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Marx, Johannes

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Path Dependency and Change in International Relations: Institutional Dynamics in the Field of Intellectual Property Rights

*Johannes Marx**

Abstract: »Pfadabhängigkeit und Wandel in den Internationalen Beziehungen. Bestimmungsfaktoren institutionellen Wandels im Politikfeld geistige Eigentumsrechte«. In the last decade the historic dimension of politics has become more and more important in political science. There are a growing number of articles dealing with questions of political dynamics and political processes. Nevertheless, the interdisciplinary dialogue is rare between history and political science. This article examines first the characteristics of both disciplines and asks for a common methodological ground analyzing political processes. It is argued that the analysis of political processes should be theory-driven, looking for social mechanisms like path dependency and based on agency. The usefulness of this method will be demonstrated by analyzing the international regulation of Intellectual Property Rights. It will be reasoned that external changes in the environment of the international institutions (WIPO and GATT) triggered changes in the development of the path along which the protection of IPRs evolved and switched the modus of institutional change from path dependency to open change and vice versa.

Keywords: institutional dynamics, intellectual property rights, WIPO, TRIPs, path dependency.

1. Introduction

Patents and other intellectual property rights are an important factor for the wealth of nations (Maskus 2000). A patent provides the right to exclude others from profiting from a patented invention for a certain period of time. Thus, if there were no patents, we may assume that only few persons would invest in research and development. Due to the expected economic benefits secured by Intellectual Property Rights [IPRs] there is a strong incentive to guarantee IPRs in International Relations.¹

* Address all communications to: Johannes Marx, Institut für Politikwissenschaft, Abt. Systemanalyse und Systemvergleich, Universität Mainz; Colonel-Kleinmann-Weg 2; 55128 Mainz, Germany; e-mail: jmarx@uni-mainz.de.
URL: http://www.politik.uni-mainz.de/cms/941_DEU_HTML.php.

¹ There is an intense debate about the necessary level of protection producing economic wealth (Landes and Posner 2003; Maskus 2000; Mazzoleni and Nelson 1998; Richards 2005).

The development of policies pertaining to the establishment of the international protection of IPRs is a conflict-laden process in International Relations. Several actors operate in this field with sometimes diametrically opposed interests. The industrialized countries, for instance, argue for a higher protection level, while the developing countries want to lower it.²

At the moment, there are two international institutions monitoring the international treaties concerning IPRs: the World Intellectual Property Organization [WIPO] and the World Trade Organization [WTO] with the Agreement on Trade-Related Aspects of Intellectual Property Rights [TRIPs], negotiated by the Uruguay-Round from 1986 to 1994 (May and Sell 2006; May 2006; Frederick 2000).

The process of establishing IPRs can be divided into three phases: From the 1880s to the 1960s, the international regulation of IPRs was stable and efficient most of the time. The established institution, the Bureau International réuni pour la protection de la propriété intellectuelle (BIRPI), was able to handle the occurring problems regarding IPRs. This phase ended when the protection of IPRs was improved by the creation of WIPO. The second phase, which lasted from the 1960s until the meeting of the Uruguay-Round, was characterized by a deadlock in the WIPO and a new dynamic outside of this institution. The present phase is again characterized by institutional stagnation in the TRIPs/WTO and hot debates about the legitimacy of the institutional design in the field of IPRs and bi- and multilateral negotiations outside the existing institutions.

In the following, I will concentrate on the process of IPR development from the starting point in the 1880ies passing the rising dissatisfaction with the protection level of IPRs in the 1950ies up to the recent situation. The main research focus is on the driving forces of this process. Against the background of this process the following problems will be discussed:

- 1) Why did the process of establishing IPRs come to an abrupt halt at the very moment when the BIRPI was “upgraded” and became the World Intellectual Property Organization?
- 2) Obviously, WIPO did not suffice for the protection of IPRs, hence, as a second regime, TRIPs was established within the WTO. Why did the WIPO not live up to expectations?

² It should be made clear at that point that the author neither argues for an optimal protection level of IPRs nor complains about an insufficient protection level due to strong resistance of developing countries. The aim of the article is just to ask for the causes that bring out that special and unique developing path. Using terms like ‘improve’, ‘did not suffice’, ‘did not live up expectations’, or ‘new quality’ are no normative statements of the author but reflect the perspective of the most powerful actors in the field at that time.

3) TRIPs was one of the main claims of the western negotiators during the Uruguay-Round. Why did TRIPs not work as an instrument to enhance the protection level of IPRs in the way the western states expected?

These kinds of questions ask for process-analyses. With process-analyses it is possible to identify mechanisms that are relevant for change and stability in International Relations. It will be discussed if the concept of path dependence, as a central mechanism, can be used for the analysis of the international development of IPRs. It is argued that parts of the process can be understood in terms of path dependency while others are the result of a changing global context instead of the institutional setting. The basic assumption of this article is that the whole process is a consequence of the rational action of the relevant actors, regardless of whether the results of the actions were intended or non-intended.

In part two, theoretical reflections such as how to analyze dynamic and historical processes will be presented. On the basis of the debate between historians and social scientists in the 1990s a methodological framework (rational choice narrativism and the idea of social mechanisms) will be developed to analyze historical processes (Kiser and Hechter 1991, 1998; Elman and Elman 1997). For the analysis of institutional change this methodological framework will be enriched in part three by the concept of path dependency as a central social mechanism governing temporal processes. The historical analysis of the developing path of the international institutions of IPRs will ensue in part four. It will be argued that, as already mentioned above, the process of establishing IPRs can be partially explained in terms of path dependency while other parts cannot. Thus, it is one central concern of this article to show how external changes in the environment of the international institutions (WIPO and GATT) triggered changes in the development of the path along which the protection of IPRs evolved and switched the modus of institutional change from path dependency to dynamics and vice versa.

2. Analyzing Temporal Processes in Social Science

The study of the development of international institutions is of interest to both political scientists and historians. The scholars working in these two fields usually have very different ideas on how to proceed. While historians, as a rule, favor an ideographic and narrative-oriented approach analyzing their subjects, political scientists seek to develop nomothetic and deductive models of explanation. This debate between historians and social scientists is well known as a historical fact. But the relevance of this debate for the analysis of historical processes is quite unknown. Central aspects of this debate have an enormous impact on how to proceed in the process analysis. Firstly, referring to the de-

bate between historians and social scientists the methodological problems of process analysis will be identified.³ Secondly, it will be argued that rational choice narrativism is a method to deal with the special challenges of process analysis.

2.1. Nomothetic Versus Ideographic

This methodological distinction between the two disciplines goes back to a 19th century German debate. Windelband introduced the terms “nomothetic” and “ideographic” in a speech he gave in 1894 to capture the methodological difference between explanatory and hermeneutic sciences (Windelband 1904). While ideographic sciences aim at understanding individual occurrences with respect to their complexities by employing hermeneutic methods, nomothetic sciences aim at explaining them as instances of natural laws at work. The question which has been discussed up to the present day is: what is the correct method for social sciences in general and the study of history in particular: understanding or explaining, *verstehen* or *erklären* (Hausmann 1991; Wright 1980).

