International institutions in a functionally differentiated world society

Book section

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1. Introduction

In their introduction to this volume, Mathias Albert, Barry Buzan and Michael Zürn suggest that long-term structural change in the international system can be analyzed in terms of the interaction between, and relative importance of, three different forms of social differentiation: segmentary, stratificatory and functional (see also Buzan and Albert, 2010). IR scholarship traditionally focuses on what sociologists would see as the result of segmentary differentiation, namely systems or societies of states, while paying attention also to stratificatory differentiation because of the role of great powers, superpowers and empires. According to prominent system theorists, this spatially differentiated political system should be seen as embedded in a "world society" that is itself primarily differentiated along functionally lines (Luhmann, 1971). According to Niklas Luhmann, only the political system and the legal system are differentiated spatially in the form of states;[1] all other systems "operate independently from spatial boundaries. Precisely the unambiguous character of spatial boundaries makes it clear that they are not respected neither by truths nor by diseases, neither by education nor by television, neither by money (if the need for credit is considered) nor by love." Luhmann added that "The importance of spatial boundaries lies in the interdependencies between the political and the legal system on the one hand and the other functional systems on the other" (Luhmann, 1997: 166-167).[2]

This chapter examines one specific aspect within this broader theme: the role played by international institutions in the relationship between different forms of differentiation in world

[1] A study that qualifies this position and identifies trends towards a decline of the primacy of territorial-segmentary differentiation even in the political system and the legal system of world society is Albert (2002; specifically p. 325, 337-338).

[2] See also Luhmann (2000: 220-227). Translations from sources in German are by the author.

society. The focus is on "designed" institutions, or what Buzan (2004: 161-204) refers to as "secondary institutions". Various arguments concerning that role can be developed. One argument is made by Albert, Buzan and Zürn in the introduction to this volume: international institutions are a reflection of the (growing) functional differentiation of the global *political* system, which allows the globalization of other functional subsystems such as the economy, science, art and law. This could mean that international institutions reduce barriers to informational or material flows between similar subsystems in different "segments"; or, more radically, it could mean that international institutions promote the emergence of certain types of functional differentiation in the first place, specifically by acting as mechanisms of diffusion from world regions where the relevant functional boundaries are already established to the regions where they are fuzzier or absent. A second argument is made by Richard Münch in his chapter in this volume: international institutions such as the WTO promote the empowerment of actors who pursue the specific interests and values of individual functional subsystems, notably the economy, and the disempowerment of actors, such as national governments and political parties, who pursue more general goals. A third argument is that international institutions replicate and "internationalize" tensions between legal norms linked to different subsystems, producing a variety of "regime collisions" (Fischer-Lescano and Teubner, 2004).

All these arguments deserve careful theoretical and empirical analysis. But this chapter will examine a fourth line of argument: international institutions address, and can contribute to solve, the tensions between the "demands" of different functional subsystems. Sociologists sometimes distinguish between "social integration", which concerns how actors relate to each other, and "system integration", which concerns how different social subsystems relate to each other (Lockwood, 1964). Most research on international institutions focuses on a particular form of "social integration", that is, the role played by international institutions in the interaction between states, for instance as facilitators of bargaining, enforcement and socialization. This is certainly not surprising, since states are crucial in creating "secondary" international institutions and in securing the conditions of their survival. As a result, much is known about how international institutions can reduce conflict and promote cooperation among states; but less is known about how, indeed whether, international institutions may affect the tensions that characterize a functionally differentiated world society.

The chapter thus has three aims. The first is to explore what it would mean for an international institution to promote "coordination" between functional subsystems *in addition to* coordination between social segments in the political subsystem, i.e. states. The second is to suggest some of the mechanisms through which that may happen. The third is to illustrate how such mechanisms may operate in practice by discussing the case of the international sanitary conferences in the nineteenth century. If these mechanisms can be detected at such an early stage of international institutionalization, they can be expected to be even more significant in later periods, when more robust international institutions exist and are managed and promoted by international organizations that are capable of autonomous agency.

2. International institutions and intersegmentary coordination

Since the late nineteenth century, governments have negotiated and ratified a number of international sanitary conventions aimed at regulating the surveillance and control of infectious diseases spreading across borders. The latest of these sanitary conventions, the 2005 version of the International Health Regulations, is a legally binding treaty that obliges states to notify to the World Health Organization outbreaks of diseases of potential international relevance, prescribes some measures to limit their spread across borders, and proscribes others. Why did states adopt these international sanitary conventions and hereby empower international organizations to perform certain tasks?

A standard rationalist explanation in international relations theory would run along the following lines. Restricting travel and commerce between two or more countries with the aim of preventing or reducing the spread of infectious diseases across borders is likely to generate economic costs for all countries. However, when an outbreak of an infectious disease is reported in the territory of a state, the authorities of the other countries may believe that the cost to their economies would be offset by the health (and possibly economic) gains of restricting flows of traffic with the affected country. Modern states regularly employed, and still employ, containment measures such as quarantines for ships, cargoes and passengers, requirements of "clean bills of health", trade embargoes and restrictions on the mobility of people, travel advisories against cities, regions or countries. Such measures often create very substantial economic costs. Schematically, states find themselves in the following situation of strategic interdependence: (i) every state prefers to tighten border controls if an outbreak is

reported in another state, but it prefers other states not to tighten border controls if an outbreak is reported within its own borders; (ii) each state has strong reasons to hide or downplay disease outbreaks in their territories to the other states; (iii) knowing this, each state has reason to tighten border controls as soon as it suspects an outbreak in another state. The costs of reporting and the risks of overreaction place governments in a Prisoners' Dilemma: every state would prefer a situation in which restrictions to cross-border traffic are proportionate to the true nature and severity of the outbreak; but every state must assume the worst and take measures that might disrupt cross-border traffic unnecessarily. The outcome is likely to be lack of reporting on the one hand and overreaction to rumours of outbreaks on the other hand, which is not a Pareto efficient outcome.

