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Blockmodels as Power Structure Images.
The German, American and Japanese
Labor Policy Domains Compared

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Abstract

In this article the power structures of the German, American and Japanese Labor Policy Domains in the 1980s are analysed and compared with methods of network analysis. Policy domains are viewed as (empirical) subsystems of a polity, identifiable by a substantively defined criterion of mutual relevance among a set of consequential actors concerned with formulating, advocating, and selecting courses of action. Labor policy itself is defined as the governmental regulation of industrial relations and social policies for employees. The networks of the three policy domains consist of public and private corporate actors such as parties, ministries, labor unions, employer organizations and public interest groups.

The power structure of the policy domains is conceptualized in the line of power-dependence theory as an underlying dimension of three networks, namely power reputation, information exchange and coalition network. To these networks a blockmodel analysis is applied to derive similar power positions from the different network relations, thereby abstracting from decision making institutions and procedures. The theoretical framework to develop hypotheses and to interpret the results is provided by pluralist and corporatist theories of interest mediation. These two approaches serve as complementary guidelines about how network relations might be organized in political systems which are functioning in one of these ways. The results of the analysis support the interpretation that the Japanese labor policy domain can be identified as a corporatist and consensus system, whereas the American system can be described as a class polarized system with a pluralist way of political integration. The German power structure will be labelled as the architecture of complexity due to the special role of the mandatory social insurance organizations and certain aspects of the German governmental system. As a general result we argue that the public actors play a very important role in all three domains and that the outcomes of elections and the majorities of the parties in the legislature or the composition of the administration is very crucial for the understanding of interest mediation and authoritative decisions within these domains.

1. Introduction

A description of power structures has to be built on two types of theoretical premises, first on conceptualizations of power from which the important dimensions of power relationships can be derived, and second on theoretical approaches which can be used to interpret the resulting image structures. Concerning the first problem, we rely on a relational or network concept of power structures and shall use the method of blockmodel analysis to derive image structures of the central power relations. Concerning the second problem, pluralist and corporatist theorems about the relations of public and private actors in policy domains provide guidelines for the interpretation of power image structures.

Within policy domains, policies are formulated and some of them are collectively chosen as binding and have to be implemented. The personnel in charge of public policy uses standard definitions of domains, which often coincide with the jurisdictions of legislative committees or state ministries. Problems, issues and solutions are perceived as belonging to a domain because of certain substantive similarities (Burstein, 1991), even if the political actors are aware of some discretion they have in framing issues in such a way that they fit into different domains. More concretely, our delineation of a policy domain follows the lead of Laumann and Knoke's Organizational State who conceptualized a domain as a subsystem of a polity, identifiable by "a substantively defined criterion of mutual relevance... among a set of consequential actors concerned with formulating, advocating, and selecting courses of action (i.e. policy options)..." (Knoke and Laumann 1982:256).

The empirical systems whose power structures will be delineated are the labor policy domains of West Germany in 1980s and of the United States and Japan during the same period. In three coordinated international projects, network data were collected which measure central aspects of power wielding between the consequential actors in each national labor policy domain. Labor policy is understood as the governmental regulation of industrial relations and social policies for employees. The actors are conceived as corporate actors with interest in and partial control of the outcome of labor bills which were pending in the respective legislatures in the 1980s. Thus both political actors as parliamentary parties or labor ministries had to be included in the set of consequential actors, as

labor unions and employer associations as the most powerful private organizations in these policy domains.

In the following, I shall first discuss the two theoretical premises, in the next section the problem of the dimensions of power structure and how to measure them with power networks. In section 2, types of interest intermediation as e.g. pluralist or corporatist systems will be evaluated with respect to their implications for power structures. In section 3, the research design will be outlined and in section 4, finally the results of the blockmodel analysis of the German power network shall be presented and compared with the power networks of the American and Japanese labor policy domain.

2. Power networks or power in networks?

Conceptualizing power in a network context can mean two different things. One possible approach is to look for power networks in the sense that the content of the relations linking the actors in the network can be interpreted as a power measure. The other possibility is to conceptualize power as a latent dimension of all networks or at least of those with asymmetric or directed relations. The best known example of the first approach is a power reputation network where all system participants are asked whom of their fellow actors they perceive as especially powerful or influential. A second example would be a resource dependency network which is interpreted as the reverse view of a power network by power-dependency theory.

For the second approach, the content of the relations is less important than certain formal properties which indicate that "one social actor exerts greater control over another's behavior" (see discussion in Knoke 1990:3-7). A classical example of such an interpretation is Homans' discussion of the patterns of interaction in small groups where "the more popular members tended to receive most interactions" (Homans 1974:180). Homans insists that the volume of received interactions is not a simple effect of the popularity or esteem of an actor but of his power due to the possession of a scarce reward. "That is, power and not approval is the fundamental variable determining the rank order of the members of the group in the number of interactions they receive" (Homans 1974:182).

Now, the labor policy domains of large nation states are not prototypes of small groups, even if we hear sometimes of cosy triangles as parts of them, and one may raise the question whether the findings about status and power in small groups can be extrapolated to large systems consisting of corporate actors. We argue in favor of such an extrapolation if, and only if, the theoretical rationales underlying the explanations are applicable in both cases. An exchange theoretic explanation built on rational choice premises does fulfill the condition. Rational actors as individuals or as corporate actors both try to realize their interests consistently.

Small groups and policy networks do differ in another respect which is of importance to a power structure analysis. Beyond the stage of agenda-setting, all further steps in the policy cycle depend heavily on institutional rules, and policies in the form of bills are, of course, a very good case in point when the final collective decision has to be made by parliament. Whereas behavior in small groups is mostly subinstitutional, policy making in the legislative arena is highly institutionalized when only certain actors have the right to make the final authoritative decision.

The right to make binding decisions for a collectivity presupposes a certain degree of institutionalization. We propose to define power as the ability to achieve one's objectives in collective decisions, thereby following Parsons' concept of power as the "generalized capacity to secure the performance of binding obligations by units in a system of collective organization" (1967:308). Stressing the collectivity aspect of power goes beyond a merely dyadic perspective for which, in Weber's words, power is the ability of an actor "to carry out his own will despite resistance" (1947:152). In the institutionalized setting of policy domains, a single actor is able to achieve his objectives in collective decisions, either directly in an authority role or indirectly through access to the authorities. What do these distinctions between authority and access mean for power in networks?

Access is, of course, a network idea and it should be very easy to investigate who has power via access to the authorities once the actors with authority are known. But we want to delineate the power structure using only network data and not the individual characteristic whether an actor possesses authority or not. Otherwise, we only had to subdivide the network into the set of authorities and the set of private actors and compute the densities for this fourfold table. We want, instead,

derive the power structure solely from network information arguing that in institutional settings like policy networks, authority is a scarce resource to which powerful actors must have access to reach their objectives in collective decisions. The authorities are not treated as separate entities outside the set of actors, but as roles played by that subset of actors we call public actors. The private actors are, then, those without authority roles. Since private actors can have access to public actors through an intermediary who is also a private actor, and since public actors can improve their power position through access to other public actors, a bipartite network of contacts between public and private actors would not suffice, aside from the fact, that playing an authority role would be used as an individual attribute to separate the two sets of actors. Once the decision is made in favor of a full network covering all actors irrespective of their roles, the question is how a matrix has to be constructed as an optimal measure of power in networks.

Going back to power networks for a moment, we shall use a power reputation network as one dimension of a power structure. The more often an actor was mentioned as especially influential by the other actors, the more powerful he is perceived. Using the usual matrix representation of a network with the respondents as the rows and the mentioned others as the columns, the more 1s an actor has in his or her column, the more powerful he or she is perceived.