Windelband himself thought that ideographic sciences also require general propositions if they want to causally explain historical processes. Hempel can be interpreted similarly since he points out that there is a causal understanding of explanation inherent in historical reasoning (Hempel 1942). In this sense, the basic, though quite oversubscribed, comparison in the scientific literature must be understood rather gradually. As the debate reveals, however, there is no such categorical difference between the study of history, on the one hand, and political science on the other. As Windelband himself and later Hempel pointed out, any rendition of historical occurrences requires assumptions of causality. The differentiation is not useful to distinguish political from historical sciences. Especially the rejection of the possible explanations of history does not meet the requirements of the actual work of historians. Indeed, historians search for causes of historical developments as well, in doing so they also draw on theoretical assumptions (Van den Braembussche 1989).

Vice versa, social scientists have to take historical circumstances into account if they wish to claim that their theories are empirically true: “Historians and political scientists have argued that just as all international relations theories need historical facts against which they can be measured, so too do all historical works offer assertions about the possible causes of the events they describe, and hence are relying on (sometimes implicit) causal theories” (Elman and Elman 1997: 7). Therefore, the difference between historical and social sciences is less a matter of whether theories and analytical methods are

³ For a more detailed argumentation see Marx 2007, 2008.

used or not, but rather of the role they play in the scientific process (Levy 1997: 25).

2.2 Narrative Understanding versus DN Model of Explanation

Another differentiation is made between narrative understanding and the DN (Deductive Nomological) model of explanation. In accordance with Elman and Elman, this dichotomy represents the defining difference between the disciplines: “According to one popular view, historians (unlike political scientists) pursue narrative-based rather than theory-based explanations” (Elman and Elman 1997: 7). Kiser and Hechter also work with this very criterion to differentiate between historical and social sciences (Kiser and Hechter 1991, 1998). After Kiser and Hechter, historians use narrative elements at two points in the scientific process: first to describe the initial conditions of the analyzed process to prepare the ground for the analytical reasoning. Second, they use narrative elements to embed their arguments in a historical context and to enrich their structural arguments with empirical data (Kiser 1996: 252).

Due to the importance of the term ‘narration’ for these methodological questions it is necessary to clarify its meaning. Central components of a narration are a certain number of events as well as their chronological order. Accordingly, narrations can be defined as sentences about a sequence of events which stand in a meaningful context to each other. Narrations systematically refer back to the social actions of persons. This way, they distance themselves from works explaining the change of social phenomena by social structure analysis at the macrolevel:

First, narrativists want to bring actors back into historical analysis. They argue that structuralist historical accounts are often incomplete because they lack sufficiently detailed accounts of how macrolevel causes produce macrolevel effects and that the intervening mechanisms necessary to complete structural arguments are found at the microlevel (Kiser 1996: 250).

The aim of historical narration, thus, is the exposure of mechanisms that bring about social and cultural changes. Hence, a narration can be regarded as a linguistic account of how social processes change. The beginning of a narration consists of a description of a social starting point and it ends with the description of a modified social situation analogous to the explanandum of the DN model of explanation. The change is ascribed to the protagonists of the narration (Roberts 2006). Consequently, the narration embodies a meaningful explanation of the given social process by telling the social mechanisms as the driving forces of the process (Danto 1968).

Furthermore, many political scientists advocate the nomological model of explanation which is usually based on the methodological program of critical rationalism (Popper 1981). In this respect, a scientific explanation is represented by a number of premises from which the explanandum can be logically deduced. Among these premises has to be at least one general law. This con-

cept of scientific explanations is exemplified in the Hempel-Oppenheim-scheme (Hempel 1965; Hempel 1942).

In social sciences such an explanatory understanding is usually accompanied by the employment of quantitative methods. In this context, academic papers often explain social phenomena by referring to features of the social structure. Such a program strives for an explanation by alluding to persistent, supra-individual and structural circumstances as social norms or the distribution of social trust. Structural theories of this kind are widespread in various fields of political science. Even the major theories of International Relations ultimately are structural theories ascribing stability or instability of International Relations to structural circumstances such as the constellations of power. The aim of such a scientific understanding is the discovery of general and informative propositions about social phenomena which must then be subjected to rigorous empirical tests. If they fail the test, they are to be abandoned; if they succeed they are “on probate” (Lakatos 1964; Popper 1979).

Both explanatory strategies face immense problems of justification. Against a narrative explanatory strategy it may be objected that the actual causal mechanisms are mentioned only implicitly. The theoretical assumptions are not named explicitly and can, thus, not be subjected to criticism: “Narrative analysis cannot escape from theoretical assumptions, although clearly historians vary in the extent to which they self-consciously follow a well-specified theory in their narratives” (Levy 1997: 27). Mentioning these implicit assumptions explicitly and, hence, pointing out the premises of one’s own argumentation would, so one may assume, contribute to scientific progress.

Vice versa, the deductive-nomological explanatory understanding is criticized because of its orientation towards macroscopic laws of structure, blocking the view of the actual mechanisms responsible for the formation and alteration of social phenomena (Hedström and Swedberg 1996; Schmid 2006; Stinchcombe 1991). If one is interested in the explanation of changes of social processes, the responsible mechanisms should be named explicitly. Representatives of a narrative explanatory understanding share this criticism of macroanalysis which is still regarded valid in large parts of the social sciences. Stressing the meaning of temporality, systematically disregarded in observations of structure, they call for a theoretical orientation towards the acting man.

2.3 Rational Choice Narrativism for the Analysis of Historical Processes

The orientation towards the idea of human agency is common to both branches of research. Therefore, the differences stressed in the literature seem to be exaggerated.

Narrative can be defined as a method – a form of data presentation that is optimal when the data are neither too complex nor too fragmentary for data re-

duction techniques (such as tabular presentation or quantitative analysis) to be used and when temporal sequence and particular details are important aspects of the data or the argument being made (Kiser 1996: 260).

Hence, the question of the appropriate explanatory strategy depends on the quality of the information of the available data (Abell 2004). A narrative explanatory strategy is preferable if complex or fragmentary boundary conditions are limiting the approach of quantitative analysis methods. In consequence, analyzing the historical development of international institutions is best implemented in narrative oriented studies.

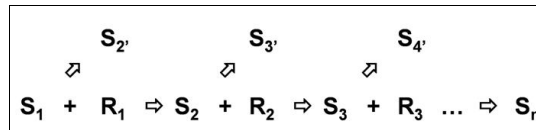
Narrative methods are to use if one or more of the following arguments are observed:

Quantitative research strategies can be limited due to the fragmentary and incomplete character of the available data.

Another problem restricting the scope and performance of quantitative methods for historical processes is the varying constraints in historical processes. These processes are characterized by the existence of exogenous variables that supervene in the setting of historical processes and change its characteristics.

Theories based on the variables of the initial point of the process cannot explain the change of an international institution without taking into account the relevant variables of the changing environment. Sometimes even new variables have to be considered. These variables are not inherent in these historical processes but they result from other social circumstances (Stegmüller 1983).

It is the theoretical challenge to deal with such 'historical' variables:



S_{1-n} = Situations

$S_{1'-n'}$ = Situations to expect theoretically which didn't occur

C_{1-n} = Limiting conditions

One way to handle this issue is to use a narrative approach open for empirical change. The narrative links the initial point of the process with the explanandum that is to be explained by referring to the behavior of rational actors in a changing context. The danger of this method is to slide into story-telling (Schimmelfennig 2006). Therefore, the analysis must be guided by a theoretical framework and linked to historical data.