There are ways out of this dilemma. In principle states could reach a mutually beneficial situation by: (1) reaching agreement on what constitutes a proportionate response to an outbreak in another country; (2) committing themselves to reporting outbreaks promptly, truthfully and comprehensively; (3) committing themselves not to take measures that are more restrictive than those previously agreed; (4) possibly agreeing to transfer expertise and resources to countries hit by an outbreak, as such a "side payment" would increase the incentive to report. Crucially, these commitments would need to be credible, i.e. governments must be helped to resist the temptation to cheat. This is where global health governance comes in. Rationalist authors would argue that the surveillance system based on the international sanitary conventions and the activities of organizations such at the World Health Organization were created by states as a way to solve the Prisoners' Dilemma. Specifically, these institutions and organizations reduce ambiguity about which kinds of behaviour constitute cooperation or defection; they increase the cost of defection by defining it as a breach of binding international law; and they increase transparency and thus facilitate the decentralized sanctioning of defectors.

A number of complexities could be added to this basic rationalist explanation. For instance, flexible institutional rules can be explained by uncertainty about the state of the world, e.g. on the transmissibility of disease. The centralization of institutional tasks, e.g. the WHO's authority to declare a public health emergency of international concern, can be explained by the severity of the enforcement problem (Koremenos et al., 2001). Rationalist approaches can also account for the distribution of the benefits of cooperation: institutions will probably

reflect the states' relative bargaining leverage, which in turn is determined by their inside and outside options.

Standard rationalist approaches provide parsimonious and elegant explanations of institutionalized cooperation among states. This does not mean, of course, that they are accurate or complete. They may not be able, for instance, to explain why it took half a century to agree on a basic set of rules to deal with outbreaks. Rather than examining the question of empirical accuracy directly, however, it is useful to consider two key assumptions made by the rationalist explanation outlined above.

The first assumption is that states know what they want and rank various possible outcomes according to their contribution to an abstract metric, which is often dubbed "utility". In the account of international health cooperation given above, the fact that states pursue health goals as well as economic goals does not require further analysis: states somehow aggregate expected health gains/losses and expected economic gains/losses, and the process of commensuration – understood as "the expression or measurement of characteristics normally represented by different units according to a common metric" (Espeland and Stevens, 1998: 315) – does not need to be theorized further. Within a rationalist perspective, even the loss of state autonomy as a result of adopting a binding treaty can be conceptualized as a "sovereignty cost" (Abbott and Snidal, 2000), which is weighed against possible gains in view of increasing overall utility. Of course the assumption of unproblematic commensurability is common to rational choice theory in general.

The second assumption of the explanatory account outlined above is that states engage in negotiations with other states on the basis of goals that are defined prior to interaction and already combine health, economic and political values into a coherent utility function. In other words, the commensuration of health goals, economic goals and political goals occurs *within* individual states, and processes at the international level play no role in it.

A more specific implication of this assumption is that international institutions and organizations may help states overcome various bargaining and commitment problems, and

thus promote Pareto-efficiency in interest aggregation, but they do not contribute to the process of determining how health and economic values are weighed against each other.[3]

Questioning those assumptions has theoretical and empirical benefits. With regard to the first assumption, the possible tension between economic, health and political values in the control of infectious diseases highlights the analytical gains of focusing on functional differentiation as a key feature of modern society. If the health system and the economic system are conceptualized as autonomous domains guided by different values and primarily oriented at asserting those values with little regard for the concerns of other systems, then the ability of the political system to take into account and possibly reconcile those values cannot be taken for granted and needs to be assessed explicitly.

With regard to the second assumption, it can be reformulated as stating that the political problems stemming from conflicts between the imperatives of different functional subsystems are resolved *within* each segmentarily differentiated unit, i.e. each state. Beyond the national level, mechanisms of coordination between "segments" (negotiation between sovereign governments) are more important than mechanisms of coordination between functional subsystems (tensions and adjustments between functional values and interests, for instance health and wealth). The starting point of my argument is that this should be treated as a hypothesis rather than an assumption, which should be considered together with the opposite hypothesis: politically relevant tensions between different functional subsystems are transposed, and possibly resolved, at the international level. A more specific hypothesis is that the role of international institutions need not be limited to facilitating agreement between governments with clearly defined goals, i.e. "intersegmental" coordination; they can also promote "interfunctional" coordination and limit the negative externalities that subsystems may otherwise produce for one another.

3. Functional differentiation and institution-enabled coordination

I do not take the "communicative turn" (see Stetter in this volume) and instead, following Max Weber's (1922) lead, I include actors in the definition of functional differentiation.[4]

[3] Rational institutionalism "takes states' conceptions of their interests as exogenous: unexplained within the terms of the theory" (Keohane, 1993: 285).