An access network which is constructed analogously must have the actors granting access in the rows and the actors looking for access in the columns. But since the column actors having better or broader access should be the more powerful ones, we cannot rely solely on the answers of the column actors to whom they think they have access. These answers should be ideally cross-validated by the respective row actors.

We shall use a network of confirmed information exchange to derive the latent power dimension in networks. Having and granting access was operationalized as sending and receiving valuable information. Not every information exchanged in a policy domain is a valuable item which would be demanded by the other actors. A lot of information is broadcast freely to all system participants. In order to distinguish valuable from more or less freely distributed information, we asked respondents in which of several subfields their organization needs important policy information that only other organizations can provide. The follow-up-question was, then, which other organizations give this type of information to the focal

organization. Thus the side granting access was conceptualized as actors who demand valuable information and are therefore dependent on the organizations giving them this type of demanded information.

The complementary question to this one asking who satisfies the information demand of the focal organization, is an information supply question. Again, we asked first in which subfield the focal organization can provide information most valuable to others and continued with a probe searching for the other actors to whom the focal organization sends this information. A valid entry in the constructed matrix of confirmed information exchange has the meaning that both the sender and the receiver had to give the respective answer. When party A told us that it is receiving information from union B, this was supposed to be a valid answer only when union B told us that it is indeed sending valuable information to party A. The interpretation is that the senders have access to the receivers of information.

One general problem with exchange networks is that the commodities or resources exchanged can be very different. Even if we generally agree with Cook's doubts about the meaningfulness of the concept of directionality of ties in exchange networks (Cook 1990:120), some imbalance may be built into actual exchange networks if one takes into account only one possible influence resource. In our case, this is valuable information which may not be exchanged only with other valuable information but with other influence resources like votes or money. One would get a complete picture of the hidden power dimensions in exchange networks if one would have a complete list of the important resources and of their prices or values. In addition, one could try to gather information on exchange offers which were not accepted by the more powerful partner. Since we do not have all the necessary information on these aspects of exchange networks, we propose to use the power reputation network as a remedy against pitfalls of misspecified exchanges.

The network of power reputation is not a social network in the sense that it summarizes information on actual exchanges or interactions, but it is a purely perceptual network. It will help us in the analysis to find out which actors are seen as the powerful ones and whether these actors are indeed playing a central role in the matrix of confirmed information exchange as we would predict.

With confirmed information transfer and power reputation, we may identify a clustering of actors who are perceived by all system participants as especially influential and who form the center of the information exchange network in the sense that they send to and receive from other positions valuable information. One would nevertheless doubt whether the actors in this central position form a unified ruling caucus, if nothing were known about the interests of these actors. Do they usually agree on policies or are they divided into two or more subgroups concerning their policy preferences? When one operationalizes a concept of power as the ability to achieve one's objectives in collective decisions, one should take into account the possibility that somebody has power only due to the fact that he shares his policy preferences with the really powerful actors. But given the same policy preference at the beginning of the policy formulation phase will not guarantee an outcome favorable to free riders of the steersmen of the power play if these have to negotiate compromises till a final solution can be reached. Less powerful actors can protect themselves from utility losses by building coalitions with other actors sharing their preference concerning a certain policy. We, therefore, propose to build a power structure of a policy domain on a coalition network as a third dimension, besides power reputation and confirmed information exchange.

With the three networks of power reputation, information exchange and coalition, we come close to the power-dependence theory of Emerson and Cook if we were willing to interpret the power reputation network as a resource dependence matrix into which power imbalances are built which can be overcome by network extension ("increasing the number of alternative suppliers of valuable resources") or coalition formation (Cook 1990:221). But interpreting a non-mutual power mention as an indicator of resource dependency, emphasizes the dependence aspect too much at the cost of the cognitive aspect when the respondent answers the question as a neutral observer of the system. We apply a conservative strategy and take power reputation at face value, i.e. as the view of the power structure seen from an insider perspective.

3. Types of power structures

Power reputation, cooperation in coalitions and confirmed information transfers will function as the relational building blocks for the power structure of a policy domain.

Actors having similar patterns of relations to others will be clustered into common positions, so that the three original networks will be condensed to three small matrices which will be interpreted as the images of the power structure of the domain. These images are power structures in so far as the original data contained information on power networks and power in networks. We now turn to the question which types of power structures indicate which types of interest intermediation in policy domains.

The literature on interest intermediation in policy domains offers an abundance of types which are difficult to reduce to a few dimensions of a property space. Besides the main types of pluralism and corporatism, subtypes are differentiated as pressure pluralism or liberal corporatism or more variant types are constructed like Parentela-systems or clientelism. Some authors pay special attention to the implementation phase of the policy cycle, others take into account policy formulation and decision in addition. Since our research focuses on the latter phase, the roles postulated for parliamentary parties in comparison with the administration are of special interest.

We facilitate the task to summarize the main features of the typologies of interest intermediation by focusing only on the polar types of pluralism and corporatism and by concentrating on the labor policy domain as a basically polarized system. Business organizations and labor unions normally are to be found at opposite sides in coalitions favoring or opposing specific policies in this domain. The problem of democratic systems is how to overcome this inherent class polarization. For pluralists, cross-cutting cleavages function as an integrative mechanism whereas corporatists argue that the peak organizations of the two classes negotiate compromise policies, with the help of the state, to avoid political stalemate.

What are the network implications of these assumptions? One should find signs of cross-cutting cleavages in the coalition network, but one may doubt whether a crude measure of cooperation in coalitions would detect less intense cooperations across class lines. We anticipate that the coalition network will, first of all, detect the basic cleavage between business and labor.

The more fine-grained aspects of the power structure should be better visible in the information exchange patterns. We shall, therefore, summarize three major

network implications of pluralism and corporatism in terms of access patterns between private interest groups and public actors.

Two types of access: In the pluralist world view, private and public actors play quite different roles in policy domains. The private interest groups try to gain access to the governing center whose task it is to make the final collective decision. The groups with better access will be better able to reach their objectives, but neither the governing center nor the interest groups with better access will exaggerate their success since, according to the democratic majority principle, the opposition party is seen as the alternative government which will not be completely isolated in the communication structure. Concerning the network of information exchange, public actors of the governing center are supposed to be the major recipients of valuable information, and are less inclined to send information to the private actors who have to accept a policy once the authoritative decision was made.

In the corporatist world view, the access of private to public actors is balanced on the other side by the access the public actors have to the peak organizations of business and labor which have to deliver the acceptance of the negotiated policies by their respective rank and file members. Some corporatists argue that the bargaining partner of business and labor is the administration, especially the Labor Ministry, whereas parliament finally has only to accept the solution reached in negotiations between the ministries and the private interest groups. But once one has left behind narrow policies for special clientels and pays attention to policies with broader impacts, the role of parliamentary parties seems no longer to be passive, but their active support is needed for the "concertation" (see Lehbruch 1984) of economic or labor policy. Lehbruch even argues that a close cooperation of a party with a social class, especially a labor party with the union sector, is a characteristic of a corporatist system.

Sector-internal communication patterns: If a corporatist system is basically a bargaining system, then it will function optimally only with a small number of organizations. Every actor participating in the negotiations will have veto power and the necessary compromises will be better reached with fewer negotiators. Peak organizations within the business and union sector are, therefore, a necessary precondition of corporatism if these peak organizations entertain a de facto monopoly of interest representation in their respective sector (Schmitter

1977). The matrix of confirmed information exchange for the respective sectors is expected to show whether peak organizations are indeed accepted in their central role by the other organizations. If yes, we expect a clear center-periphery pattern of communication where the peripheral organizations send information to the center and the center to the periphery but where the peripheral actors are not linked to each other. If this pattern does not exist, a pluralist system of interest intermediation is more likely.