In this study for instance the analysis has to handle the problem of new member states entering the forums of the international organizations. We find sequencing in this process and we find actors that stick to institutional rules even if they do not meet their expectations.

The proposed method for the analysis of such historical processes is rational choice narrativism. Rational choice narrativism stresses the idea that social change can be explained by the assumption of rationality to institutional and individual behavior. At the same time rational choice narrativism is open to historical change. With the narrative elements of an explanation one can describe the changes of social context variables that are not linked to the rational behavior of the observed unit of social life. There are three basic assumptions of rational choice narrativism: (1) individual interests are relevant for explaining actions, (2) social and material restrictions are relevant factors, (3) and actors behave on the basis of a utility function that means they maximize their individual benefit.

Using this approach, the analysis of historical processes is linked to the behavior of rational actors (Bates et al. 1998, Kiser and Hechter 1998). However, this decision only commits us to the idea of methodological individualism and rationalism. Still, there is a need for more theoretical insight in the characteristics of historical processes.

3. Rational Choice Narrativism, Path Dependency and a Theory of Change

The methodological toolbox for the analysis of temporal processes offers more than the idea that history matters. The analysis of historical processes is inspired by the desire to discover social mechanisms. “Most important, examining temporal processes allows us to identify and explicate some fundamental social mechanisms” (Pierson 2004: 7). Social Mechanisms are defined as “plausible, frequently observed ways in which things happen” (Elster 1989: viii). The concept of social mechanisms as used by Elster (1989), Hedström and Swedberg (1996), and Schmid (2006) is linked to the idea of rational choice theory. Social mechanisms are understood as a frequently observed link between social situations, the rational actions of a group of people and the phenomena that is to be explained. This link is based on the idea of methodological individualism, i.e. by taking recourse to the concept of rationality.

There are several social mechanisms in the Social Sciences. One widespread known mechanism is path dependency (North 2006; Pierson 2004; Mahoney 2000).⁴

A process is path dependent if initial moves in one direction elicit further moves in that same direction; in other words the order in which things happen affects how they happen; the trajectory of change up to a certain point constrains the trajectory after that point (Kay 2005: 553).

⁴ In the following, the article will concentrate on the relevance of this mechanism for the explanation of international regulation of IPRs.

This vague definition of path dependency can be clarified by differentiating between various concepts of path dependency.

In literature, one can find three major strands dealing with different concepts of path dependence: increasing returns path dependence, evolutionary path dependence, and sequencing path dependence.⁵

- The most prominent concept of path dependence is increasing returns path dependence. This variant is typical for economic arguments. Increasing returns path dependence arises if “the productive input yields more than a proportionate increase in output” (Hathaway 2001: 107). Douglass North employed this concept to explain institutional change and the development of economies (North 2006). Increasing returns path dependence has three main characteristics: First, the outcome of temporal processes is open and unpredictable *ex ante*, because multiple equilibria are possible (Arthur 1994: 112). Second, “the further into the process we are, the harder it becomes to shift from one path to another” (Pierson 2004: 18). Increasing returns path dependence leads to inflexibility (lock-in effect). Third, increasing returns processes are characterized by “nonergodicity”. „Ergodic [...] processes are those wherein outcomes are not remarkably affected by the sequence of events. In contrast, nonergodic [...] processes do not automatically converge to a predictable, well-specified distribution of outcomes” (Hirsch and Gillespie 2001: 71). Minor factors at the outset determine the trajectory of a developing path and cause major effects.
- Evolutionary path dependence focuses on analogies to biology. The idea of biological evolution is transferred to social processes. “Natural variation in the population combined with competition for limited resources leads to natural selection: Some organisms will be more ‘fit’ than others – better equipped to survive and thus to reproduce” (Hathaway 2001: 114). Institutions and other social equilibria exist because they have survived the contest of social life.
- Sequencing path dependence accentuates the idea of sequencing and timing. On the basis of the works of Arrow (1963) and Riker (1982) about voting processes with three or more alternatives it is argued that the sequence of considering alternatives can influence the outcome. “As Arrow recognized, if a social choice system is intransitive, outcomes depend on the procedural structure within which they are determined. The power to set the agenda can thus become, in a very real sense, the power to determine the result” (Hathaway 2001: 118). The agenda-setter can manipulate the vote by dictating the order for paired comparisons of the alternatives. Similar arguments are discussed in the literature on game theory. Particularly in coordination games, the order of the moves is relevant for the outcome. In both cases, the

⁵ For an alternative demarcation see Howlett and Rayner (2006). They differentiate between stochastic, narrative, path dependency and process-sequencing models of institutional change.

sequence of the moves determines the development of the path and the outcome. The process is characterized by irreversibility.

However, not all concepts of path dependency are compatible with rational choice narrativism. This is the case especially with respect to evolutionary path dependency which is based upon the idea of functionalism due to collective action problems (Olson 1965; Føllesdal et al. 1988: 165-181).

The two other concepts of path dependence are compatible with rational choice narrativism as both concepts stress the idea of sequencing and timing. One characteristic of path dependency is that the “costs of switching from one alternative to another will, in certain social contexts, increase markedly over time” (Pierson 2004; 19). Another characteristic is that issues of timing and sequencing have an effect on the causal chain. They differ, though, with regard to the question of whether path dependent processes are only inflexible or rather irreversible. In the following it is suggested to use the term path dependency only if the trajectory of a path is irreversible. In consequence, the development of an institution can be characterized by the term path dependency if the development has been caused by its institutional setting and not by the environment of the institution. This means that the antecedent conditions at the onset of the process (the original institutional setting) are responsible for the way the institution evolves. The developing path of the institution can be an intended or non-intended result of the rational behavior of the actors.

Due to that definition not all historical processes are path dependent.

That past events and choices can influence and in some cases determine the outcomes of current political, economic, and social processes is indisputable, but the extent to which history matters and the mechanisms through which it operates in particular contexts are more difficult to unpack (Page 2005: 1).

It is important to note that path dependence is only a term to characterize a specific feature of institutional development. It is not a theory to explain why institutions change – or do not change. Arthur discusses four factors generating path dependency in the field of technology (Arthur 1994: 112): large set-up costs, learning effects, coordination effects, and adaptive expectations. In the following, it will be argued that these features are the basic variables of an explanation of institutional change. They can be used for a rational choice narrativism-based analysis of the development of international institutions (Pierson 2004: 24-53):

- Large set-up costs are an incentive for large production runs, because “fixed costs can be spread over more output, which will lead to lower unit costs” (Pierson 2004: 24). In the context of analyzing international institutions, the start-up costs of organizations or regimes can be interpreted as a strong incentive to preserve once-arranged institutions. There is also a parallel psychological effect enforcing this mechanism. A well known anomaly of classical models of rational choice is the sunk cost effect. From a

microeconomic perspective, rational actors should not consider invested money (sunk costs) when making rational decisions. As behavioral economics shows, though, actors evidently take into account the sunk costs and cling to expensive decisions even if they know that these decisions were wrong. This can be explained by attributing loss aversion to the rational actor (Arkes and Ayton 1999; Johnstone 2002). In consequence, rational actors have a tendency to stick to once-arranged institutions even if they work ineffectively.

