archer 1985; Carlsnaes 1992). Despite its empirical continuity, we may consider a process of co-evolution as a sequence of separate cases, each of them with a single unidirectional line of influence running from one of the regimes involved to the other. Cases are again best selected according to important decisions, or sets of decisions, that establish components of the source regime with possible effects on the target regime. In doing so, we implicitly assume that a stable situation exists at an appropriate point in time t_0, in which neither of the regimes in question

is under pressure to adapt. It may not be possible to identify empirically any such moment within the overall development of an international regime. Nevertheless, *with respect to a particular decision or set of decisions*, such as the decisions to control and phase out CFCs, we will not expect any effect *before* the relevant decisions were adopted (or their adoption was at least anticipated). Accordingly, we may observe at point t_1 an important change within Regime *A*, for example the adoption (or elaboration) of a new set of regulations, with a possible effect on Regime *B*. This effect must inevitably occur later than its cause, at point t_2. The members of Regime *B* may react, for example, by a collective decision adapting regulations to the new situation. Such a response occurs yet another analytical moment later, at point t_3.

If we are able to identify any such influence, it will be clearly directed from the source regime to the target regime. If influence is symmetrical, it will run the other direction in the subsequent phase. Assume that the decision adopted by actors of Regime *B* at point t_3 significantly modifies the environment of Regime *A*. This effect will occur yet another analytical moment later, at point t_4. And it may lead to a further institutional response by actors of Regime *A*, at point t_5. Influence is also clearly directed, but it runs from Regime *B* toward Regime *A*. Hence, we have discovered a feedback loop. The original action of Regime *A* members causes a reaction of Regime *B* actors that feeds back on Regime *A*. "Co-evolution" of the global Basel Convention on the Transboundary Movement of Hazardous Wastes and several related regional regimes may thus be analyzed as a sequence of two phases. In the first analytical phase, the establishment of a moderate control arrangement at the global level may have caused the African countries, and subsequently the countries of other possible target regions, to adopt separate regional regimes prohibiting the import of hazardous wastes. In the second phase, the existence of a number of such regional regimes may have strengthened those favoring a ban of waste exports from OECD countries to non-OECD countries that was eventually agreed under the global regime (Meinke 2002). Once again, the overall interaction pattern is better grasped by the separate exploration of two successive cause-effect relationships than in an aggregate perspective.

Third, *interaction within a whole set of regimes* may be disentangled into a number of bilateral relations of influence. For example, the Baltic Sea is affected by a number of functionally different global environmental regimes addressing, inter alia, oil pollution from ships and dumping of wastes at sea, and by an important regional regime, as well as overall arrangements such as the United Nations Convention on the Law of the Sea (UNCLOS III) with its Exclusive Economic Zones arrangement (Young 1996). It is likely that all these institutions interact with each other—either affecting each others'

performance or influencing each others' institutional development. We may well describe the set of institutions involved. We may even try to assess the impact of this set of regimes on the state of the regional common in question (which would constitute an analysis of "simple effectiveness," see Underdal in this volume). However, we would not learn anything about the causal influence between the institutions involved.

Once again, we should distinguish cases of regime interaction on the basis of specific components of the respective source regimes that emerge and develop through collective decision making. At closer inspection, we may discover rather different patterns of causal influence within a set of regimes. For example, a single important decision adopted within a source regime may turn out to exert parallel influence on a number of target regimes. The decision to ban the dumping of certain wastes at sea, adopted under the global London Dumping Convention, might have affected a number of regional seas regimes concurrently, although independently of each other. On the other hand, a single target regime may be affected by different source regimes. We may thus examine separately the influence exerted on the development of the Baltic Sea regime by the London Dumping Convention, by the International Convention for the Prevention of Pollution from Ships (MARPOL 1973/78) and by the UN Convention on the Law of the Sea. The separate exploration of these individual cases promises to reveal a much clearer picture of the interaction pattern than an overall perspective could do.

It is not necessary to elaborate further that these three sources of complexity of an interaction situation may occur simultaneously. In the extreme, we may have to deal with a whole set of highly complex regimes that develop over time. Still, for analytical purposes one may best identify appropriate cases of interaction with a clear direction of influence. The reason is that the separate analysis of interaction cases will reveal different types of interaction and different underlying causal pathways. It may also be discovered that causal pathways change over time. Consequently, analyzing cases of definite inter-regime influence rather than a complex overall situation promises to provide both a better idea of the causal pathways determining the interaction and, by means of re-aggregation of the results, a better picture of the complex overall situation.

2. COPING WITH THE MULTIFACETED NATURE OF REGIME INTERACTION

Regime interaction is a comparatively novel field of research. As is evident from the existing literature, it covers a broad range of cases with

rather different properties, but we do not know very much about the core characteristics of these cases. "International regimes" had also once been a concept much criticized for its lack of precision (Strange 1982). Today, we have a fairly clear idea of what an international regime is, what its functions are, of important types of regimes as well as of ways to assess their (simple) effectiveness. This knowledge is a result of more than two decades of conceptually founded regime analysis. It demonstrates how an originally unclear phenomenon may be systematically unfolded through theoretically informed research. The exploration of regime interaction still lacks conceptually founded guidance on how to deal with the multifaceted and empirically complex phenomenon in a similarly systematic way.

First of all, this theoretical gap raises the problem of how to identify cases of regime interaction. A case of regime interaction may be comparatively limited in scope and difficult to recognize. So far, the empirical—and predominantly descriptive—literature on regime interaction tend to focus on areas of eminent interest to policy makers that have been primarily related to conflicts between regimes rather than synergy effects. To be sure, the perceptions of negotiators and stake-holders constitute an important source of information about the existence and nature of a case of regime interaction. However, systematic mapping must be based on conceptually sound criteria in order to minimize the risk that whole categories of interaction or core characteristics of particular cases are not taken into account. In short, researchers must develop their own idea of what constitutes a case of interaction and its core characteristics.

Moreover, there are good reasons to believe that it is not useful, or may even be epistemologically impossible, to simply *describe* a case of interaction without an idea of its central aspects, because description *always* requires distinguishing between important properties (that are worth reporting) and other features (that may be ignored) (King et al. 1994: 42-43). Generally, we generate information about our environment through self-constructed distinctions, internal models, "paradigms," or "theories" that allow us to order individual observations. Hence, we would be unable to identify cars on a motorway without an idea of how cars are to be distinguished from other objects, for example motorcycles. And "cars" remains an amorphous category, unless we introduce further distinctions, for example between vans, limousines, and station wagons. It appears that any systematic study of regime interaction will have to be based on some useful distinctions that help identify cases of interaction by pointing toward their core characteristics.

