

# Ideas and Institutions in the Field of Healthcare

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# Ideas and Institutions in the Field of Healthcare

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This paper focuses on institutional differences in the field of healthcare. By referring to institutional theory the impact of guiding ideas on healthcare systems is discussed. It is argued that ideas that have played a major role in the formative phase of the respective institution are still mirrored in the institutional set-up of today's healthcare systems. Sometimes, however, conflicting ideas have become dominant that have resulted in institutional change and have lead to the present high variety of healthcare systems. Identifying institutional variation is not an end in itself. Varying institutional arrangements should impact social action in different ways. How healthcare systems are institutionalized, for example, has a major influence on people's trust in their doctor (Calnan and Sanford 2004), on the utilization of medical services (Andersen 1995; Reibling and Wendt 2008), whether people purchase supplementary private insurance, or if private costs of healthcare are a burden especially for lower income groups (van Doorslaer, Masseria and Koolman 2006). While the importance of institutions for trust building and social behavior cannot be analyzed in this paper it might help to draw a closer link between healthcare systems and certain guiding ideas.

In the following we will briefly discuss institutionalist approaches and their importance for healthcare system research (*section 1*). On this basis we will outline institutional characteristics of healthcare systems that are especially relevant for patients' access to health services. Health systems have been institutionalized for providing access to

medical care for those in need, and therefore analyses of healthcare systems should take indicators into account that facilitate respectively constrain access (*section 2*). By using quantitative data of financing and service provision as well as institutional information we classify 20 healthcare systems with cluster analysis. In earlier work analyzing 15 European countries, three types of healthcare systems have been identified (Wendt 2009): *A health service provision oriented type, a universal coverage – controlled access type, and a low budget – restricted access type*. In the present analysis we have included further countries (Australia, Canada, New Zealand, Switzerland, and the United States). The aim is to test whether these countries follow principles similar to the ones in the EU-15 study (*section 3*). In the concluding part it will be discussed whether the different types of systems are related to different ideas in the field of healthcare (*section 4*).<sup>1</sup>

## **Ideas and Institutions**

Scholars of institutional theory in general distinguish three institutionalist perspectives: *Historical institutionalism, rational choice institutionalism, and sociological institutionalism* (Hall and Taylor 1996; Immergut 1998; Scharpf 2000; Lieberman 2002; Béland 2005). For the present paper these theoretical approaches are of importance because all three focus on the process how institutions are formed and changed as well as on the relationship between institutions and human behavior (Hall and Taylor 1996; Immergut 1998). For research on healthcare systems this relationship is critical since the way healthcare systems are institutionalized affects patients in many respects: their

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<sup>1</sup> All sections in this paper are only preliminary and two indicators for classifying the healthcare systems, that are relevant according to the analytic framework, have so far not been included in the empirical analysis.

access to service providers, their perceptions of healthcare as a “right”, and processes of trust building are, for instance, shaped by the healthcare system. The institutional set-up of health systems might, however, also set incentives of using services too often which is sometimes, and depending on the payment system, induced by physicians (Evans 1974).

Based on these considerations as well as on influential studies in this field it can be concluded that institutions matter in healthcare (see, for instance, Immergut 1992; Giaimo and Manow 1997; Steinmo and Watts 1995; Hacker 1998; Freeman 1999). Different schools of institutionalism, however, have concentrated on different aspects and emphasize different explanations *why* and *how* institutions impact on social action.

In *historical institutionalism*, institutions are defined as “the formal or informal procedures, routines, norms and conventions embedded in the organizational structure of the polity or political economy” (Hall and Taylor 1996: 938). Institutional structures of the political system create obstacles for politicians such as veto positions (Immergut 1992) but also opportunities (Béland 2005). They establish the “rules of the game” for political reform and in this context shape political behavior and outcomes (Lieberman 2002; Béland and Hacker 2004). By focusing on periodization and regimes, historical institutionalists have especially applied the concept of path-dependency for describing the origin and persistence of institutions and analyzing their influence on collective actors (Lieberman 2002; Ebbinghaus 2005). The approach so far has been mainly concentrating on institutional stability and is therefore not well equipped for explaining institutional change (Lieberman 2002). However, it does offer a broad conception for analyzing the relationship between institutions and behavior by utilizing both “calculus” and “cultural” approaches to this problem (Hall and Taylor 1996).