- A second factor promoting path dependency is the existence of learning effects. A higher level of knowledge about the procedures and the process coordination in international institutions reduces the transaction costs of the institutional members. There could also be a socialization effect in the sense that actors learn to value cooperation or defection and thus stabilize equilibria (Vogt 2000).
- Thirdly, the smoother an organization works, the lower are the losses by friction costs. Such coordination effects enhance the benefits of individual activity by reducing institutional restrictions and transaction costs. Furthermore, the members of well-functioning institutions are motivated to intensify their activities in one field and to extend their activities to regulate neighboring policy fields.
- Connected to this issue is the fourth factor: Expectations about the future development of an institution can increase the members' cooperativeness. The argument is well known from game theoretic studies. It is the shadow of the future motivating people or states to trust each other and to cooperate (Axelrod and Keohane 1986).
- Finally, another mechanism can be added to the factors proposed by Arthur. International organizations have an agenda. In rational choice theories on bureaucracy one finds the argument that bureaucrats try to maximize the budget of an institution by expanding the range of commitments (Fiorina and Noll 1978; Miller 2000; Niskanen 2007, 1996). Consequently, such behavior leads to inefficiencies and a waste of public funds. Applying this argument to the analysis of international institutions, the self-interests of the institution have to be taken into consideration. Institutions, once arranged, are characterized by inertia and, thus, resist efforts for dissolving (Keohane 1984: 102). The reason in favor can be found in the officials' interest in maximizing power, income and so on. Therefore, the individual interests of the staff can be added to the institutional setting, due to the interests aggregate in an institutional agenda.

These motivating factors are necessary to extend the concept of path dependency to a theory of chance or stability. These factors offer the variables that are relevant for the analysis of institutional change. The following chapter will discuss whether or not the phases of the international development of IPRs can be explained in reference to the concept of path dependency.

4. Path Dependency and Change in the International Development of IPRs

The protection of IPRs is an old issue in international economic policy.⁶ However, the analysis of the developing path of the international regulation of IPRs seems rather under-studied. There is a thorough work of Christopher May with a strong historical focus on the development of the WIPO (May 2006). Some periods of the process are analyzed by Helfer (2004), Woolcock (2005) and Sell (2006, Sell and May 2001). Apart from these works, though, there are only very few studies looking for a causal analysis of the whole process based on a strong theoretical framework.

First Period: From BIRPI to WIPO

In the beginning the protection of IPRs was not an international but rather a national political issue. However, due to the growing economic interdependence and the progression of industrialization the protection of IPRs became an issue of international politics.

In the twenty-five years between 1850 and 1875 an international controversy developed between those seeking to defend the protection of innovation and invention through the patent system, and those who contrasted this protection with the needs and demands of an international system of free trade (May 2006: 15).

In the 1860s and 1870s, the national governments and policy makers of the nowadays called industrialized countries became aware of the problematic aspects of IPRs. After intensive lobbying by German and Austrian patent attorneys, a convent on intellectual property was organized in Vienna in 1873. Five years later the idea was seized on and extended by two conferences in Paris (1878 and 1880). The process culminated in a final conference in 1883. The ratified Paris Convention for the Protection of Industrial Property “covered patents, trademarks, and industrial designs. Member countries also constituted an International Union for the Protection of Industrial Property, and it is in this organization that the WIPO finds its origins” (May 2006: 17). In the same year, a Congress of the International Literary Association in Bern decided to follow the Paris Convention with respect to literary and artistic goods. Three years later a treaty on the Protection of Literary and Artistic Works was adopted.⁷ It was also agreed to establish a permanent bureau called the Berner Bureau.

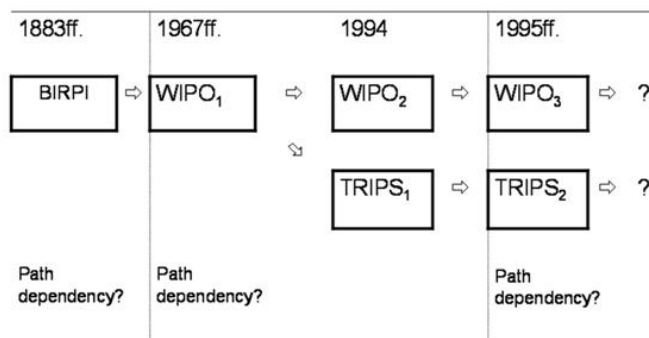
⁶ For a short overview over the history of IPRs see Botoy (2004) and May (2007).

⁷ Because of national copyrights that were not compatible with the international treaty the US was not part of this convention. In 1891 they found a compromise in the Chace Act. The US did not join the international treaty until 1986, though.

The Berner Bureau was supervised by the Swiss government, which controlled the funding of the Bureau. The Paris and the Bern Regimes included a convention, a Union of member states, and two administrative Bureaus. In 1893, both bureaus were merged in one institution (BIRPI), the predecessor of the WIPO.⁸

The founding phase of the international protection of IPRs was strongly influenced by the interests of transnational actors. Their position papers and the results of their meetings constituted the basis of the ensuing official treaties. The thus-established institution was stable and survived two World Wars and the world economic crisis (Menescal 2005). In 1960, the BIRPI moved from Bern to Geneva where the WIPO nowadays is still located.

Development of the International Protection of Intellectual Property Rights



The increasing institutionalization of the protection of IPRs was brought about by the process of economic interdependence. Zürn points to this central, causal mechanism when he argues that the dynamics of international politics, especially in the field of international economy, applies pressure on the existing international institutions (Zürn et al. 2007; Zürn 2004).

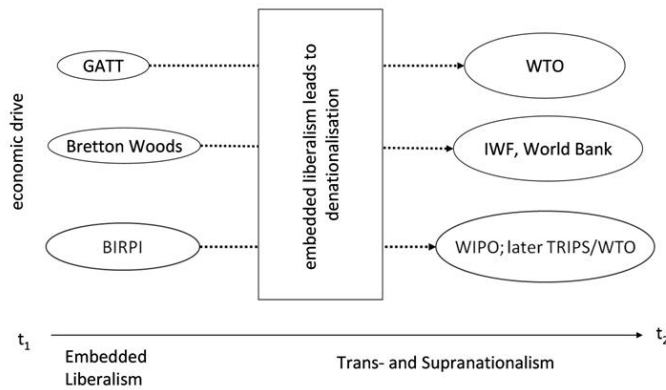
The time after World War II was characterized by two opposing trends: On the one hand, the international system was characterized by the effects of decolonization. Accordingly, a number of developing countries emerged on the world stage. Nation-building and the enforced development of nation states were the outcomes.

⁸ “The underlying principles of both these initial multilateral intellectual property agreements were non-discrimination, national treatment and right of priority, offering protection to the first to invent or create, rather than the first to file or reproduce” (May 2006: 18). Consequently, states were impelled not to make any difference between natives and foreigners with respect to the protection of their legitimate interests. There were no regulations focusing on the substance a patent had to cover and no enforcement procedures.

