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The International Telecommunication Regime in the Information Age

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ABSTRACT *This paper examines recent changes in the international telecommunication regime. The concept of an international regime comes from the field of international relations. Although it is not universally accepted, one of the most widely supported definitions describes an international regime as, 'implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations'.[1] The 'given area' of concern here is telecommunication. Telecommunication and the principles, norms, rules and decision-making procedures which are relevant to it at the international level—which have been studied extensively by communications and development economics scholars[2]—have only rarely been the focus of international relations scholars.[3] The objective of this paper is to use tools from the study of international relations to explore subject matter that has more frequently been the focus of scholars in communications, development economics, and information economics.*

Keywords: international regime, International Telecommunication Union.

Introduction

Telecommunication, as an industry and as a subject matter of economic and policy analysis, has been changing along two axes. First, the inter-industry boundaries have been blurring between what was known as telecommunication—encompassing largely voice service and data transport—and computer, broadcast, and information services industries. It is now common to see reference to the broader Information and Communication Technologies (ICT) and services. Second, the geographic scope of the industry is becoming global. A relatively short period of global alliances among national service providers is being followed by the growth of multinational service providers. As a result of convergence and globalism, among other trends, the international arrangements for dealing with telecommunication issues are in flux and under stress. This paper is an attempt to illuminate the nature of the stress and to explore the direction of change.

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Drake[4] defined the nature of the change as 'decline'. He chronicled a history of decreasing effectiveness of the organs and processes of the International Telecommunication Union (ITU) that have to do with provision of telecommunication services and with interconnection standards. He exempted, from his definition of the telecommunication regime, the 'international radio regime' by which he means the combined issue-area of radio spectrum and satellite orbital slot registration, both of which are the responsibility of other organs and processes of the ITU. He defined the rest of the ITU as the international telecommunication regime and described what he sees as a steady withering of its effectiveness, which, he concludes, casts doubt on the regime's continued resilience and survival. This paper views the regime differently. Following Krasner's definition, this paper sees the regime as a fabric of institutions—including the ITU but not limited to it—as well as a wealth of understandings and behavioral practices. While changes in international organizations and their effectiveness are parts of the story, so are the changes in institutionalized understandings and practices outside of organizations. Before the phrase was subverted to other purposes, this kind of change would have been referred to as 'regime change'. The objective here is to draw on the literature of the field of international relations to illuminate the causes and possible effects of this broader view of the changes in the international telecommunication regime.

The paper is organized as follows: first, a discussion of international regime theory; second, a brief review of Drake's analysis of the history of the international telecommunication regime; third, a second look at the changes taking place in the industry and the regime, viewed through a wider lens provided by a variety of approaches to regime theory; fourth, a suggestion of new research that would seem to be required to further understand these changes in the telecommunication regime.

Regime Theory

For almost 30 years, analysis of international relations has included a research agenda aimed at developing an understanding of when, how, and why rules-based cooperation develops among nations with regard to a particular issue-area. Most of this research is described as focusing on 'international regimes',[5] although regimes are sometimes treated as a special case of 'international institutions'.[6] One objective of this research has been to identify the factors that lead to, and help explain, change in international regimes. The objectives of this paper are first, to review, and then to apply, the results of that research.

Hasenclever *et al.*[7] published an exhaustive analysis of the international regime literature, in which they describe three theoretical approaches to understanding regimes. In their conclusion, they bemoan the tendency among students of regimes to argue the more-or-less mutually exclusive value of their own theoretical approaches. As an alternative, Hasenclever *et al.* suggest that each approach has explanatory value in some situations, and that the field would be better served by refining understanding of which theory serves which kinds of cases best. It is beyond the scope of this article to debate these theoretical approaches to regime theory. The intention here is to use insights from all of the approaches where they seem helpful in understanding the telecommunication regime. The three schools of thought described by Hasenclever *et al.* are:

1. a realist, power-based approach;
2. a neo-liberal, interest-based approach; and
3. a cognitivist, knowledge-based approach.