Distinction alone does not suffice. As cars may be distinguished according to an almost infinite number of aspects, for instance their color, their manufacturer, the size of their steering wheel, we may think of

numerous distinctions between cases of regime interaction. What we need are distinctions that presumably tell us something about *important* characteristics, that is those aspects that we believe to be central to cases of interaction. Unless we have an idea of how cases involving few actors differ systematically from those involving many, the number of relevant actors will not be a useful distinction. Likewise, unless we hypothesize that regime interaction in the area of environmental protection differs significantly from interaction in the areas of the economy or security, we cannot expect to gain additional information from this distinction. Hence, useful distinctions are supported by plausible hypotheses about the operation of regime interaction. Generally, this will be true for any distinction that addresses variation of the causal pathways at work because variation of this type promises hints as to *how* interaction operates and *why* it produces the results observed. Distinctions of this sort promise to provide a basis for the inductive development of types of regime interaction. While it is still too early and far beyond the scope of the present paper to put forward a theory of regime interaction, we may well look for categories that have the potential for providing a sound basis for theory development.

The present section first develops a set of generalized distinctions that shed light on a number of key properties of cases of regime interaction. Second, it briefly explores the utility of these categories for empirical analysis. Illustrative reference is made to various cases, particularly in the area of environmental policy. However, the categories introduced are of a general nature and therefore applicable to all policy areas.

2.1 Dimensions of Regime Interaction

Conceptually fruitful criteria for the distinction of cases must address particularly important dimensions of regime interaction. Distinctions based on factors whose variation might have an impact on the causal pathways at work are most likely to be important. In section 1, we have argued that cases of regime interaction always involve action within the source regime. This action will always produce some consequence within the target regime or the issue area governed by it, and may lead to further responses within the source and target regimes. We may thus assume that variation of these factors of regime interaction, namely source regime action and the resulting consequences, matter. However, not every action adopted within an international regime exerts influence on a target institution. A third area of importance pertains to the situation that links the regimes involved. Accordingly, we should look for distinctions related to significant variation of (1) situation-specific aspects, (2) the properties of source regime action, and (3) the type of consequences and responses.

Situation-Specific Causes and Effects. We may expect that some characteristics of a case of regime interaction are specific to the situation, rather than to source regime action or to the consequence generated. Two aspects appear to be particularly relevant in this respect. First, there must be situation-specific drivers that provide a basis for influence between the regimes involved. Second, we need information about the effects of a case on the target regime. We therefore propose two distinctions: one relating to the situation-specific causes and the other to the effects.

The functional interdependence of two or more international regimes and the related issue areas has been established as an important driver for regime interaction (Young et al. 1999: 50). In this case, two issue areas are related by some functional logic. However, in some cases, interacting regimes govern issue-areas with a virtually identical substance. Accordingly, we have to look for a second driver of regime interaction that may replace functional interdependence. We propose that this driver is related to the membership of the regimes involved. Empirically, both the substantive issue areas *and* the memberships of the regimes involved vary across cases. Upon closer inspection, we find that the issue areas governed are in some cases so different that we may expect this variation to be relevant for the causal pathway at work, while in other cases the substance addressed is almost identical and therefore presumably of little explanatory value. Likewise, in some cases we find memberships so clearly distinct from each other that we may expect this variation to influence the causal pathways at work, while this is not true for other cases. Hence, cases may *ideally* be driven either by a functional logic or by a membership-related logic. We derive a distinction between two types of regime interaction, each of which is based on a different logic.

Unless we have an appropriate distinction of the effects generated by a case of regime interaction, we may only observe whether a source regime indeed affects the target regime, but not in which way. Effects can vary to a considerable extent, and we may think of several suitable distinctions. At the most basic level, effects may either reinforce or contradict the "policy direction" (Gehring 1994: 433 – 49) of the target regime. The policy direction indicates the direction of collectively desired change or the objective of maintaining a desired status quo against some collectively undesired change. Hence, we gain a distinction between cases of interaction that produce *synergy* and cases that cause *disruption* from the point of view of the collectivity of target regime actors (although some members may disagree individually). While this distinction is clearly situation-specific, it is *not* immediately related to the causes of interaction. However, it may provide *important* information about the characteristics of cases of regime interaction relevant to whether and how it is responded to (section 2.1.4).

We may, for example, hypothesize that synergistic effects are frequently simply "consumed" without further action because they generate additional benefits "free of charge," while disruption creates conflict and will therefore produce demand for more beneficial solutions. However, *if* synergy leads to institutional adaptation, it may launch a process of dynamic and mutually reinforcing co-development of the regimes involved (see section 1).

By combining these two dimensions of regime interaction, we derive four types of regime interaction depicted in Figure 10.1. In cases that follow a functional logic (left side of Figure 10.1), the memberships of the source regime and the target regime are basically identical. They raise the question of why a group of actors might act within one regime in a way that influences its own governing effort within another issue area. This kind of interference may occur, first, because a serious policy response to the problem addressed within one regime has inevitable consequences for the performance of the other one. This is virtually what Young et al. (1999: 50) call "functional linkage", namely the occurrence of 'facts of life' "in the sense that the operation of one institution directly influences the effectiveness of another through some substantive connection of the activities involved". Second, cases following a functional logic may arise from the fact that governance of distinct issue-areas in separate institutions inevitably separates the related norm-molding processes. Institutional fragmentation diverts attention from externalities generated by these solutions and supports the uncoordinated development of policy solutions.

In the top left box (1.1), we find cases that are driven by a functional logic and produce synergy effects. For example, the phase-out of CFCs agreed upon within the ozone regime automatically supports the objective of the climate change regime because CFCs are also important greenhouse gases (Oberthür 2001). This effect may be explained without reference to the (minor) variation of membership of the two global regimes. Cases of this type are largely unproblematic for the target regime. They enhance its effectiveness without producing additional costs.

In contrast, the bottom left box (1.2) contains cases driven by a functional logic that produce effects running counter to the policy objective of the target regime. For example, WTO/GATT has been established to promote a freer world trade and reduce trade obstacles, whereas several environmental regimes include arrangements that restrict international trade in certain goods, or that use the threat of trade sanctions to enforce environmental obligations like the ozone regime. Accordingly, the largely identical membership of these regimes is faced with a trade-off between their goal of pursuing environmental protection by means of establishing selective trade restrictions, and their goal of freer trade (for some of the rich literature on this subject see Lang 1993, Petersmann 1993, Moltke 1997).