Composition of the governing center: In classical pluralism, the roles played by public and private actors are different so that we expect that in pluralist systems, the boundaries between state and society will not be blurred. The governing center should mainly be composed of public actors which are the major targets of influence attempts of the private actors. Whether this center to which the actors seek access is really seen as the most powerful position is a different question. For a pluralist system it is also conceivable that the political center is instrumentalized from the powerful societal groups outside of it. The governing centers of purely corporatist systems could, on the contrary, be composed of all powerful actors irrespective of their home sectors since they may closer interact with each other on equal terms than the peak organizations of each sector are linked to their rank and file members.

With these three guidelines, we are able to test the hypothesis on the more corporatist character of policy making in Germany, compared at least with the United States, which are unanimously evaluated as more pluralist. And we shall be able to compare the power structure of these two labor policy domains with the same domain in Japan about whose system of interest intermediation there exists more disagreement (Lijphart und Crepaz 1991).

4. Research and analysis design

A power structure can be narrowly defined as "the stable, enduring configuration of relationships through which power is generated" (Knoke 1981). This definition emphasizes only power in networks, but not necessarily power networks like the reputational measures. We have added this dimension as a precaution against misspecifications of power models since we assume that power perceptions of insiders guarantee a realistic perception of the power structure.

The power configurations and perceptions will be represented in terms of a blockmodel which will answer two questions: (1) Which organizations are structurally similar so that they are clustered together into a common position, and (2) what are the image structures between these positions concerning the three crucial dimensions of power structures? Concerning the first question, a good interpretation of the results of blockmodel analyses is possible only when one knows which actors were identified so that they are the delineated population of consequential actors in the three labor policy domains. We shall, therefore, first give an overview of the composition of the population in Germany compared to the United States and Japan in terms of more conventional categories of public and private organizations. Secondly, the types of organizations will be described in terms of their network characteristics as a first overview of the descriptive potential of the three networks. Then the analysis procedure will be explained in detail.

4.1 Actor and network features of the policy domains

Since we are interested in the policy formulation phase which is ended by an authoritative decision on a proposed policy in the form of a bill, the legislative actors are supposed to play a crucial role in all three labor policy domains. The identification of the set of public actors turned out to be not an easy task which could be fulfilled only by reading the constitution. The voting rights in legislatures are given to individual members, but these members may be organized collectively along party lines, such that these party groups in parliaments and in legislative committees are the corporate actors which count. This is of course more true for parliamentary systems like Germany or Japan where it makes a lot of sense to treat the parties in parliament as unitary actors building executive and legislative coalitions. Even for the U.S. congress, parties are supposed to be a good first guess if one decides not from the beginning, to treat only individual members of congress as the consequential actors. In the U.S., the four important party actors for the labor policy domain are supposed to be the representatives of the Republicans and Democrats in the respective committees of the House and the Senate. For the parliamentary system of Japan, only the parties were supposed to be unitary actors without making a distinction between the Lower and Upper House of the Diet. This decision was possible because the Liberal Democratic Party had an absolute majority in both Houses of the Diet during the 80s which is the period covered by our investigation. In Germany, during the 80s before

thereunification, four parties were represented in parliament and since the parliamentary parties are very important, they are supposed to be unitary actors in addition to their members in the respective labor policy committee of the Bundestag.

A similarly difficult task was the delineation of public actors within the executive branch. In the U.S., only the President has formal authority in the legislative process, whereas in Germany and in Japan the Federal Ministries play a formal role through the right of the cabinet to initiate legislation. Even in the United States, the departments are important representatives of the administration vis-à-vis congress so that it makes sense to include the labor ministries and some additional ministries in all three nations which deal with questions of labor legislation. But only in the United States, the White House office was included as the important head of the administration whereas in Germany and Japan, the responsible labor ministers have more leeway in steering labor policy so that the Chancellor or the Prime Minister were not included.

A category of public actors not present in the United States and Japan are the state governments in Germany which send their delegates to the second chamber, the Bundesrat. The state governments have a vote on about 60% of the German legislative bills which is mainly justified by the role of the state governments in the implementation of the respective policies. Therefore, the state governments had to be included as a separate category in Germany.

Table 1
Types of Labor Policy Domain Actors in the USA, FRG and Japan

Type of organisation information	Percentage in sample			Number with valid network		
	USA	FRG	Japan	USA	FRG	Japan
1. Labor <u>Unions</u> and Work Councils	17.1	14.3	29.5	20	17	36
2. <u>Business</u> Associations and Corporations	25.6	18.3	29.5	28	21	35
3. <u>Professional</u> Societies	8.5	9.5	0.8	10	12	{ 10
4. <u>Public Interest</u> Groups	29.9	15.1	8.2	34	18	
5. <u>Mandatory Social</u> <u>Insurance</u> Association	-	10.3	3.3	-	13	4
6. <u>Ministries</u> , Departments, Agencies	15.4	10.3	15.6	16	13	16
7a. Political Parties in Legislative Committees	3.4	3.2	-	{ 4	{ 17	{ 5
7b. Political <u>Parties</u> in Parliament or as Organizations	-	10.3	4.9			
8. State Govern- ments (<u>Länder</u>)	-	8.7	-	-	10	-
9. Advisory Groups (<u>Shingikai</u>)	-	-	8.2	-	-	9
N	117	126	122	112	121	115

In Japan, there also exists a special category which has no equivalent in the other two states. These are advisory boards of the ministries which are generally prescribed by the National Government Organization Law. Their role is to submit final reports of the deliberation, research and examinations on the respective

policies and in this role, they generally act as a single corporate organization and not as a collective actor like parliament which has to be decomposed into its constituent party organizations as corporate actors.

Compared to the problem of identifying an equivalent set of public actors, the delineation of the private corporate actors in the labor policy domains of the three countries was easier and equivalent criteria of participation in the domain as public hearings or references in newspaper articles on labor policy could be used. The most important private actors are of course labor unions and business associations. A further important organization type are professional societies and, even more important, public interest groups. This latter category is relatively heterogeneous. The label was originally coined to describe a lobby of organization "that seeks a collective good, the achievement of which will not selectively and materially benefit the membership or activists of the organization" (Berry 1977:7; also Berry 1984:22; Schlozman und Tierney 1986:29, who labelled these "citizens groups"). Because the ability to appear as a disinterested actor is highly priced in political rethoric, many groups claim the label while still pursuing policy agendas that mainly benefit narrow segments of the society. Given a difficulty of determining when an organization is clearly acting on behalf of the general public's interest, we apply the PIG label to all organizations that try to influence collective decisions without having the right to decide for themselves and that do not represent overt economic interests (i.e. employers, workers, or professionals). Among these are welfare associations, as well as associations of disadvantaged groups in the labor market, or peak organizations of cities and counties. In the U.S., public interest law firms are also included in this category as non-membership groups and national associations of state actors like the National Governors' Association. In Germany, this latter type of state actors is missing as a lobby organization since the states are represented in the Bundesrat directly. But both in Germany and Japan, peak organization of local communities are represented in this subcategory as they are in the United States.