Realists maintain that 'states are the most important actors on the world scene which act out of self-interest in an anarchic environment'.[8] They are rationalists, treating the identities and interests of states as given, causal, variables. They do not deny that regimes exist, nor that states cooperate in pursuit of their interests. However, they explain this cooperation in terms of the exercise, conservation, and consolidation of national power. Alliances, in their view, tend to be short-lived, and often focused on a common threat. One realist regime analysis worthy of special mention is 'hegemonic stability theory', which traces its roots to Kindleberger's analysis of the Great Depression.[9] This theory holds that a regime can only be effective or robust when there is a dominant state in the regime's issue-area, using its power to further its interests through the regime. Kindleberger's analysis of the Great Depression explains the length and depth of the depression in terms of the inability of Great Britain and the unwillingness of the United States—at least until after WWII—to act as the hegemon for a regime of 'international economic infrastructure'.[10]

Neo-liberals, like the realists, are also rationalist. They, too, treat the identities and interests of states as independent variables in explaining instances of international cooperation. But neo-liberals hold that states realize that in some situations the exercise of individual rational decision-making by each state will yield sub-optimal, Pareto-inefficient results. In those circumstances, the neo-liberals assert, states will recognize the market failure that results from 'going it alone', and will contract with each other to create institutional means of achieving more optimal outcomes by cooperation. These institutional means are the neo-liberal explanation of a regime. Their approach is therefore a functional or contractual approach.

Some neo-liberals extend this approach by the use of Game Theory to differentiate among various kinds of regimes. They compare international relations to a multiple iteration game (e.g. Prisoners' Dilemma, Coordination, Battle of the Sexes, Assurance, or Suasion) where the result achieved by cooperation is superior, from each player's view, to the most likely result if each pursues its own interest without cooperation. In order to achieve a better solution, each player must have information about the others, as well as about predictable sanctions for violation of agreements, to reduce uncertainty and risk and make cooperation a safe course of action. The neo-liberal view is that the function of regimes is to supply such information and predictability. The majority of supporters of this view differentiate among regimes according to the nature of the game being played. They differentiate according to the attributes of the situation, such as the number of players and the payoffs that each believes it will achieve from each possible outcome. Different situations, they say, will lead to different likelihoods of regime formation and different levels of effectiveness and resilience in a regime, when one does form. Issue-areas in which the situation resembles a multi-player coordination game, for instance, are likely to result in a stable international regime with relatively little formalized compliance enforcement, because defection is not in any player's interest. On the other hand, in an issue-area that is more like a multi-player collaboration game (e.g. Prisoners' Dilemma or Battle of the Sexes), it is likely that a regime will form, but that it will have relatively formalized compliance

enforcement and be less stable, because defection is always an option and can sometimes yield substantial short term rewards.

A related approach, which Hasenclever *et al.*[11] treat as another variation on the neo-liberal, interest-based approach, differentiates among regimes not on the basis of the situation of the issue-area, but on the basis of the conflict addressed in the issue-area. This view attempts to use the structure of the problem that the participants are trying to solve, rather than the structure of the situation, to explain variations in regime formation, regime effectiveness, and regime resilience.

One branch of this approach differentiates among four different kinds of 'conflict typologies'.[12]

(a) Issue-areas in which the structure of the problem is a conflict over 'principled beliefs regarding the legitimacy of a given action or practice',[13] will almost never result in a regime, much less a stable one. Perhaps the most illustrative case of this type of issue-area is the definition and protection of human rights.
(b) Issue-areas in which the problem is disagreement over the best means to achieve a shared goal, however, have sometimes led to stable regimes, although there are difficulties. An illustrative case of this kind of issue-area is the extremely slow progress of development of a regime for regulation of global climate change.

    When the structure of the problem addressed in an issue-area is a conflict of interest—as opposed to a conflict over either means or ends—the parties are agreed on the value of some end as well as the means to achieve it, but are competing for larger shares in its distribution. In such an issue-area, the likelihood of stable regime formation depends on whether the competition is for absolute or relative shares.
(c) If the parties have no concern for how much others receive and are only concerned with their own absolute share, regime formation and stability are very likely. Most economic development issue-areas are of this category.
(d) If, however, the concern of each is to increase its share relative to others, then regime formation and stability are more problematic, though not unlikely, as in the case of a conflict over values. This means that regimes will exist, but that both stability and compliance will be ongoing challenges. Examples of this type of issue-area would be nuclear proliferation and strategic arms limitation.