[4] The adjective "functional" is unfortunate as it may suggest that the emergence and persistence of action orientations are *explained* by the fact that they are necessary for the reproduction of the system as a whole. "Sectoral differentiation" would be a more neutral term that does not carry such connotations. Buzan and Little

Following Uwe Schimank's (2005, 2006, 2007) actor-theoretical conceptualization, social subsystems consist of generalized action orientations that constitute reciprocal expectations between actors. Three types of action orientations can be distinguished (Schimank, 2005: 85): (a) cognitive orientations, which define the "what is" dimension of social reality through patterns of perception, cognitive maps, interpretative frameworks, and related mechanisms; (b) normative orientations, which define the "what should be" dimension of social reality through institutionalized norms and role expectations; and (c) evaluative orientations, which define the "what I want" dimension through generalized goals and principles of rationality. In each societal subsystem, action orientations can be seen as structured by the binary codes identified by Luhmann (true/false for science, legal/illegal for law, powerful/powerless for politics, etc.). The positive value of the binary code provides actors with the most general evaluative orientation, which is complemented by subsystemic "programmes" that consist of more specific evaluative components as well as cognitive and normative orientations. Schimank argues that the clusters of cognitive, normative and evaluative orientations that constitute social subsystems are "simplifying abstractions" of specific social situations. These abstractions are recognized as "fictions" by the social actors themselves, but they are effective as they represent self-fulfilling prophecies that push a specific social situation to conform to the relevant abstract logic of action of a certain societal subsystem (Schimank, 2005: 88-94).

What are the consequences of functional differentiation? Max Weber described them in dramatic terms: functional differentiation results in a "polytheism" in which "different value orders of the world are in an unsolvable struggle with each other" (Weber, 1919/1988: 603). This struggle unfolds within individuals, but also at the level of social groups and organizations. In other words, the tension between social subsystems occurs within actors and between actors.

One first basic consequence of functional differentiation is that actors are endowed with roles that induce them to focus on certain cognitive, normative and evaluative orientations and neglect others. An example of this indifference relates to the international trade/health interface discussed in sections 2, 4 and 5 and is described succinctly by Richard Smith, Kelley Lee and Nick Drager (2009: 770): "Those involved in health tend to consider trade from the

(2000: 72-77), for instance, refer to "sectors", and Albert and Buzan (2010) explore the relationship between sectors and functional differentiation. Since the expression functional differentiation is ingrained in scientific usage, even in works that reject the functional explanation just mentioned, it will be retained here, in line with the convention adopted in this volume.

perspective of health system and population health effects, with the objective of maximising health indicators such as life expectancy, with little regard for indicators of interest to the trade agenda. Conversely, those involved in trade consider health as a potential barrier to trade, with the objective of maximising economic indicators, such as gross domestic product. Predictably, little attention is given to indicators of interest to the health agenda."

In many cases, we can justifiably talk of "tensions" rather than mere "indifference" or "disregard", because actions oriented to the logics of a certain subsystem may interfere and thwart actions oriented to the logics of a different subsystem. To refer to an example that will be considered in greater depth in later sections, policy measures deemed "necessary" from a medical perspective may clash with measures aimed at promoting economic goals.

However, the presence and intensity of such tensions is a variable, not a constant. Tensions are not inevitable or irresolvable because of two reasons, one of which operates within actors and the other between actors. At the intra-actor level, it should be noted that both the interruption of positive externalities and the production of negative externalities across subsystems depend on *actions*, and actions are rarely guided by "pure" subsystemic action orientations. Actors are not usually "monomaniacally" fixated on the demands of one of their roles. Individuals and group agents (organizations) routinely trade-off values and aggregate different kinds of judgements, although the process can be psychologically demanding because of "cognitive incommensurability", "constitutive incommensurability" and other problems (Tetlock at al., 1996; Tetlock, 2000). The capacity to aggregate values, norms, judgements, and if necessary weight them against each other, varies significantly across actors and contexts.

At the inter-actor level, even if we were to assume that individual or collective actors are exclusively or – more plausibly – primarily oriented towards a particular subsystemic code, this does not entail that actions guided by different normative, cognitive and evaluative orientations will necessarily clash. We can follow Schimank (2005: 199-219) and distinguish between "general orientation agreement" and "specific interest agreement".[5] Disagreement between actors can have two different causes: one the one hand, the fact that they may observe different aspects of an issue; on the other hand, the fact that they may assess differently the same aspect of an issue. The first situation produces a disagreement over relevance, the second produces a disagreement over claims (statements of fact, evaluations or

[5] For a different but related distinction between two kinds of agreement see List (2002)..

demands). Schimank uses this distinction between disagreement over relevance and disagreement over claims to identify two types of agreement between actors: they may interpret the situation in which they find themselves on the basis of the same general cognitive, normative and evaluative orientations (general orientation agreement); or they may agree on who among them should satisfy which interest to what degree in a given situation of interdependence (specific interest agreement). Crucially, specific interest agreements are feasible also among actors who have no general orientation agreement, and specifically among actors that follow a variety of logics of action that are specific to different functional subsystems.

An important aspect that is not noted by Schimank is that in some case actors may find it easier to reach specific interest agreements with actors with whom they have no general orientation agreement, than with actors with whom they share the same cognitive, normative or evaluative orientation. For instance, the next section shows that, in the nineteenth century, physicians oriented to the same medical-scientific code disagreed vehemently on a key substantive issue, namely the transmissibility of cholera, and many physicians denying it cooperated with commercial actors to pursue a shared objective, the elimination of quarantines. In other words, intersectoral coalitions can be expected to occur frequently, especially when general orientation agreement fails to produce a specific interest agreement within that subsystem. More generally, there is no reason to suppose that conflicts of interest and contentious action are more likely "between" functional subsystems than "within" them (consider the conflict between workers and capitalists about economic gains or the conflict between religious communities about salvation).