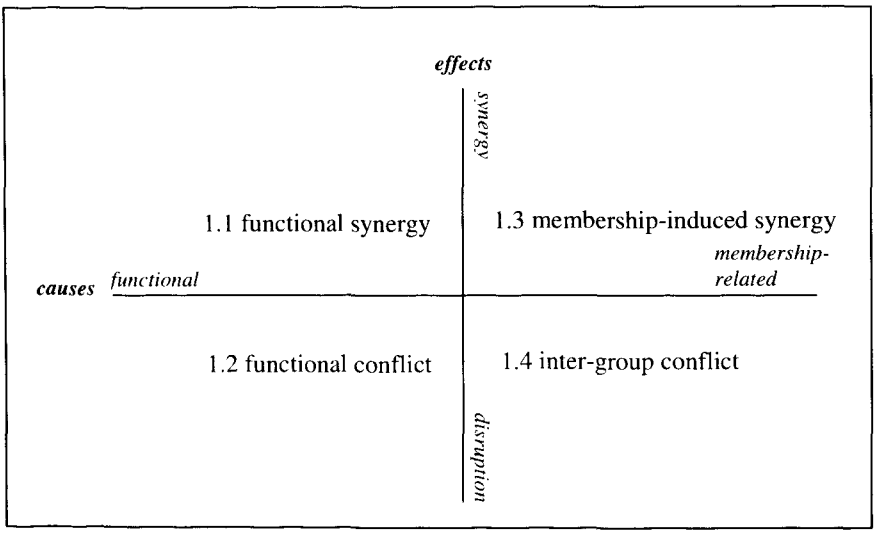

Figure 10.1. *Situation-specific causes and effects of regime interaction.*

Minor differences in membership are not relevant for the causal pathway that links the regimes involved. Cases of this type create demand for response action. They are readily recognizable because they stir conflict between regimes and have been the major focus of academic interest so far.

Located on the right side of Figure 10.1 are cases driven by a logic of membership. Their core characteristic is that different groups of actors operate within the same issue-area. While the functional logic may be based upon some natural law or 'objective' trade-off between different goals, the logic of membership is the exclusive product of the social construction of institutional boundaries. Memberships of the regimes involved may completely overlap, so that a smaller group of actors forms a part of a larger group as in the case of a regional and a global regime operating in the same issue-area. They may also be mutually exclusive as in the case of two regimes addressing the same substantive problem in different regions of the world, or they may partly overlap. In all these cases it is the interplay between the groups of actors involved that constitutes the source of regime interaction.

In the top right box (1.3) we find cases of interaction driven by a logic of membership that generate synergy effects. For example, the rapid development of the global Basel regime on the transboundary movement of hazardous wastes may be attributed to the establishment of several regional arrangements operating within the same issue-area because the number of

outlets for legal waste exports to the south was significantly reduced and the constellation of interests within the global regime thereby affected (Meinke 2002). Interaction of this type is clearly attributed to the interplay between the groups of actors involved, rather than the (minor) differences of the substantive issue-areas governed by the actual regimes. It may create space for additional action within the original source regime.

Finally, in the bottom right box (1.4) we find cases driven by a logic of membership that creates disruption within the target regime. For example, the interaction between NATO and the Warsaw Pact was dominated by their mutually exclusive membership, while they operated in virtually the same subject area. Disruption will generally create *demand* for suitable response action, although the ability of target regime members to react may be limited. *If* response action takes place within the original target regime, it may well produce its own externalities that affect the original source regime negatively. As a result, we may expect a process of co-evolution.

The distinctions between types of regime interaction according to causes and effects draw attention to the fact that regime interaction may not only be driven by a functional logic that is emphasized by much of the current empirical literature. It may also be driven by a logic of membership that is generated entirely by the human construction of regime boundaries. Moreover, it may not necessarily produce only conflict but also synergy. Moreover, all four situation-specific types of regime interaction can be illustrated by well-known examples and are thus empirically relevant.

2.1.1 Nature of Source Regime Action

Considering the fact that every case of regime interaction is caused by action within the source regime, we may expect that the nature of source regime action sheds light on some other important aspects of an interaction case that are not illuminated by its situation-specific dimensions. Hence, we must identify dimensions in which source regime action varies significantly in ways that provide important information about a case of interaction. Once again, we propose two important distinctions: one relating to the influence of source regime action on the target regime and the other to the motivation of source regime action.

The ability of source regime actors to unilaterally influence the target regime may be expected to have an immediate impact on the causal pathway at work. If this ability is high, source regime action will cause a consequence without consent, or even action, of the target regime actors. In contrast, if the source regime is not able to influence the target regime unilaterally, effective interaction will inevitably depend on consent and action by target regime actors. There are different causal pathways at work, depending on the ability

of source regime actors to exert unilateral influence. Hence, we derive an important conceptual distinction between cases that rely on the ability of source regime actors to influence the target regime unilaterally and cases that depend on consent of target regime actors.

Another important aspect is whether the effects on the target regime are intended by source regime actors or not. The actors of the source regime *may* intend to bring about interaction, but in many cases they do not. Intentionality must be kept separate from anticipation. Unintended regime interaction may or may not have been anticipated. If anticipated, unintended regime interaction was not avoided because the costs of doing so were considered higher than the benefits. If unanticipated, effects come about as a surprise, although they might have been possible to anticipate at closer inspection (Martin/Simmons 1998). It does not seem to matter immediately for the causal pathway leading from source regime action to the effect, whether externalities were intended or not. However, if we assume that the intentionality of source regime action may be relevant for the kind of response, this distinction will be important. We may hypothesize, for example, that unintended interaction will more easily become subject to inter-regime coordination than intended action, because source regime actors will be prepared to search for a common solution. On the other hand, it will be easier to identify reliable solutions for intended cases of interaction, because they tend to depend exclusively on human action.

By combining the dimensions of intentionality and ability to exert unilateral influence, we again derive four types of regime interaction (see Figure 10.2). In the top left box (2.1) we find cases in which the members of a source regime intend to affect another regime and are able to do so. For example, a number of European countries agreed in 1990 to abolish police checks at their internal borders. The members of this so-called Schengen regime intended to influence the related policy of the European Communities that had been in stalemate for several years, and they were able to do so successfully (Gehring 1998). In cases of this type, the members of the source regime control the interaction situation almost entirely. They employ the source regime as an *instrument* to influence the target regime. They will have little reason to negotiate with target regime actors about changes of their policy.

The bottom left box (2.2) contains cases in which the actors are capable of unilaterally producing effects on the target regime while not intending to do so. A case in point is the interaction between GATT/WTO and environmental regimes that comprise trade restrictions. The actors negotiating the Montreal Protocol were able to decide unilaterally that trade sanctions be imposed on non-compliant countries. They created tension within the trade regime, but they did not do so *in order* to influence GATT.