A second branch of problem-structuralism differentiates among three types of policy domains.[14]

(a) Issue-areas in which the policy domain involves the internal system of rule in member states are the least likely to exhibit regime formation. Examples are the protection of human rights, free democratic elections, and freedom of the press.
(b) Issue-areas in which the policy domain involves security issues are moderately conducive to stable regime formation. Examples are mutual defense, non-aggression, and law enforcement cooperation.
(c) Issue-areas in which the policy domain involves the development and distribution of economic values are the most conducive to stable regime formation. Examples are trade, foreign investment, and development assistance.

The third approach, the cognitivist approach, treats ideas and knowledge as independent variables, using decision-makers' belief systems to explain institutionalization in international relations. Importantly, the cognitivists maintain that the epistemology of international relations—how states identify themselves and the behaviors that will serve their interests—is the crucial explanatory variable in understanding the formation and effectiveness of regimes. Whereas both realists and neo-liberals are rationalist, and accept states' identities and interests as given, the cognitivist position is that these are dependent variables, to be explained by rhetorical analysis and analysis of belief systems. Even more importantly for the present analysis, they argue that the dynamics of regime change can be understood in terms of learning, and of the development of knowledge-based epistemic communities that influence the global definition of circumstances, interests, and alternative courses of action.

Drake's History of the International Telecommunication Regime

Drake referred to the early development of the ITU as the *Ancien Regime*, and traced its roots from the Treaty of Dresden in 1850 through the 'transformations' of liberalization and privatization in the 1980s. This early part of his analysis places him in the realist camp as regards theories of international regimes. He detailed the 'power dynamics'[15] of the early years of the organization as dominated by European PTTs, agreeing among themselves in a 'quasi-cartelized environment'[16] on principles of national sovereignty, joint service provision, and international interconnection by means of technical standardization. Moreover, Drake pointed out that the European PTTs were able to 'socialize'[17] new members into nationalizing their telecommunication systems, resulting in a 'near universal symmetry of interests'[18] between most non-European states and the dominant European members. The symmetrical interests these PTTs then pursued included the protection of their domestic monopolies and a 'non-competitive global market'[19] in which the behavior of non-signatories, private-sector carriers, and corporate telecom users would be controlled so as to protect both sovereignty over telecommunication and PTT revenues.

Drake described the 'transformation' of the regime as the product of a sequence of factors. He began with domestic pressures in the US, including:

- technological possibilities prompting an 'intellectual sea change' in conceptualization of telecommunication as a factor in business competitiveness rather than as an appropriately monopolized public utility;
- US-based trans-national corporations (TNCs) demanding diplomatic and regulatory support for their argument that the same policy changes they had been able to achieve in the US should be made in other nations and at the international level;
- a shift in US foreign policy with regard to the ITU, from a position of grudging and obstructionist participation to one of active non-compliance; and
- a shift in US foreign policy from treating telecommunication as a separate issue-area of international relations to treating it as part of an issue-area of trade in services.

He then traced the causes of change to domestic policy decisions made in PTT nations—and especially in the European nations most powerful at the ITU—

withdrawing support for public sector monopoly administrations and for the international regime, i.e. the ITU. These decisions, he said, arose from pressures emanating from the US, either directly, as he concluded was the case with the 'spread of American-style intellectual frameworks', or indirectly, as he said was the case with domestic corporate telecom users and manufacturers, who 'found themselves competing with American-based counterparts which were benefiting' from the changes in US policy. The impact of this combination of political pressures was felt at the WATTC meeting in Melbourne in 1998, and thereafter, as the ITU abandoned many of its basic constitutional principles, reorganized its processes and procedures, and surrendered to the tide of liberalization, privatization, and competition in telecommunication.

Finally, Drake listed developments that led him to believe that 'decay' has set in, that will lead to the demise of the regime—which he identifies with key parts of the ITU. These include the following:

1 the World Trade Organization (WTO) and its General Agreement on Trade in Services (GATS) and Group on Basic Telecommunications (GBT);
2. the commercialization and growth of the Internet and the increasing importance in telecommunication standards of the Internet Engineering Task Force (IETF);
3. a growing pattern of non-compliance with ITU agreements, often made possible by technological bypass (e.g. call-back); and
4. the attack by the US Federal Communications Commission (FCC) on international accounting and settlements rates.