In *rational choice institutionalism*, in contrast, it is assumed that actor's behavior is driven primarily by a strategic calculus. Institutions reduce uncertainty about the behavior of others by "affecting the range and sequence of alternatives on the choice-agenda" (Hall and Taylor 1996: 945) and through the information they control (Tsebelis 1999). Different institutions will thus result in diverse strategies of actors and also in different outcomes of their interaction. Although acknowledging the existence of non-perfect information ("bounded rationality") a cost-benefit analysis is assumed in this model. In general it is assumed that relevant actors have a fixed set of preferences and behave "entirely instrumentally so as to maximize the attainment of these preferences" (Hall and Taylor 1996: 944f). The advantage is that it provides a parsimonious deductive model that is particularly suited for a quantitative research design.

In *sociological institutionalism*, institutions are defined not only by externally imposed and sanctioned rules and procedures but also by unquestioned routines, cognitive scripts, and moral values (Hall and Taylor 1996; Scharpf 2000). According to DiMaggio and Powell (1991) this focus on the cognitive dimension distinguishes it from other or earlier institutionalist approaches (see also Scott 1995). With its "account for taken-for-granted cultural meanings and scripts that underlie action" (Lieberman 2002: 701) sociological institutionalism seems to follow almost exclusively the "cultural" approach. In this perspective, institutions do not directly affect the strategic calculations of actors but they shape basic preferences and the very identity of individuals (DiMaggio and Powell 1991; Dierkes and Zapf 1994; Hall and Taylor 1996).

In line with Hall and Taylor (1996) we consider the historical institutionalism to be especially suited for analyzing the relationship between institutional structures and social

action since “cultural” and “calculus” approaches are both applied. Hall and Taylor (1996) have advocated a greater interchange among the three institutionalisms, and the historical approach seems to be well equipped for including advantages of the other two approaches while avoiding some of the disadvantages such as the neglect of the importance of values in the rational choice approach and the broad definition of institutions and the related difficulties of empirical measurement in the sociological approach. Despite these differences the three approaches share a common perspective and are in particular concerned with how institutions affect the behavior of individuals. This aspect is of great importance since institutions affect outcomes only through social action (Hall and Taylor 1996; Lieberman 2002; Immergut 1998).

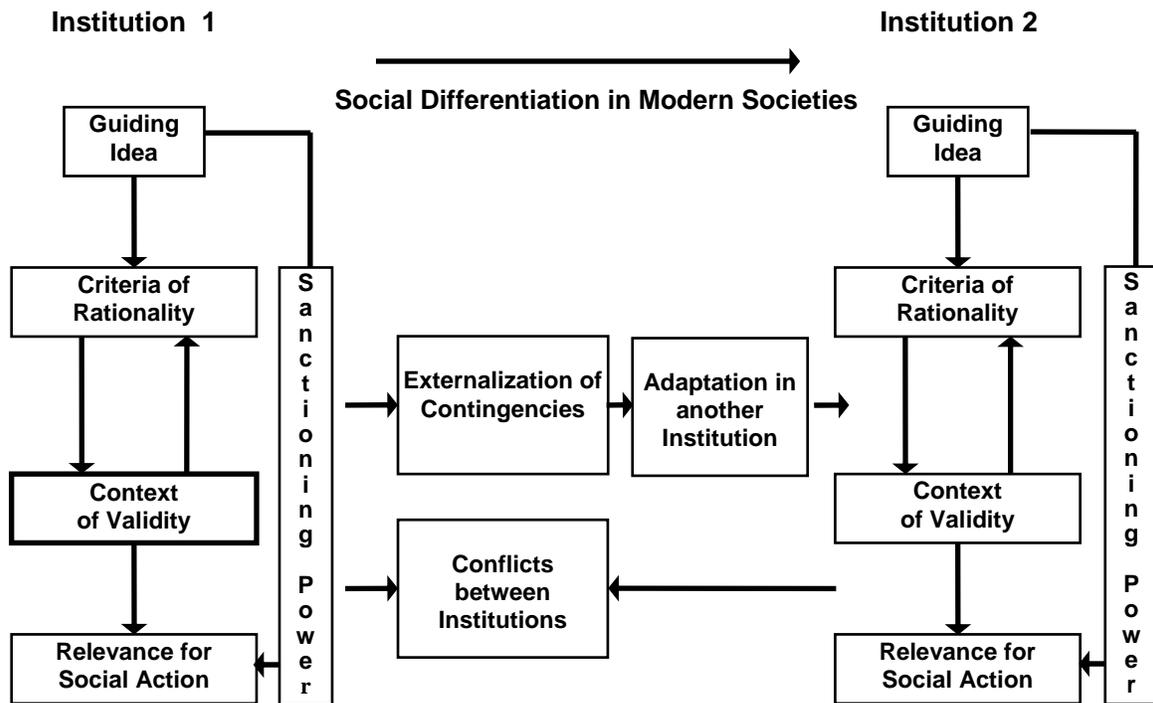
When taking *historical institutionalism* as the theoretical basis of healthcare system research one has to pay attention to two important perspectives. First, while the effects on the behavior of political and corporate actors have been discussed in a number of studies (Immergut 1992; Döhler and Manow 1995; Hacker 1998; Giaimo and Manow 1999) the effects of institutions on the action of individuals (citizens, patients) have been largely ignored in this stream of research. The focus on individuals is so far restricted to the electoral arena (Béland 2005). In his “new politics of the welfare state” thesis Pierson (1996, 2001) points at the “feedback processes” of past public policies on program beneficiaries and sees an electoral “blame avoidance” logic at work in times of austerity: politicians are reluctant to advance far-reaching retrenchment and restructuring as they fear electoral backlash. From a sociological perspective this focus is to be extended and should also capture the influence of institutions on potential service recipients. This is also relevant from a political science perspective since the “electoral feedback” process