Both coordination modalities discussed thus far - the capacity (and willingness) to aggregate and weigh heterogeneous action orientations, and the existence of specific interest agreements despite general orientation disagreement – can emerge "spontaneously"; but they can also be "induced". There are a number of ways in which actions primarily oriented to the logic of a given subsystem can be influenced in such a way as to reduce its negative impacts on the effectiveness of actions oriented to other subsystems. For instance: (A) Forms of "reflexive self-regulation" may sensitize actors to the consequences of their actions beyond subsystemic boundaries. This may be facilitated by organizational features of a given subsystem: for instance, a central medical association may increase its members' interest in the economic consequences of medical interventions. (B) The political system may actively promote – but

not impose – trans-systemic deliberation and coordination through "context steering" (Teubner and Willke, 1984). (C) The political system may attempt to control subsystemic externalities through the traditional instruments of "political steering", such as coercive regulation and resource transfer (Mayntz and Scharpf, 2005; Lange and Braun, 2000).

Moving on to the more specific theme of international institutions, they can affect intersystemic coordination through more than one route: they can promote reflexive self-regulation; they can promote trans-systemic deliberation and coordination; or they can influence how other political actors, notably governments, use their powers of coercive regulation and resource transfer. In other words, they can have intra-actor as well as inter-actor effects.

At the microlevel, international organizations can modify action orientations and they can create opportunities for the identification of specific interest agreements. These two modalities are often combined in practice, but for analytical purposes they will be considered separately. Opportunities for specific interest agreement can be provided through institutional contexts that facilitate communication and deliberation between actors with different subsystemic orientations. By communicating with each other, these actors can inform each other about what Schimank (2005: 214-217) calls their respective "reflexive interests", i.e. their interests in the general conditions for the realization of specific substantive interests. Actors can then use this information to discover specific interest agreements and negotiate the terms of coordinated action to realize them. The result of this process can be the emergence of an *intersystemic coalition* for the pursuit of specific goals. Action orientations do not need to change for this to occur.

But action orientations themselves can be modified. This can be done by (a) increasing the integrative complexity of actors and (b) framing the issues. With regard to the former mechanism, functional subsystems can be seen as "islands of low complexity" (Luhmann, (1967) 2005: 147), which address the anthropological need of coping with the extreme complexity of the world – even if this effect of differentiation is not necessarily also its cause. *Pace* Schimank (2005: 210-212), actors normally retain and in certain circumstances increase their capacity to take into account multiple subsystemic logics. Political psychologists define *integrative complexity* in terms of two cognitive structural properties: differentiation and integration (Suedfeld et al., 2003). Differentiation refers to the number of perspectives,

characteristics or dimensions of stimuli (which may be problems, events, theories, policies, etc) that an individual or group takes into account. Integration refers to the perception of connections among those differentiated perspectives, characteristics or dimensions; these connections can take the form of trade-offs between alternatives, a synthesis that combines them, or an overarching contextual structure. For our purposes it is crucial that integrative complexity varies not only across individuals or groups but also as a result of a wide range of situational factors (Suedfeld et al., 2003). Two related factors are especially relevant. First, integrative complexity is often enhanced when actors feel *accountable* to an audience for their position, for instance when they expect to have to discuss their ideas with peers whose opinions they do not know, or with experts (Lerner and Tetlock, 1999). Second, *groups* can display higher integrative complexity than any of their individual members, as a result of discussion and information sharing (Gruenfeld and Hollingshead, 1993). In sum, certain organizational contexts increase the capacity of actors to integrate multiple subsystemic logics in their actions, and international institutions can provide such contexts.

Action orientations can also be affected by *framing*. Partly in contrast to mechanisms that promote integrative complexity, frames facilitate the management of multiple subsystemic logics by *restricting* the range of interdimensional connections that actors actually consider. Specifically with regard to the evaluative dimension of action orientations, this restriction can take the form of value prioritization or value hybridization. Frames can promote *value prioritization* through at least three mechanisms (Nelson and Willey, 2001): policy labelling and categorization, which consists of the assignment of novel objects to familiar categories; goal ranking, which may create a lexicographic hierarchy among subsystemic values;[6] and institutional role assignment, which allows for the acceptance of local (organizational) value hierarchies that may be different from the actors' global value hierarchies. On the other hand, frames can promote *value hybridization* by highlighting synergies in the pursuit of different subsystemic values.

While modifying action orientations and creating opportunities for specific interest agreements can be separated analytically, in practice they are usually combined. This can be illustrated with reference to the history of international health cooperation and the institutions created to promote it since the mid-nineteenth century. David Fidler uses the term "source code" to describe the complex of motives that have produced action on global health issues in

[6] Value prioritization sometimes involves "taboo trade-offs", i.e. trade-offs that people refuse to contemplate, which is also known "constitutive incommensurability" (Tetlock, 2000; Tetlock, 2003).

different periods, and summarizes them as follows: "The initial source code [in the 19th century] was State-centric and reflected predominantly trading interests of the great powers. WHO's establishment after World War II added human rights to the source code in the form of the right to health. Later efforts to address HIV/AIDS deepened the human rights content of the source code. The last decade has seen health motivations related to security and development, as well as renewed emphasis on health's importance to the economic interests of States and non-State actors" (Fidler, 2007).