Finally, there does exist a category in between the private and public actors in Germany which is completely missing in the United States and which only has some minor representatives in Japan. These are the major social insurance institutions covering old age pensions, health care and unemployment and which are constructed in Germany as public law corporations with mandatory membership and the right of self-government. In their board of directors, unions

and employer representatives normally cooperate, giving these institutions a corporatist flavor. Since the members' dues and the contributions of the employers are regulated by law and can be compared to taxes for the mandatory members, the term "parafiscus" is sometimes used. Many of these corporations are organized at the regional level, and in this case, they collaborate at the national level in a peak organization in which the regional corporations are voluntary members. These peak associations act as any other interest group in order to influence public actors on behalf of their members and staff. Since the members' organizations implement social insurance policies decided by the state, we shall keep them separate from conventional private interest groups which are, almost without exception in the U.S. and with some minor exceptions in Japan, voluntary associations and which do not act as special administrations to implement state policies.

A description of basic network measures as density, indegrees and outdegrees of these different types of organizations for the three networks gives a preliminary overview of the descriptive potential of these power structure dimensions. It is preliminary in the sense that the actors are not classified according to the similarities of their patterns of power relationships with each other, yet it has descriptive value concerning the conventional typology of private and public actors.

In table 2, the indegrees of the power reputation network are compared for the different types of organizations. When one interprets these figures, one has to take into account, that the indegrees are a summary measure for all actors within a category and that heterogeneous categories with some major and minor players sometimes get only an average power reputation. This is true for the category of parties in Germany which draws a relatively low sum of power mentions compared to the other two countries. But it would be too early to comment this result as meaning that the parties are not very important in the German labor policy domain, at least compared to the ministries. The overall network density is highest in Germany for the power reputation network, second highest in the United States and lowest in Japan.

The indegrees and outdegrees of the confirmed information transfer networks give a first impression of which actors are the major targets for communication in the labor policy domains. These should be the actors within that organizational type which has the highest entries of receipts of information. Quite clearly, these are the

congressional parties in the United States and even in Germany and in Japan, the degrees for the receipts of information are highest for the party category. For the other important comparable category of political actors, the ministries, the sendings are a little bit higher than the receipts. These are communalities between the three countries which give the impression that a comparison especially of this network can be very meaningful.

An important first insight into the sector-internal communication patterns is given by the density figures in table 3. It is quite clear, that in the United States the internal communication density is highest for the union sector, second highest for the administration which includes the White House, the departments and some agencies and third highest for the business category. The most interesting contrast to these figures are the internal densities of unions and business sectors in Germany and Japan. They are much lower than in the United States which may be a first indicator of a functioning peak organization system within these sectors in the latter two countries.

The density of the coalition network is highest for Germany and very low for Japan. In Japan, the device of coalitions is only used by the unions and the business sector and not by the other organizational types, whereas in Germany, the state governments, the parties and the ministries all participate above average in coalitions. That may have to do with the fact that coalitions under a system which is dependent on coalition governments are a more favorable formal device to support one's policy preference than in systems which are built on absolute majorities like the Japanese system, or in presidential systems which do not need a coalition to elect the head of the administration. Nevertheless, in all three countries the internal density in the coalition network ist relatively high, compared to the overall density, within the union sector and, with the exception of Germany, within the business sector.

Table 2

**Average Power Reputation and Number of Sendings and Receipts in
 Confirmed Information Transfer
 Nets of Actors in Organization Types**

Organization Type Nets ²	Average Power Reputation ¹			Confirmed		Information		Transfer	
	USA	FRG	Japan	USA	FRG	FRG	Japan		
				Sendings	Receipts	Sendings	Receipts	Sendings	
	Receipts								
1. Unions	40.8	36.7	18.5	13.4	13.2	5.5	5.4	5.9	5.6
2. Business	27.1	31.1	13.0	12.0	9.9	7.4	5.7	3.0	3.7
3. Professionals	18.7	30.0		10.7	9.4	7.3	5.6		
			}14.0					}2.3	2.9
4. PIG's	22.9	41.7		9.7	9.6	6.6	6.8		
5. Insurance	-	48.2	12.3	-	-	12.3	12.0	1.3	1.8
6. Ministries	37.1	64.2	33.3	14.6	14.1	10.3	9.6	10.1	7.2
7. Parties	77.5	38.4	41.4	8.5	30.3	12.6	14.4	6.6	11.4
8. Länder	-	43.5	-	-	-	4.3	8.1	-	-
9. Shingikai	-	-	33.2	-	-	-	-	2.2	2.4
Overall Mean =	30.8	41.8	20.4	11.7	11.7	8.3	8.3	4.9	4.9
Network Density	.275	.345	.178	.104		.069		.042	

1) Indegrees of power reputation network

2) A report of actor A that he is sending information to B has to be confirmed by B with a report that he is receiving information from A. The numbers are averages of row and column totals for actors in organization types.

Table 3

**Internal Density of Organization Type Actors in Networks of Confirmed
Information Transfers and Cooperation in Coalitions**

	Confirmed Information Transfer			Cooperation in Coalitions ¹		
	USA	FRG	Japan	USA	FRG	Japan
1. Unions	.295	.083	.086	.632	.691	.106
2. Business	.205	.084	.058	.307	.105	.150
3. Professionals	.170	.104		.022	.076	
			}010			}0
4. PIG's	.146	.167		.023	.137	
5. Insurance	--	.308	.063	--	.244	0
6. Ministries	.215	.124	.125	.050	.256	0
7. Parties	.063	.149	.160	0	.191	0
8. Länder	--	.210	--	--	.311	--
9. Shingikai	--	--	.012	--	--	0
Overall Density	.104	.069	.042	.085	.112	.029

1) To form a coalition is one of several alternatives to influence the outcome of a legislative decision. When two actors collaborated in coalitions for two or more legislative decisions they are linked symmetrically in the binary coalition network.

4.2 Analysis design

Concerning the analysis design, the following decisions have to be made: choice of an equivalence criterion, choice of a blockmodel algorithm, weight of the three networks for the analysis and number of positions or blocks in the final solution. Generally, a blockmodel analysis can either be a clustering of actors into positions or a clustering of relations into roles, both times starting with multiple networks (cf. Faust und Wassermann 1992). We shall use the former approach which promises to give better results for large networks, and search for structurally equivalent actors with the same or rather similar patterns of relationships across all three networks. The original network data will be reduced to a smaller matrix containing

only six to eight groups of actors which occupy similar positions in the power structure. We label these groups of actors either "positions" or "blocks" and describe their relationships in terms of power reputation, communication and coalition with idealized digraphs containing only arrows between positions which are larger than the overall density of the respective network. The algorithm chosen is CONCOR which allows to give different weights to the three original networks.

The important dimension of power in networks is measured in our example by a network of confirmed information exchange. The position of an actor within the final power structure is both determined by his or her sent and his or her received information. From the way the question was asked, the receivers are supposed to be the more dependent actors because they said that they need information which is given to them by the senders. Technically, that means that both the rows and the columns of the communication matrix have to be taken into account.

In the coalition matrix, the columns and rows contain the same information since the matrix is symmetric. Here we decided to count the information only once, i.e. to take into account only the row vectors thereby weighing the coalition network only half as much as the theoretically more important communication matrix.