can be better understood on the basis of broader knowledge of the relationship between (welfare) institutions, public attitudes, and social action of welfare state recipients.

The second shortcoming of historical institutionalism is the ignorance of the power of ideas. This aspect has already been emphasized by Hall (1993), Lieberman (2002), and Béland (2005) and is especially relevant to better explain institutional change: “Without denying the impact of material interests on the policy process, we need to know much more than we do about the role that ideas play in policymaking and in the process whereby policies change” (Hall 1993: 292). This focus on ideas, however, is not only necessary when analyzing institutional origin and change (Hall 1993; Lieberman 2002; Béland 2005) but also for a better understanding of how institutions structure social action – even if it has often been emphasized that a direct link between ideas and social action seems not to exist. Lieberman (2002: 698) suggests that “ideas alone do not create the incentives or opportunities for action” which is in line with Max Weber’s famous formulation: “Interests (material and ideal), not ideas, directly govern people’s actions. But the ‘world views’ created by ‘ideas’ have often set the future course according to which the dynamic of interests conditioned action” (Weber 1988/1920: 252; own translation).

The institutionalist approach of M. Rainer Lepsius, however, draws a more direct line between ideas, institutions, and social action. According to Lepsius (1990, 1997), institutions are processes that structure social action and relate it to value positions. The central question for Lepsius is: “how is it that in given situations, social action is guided by certain ideas, irrespective of the motives and interests of the individual actors?” (Lepsius 1997: 58; own translation).

**Figure 1: Processes of Institutionalization**



Sources: Own depiction, adapted from Lepsius 1997.

According to Lepsius’ theoretical model (figure 1) guiding ideas are relevant for social action especially if they have become institutionalized. Problems that cannot be dealt within the context of the existing institution are externalized and provide the basis for the establishment of new institutions with the possible effect of conflicts between institutional orders (see also Lieberman 2002). As part of the process of institutionalization guiding ideas are translated into “criteria of rationality” (Lepsius 1990, 1997). In a certain context (“context of validity”) these criteria provide the basis of rational behavior. In healthcare systems, for instance, people in general do not directly orientate at the idea of “solidarity”. But the social insurance principle that is based upon the idea of solidarity has the sanctioning power to guide the behavior of political actors, service providers, and beneficiaries in a way that is in line with the principle of solidarity.

While the question of *how* ideas become institutionalized is relevant when analyzing institutional change (Hall 1993; Hall and Taylor 1996; Béland 2005), the present study first of all focuses on the question whether a relationship between existing institutional arrangements and certain ideas can be identified. Flora, Alber and Kohl (1977) have distinguished welfare state institutions according to the question whether they support the principle of *socio-economic equality* or the principle of *socio-economic security*. In healthcare, this differentiation seems to be still relevant.

Socio-economic security for certain parts of the working population has been the guiding idea in the formative phase of social health insurance systems in the late 19<sup>th</sup> century. First, it was the goal to provide income security for certain population groups in the time of sickness, and only later the idea of socio-economic security also covered the principle that patients should receive the best possible medical treatment. Our argument is that this idea is still relevant for a number of today's healthcare systems. The other main idea that has become institutionalized in modern healthcare is the principle of socio-economic equality. Since the mid-20<sup>th</sup> century, some countries started to replace their existing health insurance scheme with a National Health Service where coverage in the case of sickness has been given the status of a social citizenship right. The entire population has been covered and the idea is that treatment should be strongly related to need and not to income, social class, or education. Both principles are relevant in any modern healthcare system but my argument is that either socio-economic security or socio-economic equality has become the *guiding idea* and is primarily relevant for social action. Both principles can only be implemented in the case that a third idea has received broad

popular support because they require a high degree of financial redistribution: the value of *solidarity*.