It can be hypothesised that, in each of the periods highlighted by Fidler,

1. a process of value hybridization took place, which combined cognitive, normative and evaluative orientations from different social subsystems;
2. this process depended on a sufficient level of integrative complexity, which allowed actors to perceive that different dimensions could and should be synthesised, and on a degree of framing, which allowed for specific modes of synthesis to be selected and accepted by a substantial proportion of relevant actors;
3. the process was intentionally induced in order to stimulate cross-sectoral coalitions of actors, such as public health experts and military planners in the case of the securitization of AIDS; in other words, framing strategies were used to highlight specific interest agreements, and in turn specific interest agreements promoted framing effects;
4. international and transnational instititutions/organizations such as the World Health Organization, the World Bank and the Rockefeller Foundation played a role in creating the conditions for this process to occur, as actors and/or as forums.

The rest of this paper focuses on point (4). Scepticism about the role of international institutions could be based on the argument that the processes described under (1), (2), and (3) do indeed routinely take place, but exclusively within states. This argument would expect that, through framing and other processes, specific interest agreements are forged *within* states, and then state representatives try to promote the "national interest" by bargaining with other state representatives over the content of common policies. In this view, international institutions have a role in promoting "social integration" (between state actors), but not "system integration" (between functional subsystems). The remainder of this chapter assesses this sceptical argument in the light of the interface between health, trade and politics in nineteenth-century Europe and the early international sanitary conferences.

4. The health/trade/politics interface in the nineteenth century

This section and the next examine the interface between health, trade and politics in nineteenth-century Europe, at the outset of "Westphalian" international health cooperation. Because of the absence of IOs and relatively low levels of formal institutionalization, nineteenth-century developments constitute a "hard case" for the hypothesis that international instititutions play a role in promoting not only "social integration" but also "system integration".

The focal issue of the analysis is *mobility* of people and goods across borders, and how it was seen in the context of three different social subsystems – politics, economy and health. By the early nineteenth century, these three sectors had already attained a high degree of autonomy, and the issue of mobility played an important part in those processes of differentiation. Increased interaction beyond the boundaries of local communities played an important part in the emergence of the economy as a functionally differentiated subsystem. In closed communities, the exchange of goods and services is tightly regulated by communal norms of solidarity and respect for social stratification. Contact with strangers unleashes a different dynamic, as with them the key criterion for economic interaction becomes personal utility and the ability to pay (Münch, 1990).

The 1820s were a "watershed" in the evolution of the world economy. Both commodity markets and factor markets became considerably more integrated, partly as a result of a world-wide transport revolution. Within the economic system, the mobility of people and goods is evaluated in terms of their effect on income opportunities. Classical economics developed a positive evaluation of open economies and this influenced the cognitive orientations of actors in the economic system. But mobility, both in the form of trade and in the form of migration, generated (and generates) economic losers as well as winners, which explains why significant disagreements persisted within the economic system on the evaluative assessment of mobility.

Health can be considered as a distinct functional subsystem based on the binary code "ill/healthy" (Luhmann, 1983a, 1983b, 1990).[7] The differentiation of health as a social system is linked to two interrelated processes (Field, 1973, Bauch, 1996). On the one hand, the separation of the role of physicians from the role of priest/magician and the professionalization of former. In fourteenth-century Italy, medicine was already an institutionalized profession based on degrees conferred by universities and organization in guilds (Biow, 2002). The process took longer in other European countries and was largely concluded by the early nineteenth century (Bauch, 1996). The second process was the increasing reliance of medical practice on scientific knowledge, which gradually replaced religion as the key supporting code. The scientification of the health system was a key aspect of its professionalization, as it strengthened physicians in their claim to monopolize key aspects of health care.

As with the economy, the issue of mobility of goods and people is closely linked to the process of differentiation of health as a social subsector. Medical expertise was institutionalized by having medical doctors as members of boards of health convened after the fourteenth century by Italian princes in response to outbreaks of plague (Salter, 2003: 50-55). A key task of these boards of health was to make decisions about restricting movement of the population. In the fourteenth and fifteenth centuries, medical opinion was divided over whether the plague was spread by person-to-person contact or carried by "bad air", but belief in the need to isolate sufferers became increasingly widespread. The movement of people was perceived as a threat to public health, and from the 1420s an increasing number of cities implemented travel bans and quarantines (Carmichael, 1983).

However, medical opinion was never unanimous on the question of whether and how interpersonal interaction and mobility contributed to disease, and opinions started to diverge considerably in the eighteenth century. Certain diseases, such as smallpox and syphilis, were widely considered contagious from ancient times, especially thanks to the "contagionist" doctrines of the Old Testament. But the contagionist perspective was often challenged by "localist" interpretations of the origins of diseases, according to which they were caused by a range of environmental conditions, both natural (e.g. the climate) and subject to human influence (e.g. filthy and crowded living conditions, stagnant water). In the contagionist view

[7] In this chapter I adopt a simplified conception of the health system that neglects important aspects of the relationship between medicine, medical organizations, and health science. On that bundle of issues see Vogd (2005). See also Schimank (2006: 128-130).

of etiology, human mobility was perceived as a primary determinant of ill health, and the best approach to prophylaxis was to break chains of transmission by interrupting the circulation of carriers. In the localist view of etiology, mobility played a subordinate or no role, and the best approach to prophylaxis was to create hygienic living conditions and specifically to improve housing, sanitation, sewerage, drainage, food and personal habits. There was no strict dichotomy between contagionism and localism, however. With regard of the three diseases that triggered most debate in the nineteenth century, plague, yellow fever and cholera (there was wide agreement on the contagious nature of diseases such as measles, smallpox and syphilis), most medical experts accepted intermediate positions between the two polar interpretations and combined elements of both (Ackerknecht, 1948; Harrison, 2006: 198-205; Baldwin, 1999: 2-10).