On the other hand, the Western industrial countries underwent a process of denationalization. This process was characterized by increasing international trade and economic growth of the welfare states with an expansion of transnational relations. John Ruggie coined the term ‘embedded liberalism’ for this period (Ruggie 1995). David Harvey stated that this time was shaped by the understanding that capitalism and communism “in their raw forms had failed” and thus he reasoned: “The only way ahead was to construct the right blend of state, market, and democratic institution to guarantee peace, inclusion, well-being, and stability” (Harvey 2005: 10).

With regard to of these two developments, there was a heightened need for regulating behind-the-border-issues with respect to both international and transnational activities (Helleiner 2006; Lang 2006). One may well argue that the ensuing international agreements ratified in the 1960s and 1970s reached a new quality (Zürn et al. 2007). Put in economic terms, the win expectations of the industrialized countries, their interests to lower transaction costs and the need to control negative externalities caused by a deficient protection system were the main causes which generated their will to enhance the protection level of IPRs (Miller 2000).

Embedded Liberalism and a Trend Towards Supranationalism



The development of the BIRPI is part of this trend in international relations. After World War II a growing number of states signed the conventions pertaining to IPRs. Due to the weak patent protection in the new member states, national and international law collisions soared. The need for improving protection by enforcing the international agreements was growing. With the Stockholm Conference in 1967 an independent international institution was devised and finally established in Geneva three years later – the WIPO. Following, in 1974, the WIPO became a specialized agency of the United Nations.

The question to be asked at this point is whether this process from BIRPI to WIPO can be explained in terms of path dependency. At first sight, the duration and stability of the BIRPI is surprising and could be interpreted as a sign of path dependency. But the above-discussed factors generating path dependence do not apply to BIRPI:

One could argue that set-up costs served as an incentive for preserving BIRPI. After the founding the organization had grown steadily and had – in contrast to most other international institutions – its own income. During the first decades in the twentieth century the international protection of IPRs were strengthened continuously (Menescal 2005: 775). These modifications

were often responses to new technologies in various economic sectors where IPRs were becoming more important, but also represented successful lobbying by a number of private sector groups that were eager to ensure that IPRs were both protected and extended (May 2006: 23).

The growing economic interdependence and the technical development were the driving forces for the institutional development and motivated rational actors to coordinate their behavior and improve the protection level.

But this development was not path dependent: At the same time as BIRPI was extended, the UN Economic and Social Council on the one side and the International Labor Organization [ILO] and the United Nations Education Scientific and Cultural Organization [UNESCO] on the other side proposed to involve other existing institutions except BIRPI in the protection of IPRs. They sought to integrate the regulation of IPRs into their own institutional framework. The ILO and the UNESCO established an alternative copyright convention under the leadership of the UN which operated as an alternate diplomatic forum for international negotiations concerning IPRs.

At this time, in the early 1960s, the BIRPI's staff was well aware that other international organizations, not least of all the UN Economic and Social Council, were exploring the possibility of developing a more formal role in the international governance of IPRs (May 2006: 23).

At a meeting of BIRPI in 1962, a group of experts was asked to develop an agenda to stabilize BIRPI and to eliminate the control over BIRPI's financial resources which – at that time – was exercised by the Swiss government.⁹ As mentioned above, the Stockholm Conference established the WIPO five years later. WIPO then became a specialized agency of the UN in 1974. To sum up, this development can be explained by three causes:

- 1) Alternative institutions trying to protect IPRs (ILO, UNESCO) exercised exogenous pressure on the supporters of BIRPI to fulfill its responsibilities more satisfactorily.

⁹ BIRPI was still under financial control of the Swiss government. In 1963 the first non-Swiss became Director of BIRPI, Georg H. C. Bodenhausen.

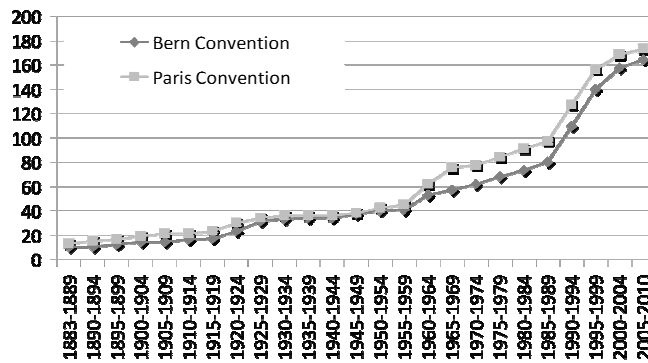
- 2) Due to the increasing economic interdependence, there was endogenous pressure on BIRPI to improve its performance.
- 3) Furthermore, individual interests of the members of staff of BIRPI (of WIPO since 1968 respectively) were the driving forces for an institutional enhancement of their institution. Particularly Georg Bodenhausen, the first non Swiss Director, was a strong advocate of upgrading the status of WIPO and extending its spheres of influence – not least, we may assume, because he was also interested in the privileges that come with the diplomatic status granted to a specialized agency of the UN.

All factors combined are relevant for the development of BIRPI to WIPO in the 1960s. Due to the importance of exogenous factors in this process, the concept of path dependency cannot be applied in this case.

Second Period: Stagnation in WIPO and The Uruguay-Round

As mentioned above the WIPO was founded in 1968 as a consequence of the economic interests of the industrialized countries. However, the institutional enhancement of WIPO as an UN agency obligates WIPO to commit itself to the development goals according to which sustainable economic development of the developing countries was to be accorded more importance than before. As this was not in accordance with the interests of the industrialized countries, they became increasingly dissatisfied with WIPO's performance. At the same time, – quite understandingly – the growing number of developing states – constituting the majority within WIPO since 1974 – became strong supporters of the organization.

Decolonization as a Cause of Institutional Change
Number of Contractual States of the two oldest contracts controlled by the WIPO



Own illustration based on dates of <<http://www.wipo.org>>.

In 1964, thirty-nine countries voted in favor of enhancing BIRPI's status by founding the WIPO as an independent international organization, nine of which were developing countries. In the following ten years, the number of member states doubled with most of the new members being developing countries. By 1970, about eighty states had ratified the two oldest contracts controlled by the WIPO (Paris Convention and Berne Convention). Consequently, it became increasingly difficult and finally impossible for the industrialized states to mobilize majority support for stepping up the level of protection of IPRs.

Again it has to be asked, if this development can be explained in terms of path dependency. Due to the recognition of the WIPO as a specialized UN agency, the normative pressure to promote the protection of IPRs for economic reasons in accordance with the developing goals of the UN increased. This pressure can be interpreted as institutional costs which influenced the calculation process so that actors felt the need to sustain their support for the institution even if the institution did no longer meet their economic expectations. These effects of institutions are well known in economic literature.

Furthermore, sequencing played a major role. In this described context, it was only possible to raise the level of protection of IPRs prior to WIPO becoming a specialized agency of the United Nations. Afterwards, this was no longer possible due to the attached commitment to sustainable economic development of the developing countries.

Learning effects also played a major role since the developing countries became aware of the "dark side" of IPRs (Menescal 2005). They increasingly promoted the idea that the interests of producers and consumers of intellectual property had to be balanced, and this was to be reflected by IPRs.

Summing up the above arguments, the development of the WIPO from 1967-1994 can be explained in terms of path dependency: Since 1967, the WIPO has been moving on a clear trajectory towards a balanced normative arrangement as to the international protection of IPRs. The institutional setting and the majority of the developing and least-developed countries in the WIPO are the main factors explaining the evolution of the institution. The normative commitment to the developing goals of the UN had not been intended by the industrialized countries and came into effect as a result of the process.