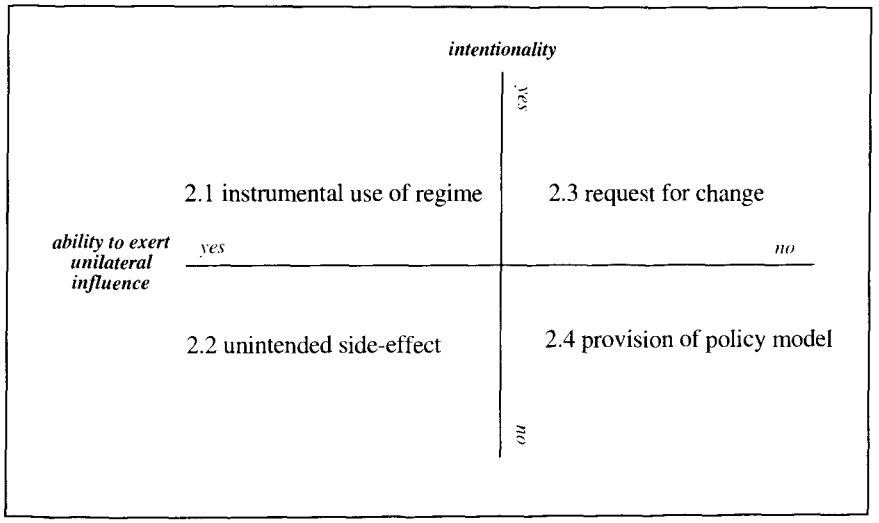

Figure 10.2. *Nature of source regime action.*

In these cases, interaction depends exclusively on source regime action. In contrast to the instrumental use of regimes, source regime actors do not entirely control the situation because the generation of externalities occurs involuntarily. We may expect a greater preparedness to negotiate with target regime actors, but also difficulties to actually resolve the issue to the satisfaction of both sides.

Cases at the right side of Figure 10.2 are characterized by a low ability or even inability of source regime actors to unilaterally influence the target regime. In the top right box (2.3) we find cases in which source regime actors nevertheless clearly intend to influence the target regime by requesting the latter to change. For example, the ozone regime's Montreal Protocol requires close control of trade in ozone-depleting substances and products containing these substances. Control is executed predominantly by customs officials. Members of the ozone regime desired to modify the Harmonized System of customs codes of the World Customs Organization (WCO) according to their needs. As they intended to change the customs codes, but could not impose modifications, they had to ask WCO to adapt (Oberthür 2001). Note that *interaction* requires that the request for change is reacted to in some way by the members of the target regime. Arising intentionally, this type of interaction is characterized by action within both the target regime and the source regime. It is based on communication, most probably negotiations, between the two memberships involved.

The bottom right box (2.4) contains cases in which the source regime members are not able to influence the target regime, nor do they intend to do so. Even under these circumstances, a regime may unintentionally exert influence by *providing an innovative policy model* that the actors of the target regime take over voluntarily. A widely discussed example is the diffusion of the Montreal Protocol's non-compliance procedure to several other international environmental regimes. This non-compliance procedure was neither invented *in order to* influence other regimes, nor could it be imposed on other regimes. Nevertheless, it had a considerable impact on the development of several other regimes (Victor et al. 1998). Interaction of this type is entirely controlled by the target regime. It takes place through a causal pathway that is frequently called 'learning' or 'policy diffusion'.

The distinctions related to the nature of source regime action draw attention to the fact that regime interaction is not necessarily a phenomenon of unintended externalities, as emphasized by the majority of the current literature on regime interaction. Regime interaction may well be intended by source regime actors. Even more noteworthy, interaction may occur also in cases in which source regime action alone is not able to generate influence. Hence, these distinctions uncover 'soft' types of interaction that depend on positive reaction from within the target regime to become effective and frequently remain altogether unnoticed.

2.1.2 Consequences

Source regime action will always have some consequence in the target regime or within the issue-area governed by it. Without a consequence, there would be no influence and, thus, no regime interaction. Differences in consequences have so far attracted remarkably little attention within the literature on regime interaction. The few typologies of consequences existing in the literature on regime interaction (see King 1997: 18) have not allowed for the formulation of hypotheses because they do not refer to causal pathways.

First of all, it does not need further explication that information about the nature of the *consequences* caused by a case of interaction will be highly useful. Consequences will always occur either within the target regime or within the issue-area governed by it. However, they may come about in two distinct forms which are immediately related to different causal pathways. In some cases, consequences occur at the outcome level through behavioral changes of relevant actors that affect the target regime's performance. If source regime action causes relevant actors to adapt their behavior individually, the consequence arises outside the institutional framework of the target regime (extra-institutional adaptation). In contrast, the

consequence of an interaction may also occur within the target regime itself, i.e. at the output level. (intra-institutional adaptation). In these cases, source regime action causes the members of the target regime to modify *the institution*, usually by amending its norms (see Figure 10.3).

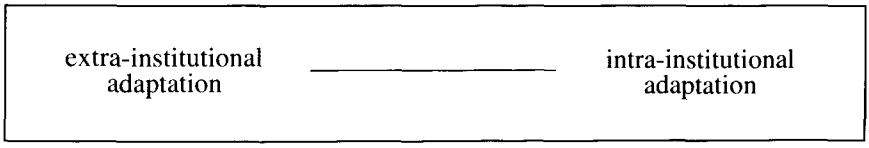

Figure 10.3. *Consequences.*

This distinction is immediately related to the causal pathways at work. In the first case, adaptation involves unilateral action of relevant states and non-state actors outside the regime itself, while in the second case it is channeled through an institutionalized communication process. If consequences occur in the form of intra-institutional adaptation, interaction is dependent on the consent of the target regime actors. Although source regime action may change the decision situation of target regime actors, interaction cannot come about against the will of these actors. It may thus be hypothesized that interaction of this sort will not be highly disruptive. In contrast, extra-institutional adaptation located at the outcome level occurs 'behind the back' of the target regime members without their consent. It is thus not only less visible and may even go unnoticed by both practitioners and scientific observers. It may also easily generate disruptive effects on the performance of the target regime that may be difficult to thwart by action of the target regime itself.

For example, the Montreal Protocol to protect the ozone layer affects the behavior of states and non-state actors related to the production and use of ozone-depleting substances, including CFCs. As CFCs are also greenhouse gases, the Protocol simultaneously affects behavior of state and non-state actors that is relevant to the performance of the climate change regime. This effect occurs without a modification of the rules of, or any other action within, the target regime. Similarly, the Kyoto Protocol provides incentives to maximize carbon sequestration by forests, thus endangering the achievement of the objectives of sustainable forest management pursued under the Convention on Biological Diversity. The consequence of the interaction in the target regime again consists in extra-institutional behavioral adaptations by relevant actors (e.g. investments in mono-cultural tree plantations).