The network of power reputation equals most a normal network since the rows in this matrix represent the respondents and the columns represent the organizations which have received mentions as powerful actors. Thus, a correlation of the rows of two organizations, say A and B, measures the agreement in the answers of these two organizations. A correlation of the columns is, on the other side, not only based on the answers of two organizations, but of all organizations in the system. The higher the correlation, the more similar are the groups of actors who mention the one or the other actor as powerful. Laumann and Knoke have labelled this perspective the constituency perspective interpreting the groups of actors mentioning other actors as powerful as the constituency of the column actors (Laumann and Knoke 1987: 169-188). In addition to this interpretation, we argue here that only the column perspective represents a systemic view of the system whereas the correlations between the rows are more characteristic of a local perspective of the two respondents who answered the questions. Given the high validity of the communication network and of the coalition network where an entry is based always on the answers of at least two respondents, the local perspective of the power reputation network is supposed to be too noisy for a systemic

interpretation. Therefore, we decided to include only the columns of the power reputation matrix in the input data for CONCOR. Thus, in the final solution, the matrix of confirmed information exchange has half of the weight and each of the two remaining matrices only one fourth.

Even if the aim of a blockmodel analysis is to find a representation of the original networks in a highly condensed form with only a few number of positions, the decision about the optimal number of positions is relatively difficult. The CONCOR algorithm (cf. Breiger/Boorman/Arabie 1975; Schwartz 1977) is a divisive procedure splitting the universe of actors stepwise into subgroups. We use a version of this program in which the goodness of fit measure b developed by Carrington/Heil/Berkowitz (1980) is included (Mitchell 1983). At each step of the division, this index measures how far the resulting density matrix within and between blocks is from the ideal typical pattern, in which some densities would be 1 and all others would be 0. Since the ideal typical pattern is the better approached the larger the number of blocks, the relative increase of fit compared to the size of the matrix can be used as a criterion for the optimal number of blocks.

The measure of global b is a simple addition of the b 's for the single matrices. Since our aim is to compare the German solution with the power structures of the labor policy domains in the United States and Japan, it could well be that the separate decision on the optimal number of blocks could be misleading. Thus, the German solution, say of four blocks, could be mainly based on the information of the coalition network whereas the Japanese solution could be based more on the power reputation network. We therefore decided not to use the global b as our best measure of fit, but the separate b 's for the three matrices, looking for a solution in which the sequence of the size of the separate b 's is the same for the three countries. This was true for the eight block solution in which the coalition network had the highest b in each country, the matrix of confirmed information exchange the second highest and the matrix of power reputation finally ranked last. Thus, the perceptual aspect of the power structure is not only theoretically but also empirically downgraded.

Generally, we expect that the coalition network will mainly structure the main diagonal of the blockmodel bringing together actors with similar interests in the labor policy domain so that the internal density of the blocks in the coalition networks is very high. Coalitions could be formed for several bills for which we asked

the respondents to give us information. A cooperation in the coalition network is coded as present when two organizations cooperated at least two times in a coalition.

The second expectation concerning the final solution is that the power reputation network will mainly structure the columns of the image matrices. That is we expect an overall agreement in a policy domain who the powerful actors are so that the columns of the image structures will contain either high densities or very low densities, or, in a dichotomous representation, either 0s or 1s. The finegrained structure then will be detected by the confirmed information exchange. This is justified in so far as the pluralist and corporatist hypotheses about power structures are mainly formulated in terms of access which is measured by information exchange in our investigation.

5. The power structures in comparison

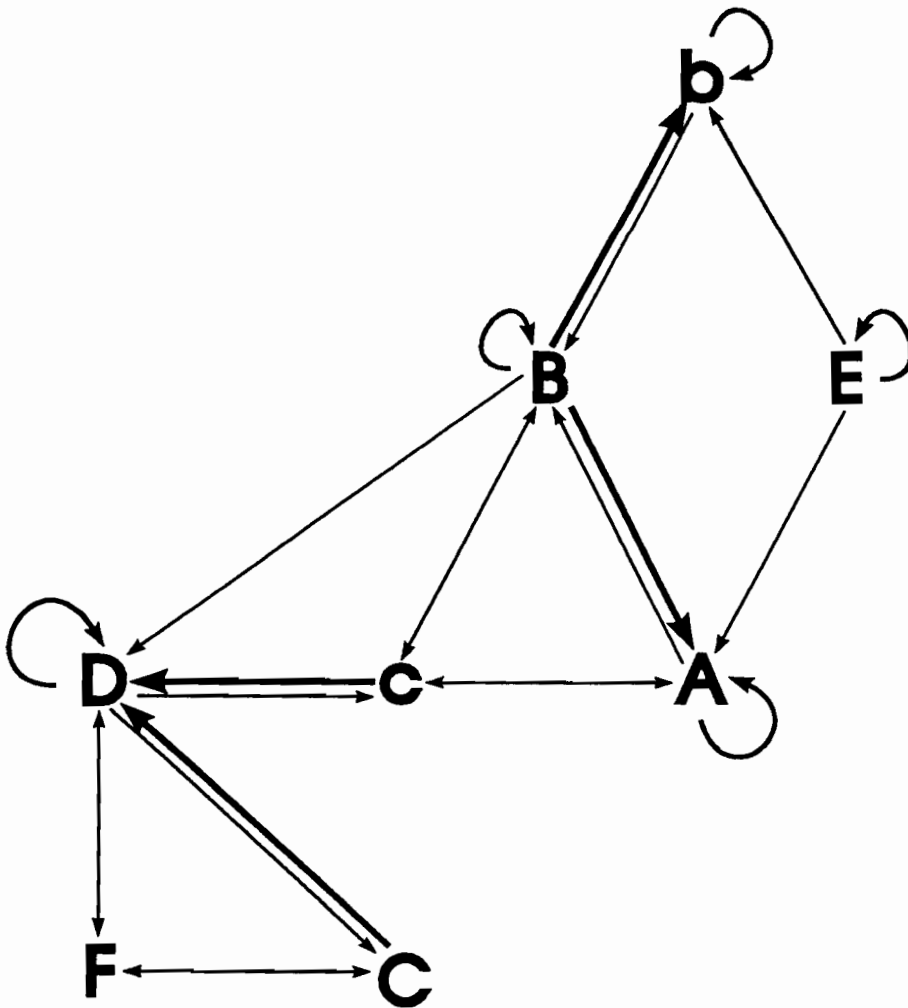
Image structures containing information on three networks between eight blocks are already rather complex and not easy to interpret. Since we have downgraded the weight of two of the three networks and since the type of image structures expected for coalition building and power reputation is rather simple, it is possible to focus the attention on the digraphs of the communication patterns, provided that the coalitions among and between blocks and the sequence in the power reputation can be shown in the same figure. The sequence of positions in the more or less uniformly perceived power structure will be indicated by labelling the positions with letters, starting with A for the most powerful block, B for the second position in the power pyramid and so on. If two positions are linked by coalitions, this is either indicated by a capital letter for the more powerful block and the respective small letter for the minor block, that is the less powerful coalition partner, or it is indicated by the same capital letter and the numeral 1 and 2 if the two coalition partners are placed at adjoining ranks in the power pyramid. The arrows of the digraph both between blocks and the reflexive arrows pointing back to the same position indicate above average confirmed sendings to the respective recipients. A double headed arrow indicates a balanced, above average information flow in both directions. If this information flow is high and unbalanced, two arrows are drawn, the stronger one showing which position is sending more to the respective recipient, than the other way round. Unbalanced information flow to

the center in which the public actors are placed would be one of several characteristics of pluralist systems of interest intermediation.

In the section on types of power structures, the major differences between pluralist and corporatist communication patterns were summarized with regard to three aspects: types of access, sector internal communication patterns and composition of the governing center. We shall first discuss the overall communication pattern for each country before we go into the details of the sector internal links and the composition of the blocks.