The controversy on contagionism vs localism became especially acute in the nineteenth century, mainly because of cholera. This disease had traditionally been limited to areas of the Indian subcontinent, but it spread globally in the early nineteenth century as a result of a number of factors, notably the movement of British troops, improvements in transportation, and the intensification of mass migration. This first cholera pandemic took place between 1817 and 1823, and was followed by other five global pandemics in the following hundred years (Lee and Dodgson, 2000). The impact of cholera on mortality differed considerably among world regions. According to Watts (1997: 167), cholera claimed 130,000 lives in Britain during the nineteenth century, while the six cholera pandemics killed more than 25 million people in India. It is noteworthy that most debates of the International Sanitary Conferences revolved on how to protect Europe from the "Asiatic" disease.

Throughout the nineteenth century, physicians and medical experts engaged in intense debates over the etiology and prophylaxis of cholera, displaying a range of opinions between one extreme – cholera is transmissible and can be prevented by restricting mobility – and the other – cholera derives from local environmental conditions (poor housing, inadequate sewerage, poverty, etc) and specifically from "miasma" (poison arising from decaying vegetal or animal matter), with mobility playing little or no role.

The political system plays a privileged role with regard to mobility, as its focus on territorial control traditionally required it to establish borders and determine their porosity, and it controls the coercive apparatus needed to restrict mobility. In the transition from medieval to

modern Europe, states monopolized the right to authorize and restrict the physical movement of people, which previously was diffused among a range of religious and secular authorities (Torpey, 2000). This right was expressed in legal doctrines such as *ne exeat regno* and concretized in identification tools that gradually evolved into "passports" and "visas. The restrictive trend of previous centories was reversed during the nineteenth century, which was "a period of extraordinary freedom of movement" in Europe (Torpey, 2000: 56). Between 1843 and 1889, passports were eliminated in France, Belgium, Spain, Germany, and Italy (Salter, 2003: 102). Even though the United Kingdom did not formally abolish the requirement of passports, control was so limited that in 1872 the British foreign secretary, Lord Grenville, could say that "by the existing laws of Great Britain all foreigners have the unrestricted right of entrance into and residence in this country" (Torpey, 2000: 91).

Because of the control that the political system claims to exercise on borders, actors who derive their cognitive, normative and evaluative orientations primarily from the health subsystem or from economic subsystem often directed expectations and demands to the political system. In the face of the nineteenth century cholera pandemics, contagionists usually expected political authorities to break chains of transmission through a wide range of measures restricting mobility: forced hospitalization, isolation and sequestration of the ill, quarantines, *cordons sanitaires* around districts, towns, regions and countries. In order words, they often (but not always) advocated a "quarantinist" position, while their medical opponents pointed at the futility of restrictive measures and supported "sanitationist" measures instead: public programmes aimed at improving personal hygiene, living conditions and sewage systems, and at alleviating poverty. Actors with an economic interest in open borders and free circulation of goods and people, on the other hand, expected the political system to limit restrictions to mobility to an absolute minimum. The conflict among these contrasting perspectives manifested itself from the first outbreak of cholera in Europe. Russia, Austria and Prussia responded to the first pandemic with a raft of strict quarantinist measures, triggering the opposition of mercantile and commercial interests (Baldwin, 1999: 65). In turn, contagionists attacked "the middle and commercial classes, the trading interests whose self-serving ambitions subordinated the common epidemiological good to their own striving for unfettered commercial exchange" (Baldwin, 1999: 74-75). Commercial interests mobilized against quarantines also in other European countries, notably in France and Britain.

In general, commercial circles objected to stringent quarantinist measures, while many – but by no means all – medical professionals favoured limitations to mobility. But the picture was considerably more complex, for two reasons. First, important sectors of both the health circles and the commercial circles questioned mainstream "interpretations" of the impact of quarantines of health values and economic values. As noted above, many physicians denied that cholera was transmissible and saw little or no value in quarantinist policies. Even in Britain, where commercial interests were most vocal in opposing quarantines, some traders realized that the abolition of quarantines in Britain would be detrimental to their interests if other countries responded by restricting shipping from British ports (Baldwin, 1999: 97-98, 120, 205).

Second, neither medical nor economic actors formulated expectations and demands purely with reference to their own subsystemic binary code, but incorporated other values in their communications. For instance, an 1831 report on cholera by the French Academy of Medicine rejected quarantines and cordons within the country also on the grounds that it would have hampered economic activity and increased misery (Baldwin, 1999: 110).

The concurrence of health, economic, and political arguments in the debate on cholera may be interpreted as a negation of the autonomy of subsystemic communication. Erwin Ackerknecht interpreted the clash between contagionist and anticontagionist in light of the political belief of the participants: "Intellectually and rationally the two theories balanced each other too evenly. Under such conditions the accident of personal experience and temperament, and especially economic outlook and political loyalties will determine the decision. These, being liberal and bourgeois in the majority of physicians of the time brought about the victory of anticontagionism" (Ackerknecht, 1948: 589, emphasis removed). In this interpretation, "[a]nticontagionists were […] not simply scientists, they were reformers, fighting for the freedom of the individual and commerce against the shackles of despotism and reaction" (Ackerknecht, 1948: 567).