In contrast, if the parties to the Montreal Protocol request that the World Customs Organization adapt its system of customs codes to the needs of the ozone regime, interaction does not result in relevant extra-institutional behavioral adaptations. Instead, it requires intra-institutional adaptation by the World Customs Organization itself through modification of the latter's customs codes. Likewise, the influence of the Montreal Protocol's non-compliance procedure on the Kyoto Protocol manifested itself in the rules of the latter's compliance system. It did not require a modification of the behavior of any state or non-state actor outside the institutional framework of the climate change regime.

The distinction between two different forms of consequences is important for distinguishing two fundamentally different causal pathways leading from the source to the target regime. First, interaction may lead to behavioral changes of relevant actors within the issue-area governed by the target regime but outside its institutional framework. Such extra-institutional adaptation may occur independently from members of the target regime. In contrast, intra-institutional adaptation requires a collective decision taken within the institutional framework of the target regime and therefore depends on the consent of members of the target regime.

2.1.3 Responses to Interaction

Frequently, actors relevant to the operation of either the source or the target regime, or both, respond to an interaction in order to mitigate adverse, or to enhance synergistic, effects. It is important to clearly distinguish response action from the original consequences of a case of interaction. Whereas the original consequences constitute an essential element of every case of regime interaction, subsequent response action does not. It is only present in some, but not in all cases, and it is always intended to modify the original consequence.

In many cases of interaction, there is no response action at all. We may expect that this is particularly true for cases in which the original consequence of an interaction is beneficial for the target regime. In these cases, actors may tend simply to consume this additional benefit without engaging in further efforts to respond actively. For example, the benefits to the climate change regime of the phasing out of CFCs under the Montreal Protocol did not require any further action. While actors might respond to an interaction in order to enhance existing synergies, avoidance or mitigation of disruptive effects may be expected to figure more prominently since they disturb actors.

If response action occurs, it may take different forms. Response action may rely upon collective decision-making within one of the institutions

involved or it may take place beyond their confines. If individual actors respond unilaterally to the consequences of an interaction, response will take place outside of any of the institutions involved. If the original consequences of an interaction motivate the members of the target or the source regime to modify the institution, for example by amending regime norms, the response involves collective decision-making within the regimes. This distinction is important because it establishes two forms of response action that display fundamentally different conditions. In one case, response action involves unilateral decisions by individual states and non-state actors, while in the other it is a collective decision resulting from an institutionalized communication process.

Another distinction refers to the relevance of coordination between the regimes involved. Generally, response may be based upon isolated action occurring within one of the regimes or one of the issue-areas governed by them, or it may rely on explicit coordination *between* the two regimes involved. In the former case, an overarching communication process does not exist. In the latter case, however, the response includes an additional communication process that overarches the two regimes, e.g. in the form of an exchange of the relevant secretariats, negotiations between the two groups of actors or even court decision-making. In this case, we have what Young et al. (1999: 50) call a "political linkage" that arises "when actors decide to consider two or more arrangements as parts of a larger institutional complex".

By combining these two distinctions, we derive another two-dimensional matrix distinguishing types of response action (Figure 10.4). At the left side we find cases without explicit coordination between regimes. The bottom left box (4.2) contains cases in which the response does not involve any collective decision-making within either of the regimes involved, or in the form of coordination between the source and the target regime. In these cases, relevant state and non-state actors respond individually. Interested states and, subsequently, non-state actors may be inclined to respond independently, for example to mitigate disruptive effects of desired policies, especially in cases in which collective response action is lacking. Thus, countries may enact domestic regulation on the use of ozone-friendly HFCs promoted under the Montreal Protocol because of the detrimental effect of these substances on the global climate.

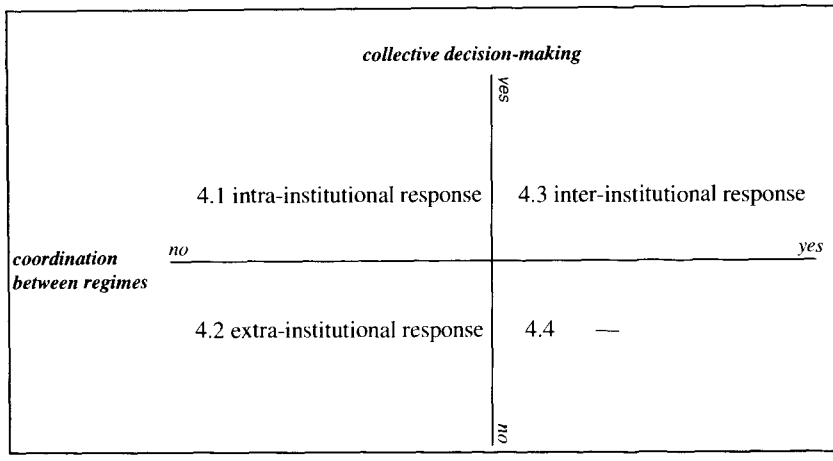

Figure 10.4. *Nature of response action.*

The top left box (4.1) contains cases in which responses occur through uncoordinated collective decision-making within either of the regimes. Such intra-institutional responses require sufficient agreement between regime members and appropriate procedures and institutional structures for collective decision-making that are usually available in modern international regimes. Thus, this form of response action may be assumed to be relatively wide-spread. Target regime members have a particularly strong incentive to act either to avoid disruption or to enhance synergy. However, the source regime will frequently be more capable of acting because it triggered the original consequence in the first place. Especially in situations in which side-effects occur unintentionally, source regime actors may be inclined to act. For example, rules are currently developed under the Kyoto Protocol to counter its potentially disruptive effect on sustainable forest management promoted by the Convention on Biological Diversity.

The right side of Figure 10.4 addresses cases of interaction in which responses are coordinated between the regimes involved. Such inter-institutional coordination is the most demanding form of responses as it requires some overarching institutional framework in which collective decisions can be taken. Accordingly, cases will concentrate in the top right box (4.3), while the bottom right box (4.4) remains empty because coordinated responses always require collective decision-making. Inter-institutional responses are comparatively rare. They will be particularly relevant in situations involving regimes that are 'nested' within a broader institution (on the notion of nested institutions see Young 1996: 2-3). For example, interaction between the various protocols to the 1979 Geneva

UNECE Convention on Long-Range Transboundary Air Pollution may be made subject to collective decisions of the regime members in the responsible 'Executive Body'. Within the European Community conflicts of obligations may be solved by an authoritative decision of the European Court of Justice. However, inter-institutional coordination can also occur between regimes that are not nested. In some cases, regimes coordinate their responses in the form of inter-institutional agreements, memoranda of understanding, or other forms of contractual agreement. For example, the climate change regime and the Global Environment Facility agreed on the terms according to which the latter operates the financial mechanism for the former (see Fairman 1996; Werksman 1996). More frequently, institutions coordinate their activity in less binding ways, in particular by establishing mechanisms for the exchange of information. For example, the original request of the Montreal Protocol to the World Customs Organization to adapt the system of customs codes with respect to ozone-depleting substances has resulted, in addition to a number of relevant decisions in both forums, in a lively exchange of information between the two regimes (see Oberthür 2001). Likewise, the Convention on Trade in Endangered Species (CITES) has established extensive exchanges of information with a number of regimes for the conservation of nature as well as with the World Customs Organization and Interpol (CITES 1999).