However, the achieved protection level at that time obviously did not satisfy the needs of the industrialized countries as these countries were contemplating alternatives (Beier 1989). Therefore, the negotiations to enhance the protection level of IPRs were taken away from WIPO and integrated into the negotiations of the Uruguay Round to establish the World Trade Organization [WTO] (Srinivasan 1998; Tandon 2004; Woolcock 2005). The Uruguay Round was an opportunity to entrust an existing alternative international organization with the regulation of IPRs. Hence, no founding costs complicated the strategic forum shifting from WIPO to WTO/TRIPs, by which the industrialized countries

(especially the United States and EC) expected three institutional advantages (Helfer 2004: 21, 22):

- 1) The US and EC have the largest domestic markets and, thus, the bargaining power to shape trade negotiations within WTO and to “force disclosure of weaker states’ preferences, block the advancement of proposals those states favored, and advance their own initiatives” (Helfer 2004: 21). The industrialized countries used the Uruguay Round to end the deadlock in the WIPO negotiations and enhance the protection level of IPRs (Primo Braga 1996).
- 2) Another advantage of the forum-shifting is that the US and EC can link negotiations in different market sectors. In consequence, packet deals (omnibus agreements) become possible whenever states with inferior standards in IPRs agree upon higher protection levels in order to gain access to the agricultural or textile markets of the US and the EC.
- 3) The WTO offers an efficient dispute settlement system that gives the US and the EC the opportunity to achieve binding decisions in the field of IPRs. “The establishment in 1995 of the robust dispute settlement mechanism at the new WTO gave the developed countries a weapon for enforcing the regulation they wanted, that they had never before” (May 2006: 34-35).

Accordingly, the forum-shifting was driven by the economic interests of the highly industrialized countries (Shaffer 2004: 2005). They expected higher gains by negotiating about a higher protection level of IPRs in the GATT/WTO instead of the WIPO. Since 1995 the protection of IPRs is an objective of TRIPs which represents one of the three main pillars of the World Trade Organization with the others being GATT [General Agreement on Tariffs and Trade] and GATS [General Agreement on Trade in Services] (Senti 2000: 1994). This institutional change marks a turning point in the international regulation of IPRs through the WIPO. The WTO did not supplant WIPO as a relevant institution for the protection of IPRs but changed its character. “TRIPs itself implicitly acknowledges the continuing importance of WIPO as a forum for negotiating treaties” (Helfer 2004: 25). An agreement between WIPO and WTO regulates the division of labour between the institutions. The WIPO is still protecting several treaties on IPRs but also took over a new function as it assists developing and least-developed countries to use intellectual property to promote social and economic development (Niemann 2008).

Third Period: Institutional Stagnation in WTO And TRIPs-Plus Treaties

With the entry of IPRs in the institutional framework of the WTO the obligation of IPRs was strengthened. TRIPs is guaranteeing a minimum standard for all member states and also has institutional instruments to enforce the binding power of these rules. Especially the Dispute Settlement System of the WTO is

a powerful instrument of the industrialized countries to force other countries to guarantee the standards of TRIPs (Leitner and Lester 2010).

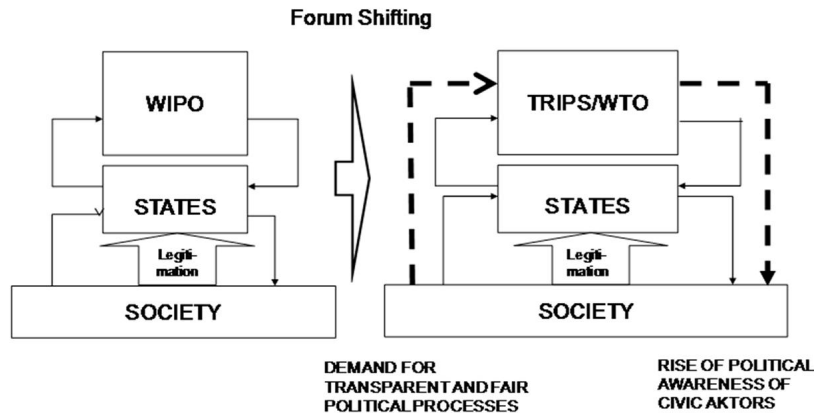
At first glance, it seems that TRIPs/WTO is a result of the interests of the industrialized countries that meets all expectations. However, this institutional change also had non-intended results:

- 1) The strong economic effects of TRIPs on developing and least-developed countries provoked strong civic resistance. Until 1995, none of the significant NGOs was critical towards Intellectual Property Rights. With the inclusion of IPRs in the WTO agreement, though, the international protection of IPRs intensified. The TRIPs-agreement is setting normative standards for the treatment of behind-the-border-issues that are binding for non-state-actors within and between states.
- 2) Due to the recognition of IPRs in the context of WTO, public awareness was increased. Consequently, the pressure on the powerful nations to practice what they preach with respect to the protection of intellectual property increased.
- 3) In the case of the terrorist attacks with Anthrax, the US government justified the violation of the intellectual property rights of Bayer with regards to the antidote to Anthrax by claiming the situation to be a state of national health emergency (which is provided for in the IPR rules). In the following, the US was put under enormous moral pressure. Countries with high mortality rates due to HIV referred to the same IPR rule to justify the production of generics. As a consequence, the industrialized countries agreed to make concessions to developing countries for the production of generic drugs.

The processes of trans- and supranationalism create a so far unparalleled civic political awareness with a high demand for transparent and fair decision making procedures within the international institutions (Smythe 2007). Such a phenomenon can be explained by the idea of negative externalities that is basal for rational choice theory. Negative externalities for private consumers created by institutional rules of the WTO generated the will to control these institutional effects.

At the moment, it is not sure if a further enhancement of the protection level is possible. Negotiations are under way, and it is not clear what the results will be (Woolcock 2005). One may fear that the process will end in deadlock as it is currently the case with respect to TRIPs. Furthermore, it can be observed that several bi- and multilateral TRIPs-Plus negotiations took place. At present time (2010), the Anti-Counterfeiting Trade Agreement (ACTA) is negotiated to improve the enforcement of the existing IPRs. The negotiation process take place outside the existing international institutions governing IPRs. History seems to iterate.

Supra- and Transnationalisation Leads to Increased Political Awareness of the Society



5. Conclusion

Analyzing historical processes is not exclusively the domain of historians. The explananda of political scientists can also be historical. Hence, there seemed to be much reason for collaboration. However, the interdisciplinary dialogue between these disciplines is rare and even the field of academic education is separated. I have argued that in analyzing historical processes no fundamental methodological differences exist between the disciplines. Scientists of both disciplines agree to refer to the idea of human agency in analyzing historical processes. On the basis of rational choice narrativism the development of the international regulation of IPRs was analyzed. It was argued that there are two major factors influencing the development of the protection of intellectual property:

- On the one hand, there is a strong interest of those in favour of protecting intellectual property to establish a strong institution serving this purpose. Thus, they promoted the substitution of BIRPI by WIPO.
- On the other hand, there are the economic and social interests of the developing countries. They also found access to the international organizations. WIPO for example, as a specialized UN agency, is committed to the UN's goals to support sustainable economic development in Third World countries – which in the aftermath of decolonization constituted the majority of the WIPO member states. This commitment was incompatible with protecting the intellectual property produced by the industrialized countries.