However, the superimposition of subsystemic orientations is not the only possible explanation of the fact that scientists and physicians appealed to commercial arguments, and that commercial interests lent their support and helped propagate a scientific theory. It could also stem from awareness of "specific interest agreements", as it has been discussed in the previous section, and the resulting incentive to seek cross-sectoral alliances. A leading British

anticontagionist, Charles Maclean, expressed this motive clearly: "I am rather at a loss to conceive how their being injurious to commerce could, in a commercial country, be regarded as an argument against seeking the abolition of otherwise pernicious establishments […] For my part, far from thinking it culpable to have availed myself of the support of commerce in combating the ridiculous but very pernicious dogmas of medical schools […] I am very free to confess that I have, upon this occasion, diligently sought to range every interest, over which I could exercise the smallest influence, on the side of truth" (quoted by Ackerknecht, 1948: 591).

These considerations suggest that, whether because of genuine merging of subsystemic codes or because of specific interest agreements, the promotion of health goals was always discursively connected to other goals. The way in which the connection occurs varies historically (Fidler, 2007).

The preceding overview should not leave the impression that in the nineteenth century governments regulated mobility during pandemics simply in response to the shifting alliances and demands of medical and commercial circles. A key concern was the maintenance of public order. When cholera made its first appearance in eastern and central Europe, the quarantinist measures hastily put in place by the authorities sparked a wave of unrest, riot and rebellion, which caused the most drastic policies to be abandoned. The British authorities in India refrained from quarantinist regulation of pilgrimages for fear of causing unrest among Muslims as well as Hindus (Baldwin, 1999: 59-65, 121, 236). On the other hand, the need to assuage a concerned "public opinion" – specifically the mass of people who neither travelled nor traded across international borders – was often cited by policy makers as an obstacle to the relaxation of quarantine provisions (Baldwin, 1999: 198-201). Also geostrategic concerns played an important role in quarantine policies, which emerged most intensely in the controversy over quarantines requirements for (mostly British) ships transiting the Suez Canal.

Throughout the nineteenth-century most European governments adopted more or less stringent quarantine regimes, with disruptive consequences on international traffic. The only countries that systematically avoided intrusive quarantinist approaches were the Netherlands and Britain, while France was split between generally quarantinist Mediterranean ports and

non-quarantinist Atlantic ports. Central and local authorities frequently changed politics and regulations, which added to the discomfort of passengers and to commercial losses.

5. The international sanitary conferences

The first proposal to convene a conference of delegates from various European countries in order to discuss the issue of quarantine arrangements in Mediterranean ports was made by the French government in 1838. Britain responded positively to the proposal and supported successive attempts by the French government. A conference was finally convened in Paris in 1851, with the participation of delegates from twelve European states. Eleven more international sanitary conferences took place between 1859 and the outbreak of World War I. The fifth conference, which met in Washington in 1881, was the first one to involve an extra-European state.

Rather than presenting a chronological summary of the discussions and decisions that took places in these conferences, I will highlight the features of these conferences that are most relevant for the relationship between segmental differentiation and functional differentiation in world society.[8] To reformulate the questions mentioned in the introduction: did the conferences consist merely of an attempt to coordinate predefined "national" interests in which health, economic and political goals were already reconciled? Or did they also contribute to easing tensions between functional subsystems?

At least four considerations support the interpretation that segmentary differentiation was clearly predominant in the international health conferences. First, the international sanitary conferences were very different from the international scientific conferences that also emerged and proliferated in the nineteenth century. Participants were selected by governments according to political criteria, not purely on the basis of scientific reputation or with the aim of representing a spectrum of opinions held by members of the scientific community in each state. In other words, they were not simply members of an "epistemic community".

[8] Space restrictions prevent me from addressing the dimension of *stratificatory differentiation*, although differences in power and status played an extremely important role in how European governments related to Egypt, Persia, the Ottoman empire and other states during the conferences, as well as the crucial relationship between European imperial metropoles and extra-European colonies. On these aspects, see Watts (1987) and Aginam (2003).

Second, the delegates were authorized and expected to negotiate international agreements on quarantines, inspections, and other policies that may have had an impact on international mobility. In accordance with most sources of international law, such agreements were not binding unless they were ratified by the participating states, and indeed often states failed to ratify sanitary conventions adopted by conference delegates. For instance, the delegates to the 1851 conference adopted a draft Sanitary Convention and annexed draft International Sanitary Regulations consisting of 137 articles, but only France and Piedmont-Sardinia ratified them (and the latter withdrew a few years later) (Howard-Jones, 1975: 15).

Third, concerns about sovereignty posed a powerful, albeit often implicit, constraint on the range of solutions that were considered by the delegates. For instance, at the 1881 conference the US delegation proposed that states should have the right to inspect foreign ships not only on arrival, but also on departure from their home ports, through their own consular officials. This form of "extraterritorial jurisdiction" was rejected by the other delegations as an infringement of sovereignty. This caution extended also to lesser "intrusions": when at the 1866 conference it was proposed that an international scientific commission should be sent to study cholera where it originated, the British delegation protested that this would have infringed the sovereignty of states with possessions in India (Howard-Jones, 1975: 31, 43-44). However, European delegations had few qualms about limiting the sovereignty of extra-European countries, such as Egypt, Persia, and the Ottoman empire.

Fourth, and crucially for the aims of this chapter, the question arises whether the delegates approached the conference with clearly defined "national positions", which reflected a domestically attained weighing and aggregation of different values – specifically economic, health, and political values. If this was the case, the conferences may have helped coordination between "segments", i.e. states, but not between "functional subsystems". There are strong reasons for answering that question in the affirmative. Delegates often defended positions that reflected nationally specific trade-offs between different values and other domestic conditions. This is most clearly the case of the British delegates, who most consistently advocated the abolition or at least the relaxation of quarantinist policies (although Britain itself continued to apply them is some circumstances: Baldwin, 1999: 150). This consistency is explained by the combination of two factors: one the one hand, a high proportion of British physicians and scientists tended towards anticontagionism and thus expressed little or no support for quarantines. On the other hand, commercial interests had a

disproportionate influence over the British government compared to most continental states and thus the pressure *against* quarantines was especially powerful. It is hardly surprising, then, that British delegates pursued a range of antiquarantinist objectives in all conferences.[9]

On the other hand, several aspects of the international sanitary conferences suggest that they did not operate merely as forum for the attainment of interstate cooperation, but also as a forum where the concerns of functional subsystems could be considered and possibly reconciled.