The two distinctions introduced here provide a starting point for evaluating the responses to regime interaction more systematically. Whether or not such responses involve collective decision-making or even coordination between the source and the target regime is important since collective decision-making and coordination between regimes open up particular capacities to mitigate conflict or enhance synergy between regimes. At the same time, achieving collective decision-making and coordination places special demands on the members of the regimes involved and may not always produce significant benefits. Whether these forms of response action become relevant will thus depend on the particular circumstances of the case.

2.2 Toward Inductive Analysis of Regime Interaction

While we have argued in Section 1 that complex interaction situations should be disaggregated into a number of limited *cases*, it turns out now that even these cases are highly complex social phenomena. According to the distinctions identified in the previous sub-section, every single case of interaction has different properties relating to its situation-specific causes and effects, to the nature of source regime action and to the consequences and responses. Evidently, these distinctions are not the only ones worth

exploring and others may be added in the future. However, we submit that they embody critical factors because they are relevant to the causal pathways that drive regime interaction. They may thus be taken as a sound starting point for advancing research on regime interaction in a systematic manner. The set of distinctions provides instruments for two sorts of research, namely the empirical mapping of cases and the inductive generation of classes of regime interaction.

First of all, the distinctions introduced here may be employed as a checklist when investigating cases of regime interaction. They point to a number of important dimensions of each case and provide criteria for the generation of case "profiles". It has to be noted, however, that each of the distinctions confronts two mutually exclusive ideal types. Real world cases will frequently be of a hybrid nature. For example, interaction between the river Rhine regime and the regime for the protection of the North Sea might be driven by a functional logic as these institutions govern clearly different subject areas that are, nevertheless, substantively linked. However, their memberships also differ significantly, suggesting a logic of membership. Similarly, it may not always be easy to decide whether a source regime was able to influence the target regime unilaterally, since this may be a matter of degree. A researcher intending to merely *classify* empirical cases according to the dimensions developed above may thus decide to turn the bi-polar distinctions into continua. Accordingly, interaction may be located somewhere in the middle between the extremes in mixed cases. However, before pragmatic solutions of this sort are pursued, researchers should check whether disaggregating further the interaction phenomenon in question would resolve the issue (see Section 2).

Second, the distinctions developed may be employed as an instrument for the exploration of dominant patterns of regime interaction. By combining some dimensions of regime interaction, we have made the first step towards a multidimensional typology of cases. Altogether, the distinctions establish numerous possible classes of regime interaction. We may expect that several of these classes will be virtually unpopulated, while cases will concentrate in others. For example, one might hypothesize that cases driven by a functional logic are strongly correlated with unintended source state action. But is this true for functional synergy too? Furthermore, do cases driven by a functional logic lead more often than cases driven by a logic of membership to inter-institutional coordination, and does intentionality systematically influence this variation? Questions of this type will eventually enable us to develop dominant types of regime interaction with similar properties. If complex situations are sufficiently disaggregated and the number of cases is high enough, even systematic application of quantitative methods may become possible. As categories are designed so as to indicate different causal

pathways at work, inductively derived patterns of cases of interaction might serve as a basis for hypothesizing about causal connections between the different dimensions distinguished, and for elaborating theoretically well-founded causal mechanisms (see Section 3.2).

3. ADVANCING CAUSAL ANALYSIS OF REGIME INTERACTION

Detection and mapping of possible cases of regime interaction is an important step in the process of evaluating the interaction pattern of a given situation. However, a case may only be established by demonstrating causality through the identification of causal pathways (3.1). This may provide the basis for developing generalized causal mechanisms in the future. Going beyond the standardization of causal pathways, such mechanisms would spell out the conditions under which they become operational (3.2).

3.1 Establishing Causality

The core task of an empirical analysis of regime interaction is to identify, separately for every case, the existence of an actual chain of influence between the regimes involved. Since quantitative or statistical methods for causal analysis of interaction situations seem to be largely out of reach at the present state of knowledge, cases of interaction need to be treated basically as single events that are independent of each other. Establishing causality then involves addressing at least two issues, namely the selection of the appropriate empirical methods based on a clear understanding of the underlying concept of agency and the identification of a causal pathway.

First, researchers aiming at establishing causality in cases of regime interaction may employ a number of well-known *empirical methods*. One important method is the tracing of negotiation and decision processes (see George/McKeown 1985). It will be particularly relevant for analyzing cases that operate at the output level and thus result in consequences within the target regime itself (see Section 2.1.3). In this case, process tracing can reveal important information about whether or not the decision of target regime actors to modify their institution was motivated by the source regime. Frequently, however, it will prove difficult to establish on this basis that decision-making in the target regime was not driven by other factors, such as technical progress. Therefore, process tracing is best complemented by other methods, that may also be employed for establishing causality in cases of

interaction that operate at the outcome level and generate consequences in the form of extra-institutional adaptation (see Section 2.1.3). An important and well-known method for establishing causality is the construction of counterfactual scenarios (Tetlock/Belkin 1996, Bierstecker 1993, Fearon 1991). This method addresses the hypothetical question of how the target regime and the issue-area governed by it would have developed in the absence of the source regime. A reliable counterfactual scenario disclosing major differences to the actual development will firmly establish causal influence. However, the construction of a *reliable* counterfactual scenario frequently proves impossible because of the many intervening factors that have to be taken into consideration. This will be especially true if the scenario stretches over a longer period of time. Therefore, this method may be complemented by the exclusion of alternative explanations (Bernauer 1995), i.e by exploring the question of whether factors other than the source regime might convincingly explain the observed change in, or effect on, the target institution. These methods are so widely applied in the well-advanced research on the simple effectiveness of international regimes (Underdal in this volume) that they need no further elaboration here.

Thought experiments and counterfactual scenarios model actors' behavior in virtual situations and depend, therefore, on assumptions about how actors might behave in general. Due to the complexity of the real world, researchers will also have to distinguish between actors that are deemed relevant for a particular pathway and those that are not. They will have to draw a line between relevant action to be taken into account and less relevant action that might be ignored. In addition, empirical data required for a plausible explanation will frequently be inaccessible or lacking and must be substituted or complemented with conceptually plausible speculation. In short, causal analysis requires – at least implicitly – a theory of action.