Figure 2

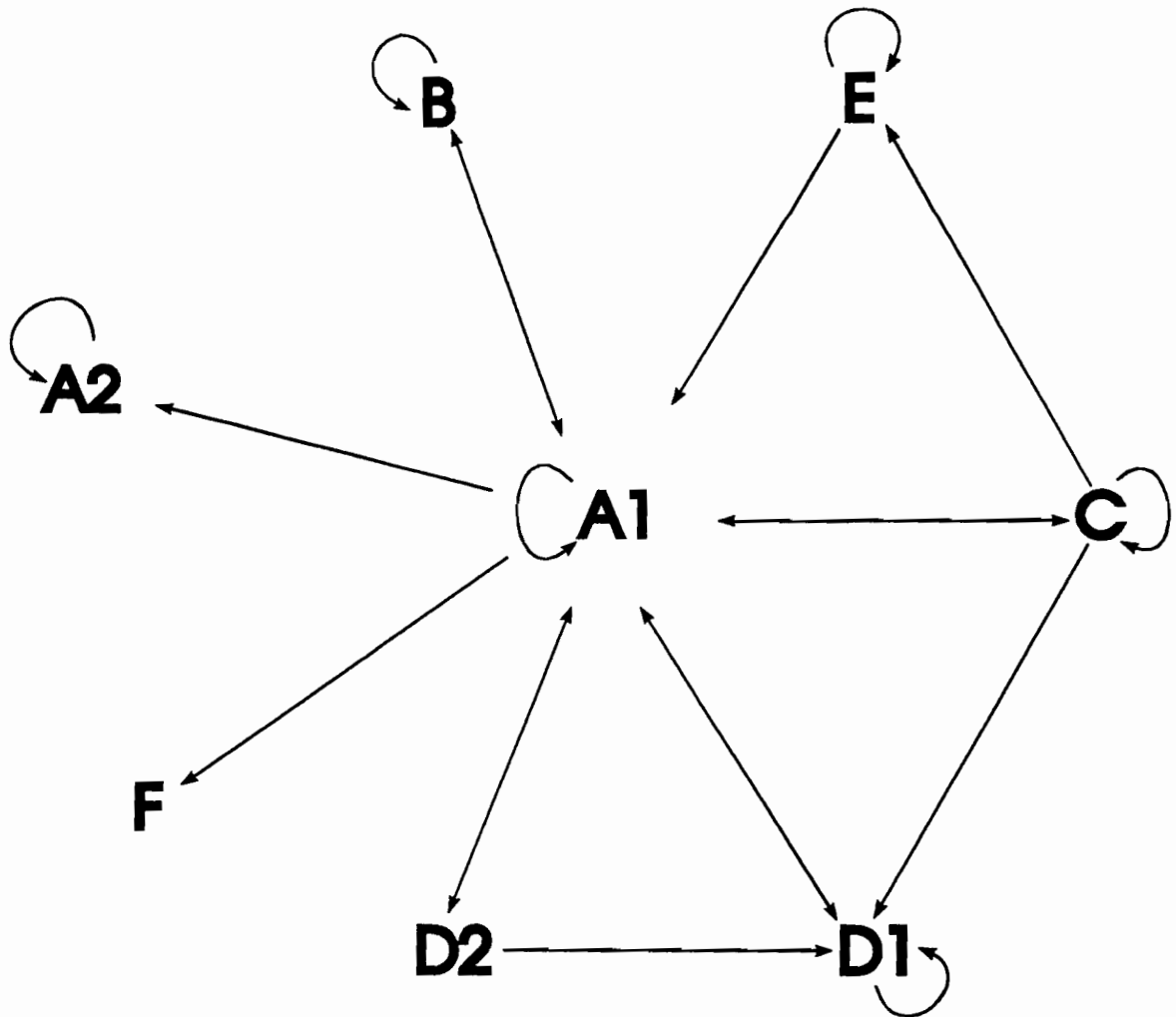
Confirmed information exchange between the 8 positions of the American power structure



Densities being equal to and higher than average densities (0.10) have been taken into consideration. With unsimilar densities in a dyade (the difference being higher than 0.02), higher density is shown by a heavily painted arrow; equal density in both directions has been shown by an arrow pointing towards both directions.

Figure 3

Confirmed information exchange between the 5 positions of the Japanese power structure



Densities higher than average densities (0.042) have been taken into consideration. An arrow pointing into both directions stands for information exchange.

One of the three labor policy domains has a clearly visible center which maintains direct links to every other position, four of which are characterized by balanced information flows in two directions, two of which indicate outflows and only one represents a one-sided inflow. The complete absence of above average

unbalanced information flows where one of the positions functions as the major of information recipient is a first indicator of a corporatist power structure.

The other two domains are characterized by rival centers. In the second country, the second most powerful position, B, is as often the target of information sendings as position A, that is, there exist four incoming arrows for A and B. But position A, which is perceived as more powerful than B, is in addition also more central since it maintains links of one or another type with every other position, whereas B is two links away from positions D and d.

The third domain resembles the second one insofar as power center A has a rival position in the communication pattern, the difference being that this time the rival is less powerful - it is not the second but only the fourth in the power pyramid, that is D - but it is even more central than block A. D is the target of four other positions, whereas A is the recipient of only three blocks. In addition, D functions more than A as a hub as two of its four incoming flows are strongly unbalanced compared to one such arrow targeting at A. Depending on the composition of these two blocks, this third country seems to be a candidate for a pluralist system of interest intermediation. These are, not surprisingly, the United States, Japan is the first country with the most centralized system and Germany the second.

Before we discuss the composition of the power center and its rival, we leave the blockmodel results for a moment and look at the internal communication pattern of the union sectors. That is this time we focus the attention on that subgraph which contains all unions in a specific country. Here, Germany is at one extreme and the United States on the other, insofar as the German peak organization of the unions, the Deutscher Gewerkschaftsbund, clearly functions as the center of this center-periphery system, whereas the AFL/CIO in the U.S. does not entertain an equally outstanding position. The American unions are more linked to each other than the German unions whose contacts with each other are not direct but mediated by their peak organization. Japan is close to the German pattern, the main difference being that there exist two central unions, the Japan Private Sector Trade Union Confederation (Rengo) and the General Council of Trade Unions of Japan (Sohyo).

Table 4

Confirmed Information Transfer within the German Union Sector¹

		11111111		
		12345678901234567		
1!	.1	.....!	1	
2!	.1	.....!	2	
3!	.....	.....!	3	
4!	...11	.1111.1111!	4	
5!	...1	.....!	5	
6!	...1	.....!	6	
7!	...1	.....!	7	
8!	...1	.....!	8	
9!	...1	.....!	9	
10!	...1	.....!	10	
11!	...1	...1.....!	11	
12!	.....	.....!	12	
13!	.....	.....!	13	
14!	.....	.....!	14	
15!	...1	.....!	15	
16!	...1	.....!	16	
17!	...1	.....!	17	
		11111111		
		12345678901234567		

1) Senders are represented in columns, receivers in rows. Union 4 is the Deutscher Gewerkschaftsbund (DGB).