The combined effect of these developments, concluded Drake, is that, although the ITU will continue to serve functions in the international radio regime and in technical assistance to developing nations, 'the traditional form of state authority over the architecture of global interconnection is a thing of the past'.[20]

The Decline of the International Telecommunication Regime Revisited

Realist Regime Theory and the Telecommunication Regime

Although Drake does not express support for any specific theory of regimes, his analysis of the beginnings of the international telecommunication regime fits within the realist approach. His explanation of the origins and the behavior of the ITU is based on the pursuit and defense of self-interest by European nations, as represented by their PTTs in the creation and operations of the ITU. The explanation of regime theory that is perhaps closest to expressing the position implied by Drake is Stephen Krasner.[21] Krasner argues that international institutions, including regimes, only really make sense when viewed as the results of the exercise of power by nations. States with abundant sources of economic and military power, Krasner says, can manipulate the rules of a regime as well as the payoffs available to other nations from cooperation or defection. The behavior of the US described by Drake would appear to offer evidence to support this theory of the changes underway in the telecom regime. His listing of the US actions (e.g. the FCC attack on accounting and settlement rates) as well as inaction (e.g. the forbearance from enforcing ITU regulations against US 'call-back' providers) that have led to the decline of the ITU all fit perfectly within Krasner's explanation of

regimes. Krasner specifically cites the telecommunication regime as an example of the value of regimes, i.e. stability and a common aversion to uncoordinated action where 'the failure to coordinate policies . . . would have left everyone worse off'.[22] Krasner's approach, however, would not seem to support Drake's conclusion as to the regime. It would seem that the failure to coordinate would leave everyone worse off even today. Krasner's approach suggests that the regime is not in decay but rather is in ferment. The fact that it is now the US that is exercising power, rather than the Europeans, is a sign that the regime is changing, not that it is declining.

Hegemonic Stability Theory and the Telecommunication Regime

On the surface, it does not appear that hegemonic stability theory would explain the long history of the *ancien regime*. That history does not suggest that any one European nation had the power to maintain a telecommunication hegemony. The crux of hegemonic stability theory is that an international regime, which reduces uncertainty and aids in dispute resolution by its 'implicit or explicit principles, norms, rules, and decision-making procedures', is to some degree an international public or collective good. Public goods are those from the consumption of which no member of the 'public' can be excluded, whether they contribute to the cost or not. The relevant 'public' in this case comprises nations interconnected by international telecommunication networks. The role of hegemony is that one powerful state pays the cost of the public good—either out of benevolence and enlightened self interest or by enforcing a tax on other, weaker nations—because its benefits from the existence of the public good will exceed its costs. There would appear to be some public good characteristics to the international telecommunication regime, but it does not appear to have been an example of hegemony, either benevolent or coercive.

The economist, Charles Kindleberger, who founded this approach, built his argument within the larger framework of the theory of collective action of Mancur Olson. Olson specifically allowed for the possibility that there might be groups of nations among which collective action is possible without hegemony because the group 'does not have so many members that no one member will notice whether any other member is or is not helping to provide the collective good'.[23] This certainly describes the European PTTs, a small enough number of quite similar entities which were in close communication and regularly coordinated their efforts in the European Conference of Postal and Telecommunication Administrations (CEPT). Therefore, Drake's analysis suggests that the *ancien regime* of the ITU is an example of collective action in the exercise of power by what Olson called an 'intermediate group',[24] in this case made up of European PTTs. In interpreting Drake's history of the 'decline' of the ITU, one might conclude that the power of the European nations simply declined, relative to the US and with regard to telecommunication, to the point that their collective action could no longer maintain a regime that privileged their PTTs. Alternatively one might decide that the cost to the Europeans of maintaining the public good of the regime's norms, rules, and decision-making procedures became greater than the benefits they gained from their existence. Either of these explanations would be consistent with both realist regime theory and Drake's conclusion that the regime decayed, declined, and is now a thing of the past. But another interpretation is also possible.