Alternatives to these guiding principles, however, are conceivable. In the U.S., for instance, the market principle of profit making has been given great importance. In the health policy debate it is argued that *individual choice* is still highly supported by the American population and can be considered a major reason for public opposition toward health reforms that might constrain the freedom to choose between different insurance plans and healthcare providers (Blendon et al. 2006; Minhas, Wendt and Wierzibicki 2008). However, it could also be argued that despite the high value placed on this principle, autonomous *individual* choice is virtually absent from the American healthcare market. The choice of private insurance often depends on the employer and the choice of healthcare providers depends on the plan that the individual may enroll in. Choice is even more restricted if certain services are not included in the health benefit package or if uninsured. Therefore, we argue that the U.S. healthcare system is not guided by the principle of individual choice but by the market principle of profit making that has gained a pivotal position due to the incomplete institutionalization of the ideas of socio-economic security or socio-economic equality.

Giaimo and Manow (1997) have taken the health reforms in the U.K. since the late 1980s as an example of conflicts between opposing ideas and have argued that the idea of market competition within a state regulated system has gained a dominant position. Today, however, we would conclude that the idea of equality has remained rather powerful in the British NHS and that the idea of market competition has, in contrast to the U.S., not gained structuring power in the healthcare arena.

In the following section we will briefly discuss in what respect certain ideas are related to healthcare system characteristics. The basic assumption underlying this aim is that if an idea has become institutionalized it is reflected in certain health system characteristics. The respective health system should differ significantly from a system that is guided by another idea. The characteristics should include those aspects that are relevant for patients when seeking healthcare. More general governance principles (Giaino and Manow 1999; Tuohy 2003; Wendt, Frisina and Rothgang 2009) or whether healthcare is funded primarily through taxes or social health insurance contributions (OECD 1987; Hassenteufel and Palier 2007) should be of lesser importance for patients' decisions. The amount of money people spend on healthcare, the availability of service providers, and regulations concerning access to health services instead should matter when seeking care.

Borrowing from Peter Hall's (1993) concept of first-, second-, and third-order change (see also Rothgang, Obinger and Leibfried 2006; Wendt, Frisina and Rothgang 2009) we therefore measure the levels of health expenditure and healthcare provision as well as instruments for regulating access to medical services. Hall (1993) argues that changing spending levels and instruments may indicate changing overarching goals. In the following, however, we are not analyzing institutional change but differences across countries. The theoretical assumptions, however, are in line with Hall's analytical framework, and we expect to identify different types of healthcare on the basis of characteristics that are related to specific ideas.

## **Healthcare system characteristics**

If the *idea of security* is dominant, healthcare systems should be characterized by a high level of service providers and easy access of patients to healthcare services including freedom of choice among healthcare providers. Service providers should have incentives of providing high volume and high quality healthcare. Such an alignment, however, has its price and therefore health expenditure will presumably high. Direct co-payments of patients negatively affect access to healthcare and should therefore be modest.

The *idea of equality*, on the other hand, requires higher state control. Without state regulation higher income or educational groups would have easier access to health service providers, and therefore access to providers is regulated for fulfilling the principle of equality. Private co-payments should be low in order not to undermine access of lower income groups. Since the principle of security is of lesser importance the level of service provision, and accordingly also of health expenditure, can be lower.

In an earlier study the first system has been labelled as “*Health service provision oriented type*” and the second as “*Universal coverage – controlled access type*” (Wendt 2009). The third type that has been identified in Wendt (2009), the “*Low budget – restricted access type*”, can be related to certain ideas less easily. It seems to be the case that the ideas of universality and equality of access have been incompletely institutionalized in these countries due to financial restrictions. Inequalities seem to persist because of high private co-payments and easier access to service providers for higher income groups outside the public scheme (Wendt 2009).

In the current study, further countries have been included and some of the indicators for classifying healthcare systems have been changed. Since according to the analytical framework no direct indicators on organizational or financial principles are to be included, the question of “entitlement to healthcare” (Wendt 2009) has been skipped from the analysis. Furthermore, the “access regulation index” (see below) has been adjusted.