First, in most conferences delegations were composed by medical scientists as well as diplomats. This arrangement started in the first conference of 1851, to which "[m]ost countries sent two delegates, a diplomat and a physician, the former in order to ensure that political and commercial matters were given due consideration" (Harrison, 2006: 215). The relationship between diplomats and scientists was not always smooth. At the opening session of the 1851 conference, for instance, it was stated that scientific discussions had to be avoided, but in fact extensive discussions of the causes of diseases took place. "The diplomats frequently resented this lack of clarity and the battles between different scientific camps and opinions and criticized the scientists as being long-winded and impracticable" (Huber, 2006: 459-460). When a second conference took place eight years later, only diplomats were invited in order "to avoid the lengthy and unproductive debates of the 1851 conference" (Huber, 2006: 461). Medical scientists were allowed to take part in all subsequent conferences. But the relative importance of scientific, commercial and political considerations remained a source of contention. For instance, in 1888 a British observer commented that governments "are more easily affected by the impediments to the transport of troops merchandize in the ships they subsidize than by arguments addressed to scientific minds" (cited by Baldwin, 1999: 192).

Second, the procedural rules of some conferences allowed or even promoted departures from predefined "national positions". Votes on questions of science as well as questions of policy were frequently taken. In the first and third conference, it was agreed that each state would be entitled to two votes, but that voting should be by individual delegate rather than by country. As a result, it often happened that two delegates of the same country would vote in opposite

[9] Additional reasons are that Britain was protected by its geographical position and that it had stronger administrative capabilities to control and manage infected individuals within the country and not only at the borders (Baldwin, 1999: 211-226, 236-243).

ways (Howard-Jones, 1975: 12). In the later conferences, however, Huber notes a "decrease of freedom of the delegates to express their opinions. In contrast to the earlier conferences, the preparatory period of the conferences of 1892, 1893, and 1894 saw the circulation of questionnaires, meetings of the representatives of different offices well before the conference, the formation and negotiation of alliances, and the issuing of very tight instructions to the delegates. The rise of modern technology not only allowed cholera to cross large distances more quickly, it also made it possible for the ministerial offices and the press to monitor the delegations and the proceedings of the conferences much more closely" (Huber, 2006: 470).

Third, the mode of interaction combined bargaining and deliberation (Risse, 2000). Deliberative attitudes were particularly evident in the technical committees set up by the general conferences, but they pervaded also contributions to plenary discussions. This required attention to be paid to a number of distinct concerns and objectives. For instance, in 1903 Foreign Office officials retorted to critics that if they had only argued the interests of shipping against quarantine, Britain would never had convinced other states to follow its lead in reducing the burdens of quarantine (Baldwin, 1999: 242). Crucially, deliberation did not only concern the most efficient or equitable way to reconcile conflicts of interests among states, but also how those interests should be defined in the first place, and specifically the weight to be given to a range of medical, economic and other considerations.

Fourth, deliberative processes within the international sanitary conferences were one of factors that produced convergence on specific policies. Since the 1870s Britain and other states increasingly adopted what Baldwin (1999) calls "neoquarantinism": this consisted in replacing quarantines with inspections and surveillance of passengers without symptoms, isolating the ill and thoroughly disinfecting persons, goods, vessels and dwellings. Such revisions were first proposed at the 1874 Vienna Conference and became the object of wide agreement in the conferences of the 1890s (Baldwin, 1999: 189-190). The principles of neoquarantinism finally allowed states to develop a range of regulations that all states could accept, a goal that had eluded them for decades: the conventions that resulted from the conferences of the 1890s were widely adopted and implemented.

6. Conclusions

The type of international institutions considered in this chapter are purposively created and supported by states. It is thus natural that the interaction they help structure takes mainly the form of a process of coordination among state interests. However, looking at world society from the point of view of different forms of differentiation, and specifically the relationship between segmentary and functional differentiation, raises the question of whether and to what extent international institutions and organizations perform the additional function of facilitating the coordination of functional subsystems. This chapter has examined the early stages of international health cooperation and has found that segmentary elements were predominant. However, it also found that the international sanitary conferences were not merely a forum where states pursued interests that reflected an already clearly defined trade-off between different health, economic and political values. The task of balancing those values was to some extent transposed to those international negotiation forums, and partly achieved through deliberative and framing processes. The fact that interest, value and knowledge coalitions cut across state borders reveals that an embryonic form of "transnational neopluralism" was already in place (Cerny 2010).

Future research could consider how the trade/health interface was addressed at crucial moments of the twentieth and early twenty-first century. On the one hand, intersystemic coordination is likely to have been facilitated by the emergence of international *organizations*, at least to the extent that those organizations had an institutional interest in promoting it. On the other hand, as Fidler, Drager and Lee (2009) have noted, today a fragmented, heterogeneous and legally undemanding global health governance complex faces a more structured, formalized and legalized trade governance complex. Whether international institutions are better at addressing the tensions stemming from functional differentiation now than in the nineteenth century is a matter that deserves further study.

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