The application of hegemonic stability theory to Drake's history of decline at the ITU seems to offer valuable insight. The origins of hegemonic stability theory are to be found in the analysis of the issue-area of international economic infrastructure. Kindleberger's explanation of the Great Depression is that it represents a lacuna between British and US hegemonic provision of such an infrastructure. In the period of the ITU's *ancien regime*, such an infrastructure was felt to include an international medium of exchange, sufficient liquidity for the finance of global trade, and a legal system within which property rights could be protected and commercial disputes could be resolved. One way to interpret changes in the international telecommunication regime, within the hegemonic stability approach, is that telecommunication has become an integral part of international economic infrastructure. No one in the *ancien regime* would have argued that telegraph and telephone communication were unimportant to productive economic activity; but they were not regulated as though they were crucial to it. As long as it was the shared perception of the European nations that telecommunication systems' primary importance was domestic, a regime based on sovereign control and joint service provision was sufficiently beneficial to justify the cost of shared maintenance by collective action. However, international telecommunication services are now perceived as an integral element of infrastructure for a global economy. When international telecommunication came to be perceived, in Europe as elsewhere, as a key element of international economic infrastructure, it became a part of that regime, one that has been characterized as a US hegemony.[25] The explanation of this change in perception is central to the cognitivists' view of regimes, and will be treated as such below. But for realists, the issue is one of power. The Europeans, acting through their PTTs, had the interests and the power to enforce collective action in such a way that they created and then dominated a regime. The US gained power, defined its interests differently, and was willing to act as a hegemon to enforce a differently defined regime, which came to include the issue-area of telecommunication. Drake describes policy changes in the US and in Europe that could be interpreted as the evidence to support such a hegemonic stability theory interpretation, but does not offer such an interpretation. Drake concludes that the telecommunication regime is a thing of the past. This interpretation would conclude that it is evolving into a larger regime, made up of the principles, norms, rules, and decision-making procedures of a global economy. In this view the ITU is not decaying, but is adopting a new role, alongside the IMF, the World Bank, and the WTO.

Situation-structural Neo-liberal Regime Theory and the Regime

The neo-liberal situation-structural approach to regime theory offers a different insight that may also help us to understand the changes in the telecommunication regime. Situation-structuralists' point of departure is Robert Keohane's *After Hegemony*.[26] There Keohane set out the argument that regimes are explicable in terms of the result of rational choice by states to cooperate with each other in the pursuit of more optimal outcomes than would be possible without cooperation. He used the Prisoner's Dilemma game extensively in explaining the functional and contractual nature of the cooperation his theory posits. Situation-structuralists build on *After Hegemony* by broadening the analysis to include other kinds of games, because they conclude that there are other kinds of situations in which

states will rationally choose to cooperate. The structure of the situation, they say, will determine the likelihood, the effectiveness, and the resilience of regimes.

As Drake described the pre-WWII telecommunication regime, the 'game' being played was largely one of coordination. It is worth noting that at that time what Drake has described as the two regimes of the ITU—the international telecommunication regime and the international radio regime—were virtually identical with regard to their situations. Both were matters of coordination, where the overwhelming majority of the member states were pursuing the same interests by similar means and simply needed to choose one among a number of possible standards, spectrum allocations, or settlements systems in order to coordinate and achieve an efficient equilibrium. It is, therefore, not surprising that the two different issue-areas could be dealt with effectively in the same organization. Drake comments that there was a 'strong and nearly universal symmetry of interests' among the members of the ITU.[27] This would seem to be the classic case of an issue-area in which the objective of the 'game' is coordination, i.e. a situation in which 'several Pareto-efficient equilibria exist and actors face the problem of picking one of them collectively'.[28] Issue-areas of this type, as noted above, are likely to result in a stable international regime with relatively little formalized compliance enforcement.

However, the nature of the telecommunication regime has changed. A key aspect of the post-WWII history of telecommunication is the degree to which it has become a global market. Drake points out that as telecommunication has become increasingly sophisticated, both hardware and software suppliers find that they cannot justify the costs of development and production for each new generation of technology if they cannot sell to a global market.[29] Meanwhile service providers find themselves pinched by three new realities of the business:

(a) network upgrades require repeated high fixed costs, which become sunk costs;
(b) competition in local service and basic transport of data have turned the provision of basic telecommunication services into a low-margin, commodity business; and
(c) the highest margin services are application services provided to corporations that do business globally.

In this context, service providers find that they cannot justify the fixed costs of building and maintaining a network unless they are able to provide global services to their global business customers. Now nations find that their interests are not symmetric. Their hardware and software suppliers as well as their carriers are in competition with those of other nations. Competition differentially advantages and disadvantages nations, their telecommunication industries, and their economic systems in general. There is clearly still a need for well understood and predictable 'principles, norms, rules, and decision-making procedures' to reduce uncertainty in this new environment, so the regime will survive. However, the game being played is one of 'collaboration'.