As a result the industrialized countries try to shift the forum to enforce the protection of IP. This interplay between the interests of the industrialized and

the developing countries leads to a typical movement than can be described as a pendulum motion.

The process starts with an institutional enhancement from BIRPI to WIPO. Then the pendulum swings back: A blockade by the developing countries is the result. But the pendulum swings back: The industrialized countries shift the forum from WIPO to GATT/WTO to enhance the protection level. And the pendulum swings back again: We find a blockade by the developing countries in the WTO. At the moment we can observe negotiations outside the existing institutions to enhance the protection level of IPRs.

References

- Abell, Peter. 2004: Narrative Explanation: An Alternative to Variable-Centered Explanation? *Annual Review of Sociology* 30: 287-310.
- Arkes, Hal Richard, Peter Ayton. 1999. The sunk cost and Concorde effects: Are humans less rational than lower animals?. *Psychological Bulletin* 125 (5): 591-600.
- Arrow, Kenneth .1963. Social Choice and Individual Values. London.
- Arthur, W. Brian. 1994. Increasing returns and path dependence in the economy. Ann Arbor.
- Axelrod, Robert, and Robert O. Keohane. 1986. Achieving Cooperation under Anarchy: Strategies and Institutions. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye , 226-254. Princeton: Princeton University Press.
- Bates, Robert H., Avener Greif, Margaret Levi, Jean-Laurent Rosenthal, and Barry R. Weingast. 1998. *Analytic Narratives*. Princeton: Princeton University Press.
- Beier, Friedrich-Karl. 1989. GATT or WIPO? New ways in the international protection of intellectual property; symposium at Ringberg Castle, 1988. Edited by Max-Planck-Institut für Ausländisches und Internationales Patent- Urheber- und Wettbewerbsrecht. 1. ed. Weinheim: VCH.
- Botoy, Ituku Elangi. 2004. From the Paris Convention to the Trips Agreement. *Journal of World Intellectual Property* 7 (1): 115-130.
- Danto, Arthur Coleman. 1968. *Analytical Philosophy of History*. Cambridge: Cambridge University Press.
- Elman, Colin, and Miriam Fendius Elman. 1997. Diplomatic History and International Relations Theory: Respecting Difference and Crossing Boundaries. *International Security* 22 (1): 5-21.
- Elster, Jon. 1989. *Nuts and Bolts for the Social Sciences*. Cambridge: Cambridge University Press.
- Fiorina, Morris P., and Roger G. Noll. 1978. Voters, Bureaucrats and Legislators – Rational Choice Perspective on Growth of Bureaucracy. *Journal of Public Economics* 9 (2): 239-254.
- Føllesdal, Dagfinn, Lars, Walløe, Jon, Elster. 1988. *Rationale Argumentation. Ein Grundkurs in Argumentations- und Wissenschaftstheorie*. Berlin; Walter de Gruyter & Co.

- Frederick, M. Abbott. 2000. Distributed governance at the WTO-WIPO: An evolving model for open-architecture integrated governance. *Journal of International Economic Law* 3 (1): 63-81.
- Harvey, David. 2005. *A Brief History of Neoliberalism*. Oxford: Oxford University Press.
- Hathaway, Oona A.. 2001. Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System *The Iowa Law Review* 86 (2): 622-630.
- Hausmann, Thomas. 1991. *Erklären und Verstehen: Zur Theorie und Pragmatik der Geschichtswissenschaft : mit einer Fallstudie über die Geschichtsschreibung zum Deutschen Kaiserreich von 1871-1918*. Frankfurt: Suhrkamp.
- Hedström, Peter, Richard, Swedberg. 1996. Social mechanisms. *Acta Sociologica*. 39 (3): 281-308.
- Helfer, Laurence R.. 2004. Regime Shifting: The TRIPs Agreement and New Dynamics of International Intellectual Property Lawmaking. *Yale Journal of International Law* 29: 1-83.
- Helleiner, Eric. 2006. Reinterpreting Bretton Woods: International development and the neglected origins of embedded liberalism. *Development and Change* 37 (5):943-967.
- Hempel, Carl G.. 1965. *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science*. New York: Free Press.
- Hempel, Carl G.. 1942. The Function of General Laws in History. *Journal of Philosophy* 39: 5-23.
- Hirsch, Paul M., and James J. Gillespie. 2001. Unpacking Path Dependence: Differential Valuations Accorded History Across Disciplines. In: *Path Dependence and Creation*, ed. Garud Raghu and Karnoe Peter, 69-90. Mahwah, NJ.
- Howlett, Michael, and John Rayner. 2006. Understanding the historical turn in the policy sciences: A critique of stochastic, narrative, path dependency and process-sequencing models of policy-making over time. *Policy Sciences* 39 (1): 1-18.
- Johnstone, David. 2002. Behavioral and prescriptive explanations of a reverse sunk cost effect. *Theory and Decision* 53 (3): 209-242.
- Kay, Adrian. 2005. A critique of the use of path dependency in policy studies. *Public Administration* 83 (3): 553-571.
- Keohane, Robert O.. 1984. *After Hegemony. Cooperation and Discord in the World Political Economy*. Princeton: Princeton University Press.
- Kiser, Edgar. 1996. The Revival of Narrative in Historical Sociology: What Rational Choice Theory can Contribute. *Politics Society* 24 (3): 249-271.
- Kiser, Edgar, and Michael Hechter. 1991. The Role of General Theory in Comparative-Historical Sociology. *The American Journal of Sociology*. 97 (1): 1-30.
- Kiser, Edgar, and Michael Hechter. 1998. The Debate on Historical Sociology: Rational Choice Theory and Its Critics. *The American Journal of Sociology* 104 (3): 785-816.
- Lakatos, Imre. 1964. Proofs and Refutations. 4. *British Journal for the Philosophy of Science* 14 (56): 296-342.
- Landes, William M., and Richard A. Posner. 2003. *The Economic Structure of Intellectual Property Law*. Cambridge: Cambridge University Press.
- Lang, Andrew T. F.. 2006. Reconstructing embedded liberalism: John Gerard Ruggie and constructivist approaches to the study of the international trade regime. *Journal of International Economic Law* 9 (1): 81-116.