### *Healthcare funding*

Three healthcare funding indicators can be considered to be relevant for patients’ access to healthcare services: private co-payments, public health expenditure, and the level of total health expenditure (THE). Private co-payments directly affect patients’ access to service providers and reduce access especially for lower income groups (Thomson and Mossialos 2004; Van Doorslaer, Masseria and Koolman 2006). In this study these direct payments by patients will be measured as a percentage of THE. The amount of public funding, secondly, indicates to what extent it is considered as a public responsibility to guaranteeing entry for those in need of medical treatment (Wendt 2009; Wendt et al. 2009). A lower share of public health expenditure as a percentage of THE should lead to a lower public influence regarding the organisation and delivery of medical services. THE, finally, can either be calculated as share of the gross domestic product (GDP), indicating the level of monetary resources a society is willing to invest in the provision of healthcare, or it can be measured in monetary units per head of the population, indicating the amount of money that is invested at average in the health of the people (Wendt 2009). In this paper is THE calculated in monetary inputs per head of the population (US\$, PPP, general deflator) since for the provision of healthcare services this indicator is of higher importance than the relative level of health expenditure.

### *Healthcare provision*

In a study with Jürgen Kohl we have found only a weak correlation between the financial resources invested in the healthcare system and the level of health employment (Wendt and Kohl 2009). Therefore, not only the THE level but also health employment indicators are to be included when measuring the health systems' capacity of providing necessary services (see also McPherson 1990; Figueras et al. 2004). As described in more detail in Kohl and Wendt (2009) and Wendt (2009), four service provider indicators have been included in the analysis: specialists and hospital nurses for measuring the service provider level in the in-patient sector, and general practitioners and pharmacists for measuring the service provider level in the out-patient sector. Data on these provider types were aggregated into two healthcare provider indices. The raw values of the respective indicators (per 1,000 population) were standardized and recalculated as a percentage of the average of the 20 countries included in the analysis. The in-patient index and the out-patient index were then each calculated as the average value of the health service provider indicators (see Wendt 2009 and table A1 in appendix).

### *Institutional characteristics*

For patients it is of particular importance how access to service providers is regulated (Reibling, forthcoming). Patients have either free choice and direct access to general practitioners (GPs) and specialists or they have to sign on a GP's list for a longer period of time who transfers to a specialist when necessary ("gatekeeping system"; see Saltman 1994; Rico et al. 2003). Access to GPs and specialists, however, can also be regulated to a lower degree than in pure "gatekeeping systems" and higher than in pure "free choice

systems”. Therefore, an “access regulation index” has been constructed (see also Reibling and Wendt 2008, 2009; Wendt 2009) by taking into account whether patients have a free choice of GPs or have to sign on a GPs’ list for a longer period of time and whether patients have free choice and direct access to specialists, can skip the referral system by accepting additional co-payments, or whether a referral by a GP is required when visiting a specialist. These indicators are combined to an “access regulation index” ranging from 0 (no regulation) to 4 (strong regulation) (see tables 1 and A2 in the appendix).

As a second institutional indicator the payment system of medical doctors is included because it provides incentives for the level and quality of services provided. “Whereas a fee-for-service system may set an incentive for the doctor to see his or her patients as often as possible, a reimbursement per capita or a fixed salary might set an incentive for reducing the workload” (Wendt 2009: forthcoming). It is assumed that fee-for-service payment make it easier for patients seeing a doctor while a capitation payment or a fixed salary might constrain patients’ access to medical doctors (see tables 1 and A2).

So far, data on the remuneration of specialists have not been included in the analysis. Since regulation of access to GPs and of access to specialists might have different effects they may have to be divided in two different indices. The inclusion and adjustment of these indicators should effect the construction of healthcare system types and therefore the results of the cluster analysis in the following section are only preliminary.