A collaboration situation is one in which Pareto-efficient outcomes can be reached by cooperation, but they are not stable, and almost every player has a continuing incentive to renege. Because defection continues to be at least somewhat attractive to many states, regimes are very desirable in these situations, because a regime institutionalizes mechanisms for providing information about the

behavior of other states, providing predictable sanctions for defection, and thus reducing the uncertainty that would otherwise prevent collaboration and lead to a suboptimal outcome. The situation-structuralist approach to regime theory certainly allows for the possibility that a regime may decline, decay, and die. But the basic tenet of this approach is that the instability inherent in collaboration situations is the reason many regimes exist. Rather than concluding, as Drake has, that the change in situation in international telecommunication has brought the regime to an end, the situation-structural approach to regime theory should lead us to conclude that the change in situation explains a regime change, brought about by the desirability of perpetuating the regime in a changed situation. Using this approach would lead us to the conclusion that further analysis is necessary to understand the changes and to decide if they are changes in principles and norms, in which case we are witnessing a change of regime, or are changes in rules and decision-making procedures, in which case we are witnessing a change within a regime.[30]

Problem-structural Neo-liberal Regime Theory and the Regime

Although the neo-liberal problem-structural approach is the least well-elaborated approach to regime theory, it, too, may help to illuminate the nature of the changes in the telecommunication regime. First, problem-structuralists emphasize that the characterization of the 'problem' or issue-area is entirely a matter of the way the states involved perceive it.[31] Hasenclever *et al.* point out that this means 'issue-areas can change without any corresponding change taking place in the objective facts to which policymakers are responding'.[32] This position is shared with the cognitivists' view of regime theory, and will be referred to again later. The function of a regime, from the problem-structuralist perspective, is the management of a conflict among states with regard to the positions they hold in an issue-area. The problem-structuralists, therefore, foresee the possibility that a group of states may differ both as to their characterizations of the issue-area, including its boundaries, and the positions they hold with regard to specific principles, norms, rules, and decision-making within that area. One branch of problem-structuralism, referred to as 'conflict typology' and explained above, relates regime likelihood, efficiency, and resilience to whether the issue area involves conflicts about values, means, or distribution. A second branch relates regime likelihood, efficiency, and resilience in issue-areas according to the policy domains in which they operate. Both branches offer insights directly relevant to the changes in the telecommunication regime.

As noted above, Drake comments on the strong symmetry of interests among most ITU members. In addition, he points out that the ITU traditionally described itself as a technical, and not a political, organization.[33] The first comment may be interpreted to mean that the type of conflict involved in the regime was at that point one neither over principled beliefs, nor over means to achieve agreed goals, but was, instead, a conflict of interests, and one in which relative success was largely irrelevant. The 'conflict typology' branch of problem-structuralism suggests that issue-areas with this type of conflict typically lead to stable regimes. The second comment may be interpreted to mean that the policy domain involved in the issue-area of telecommunication was then perceived, at least by European states, as economic. The ITU took pains to appear to eschew issues or positions that might be perceived as intruding on the members' systems of rule or security. According

to the 'policy domain' branch of the problem-structuralist approach to regime theory, stable regimes are most likely in issue-areas involving economic development and distribution.

It is important to note that for many years the US was asymmetrical, among the ITU's members, in its interests. The US perceived both the type of conflict involved in telecommunication and the policy domain quite differently than the Europeans and their PTTs. This led the US to remain a non-signatory until the reconstitution of the regime in 1932, and to 'extract a number of concessions', 'not sign the International Telegraph Regulations and International Telephone Regulations until 1949 and 1979, respectively', and 'even then [take] a number of important reservations'.[34] The importance of this behavior from the problem-structuralist point of view is that it indicates that the US perception of the problem addressed by the regime was dramatically different from that in Europe. The US policy position on telecommunication, beginning with the US Congress's refusal in 1844 to buy Morse's telegraph patent for the US Post Office, has been that telecommunication should be provided by the private sector. The principled beliefs of the US with regard to the issue-area included the position that a governmentally provided telecommunication system was always illegitimate. Only the most tolerant US decision-makers would have been willing to accept PTTs as simply a different means to accomplish the shared goal of reliable international telecommunication capability. This means that as the US gradually played an increasing role in the regime, the type of conflict embraced by the regime changed from being a conflict of interests in which each nation wanted to increase the efficiency and reliability of its own international telecommunication services, to a conflict over principled beliefs and/or means. As the nature of the conflict changed, the effectiveness and resilience of the regime became ever more problematic.