- Leitner, Kara, Simon, Lester. 2010. WTO Dispute Settlement 1995-2009 – A Statistical Analysis. *Journal of International Economic Law* 13 (1): 205-218.
- Levy, Jack S.. 1997. Too Important to Leave to the Other: History and Political Science in the Study of International Relations. *International Security* 22 (1): 22-33.
- Mahoney, James. 2000. Path dependence in historical sociology. *Theory and Society* 29 (4): 507-548.
- Maskus, Keith E.. 2000. Intellectual property rights and economic development. *Case Western Reserve Journal of International Law* 32 (3): 471-506.
- May, Christopher. 2006. *The World Intellectual Property Organization: resurgence and the development agenda*. Abingdon.
- Marx, Johannes. 2007. Geschichtswissenschaft und Politikwissenschaft – eine fruchtbare Beziehung? Eine Untersuchung anhand der Teildisziplinen Internationale Geschichte und Internationale Beziehungen. *New Political Economy in History. Special Issue of Historical Social Research* 32 (4): 21-52.
- Marx, Johannes. 2008. Kultur und Rationalität. Das ökonomische Forschungsprogramm als theoretische Grundlage einer kulturwissenschaftlich orientierten Sozialwissenschaft. In *Erzählen, Erklären, Verstehen. Beiträge zur Wissenschaftstheorie der Historischen Kulturwissenschaften*, ed. Frings Andreas, Marx, Johannes, 165-189. Berlin.
- May, Christopher. 2007. The hypocrisy of forgetfulness: The contemporary significance of early innovations in intellectual property. *Review of International Political Economy* 14 (1): 1-25.
- May, Christopher, and Susan K. Sell. 2006. *Intellectual property rights: a critical history*. Boulder, Colorado.
- Mazzoleni, Roberto, and Richard R. Nelson. 1998. Economic Theories about the Benefits and Costs of Patents. *Journal of Economic Issues* XXXII (4): 1031-1052.
- Menescal, Andréa Koury. 2005. Changing WIPO's Ways? The 2004 development agenda in historical perspective. *Journal of World Intellectual Property* 8 (6): 761-796.
- Miller, Gary. 2000. Rational choice and dysfunctional institutions. *Governance an International Journal of Policy and Administration* 13 (4): 535-547.
- Niemann, Ingo. 2008. Geistiges Eigentum in konkurrierenden völkerrechtlichen Vertragsordnungen: das Verhältnis zwischen WIPO und WTO/TRIPS = Intellectual property under concurring treaty regimes: the relation of WIPO and WTO/TRIPS (English summary). Berlin.
- Niskanen, William A.. 1996. *Bureaucracy and public economics*. 2. ed. Cheltenham: Edward Elgar Publishing Ltd.
- Niskanen, William A.. 2007. *Bureaucracy and Representative Government*. New Brunswick.
- North, Douglass C.. 2006. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Olson, Mancur. 1965. *The Logic of Collective Action*. Cambridge: Cambridge University Press.
- Page, Scott E.. 2005. *An Essay on the Existence and Causes of Path Dependency*. Ann Arbor.

- Pierson, Paul. 2004. *Politics in Time: History, Institutions, and Social Analysis*. Princeton: Princeton University Press.
- Popper, Karl R.. 1979. *Truth, Rationality and the Growth of Scientific Knowledge*. Frankfurt am Main.
- Popper, Karl R.. 1981. *Conjectures and refutations: the growth of scientific knowledge*. London.
- Primo Braga, Carlos A.. 1996. Trade-related Intellectual Property Issues: The Uruguay Round Agreement and its Economic Implications. In *The Uruguay Round and the Developing Countries*, ed. Martin Will and Alan L. Winter, 341-379. Cambridge: Cambridge University Press.
- Richards, Donald. 2005. Trade-related intellectual property rights. *Review of International Political Economy* 12 (3): 535-551.
- Riker, William H.. 1982. *Liberalism Against Populism: a Confrontation Between the Theory of Democracy and the Theory of Social Choice*. San Francisco: W. H. Freeman and Company.
- Roberts, Geoffrey. 2006. History, Theory and the Narrative Turn in IR. *Review of International Studies* 32 (4): 703-714.
- Ruggie, John Gerard. 1995. International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order. In *International Regimes*, ed. Stephen D., Krasner, 195-231. Ithaca.
- Schimmelfennig, Frank. 2006. Prozessanalyse. In: *Methoden der Politikwissenschaft. Neuere Qualitative und Quantitative Analyseverfahren*, ed. Behnke Joachim et al., 263-271: Baden-Baden.
- Schmid, Michael. 2006. *Die Logik Mechanismischer Erklärungen*. Wiesbaden: VS Verlag für Sozialwissenschaften
- Sell, Susan K.. 2006. Global Social Policy Forum: Intellectual Property and the Doha Development Agenda. *Global Social Policy* 6 (2): 147-150.
- Sell, S. K., and C. May. 2001. Moments in law: contestation and settlement in the history of intellectual property. *Review of International Political Economy* 8 (3): 467-500.
- Senti, Richard. 1994. *GATT-WTO: die neue Welthandelsordnung nach der Uruguay-Runde*. Zürich: Oldenburg Verlag.
- Senti, Richard. 2000. *WTO: System und Funktionsweise der Welthandelsordnung*. Zürich: Oldenburg Verlag.
- Shaffer, Gregory. 2004. Recognizing public goods in WTO dispute settlement: Who participates? Who decides? The case of TRIPS and pharmaceutical patent protection. *Journal of International Economic Law* 7 (2): 459-482.
- Shaffer, Gregory. 2005. Power, Governance and the WTO: A Comparative Institutional Approach. In *Power and Global Governance*, ed. Michael Barnett and Butt Duvall, 130-160. Cambridge: Cambridge University Press.
- Smythe, Elizabeth. 2007. Democracy, Development and the WTO's Legitimacy Challenge: Assessing the Doha Development Round. In *The WTO After Hong Kong*, ed. Donna Lee and Rordan Wilkinson, Rordan, 205-225. London: Routledge.
- Srinivasan, Thirukodikaval N.. 1998. *Developing countries and the multilateral trading system: from the GATT to the Uruguay Round and the future*. Boulder: Westview Press.

- Stegmüller, Wolfgang. 1983. Probleme und Resultate der Wissenschaftstheorie und analytischen Philosophie. Teil 3. Historische, psychologische und rationale Erklärung, Kausalitätsprobleme, Determinismus und Indeterminismus. Darmstadt.
- Stinchcombe, Arthur L.. 1991. The Conditions of Fruitfulness of Theorizing About Mechanisms in Social Science. *Philosophy of the Social Sciences* 21 (3): 367-388.
- Tandon, Yash. 2004. Paved with good intentions: background to the GATT, Uruguay Round and WTO. Harare: Seatini Zimbabwe.
- Van den Braembussche, Antoon. 1989. Historical Explanantion and Comparative Method: Towards a Theory of the History of Society. *History and Theory* 28 (4): 2-24.
- Vogt, Carsten. 2000. The evolution of cooperation in Prisoners' Dilemma with an endogenous learning mutant. *Journal of Economic Behavior and Organization* 42 (3): 347-373.
- Windelband, Wilhelm. 1904. Geschichte und Naturwissenschaft: Rektoratsrede v. 1.5.1894. Strassburg.
- Woolcock, Stephen. 2005. Trade Policy. From Uruguay to Doha and Beyond. In *Policy-Making in the European Union*, ed. Hellen Wallace, William Wallace, and Mark A. Pollack, 377-399: Oxford: Oxford University Press.
- Wright, Georg H.. 1980. *Freedom and determination*. Amsterdam: North-Holland Publishing Co.
- Zürn, Michael. 2004. Global Governance and Legitimacy Problems In: *Government and Opposition* 39 (2): 260-287.
- Zürn, Michael, Martin Binder, Matthias Ecker-Ehrhardt, and Katrin Radtke. 2007. Politische Ordnungsbildung wider Willen. *Zeitschrift für Internationale Beziehungen* 14 (1). p. 129-164.