**Table 1: Institutional characteristics of healthcare systems, 2001**

|                             | Health funding and private payment |                               |                                       | Healthcare provider indices <sup>d)</sup> |                   | Institutional indicators          |                                       |
|-----------------------------|------------------------------------|-------------------------------|---------------------------------------|---|-------------------|-----------------------------------|---------------------------------------|
|                             | THE <sup>a)</sup> per capita, US\$ | PHE <sup>b)</sup> in % of THE | Private OOP <sup>c)</sup> in % of THE | In-patient index                          | Out-patient index | Remuneration of GPs <sup>e)</sup> | Access regulation index <sup>f)</sup> |
| Australia <sup>g)</sup>     | 2397                               | 65.9                          | 19.9                                  | 89.6                                      | 115.6             | 1                                 | 4                                     |
| Austria                     | 2890                               | 75.6                          | 17.0                                  | 96.0                                      | 115.6             | 0                                 | 1                                     |
| Belgium                     | 2484                               | 71.7                          | 21.3                                  | 134.2                                     | 186.9             | 0                                 | 1                                     |
| Canada <sup>g)</sup>        | 2731                               | 70.0                          | 15.2                                  | 87.1                                      | 107.8             | 0                                 | 0                                     |
| Denmark                     | 2521                               | 82.7                          | 15.9                                  | 139.6                                     | 51.0              | 1                                 | 4                                     |
| Finland                     | 1913                               | 73.9                          | 20.6                                  | 78.1                                      | 85.6              | 2                                 | 4                                     |
| France                      | 2590                               | 78.3                          | 7.5                                   | 87.8                                      | 160.2             | 0                                 | 0                                     |
| Germany                     | 2809                               | 79.3                          | 11.5                                  | 118.6                                     | 99.5              | 0                                 | 0                                     |
| Greece                      | 1669                               | 63.8                          | 35.2                                  | 113.3                                     | 70.3              | 2                                 | 0                                     |
| Ireland                     | 2128                               | 74.1                          | 12.0                                  | 97.5                                      | 81.0              | 1                                 | 3                                     |
| Italy                       | 2215                               | 74.6                          | 22.1                                  | 127.4                                     | 122.8             | 1                                 | 4                                     |
| Luxembourg                  | 2738                               | 87.9                          | 6.5                                   | 104.5                                     | 84.9              | 0                                 | 0                                     |
| Netherlands                 | 2556                               | 62.8                          | 8.7                                   | 80.8                                      | 40.3              | 1                                 | 4                                     |
| New Zealand <sup>g)</sup>   | 1707                               | 76.4                          | 17.0                                  | 72.7                                      | 110.6             | 0                                 | 2                                     |
| Portugal                    | 1569                               | 71.5                          | 23.2                                  | 69.2                                      | 139.8             | 2                                 | 4                                     |
| Spain                       | 1636                               | 71.2                          | 23.9                                  | 91.4                                      | 110.6             | 2                                 | 4                                     |
| Sweden                      | 2511                               | 81.8                          | 16.6                                  | 124.3                                     | 74.2              | 2                                 | 3                                     |
| Switzerland <sup>g)</sup>   | 3471                               | 57.1                          | 31.7                                  | 134.8                                     | 55.3              | 0                                 | 0                                     |
| United Kingdom              | 2021                               | 83.0                          | 13.3                                  | 104.3                                     | 72.8              | 1                                 | 4                                     |
| United States <sup>g)</sup> | 4915                               | 44.6                          | 14.3                                  | 97.3                                      | 107.8             | 0                                 | 0                                     |

Notes: a) THE: total health expenditure; b) PHE: public health expenditure; c) OOP: out-of-pocket payments;

d) See construction of indices in Wendt 2009; Wendt and Kohl 2009;

e) Coding for remuneration: fee-for-service = 0; capitation = 1; salary = 2;

f) Coding for index construction: see Wendt 2009 and Table A2 in Appendix;

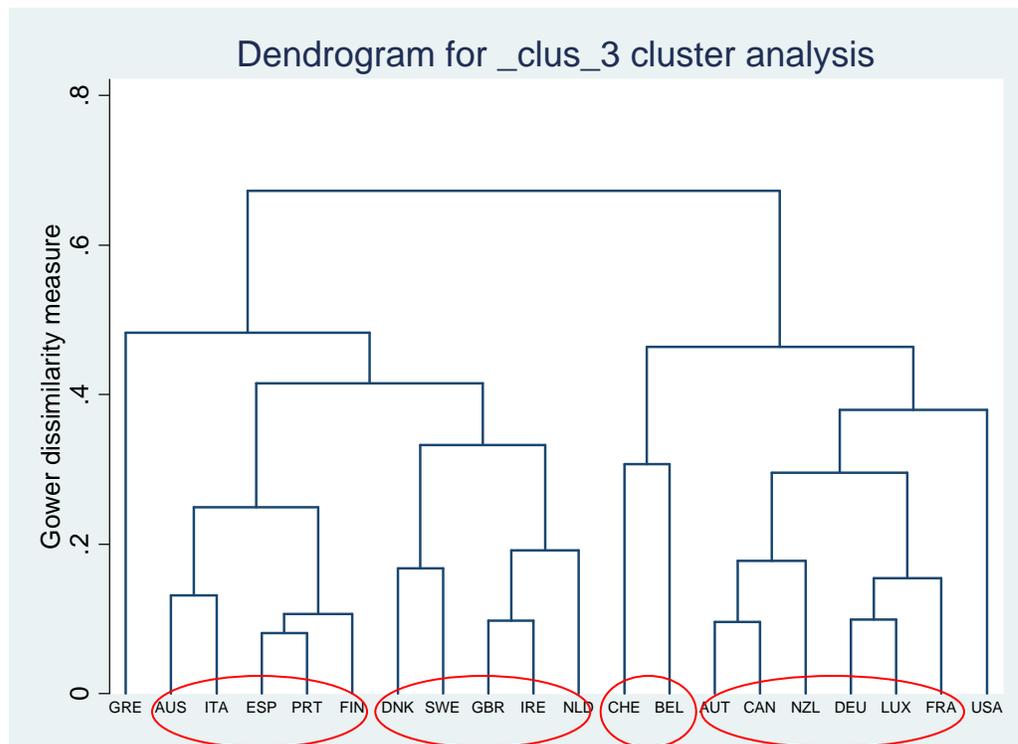
g) Institutional data have been discussed with country experts but not controlled on the basis of literature in this field.