Rational utility maximization is probably the concept most widely employed in empirical studies that explore causal pathways – even though empirical work does usually not make this assumption explicit. The analytical power of the rational actor model stems from the fact that it provides a useful theoretical foundation for exploring the behavior of actors in undetermined situations. This is most important in situations of change in which more than one viable option exists. Consider a situation in which the African countries endeavor to close their continent for waste exports. We may want to employ a theoretically informed thought experiment to investigate how waste producing industries and waste brokers might react. Will they stop waste exports? Doing so would cause high investment for industries and drive brokers out of business. Or will they try to side-step the African ban? They may attempt to do so depending on the ability of the African countries to implement their regional regime. Or will they attempt to

find alternative outlets for their waste? If successful, it might be the cheapest and least complicated option. Engaging in this type of reasoning, researchers implicitly ask: Which of a number of available options will best serve the interests of these actors and may thus be expected to be chosen by them? Asking this question is based upon the assumption that the actors intend to maximize their utility, that is, choose the option that ranks highest in their order of preferences. Causal analysis cannot avoid engaging in thought experiments of this type.

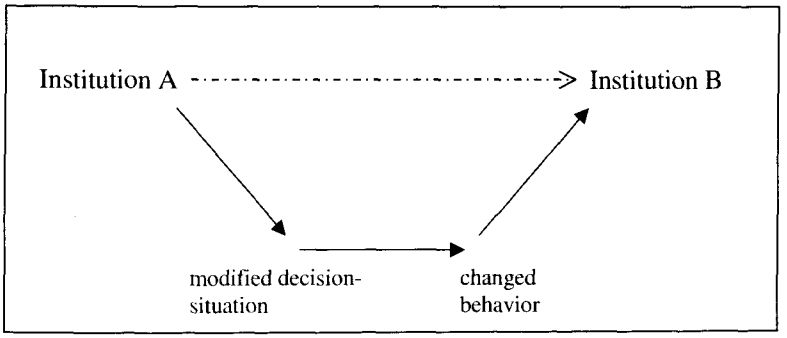

Figure 10.5. *Model of a Causal Pathway*

Second, causation will be difficult to establish without the *identification of the causal pathway* that is capable of bringing about an observed change. The empirical phenomenon of regime interaction is located at the collective ("system") level. We endeavor to identify cases in which one social institution influences another social institution. However, an international regime is not an actor (at least not in the traditional sense), and it is definitely not capable of affecting the target regime directly. If a source regime affects a target regime, influence will always be channeled through some causal pathway that involves action by non-institutional actors located at some lower ("unit") level. Accordingly, establishing causality means to link occurrences located at the institutional (aggregate) level with developments located at the actors' level (see Hovi in this volume). The basic model of causal explanation of social (aggregate level) events is illustrated in Figure 10.5.

Explanation by causal pathways combines a logic of the situation with a theory of action and a logic of aggregation of actors' behavior (see Coleman 1990: 1-23). Accordingly, identification of a causal pathway that links a source regime with a target regime comprises three major steps. First, we have to establish how an important component of the source regime (or its

anticipation) may affect the decision situation of relevant actors. Second, we must prove that the modification of the decision situation results in a change of their individual behavior. And third, we must demonstrate that these behavioral changes produce the effect observed within the target regime (see Esser 1993: 39-63). For example, we may want to establish that the Schengen regime on the abolition of border controls for persons interacted with, i.e. causally influenced, the European Union's related policy. In this case, we will have to demonstrate that the establishment of the regime significantly modified the decision situation of relevant actors, for example because it forced non-parties to choose between participation and abstention. We will then have to establish that changes in individual behavior of relevant actors may be attributed to the modified decision situation, for example that some originally hesitant countries joined the regime because they disliked isolation. Finally, we will have to demonstrate that the aggregate consequences of these behavioral changes paved the way for the development of the Union's Third Pillar (justice and home affairs), that opposition against a largely identical European policy diminished because of increased participation in the Schengen regime.

While this strategy for the identification of a causal pathway is applicable to all instances of interaction, cases will differ as to the actual pathways of influence at work over the whole causal chain. Pathways may involve different types of actors and behavior. Effects observed within the target regime will frequently be attributable to changes in the behavior of key states. However, other types of actors may play an important role in a causal pathway. For example, *waste producing industries and waste brokers* will play a major part in the explanation of influence of the ban of imports of hazardous wastes to Africa on the emergence of other regional waste import regimes. The actual – or even anticipated – change in behavior of non-state actors will modify the decision situation of potentially affected countries in other regions if they realize the emergence or aggravation of an environmental problem that did not require action so far. It may induce them to establish their own regional protection regime. Non-governmental organizations and institutional actors such as secretariats of international institutions may also constitute important actors. Given the diversity of possible cases of interaction, the relevance of varying types of actors will largely depend on the circumstances of the individual case. In most cases, research is best initiated with a focus on key states (or groups of states) because these actors are frequently most influential in bringing about changes within the target regime. Sub-state and non-state actors may be added to the analysis depending on the particular case at hand. They may be given more prominent status in the case of interaction involving 'transnational regimes' (Haufler 1993).

Finally, it should be noted that actors generally 'behave' in two distinct forms. They act *outside* the institutional framework of the regimes involved, for example shipping waste from one country to another or allowing their fishermen to catch whales. They may also act *within* an institutional framework, for example by modifying a negotiation position or instigating dispute settlement proceedings, if available. Depending on the particular case of interaction and on the specific causal pathway at work, research may have to focus on the domestic level or on the institutionalized international process. For instance, if a request for change from the side of the source regime leads to intra-institutional adaptation, and possibly to intra- or inter-institutional responses, most of the analysis will concentrate on the international institutional level. In contrast, if source regime action leads to disruptive effects at the level of domestic implementation and does not trigger collective policy responses, most of the analysis will have to address the national level.

3.2 Generalized Causal Mechanisms

Eventually we may want to reach beyond the empirical assessment of cases of regime interaction and the causal explanation of empirically observed pathways of influence. We require generalized knowledge if we intend to generate hypotheses as to what kind of interaction is to be expected in a given situation, or under which conditions a particular type of interaction is probable, or which policy responses may prove particularly effective under given circumstances. If we are not satisfied by the correlation between different types of situation and their effects, but want to know *why* an observed effect comes about in a particular situation, we must identify generalized causal mechanisms. A *generalized* causal mechanism combines a causal chain that brings about an effect in the target regime with the identification of conditions under which this causal chain becomes effective or is likely to become effective. While it reaches beyond an empirically established causal pathway, it may well be based on inductively generated patterns of regime interaction (see Section 2.2) that may provide a starting point for hypothesizing about causal connections between the different dimensions of regime interaction. The development of generalized causal mechanisms may eventually provide a kit of standard forms of interaction (Schelling 1978, Hovi in this volume) that might serve as analytical tools, much like the familiar standard game theoretic situations help analyze problems of cooperation under anarchy.