It is also worth noting that as the regime and its developed-nation members have moved toward the US position that telecommunication, at both national and international levels, should be a private sector, competitive market, developing nations' perceptions of the 'problem' addressed by the telecommunication regime have also changed. For many developing nations, telecommunication services include broadcast and are regulated with concerns for protection of language and culture, as well as for security. Private sector competitive industry structure in converging telecommunication sectors, as the developed-nation position urges, poses obvious threats to domestic sovereignty, to cultural and language protections, and even to security. Just as developing nations from Argentina to Malaysia have chafed at the intrusiveness of the World Bank and the IMF, so too they have begun to have greater difficulty with the telecommunication regime. When the *ancien regime* of the ITU was protecting national sovereignty and joint service provision, there was, quite intentionally, no threat to language, culture, or security. The relevant policy domain was economic and the regime had broad support. When the relevant policy domain became one of system of rule—with respect to issues of freedom of speech or language and culture protection—and security, the effectiveness and resilience of the regime became very different. But this did not mean that developing nations would abandon the regime. Again, neo-liberals believe that conflict justifies the regime. In fact, Krasner points out that it is because of their membership in the ITU that Third World nations' interests cannot be ignored by the more technologically advanced nations.[35] The nature of the problem dealt with by the regime is

changing, and the nature and structure of the regime are changing in response. It seems likely that there will continue to be serious changes in the structure and authority of the organs of the ITU. However, the regime's existence does not seem to be in doubt.

Cognitivist Regime Theory and the Regime

The cognitivist approach to regime theory argues that the preferences and perceived options of decision-makers are at least a significant—and perhaps the key—source of variation in cooperative international behavior. The proponents of this approach differ among themselves as to whether knowledge and belief systems are supplemental or alternative causal factors (to power and/or interest). At the very least, they all point to the importance of transnational, knowledge-based, epistemic communities to the processes of agenda setting and regime change. An epistemic community is 'a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area'.[36] The members of such a community have both professional and self interests in seeking access to policy institutions and promoting the value of their expertise as well as their policy preferences. Where there is uncertainty among decision-makers and consensus among the members of an epistemic community, a transnational body of experts has the ability to reshape agendas and redefine a regime's injunctions, from decision-making procedures to principles.

There is no question that such an epistemic community has been a part of the changes in the telecommunication regime. Drake cites an 'intellectual sea change' emanating from the US as one of the causes of the transformation of the regime.[37] From Alfred Kahn to graduate schools of economics and business at US universities to the major management consulting firms, an international community has grown whose research agendas have anticipated and mirrored the debates within the telecommunication regime, over privatization, liberalization, deregulation and competition. They have supplied the logic, the rhetoric, the theory and the proofs that have been used in both national and international initiatives to affect regime change. Drake's description of the transformation of the regime captures the community's impact when he refers to the transition from a time when European PTTs 'energetically opposed the American approach, claiming that the Americans' new discourse . . . simply reflected the interests of large American firms . . .'[38] to a time when '(t)he spread of American-style intellectual frameworks . . . helped to redefine how industry analysts and government officials across the industrialized worlds regarded their national monopolies'.[39] This contribution of cognitivism to the study of the international telecommunication regime is complementary to the rationalist approaches. It helps to explain ongoing changes in the regime by adding another parameter. Both realists and neo-liberals limit their analysis to the effects of the power and interests of states. The existence of a transnational body of opinion, as well as the community of that opinion's proponents, is external to their analysis. The cognitivists provide a theoretical justification for considering both these factors.