Sources: OECD Health Data 2008; Reibling and Wendt, 2008

## Constructing healthcare system types

By using data from table 1, cluster analysis has been performed to identify different types of healthcare systems (see also Kautto 2002; Powell and Barrientos 2004; Jensen 2008; Wendt 2009). The results shown in *figure 1* are based on complete linkage cluster analysis with the Gower dissimilarity coefficient. This method has been used since it allows analyzing a mix of binary and continuous data.

**Figure 1: Hierarchical cluster analysis: Dendrogram using complete linkage**



Note: AUS: Australia; AUT: Austria; BEL: Belgium; CAN: Canada; CHE: Switzerland; DEU: Germany; DNK: Denmark; ESP: Spain; FIN: Finland; FRA: France; GBR: Great Britain; GRE: Greece; IRE: Ireland; ITA: Italy; LUX: Luxembourg; NLD: Netherlands; NZL: New Zealand; PRT: Portugal; SWE: Sweden; USA: United States.

When controlling the stability of the cluster solution by using other procedures (ward linkage, average linkage, single linkage, waverage linkage), however, not all supported the four-cluster solution. As emphasized before, the results are therefore only preliminary, and the inclusion of further institutional data, which is also necessary according to theoretical considerations, might produce a more stable cluster solution. Some patterns, however, have been supported in all procedures and besides describing the four groups of healthcare systems shown in *figure 1* these stable patterns will be discussed in more detail.

**Table 2: Description of clusters (complete linkage with Gower dissimilarity coefficient)**

|                       | THE in US\$ per capita                            | Public funding in % of THE                  | Private out-of-pocket payment in % of THE            | Index in-patient care           | Index out-patient care         | Remuneration of GPs                          | Access regulation index             |
|-----------------------|---|---|--|---------------------------------|--------------------------------|--|-------------------------------------|
| <b>Cluster 1</b>      |   |   |  |                                 |                                |  |                                     |
| Austria               | High level of THE (at average 2578 US\$ per head) | High share of public funding (77.9% of THE) | Medium share of out-of-pocket payment (12.5% of THE) | Medium in-patient index (94.5)  | High out-patient index (113.1) | Fee-for-service                              | Low regulation (except New Zealand) |
| Canada                |   |   |  |                                 |                                |  |                                     |
| Germany               |   |   |  |                                 |                                |  |                                     |
| France                |   |   |  |                                 |                                |  |                                     |
| Luxemburg             |   |   |  |                                 |                                |  |                                     |
| New Zealand           |   |   |  |                                 |                                |  |                                     |
| <b>Cluster 2</b>      |   |   |  |                                 |                                |  |                                     |
| Denmark               | Medium level of THE (2347 US\$)                   | High share of public funding (76.9% of THE) | Medium out-of-pocket payment (13.3% of THE)          | Medium in-patient index (109.3) | Low out-patient index (63.9)   | Capitation (except Sweden: salary)           | Medium to strong regulation         |
| Great Britain         |   |   |  |                                 |                                |  |                                     |
| Ireland               |   |   |  |                                 |                                |  |                                     |
| Netherlands           |   |   |  |                                 |                                |  |                                     |
| Sweden                |   |   |  |                                 |                                |  |                                     |
| <b>Cluster 3</b>      |   |   |  |                                 |                                |  |                                     |
| Australia             | Low level of THE (1946 US\$)                      | Medium public funding (71.4% of THE)        | High out-of-pocket payment (21.9% of THE)            | Low in-patient index (91.1)     | High out-patient index (114.9) | Salary (except Italy, Australia: capitation) | Strong regulation                   |
| Spain                 |   |   |  |                                 |                                |  |                                     |
| Finland               |   |   |  |                                 |                                |  |                                     |
| Italy                 |   |   |  |                                 |                                |  |                                     |
| Portugal              |   |   |  |                                 |                                |  |                                     |
| <b>Cluster 4</b>      |   |   |  |                                 |                                |  |                                     |
| Belgium               | High level of THE (2978 US\$)                     | Low public funding (64.4% of THE)           | High out-of-pocket payment (26.5% of THE)            | High in-patient index (134.5)   | High out-patient index (121.1) | Fee-for-service                              | Low regulation                      |
| Switzerland           |   |   |  |                                 |                                |  |                                     |
| <b>Not classified</b> |   |   |  |                                 |                                |  |                                     |
| Greece                | 1669 US\$   | 63.8% of THE                                | 35.2% of THE   | 113.3                           | 70.3                           | Salary                                       | Low regulation                      |
| United States         | 4915 US\$   | 44.6% of THE                                | 14.3% of THE   | 97.3                            | 107.8                          | Fee for service                              | Low regulation                      |