Table 5
Confirmed Information Transfer within the American Union Sector¹

		11111111112										
		12345678901234567890										

	1!	..	1	..	1	.111	....	1	.11	..!		1
	2!	..	1	..	111	...	1	.11	..	1..!		2
	3!	..	11	.....	11	..	11!					3
	4!	..	1	.....								4
	5!	1	...	1	..	11	.1	.11	....	1!		5
	6!	..	11	.....	11	.....						6
	7!	..	1	.....	1	.11	.....					7
	8!	..	11	.1	.1	.....	1	..	1.1!			8
	9!	..	1	..	1	.....	1	..	1..!			9
	10!	..	1	.....	1	.....						10
	11!	..	1	.....	1	.....						11
	12!	..	1	...	1	..	1	..	1..!			12
	13!	..	1	.....	1	..	1	..!				13
	14!	1111111111	..	1	.11	..	1	.1	.1!			14
	15!	11111	.1	.11	..	1	111111	..!				15
	16!	..	1	...	11	.....	1	..	1..!			16
	17!	..	1	.....	1	.....						17
	18!	1	.11	.1	.11	..	11111	..	1!			18
	19!	..	1	.....	1	.....						19
	20!	..	11	..	1	..	1	..	1..!			20

		11111111112										
		2345678901234567890										

1) Senders are represented in columns, receivers in rows. Union 3 is the AFL/CIO, union 15 are the United Auto Workers.

Table 6
Confirmed Information Transfer within the Japanese Union Sector¹

1111111111122222222223333333																																					
123456789012345678901234567890123456																																					

1!	..	11111111111111	.11	.1	.1	.11	.111	.11	....	!	1																										1
2!	...	1	....	1	....	1111	....	11	.1	.1	....	11!	2																								2
3!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3																								3
4!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4																								4
5!	11!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5																								5
6!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6																								6
7!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7																								7
8!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8																								8
9!	1!	.1	.1	.1	.....	.....	.....	.....	.....	.....	.....	.....	9																								9
10!	1!	.1	.....	1111	.....	.....	.....	.....	.....	.....	.....	.....	10																								10
11!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	11																								11
12!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	12																								12
13!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	13																								13
14!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	14																								14
15!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	15																								15
16!	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16																								16
17!	11!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17																								17
18!	11!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	18																								18
19!	11!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19																								19
20!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	20																								20
21!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21																								21
22!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22																								22
23!	1!	.....	1	.....	.....	111	.....	.....	.....	.....	.....	.....	23																								23
24!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	24																								24
25!	11!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	25																								25
26!	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26																								26
27!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27																								27
28!	11!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28																								28
29!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29																								29
30!	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30																								30
31!	1!	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	31																								31
32!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32																								32
33!	1!	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33																								33
34!	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34																								34
35!	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35																								35
36!	.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36																								36

1111111111122222222223333333																																					
23456789012345678901234567890123456																																					

1) Senders are represented in columns, receivers in rows. Union 1 is the Japan Private Sector Trade Union Confederation (Rengo), union 2 the General Council of Trade Unions of Japan (Sohyo).

Going back now to the blockmodel results and identifying first the union blocks, we find all German unions with one exception in position D and this position cooperates in coalitions with block d which consists mainly of welfare organizations. The composition of the German position D confirms one of the characteristics of corporatist systems which was pointed out by Lehmbbruch. Within the union block, the Social Democratic Party is also included and three state governments led by Social Democratic Prime Ministers. Thus, we first learn of the German communication pattern that B is not the opposition of the power center A, but this function is played by the Social Democratic Union Sector D.

In the United States, again all unions with one exception can be found in the same block and that is block C. C has a coalition partner, namely c, which consists mainly of public interest groups, among them lobbies for state and lower level governments like the National Association of Counties, the National Governors' Association and the National Conference of State Legislatures. This is important in so far as c forms a link between the two rivals in the communication structure, namely A and D.

In Japan finally, more unions were included in the target population and they are placed in three blocks, D1 and D2, the two coalition partners, and C. D2 and C both direct their information sendings to D1, a group of actors in which the Democratic Socialist Party is also included. If there should be a rival potential to the governing center in Japan, then D1 has the best chances to grow up to this role.

When we now finally turn to a description of the three power centers, that is position A, and their major rivals in the communication structure, we have to pay attention to the role of the public actors in this regard. When A is called a power center, that means that the system participants perceive this block as most powerful in the overall system. On the other side, the role of the power center in these policy domains is their function as the major target of influence attempts, that is, a target for incoming information flows. That means that the power center cannot decide on its own, but is dependent on the information given by the major claimants' groups in the labor policy domain. In a way, the most dependent role is played by the American communication centers A and D since for them, the information overflow is largest compared to the communication centers in the other two domains. Position A in the United States consists of a large group of public

actors, among them the White House Office and the Department of Labor. In addition, some business organizations are included as the Business Round-Table or the National Alliance of Business. But characteristically, the most powerful business organizations are outside of the governing center and can be found in block B. B has been the major claimant group of the Republican Administration during the Reagan era. The major rival of A in the communication structure is D, a block in which the House and Senate Democrats are to be found together with public interest groups and some government agencies like the National Labor Relations Board. Thus, the opposition in this era of divided government between the Republican Administration and the Democrats in Congress is an outstanding feature of this solution. The Republicans in Congress are included in the block of the governing center together with the White House Office.

In Germany, the major public actors of the governing center are the parliamentary party of the CDU/CSU and the members of this party in the Labor Committee of the Bundestag on the one side and the important ministries of the domain, above all the Labor Ministry, on the other side. Corresponding to the composition of the German union block, the peak organizations of the business community are close allies of the CDU/CSU and they are included in this block A as the unions in the Social Democratic block D. The two most important organizations here are the Bundesvereinigung Deutscher Arbeitgeberverbände (BDA) and the Bundesverband der Deutschen Industrie (BDI). The German system would be corporatist if there would be a close alliance between the governing center and block D. During the period of our investigation, this alliance was not practiced but the political system was run more on a polarized basis. That was possible because the governing coalition had a double majority, the necessary majority of the Bundestag, and the very helpful additional majority of state governments led by CDU/CSU prime ministers in the Bundesrat. These state governments are all located in block a which cooperates in coalitions with block A. The main rival of the governing center in the German system is B, but this block consists of political allies of the CDU/CSU, that is mainly of the Liberal Party and in addition, the peak organizations of the health system. So there seems to be a division of labor between the two parties of the governing coalition and the complicated structure of the German system can be interpreted as a consequence of the complexity of politics in Germany which is to say that the German government is normally a coalition government, that the majority in the Federal Chamber is an important side condition of successful governing and that finally the mandatory social insurance

organizations are involved in the labor policy in addition, as claimants' groups, but also as the major implementors of social policies.

The Japanese power structure, finally, is the one which also fulfills the third condition of a corporatist system. That is the power center A1 is composed of all important players in labor policy making. These are the Ministry of Labor and other important ministries, the leading Liberal Democratic Party, the major advisory groups, five of the most important business organizations and, in addition, the two peak organizations of the union sector which were already mentioned when we discussed the internal communication links of the Japanese union sector. The second most powerful group, A2, consists of employers' organizations which closely cooperate with the governing center. The same is not true for the union sectors C, D1 and D2. The peak unions seem to be coopted to the governing center as the minor partners.

Without going into further details, the major results of this analysis will now be interpreted in a more general way. The Japanese system can be described as a consensus system with a heavy business accent and the unions as the minor partners within the governing center. Overall, such a system should be able to negotiate policies among all important sectors of the society, with the brokerage of the leading party and the Ministry of Labor.

The American system can be described as a class polarized system with political integration. Business interests and labor interests are on opposite sides and the organizations of both sides target heavily on the political center which is divided according to party lines. Due to the majority of the Democrats in the House of Representatives, the union sector had a much better access to the public actors than the German unions during an era in which a conservative government had a double majority in the Bundestag and the Bundesrat. Since the composition of the German population is more complex due to the special role of the mandatory social insurance organizations and due to the complexity of the German governmental system, we label the German power structure as the architecture of complexity. The most difficult task within this system is to organize the corporate actors which are either closely affiliated with the respective governmental parties or which are responsible for the implementation of the domain policies. The Social Democratic Opposition Party cooperates closely with the outsiders of this arrangement, but it has of course some access to the governing center.