Some cognitivists would go much further to argue for a complete substitution of the knowledge-based approach for the materialist approaches of the realists and the neo-liberals. Hasenclever *et al.* refer to these as 'strong cognitivists' and describe their approach as 'radical opposition to the theoretical mainstream'.[40] As different

as it is from the others, this perspective suggests a view of the changes in the telecommunication regime that is similar to the view provided by the realist hegemonic stability approach. However, it arrives at this similar view by an entirely different path. The strong cognitivists hold that states are bound by their identities of themselves to honor their commitments to international regimes, which means that regimes are much more robust than rationalist approaches to regime theory suggest. The resilience of regimes, according to cognitivists, should be understood as the result of states' perceptions of the legitimacy of the regime's norms, the shared attribution of meanings among the states participating in the regime, and learning within the regime. Hasenclever *et al.* comment that these are all examples of what Durkheim called 'social facts', by which he meant that while they limit and define each state, they are the products of collective forces external to the states they limit, and should be treated as empirically provable causal variables.[41] The importance of this perspective to analysis of the telecommunication regime is that it suggests that our understanding of the regime may need to begin with a sociological analysis of the perceived role of highly technical communication systems in the global society and economy. The strong cognitivists' view is that it is the perceptions of the political, governmental, and economic elites that determine the agenda and structure of international cooperation.

Among the strong cognitivists, the most radical is Robert Cox, who argues that regime change—and Cox is talking of revolutionary, not evolutionary, change—promises beneficial results. Cox regards current international institutions as part of a hegemonic order with unjust distributive consequences. His research seeks to find the contradictions in existing regimes that could be used to attack the epistemology that supports them through learning campaigns. Like Kindleberger, Cox believes that the post-WWII international economic infrastructure regime has been a US hegemony. Also like Kindleberger, Cox believes that the hegemonic position of the US in this regime is weakening. Because Kindleberger believes that only the existence of a state with power to maintain hegemony can provide stability to an international regime, he fears that the loss of US dominance may—assuming that no other powerful state steps in to assume the role—lead to the destruction of the regime and damage the interests of the entire international economic system. Cox, on the other hand, believes that the US will fall from dominance because the source of hegemonic stability is becoming transnational. His view of the current hegemonic order differs from the realists' view. His cognitivist interpretation of hegemony is that it functions by means of communication strategies designed to create a transnational consensus about the legitimacy and propriety of an ideology that protects and promotes the interests of a 'transnational managerial class'.[42] These interests require the liberation of the global economy from national control and intervention. The objectives of the ideology include privatization, deregulation, and competition. The relevance of this view to the international telecommunication regime is that it explains the impacts of convergence and globalism very differently from the rationalist approaches. Rather than seeing the changes at the ITU as the decline and decay of the regime, as Drake does, strong cognitivists like Cox see a concerted and sustained attempt to strengthen the regime—by which they mean a whole system of organizations and injunctions—by an attack on sovereignty and an attempt to replace principles and norms based on defense of national interests with principles and norms based on global economic interests. In this view, the realists and neo-liberals are missing the point about the international telecommunication regime.

Conclusion and Suggestions for New Research

The international telecommunication regime is in flux and under stress. The direction and character of the changes underway are of considerable interest, but there is little consensus on either. Application of regime theory to recent history may help, but only if we begin with as broad a view of regime theory as possible.

What evidence is there that the US is attempting to redefine the telecommunication regime to serve its own hegemonic interests? What is the evidence that the US is attempting to redefine telecommunication as an issue-area, either as a constituent part of an international economic infrastructure issue-area or otherwise? Is there evidence of explicit or implicit opposition, complicity, or deference by other nations?

In understanding the changed nature of the situation of international telecommunication, how do we factor in the increasingly global nature of the market and the corporations that participate in that market—both as sellers and as buyers? How can we understand the relationship between national domestic political behavior and the behavior of those nations in the regime? What might game theory tell us about situations in which some companies are pursuing their interests within national economies, and simultaneously pursuing those interests internationally, and manipulating host nations to do so?

What does it portend for the future of the telecommunication regime that telecommunication is, on the one hand, perceived as integral to economic infrastructure and is also perceived as having enormous potential impact on security, systems of rule, and the learning and maintenance of cultures? Can lessons learned from other regimes be extrapolated into telecommunication to help us see more clearly what the choices might be?

What can we learn from the history of the international telecommunication epistemic community? How great is the consensus, and how stable? Are there dissenting voices? Do they pose a threat to the existing regime, as Cox assumes that they must? In what direction would their counsel push the regime?

If Hasenclever *et al.*[43] are correct, and each approach to regime theory has explanatory value in some situations, then it behooves us to try to apply the methods of each approach to this regime. Some may not yield important results or new insights. Nevertheless, it seems prudent to find out.

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