There has been some endeavor to develop a generalized causal mechanism for one particular type of regime interaction, namely the instrumental use of a "minilateral" regime by a comparatively small number

of interested actors to influence or replace a larger multilateral regime governing the same issue-area. Genschel and Plümper (1997) explored why the establishment of a minilateral regime generates a dynamic that gradually affects the existing larger regime in some cases but not in others. Their general answer is that such a dynamic is likely to occur if (a) the group of initiators is able to cooperate without participation of other actors (otherwise the process could not be expected to start), and (b) the incentive for a free rider to abstain from cooperation *decreases* with every additional cooperator. In this case, the advantage of abstaining (and free riding) diminishes gradually and may eventually even turn into a disadvantage. Situations of this type have the potential for self-sustained growth. For example, joining the Schengen regime on the abolition of police controls at the internal borders in Europe became more attractive with every additional member (Gehring 1998). The Schengen regime thus heavily influenced the related EU policy. In contrast, if the advantage of abstaining and taking a free ride for a non-cooperating actor *increases* with every additional cooperator, the growth of the minilateral regime is likely to stop at a rather early stage, and it is therefore unlikely to replace the larger regime.

The formulation of such generalized causal mechanisms may be expected to advance our understanding of regime interaction considerably. It is still too early to outline a research program that would allow the development of generalized causal mechanisms - not least because of the low level of systematic empirical knowledge about types and patterns of interaction between regimes (see Section 2.2). However, such a program would be directed at inquiring into the systematic modification of incentive structures inducing relevant actors to adjust their behavior. A (moderate) rational actors' perspective (see Section 3.1) seems to be particularly well suited for this task. Advancing theoretical research in this direction might enable us one day to make general statements about the dynamics of functional conflict, or the conditions under which voluntary adoption of institutional arrangements from another regime becomes possible, or the prerequisites under which interaction is responded to by collective decision-making or inter-institutional coordination. Knowledge of this type would be of considerable value for the development of institutional designs that might prevent undesirable, and enhance desirable, interaction.

4. CONCLUSION

International regimes do not exist in isolation from one another. They co-exist within the international system and increasingly exert influence on each other's development and performance. In light of the growing number of

formally independent international regimes, *interaction between regimes* has already attracted considerable interest of both scholars and policy-makers. Much of the research on regime interaction has been motivated by concern about the detrimental impact of such interaction on the effectiveness of the regimes involved, in particular in the field of environmental protection. In this respect, it constitutes an offspring of the policy-relevant research focus on regime effectiveness that flourished in the past decade. However, research on regime interaction has not yet been based on an elaborate conceptual foundation, and it is not yet guided by theoretical ambition.

This paper aims to contribute to the filling of this conceptual gap. It develops a systematic framework for the analysis of regime interaction that may become the core of a structured research program. The framework avoids limiting attention to particular (kinds of) cases of interaction or specific pathways of influence. Instead, it is intended to facilitate the exploration and mapping of cases of interaction. Empirical knowledge gained on this basis promises to provide a basis for identifying particular patterns of regime interaction and developing a typology of cases of interaction, which would constitute the first step towards identifying causal mechanisms and a theory of regime interaction.

In investigating regime interaction, researchers are faced with situations that are characterized by high degrees of complexity. Frequently, a situation involves two regimes that are themselves sufficiently complex to interact in more than a single way, or it comprises a co-evolution process that develops over time, or it entails interaction among a whole set of regimes. Under these conditions, interaction may appear to go forth and back between the regimes involved without a clear direction of influence, or it may rely on different causal pathways. In order to gain analytical rigor and reach beyond the mere description of a complex situation, we propose to take as the units of analysis *cases of interaction* that are characterized by a clear direction of influence running from a single source regime toward a single target regime. Disaggregating complex overall situations into an appropriate number of cases allows us to examine the causal pathways at work and to identify the particular features of a case. It thus promises to generate a clearer picture of the situation as a whole than an overall analysis.

Furthermore, an important task at the present stage of research is the systematic analysis and mapping of cases. While overall interaction situations may be readily identifiable, cases of interaction will frequently be hidden if they do not stir open conflict between regimes or require action by the policy-makers involved. Therefore, researchers must have a preconceived idea of possible types of interaction and their appearance. The present framework of analysis introduces seven important dimensions of regime interaction. It draws the attention of the empirical researcher to the

broadness of the field of regime interaction and allows him to capture even cases of interaction which policy-makers may be unaware of. Based on a systematic empirical mapping of cases, it may be possible to derive inductively a more sophisticated typology of cases (and possibly of different causal pathways) that could provide the basis for the elaboration of conceptually more demanding causal mechanisms.

Finally, regime interaction is limited to cases of actual (and anticipated) influence between regimes. Therefore, causality has to be demonstrated. The application of variation-finding or statistical methods does not seem to be appropriate at the present stage of knowledge. Therefore, demonstration of causality will have to rely on the application of qualitative methods of causal inference and the establishment of causal pathways that plausibly link source regimes with target regimes and their issue-areas. The exploration of a causal pathway will always refer to the behavior of relevant actors at a lower level. The systematic search for causal pathways related to different types of regime interaction promises to provide the necessary basis for the future development of generalized causal mechanisms. Beyond specifying particular patterns of regime interaction, such generalized mechanisms would indicate under which conditions they occur. They would thus offer a tool-kit for the analysis of interaction situations much like the standard game theoretical situations do for the exploration of collective action problems.

Theoretical and conceptually well-founded knowledge about the causes and consequences of regime interaction will be highly relevant to policy-making. It promises to assist the development of policies that help prevent conflict and enhance synergy between regimes. It generates insights into particularly effective political responses and enhances our understanding of the conditions under which linkages between regimes and their issue-areas may be employed to effectively pursue political objectives. Thus, research based on the framework of analysis laid out here not only promises to advance our theoretical understanding of regime interaction, but will also help design effective institutional arrangements.

NOTES

[1] A diversity of terms can be found in the literature to describe the phenomena dealt with here, for example interplay, linkage, inter-linkage, overlap, and interconnection. Throughout this paper, we will use the term regime interaction.

[2] The paper also constitutes a contribution to the EU collaborative research project on "Institutional Interaction – How to Prevent Conflicts and Enhance Synergies between International and EU Environmental Institutions", funded under the EU research and technological development program "Energy, Environment and Sustainable Development" (Contract No. EVK2-CT2000-00079). The authors are solely responsible for the contents

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