Comparing now the three power structures, what should be the more general results beyond the more or less correct description of the domains at a certain point in time? Such a general result is, that the public actors play a very important role in all three domains and that the outcomes of elections and the majorities of the parties in the legislature or the composition of the administration is very crucial for an understanding of interest intermediation and authoritative decisions within these domains. For Germany, one would anticipate that the power structure has already changed a lot since the Social Democratic state governments gained the majority in the Federal Chamber. In Japan, there is at least a possible rival of the governing center consisting of some unions and the Socialist Party, but a changing majority in the Diet would really mean a major rearrangement of the power structure. In the American case, one would expect less change of the power structure when both majorities in Congress and the President belong to the same party. Then the communication structure is anticipated to be more centralized but one would nevertheless expect that no major claimants' group can afford to cut its ties to the opposing party which may be the party of the President of tomorrow.

Appendix Table A1

Composition of Power Structure Positions¹ in three National Labor Policy Domains

Organization Type	U.S.A.				F.R.G.				Japan															
	1a	1b	2a	2b	3a	3b	4a	4b	1a	1b	2a	2b	3	4a	4b									
1. Union	19 ^u	-	1	-	-	-	-	-	1	16 ^u	-	-	-	-	-	2 ^u	-	-	9	7	18	-	-	
2. Business	-	1	-	-	9	8 ^b	6	4	-	1	5 ^b	5	5	2	3	-	5 ^b	-	-	-	-	1	16	13
3. Professionals	2	1	2	-	2	-	2	1	-	1	-	2	1	4	2	2								
4. PIG's	-	8	10	12	-	2	-	2	9	-	3	-	-	2	4	-								
5. Insurance									-	-	-	-	7	3	3	-	-	-	2	-	-	-	2	-
6a. Ministries	-	1	-	-	-	-	-	2 ^a	-	-	4 ^a	2	-	1	-	-	2 ^a	1	1	1	3	-	-	-
6b. Agencies	-	1	3	1	-	3	2	3	-	-	-	2	-	1	1	2	4	3	1	-	-	-	-	-
7. Parties	-	-	2 ^p	-	-	-	-	2	-	5	4 ^p	1	-	2	3	2	4 ^p	-	-	-	1	-	-	-
8. Länder									-	3	-	6	-	-	1	-								
9. Shingai																	4	2	3	-	-	-	-	-
N	21	12	18	13	11	13	10	14	10	26	16	18	13	15	17	2	22	7	10	12	11	21	19	13

1) Position numerals indicate the four-block solution for each country, whose global B (cf Carrington et al. 1980) is 0.25 for the U.S.A. and Japan and only 0.18 for Germany. With eight blocks, the German B is 0.26, the U.S. value 0.31 and the Japanese value 0.35, and the rank order of the B's for the single networks is the same for each country.

u Block includes leading union,

b Block includes leading business association,

a Block includes leading executive organization (ministry of labor in F.D.R. and Japan, White ouse Office in U.S.),

p Block includes leading party in legislature (CDU/CSU, LDP, Democrats in House and Senate).

Appendix Table A2

Densities¹ between 8 American Power Structure Positions²

	1a	1b	2a	2b	3a	3b	4a	4b
1a	45 25 63	27 4 54	44 14 1	17 10 0	11 2 0	37 8 0	27 7 0	40 5 0
1b	27 3 54	14 6 33	35 10 0	17 5 5	2 5 0	23 2 0	10 4 0	39 12 0
2a	36 18 1	20 16 0	36 15 1	13 10 0	9 5 0	33 11 1	14 5 0	39 12 0
2b	26 9 0	29 8 5	36 12 0	18 45 3	7 0 3	28 4 1	16 0 0	38 3 0
3a	37 2 0	23 3 0	36 2 0	10 1 3	11 22 73	35 17 74	21 13 2	44 8 6
3b	31 7 0	11 9 0	26 6 1	4 3 1	14 10 74	34 33 68	21 13 0	37 21 5
4a	34 5 0	21 0 0	33 2 0	8 0 0	13 6 2	39 16 0	24 14 0	40 5 0
4b	27 10 0	18 10 0	33 10 0	10 2 0	10 8 6	37 32 5	14 10 0	51 36 0

- ¹ Densities multiplied by 100. First number in each of the 64 cells indicates power reputation, second number confirmed information transfer from column position (sender) to row position, and third number indicates coalition density.
- ² In figure 2, position A=4b, b=3a, C=1a, c=1b, D=2a, E=4a, F=2b.

Appendix Table A3

Densities¹ between 8 German Power Structure Positions²

	1a	1b	2a	2b	3	3a	3b	3c
1a	27 28 31	30 3	46 11 16	19 1 7	6 2 1	36 6 4	39 4 0	20 0 0
1b	21 4 30	32 10 72	48 6 12	25 4 4	6 4 3	40 6 6	46 2 2	12 4 1
2a	28 4 16	40 7 12	59 18 39	26 9 48	13 5 1	54 18 4	52 5 1	20 7 0
2b	31 2 7	35 4 4	55 9 48	28 11 65	13 1 0	57 10 3	50 2 1	17 1 0
3	22 2 1	31 3 3	49 7 1	22 0 0	13 19 17	52 19 4	40 3 0	19 10 0
4a	28 6 4	38 6 6	61 16 4	29 7 3	22 15 4	64 34 1	47 5 0	16 8 0
4b	18 6 0	30 3 2	53 10 1	23 3 1	7 1 0	45 7 0	39 3 0	22 3 0
4c	12 5 0	22 4 1	60 7 0	29 1 0	15 9 0	37 10 0	44 2 0	20 3 0

¹ Densities multiplied by 100. First number in each of the 64 cells indicates power reputation, second number confirmed information transfer from column position (sender) to row position, and third number indicates coalition density.

² In figure 1, position A=2a, a=2b, B=4a, C=4b, D=1b, d=1a, E=4c.

Appendix Table A 4

Densities¹ between 8 Japanese Power Structure Positions²

	1a	1b	1c	2a	2b	3	4a	4b
1a	54 15 5	21 10 0	19 10 0	23 10 2	20 9 4	5 8 2	7 2 2	7 2 11
1b	41 4 0	19 12 0	13 0 0	13 7 0	16 1 0	0 1 0	1 0 0	0 0 0
1c	35 8 0	11 4 0	39 13 0	18 1 0	27 3 0	5 0 0	8 0 0	9 0 0
2a	34 11 2	7 4 0	22 1 0	20 6 3	14 2 4	0 2 2	1 1 0	3 2 0
2b	57 11 4	17 4 0	20 4 0	32 6 4	35 8 25	16 5 12	20 0 0	20 0 0
3	40 9 2	12 1 0	22 1 0	24 3 2	27 3 12	3 4 4	7 1 0	7 0 0
4a	36 6 2	11 1 0	18 3 0	18 1 0	15 0 0	6 1 0	1 2 1	4 3 3
4b	41 8 11	13 2 0	27 0 0	23 3 0	13 0 0	1 0 0	1 2 3	6 12 64

¹ Densities multiplied by 100. First number in each of the 64 cells indicates power reputation, second number confirmed information transfer from column position (sender) to row position, and third number indicates coalition density.

² In figure 3, position A1=1a, A2=4b, B=1c, C=2a, D1=2b, D2=3, E=1b, F=4a.

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