Based on complete linkage cluster analysis with the Gower dissimilarity coefficient, four types of healthcare systems have been identified with characteristics similar to the types identified in an earlier study of 15 European countries (Wendt 2009):

One group, that has been labeled as “*Health service provision oriented type*” (Wendt 2009), is characterized by a high level of THE, high public funding and modest private co-payments. The in-patient healthcare provider level is slightly below the average of all included countries but the out-patient provider level is particularly high. Furthermore, countries of this type are characterized by low access regulation, and GPs are remunerated on a fee-for-service basis. This type includes European social insurance

countries (Austria, Germany, France, and Luxembourg). Furthermore, and this pattern is stable in all cluster procedures, Canada and New Zealand are classified under this type. Due to high public funding, modest co-payments, emphasis of out-patient healthcare, fee-for-service payment, and (except New Zealand) low access regulation Canada and New Zealand, which are not organized as social insurance systems, are placed in this group of countries.

The second group, that has been labeled as “*Universal coverage – controlled access type*” (Wendt 2009), is characterized by a medium THE level, high public funding, and modest private co-payments. The level of out-patient healthcare providers is particular low while the level of in-patient providers is above average. GPs are remunerated on a capitation basis (except Sweden) and the degree of regulating patients’ access to medical doctors is medium to high. This type includes mainly countries with National Health Service schemes (Great Britain, Denmark, Sweden) as well as Ireland that has so far not established a universal NHS. The traditional social insurance type of the Netherlands, and this pattern is stable in all cluster solutions, is also grouped together with NHS countries due to strong access regulation, low out-patient provider index and low private co-payments.

The third group, which has been labeled as “*Low budget – restricted access type*” (Wendt 2009), is characterized by low THE, medium public funding, and relatively high private out-of-pocket payments. The in-patient provider level is low, and the out-patient provider level is high. Access regulation is particularly strong which is supported by GP remuneration on a salary basis (except Italy and Australia). This group consists of the Southern European NHS countries Italy, Portugal, and Spain. Australia and Finland are

also classified under this type due to strong access regulation, low in-patient provider levels, and high private out-of-pocket payments.

A fourth group, which has not been identified in the earlier study, includes the cases of Belgium and Switzerland. Probably because of the exclusion of a typical “social insurance indicator” from the analysis (entitlement through social insurance contributions or as a citizenship right) Belgium is not grouped with the other social insurance countries but with Switzerland. Both countries share a high THE, low public funding, high private co-payments, and particular high service provider levels in both in-patient and out-patient healthcare. Patients’ access to medical doctors is hardly regulated, and GPs are remunerated on a fee-for-service basis.

Two countries, and this is also a stable pattern in all cluster procedures, have not been classified. The United States and Greece seem to be, for different reasons, unique and share only few characteristics with other countries’ health systems. The U.S. is characterized by the highest THE and the lowest share of public funding. The share of direct private co-payments, however, is today lower than in cluster 3 countries or in Belgium and Switzerland. Interestingly, the high THE level does not correspond with a high healthcare provider level (see also Wendt and Kohl 2009). Access is hardly regulated on a national basis. However, how access to healthcare providers is regulated in general depends on the insurance plan Americans are enrolled (White 2007). Greece stands for low THE, low public funding and particular high private co-payments. In contrast to any other healthcare system that is organized as a NHS there seems to be a low level of access regulation. However, Greece has been characterized by informal restrictions when seeking healthcare, especially for lower income groups (Davaki and Mossialos 2005).

## **Ideas and health system types: concluding remarks**

The results presented in this paper are subject to further analyses that take additional institutional indicators into account (for instance, remuneration of specialists, access to general practitioners and specialists in two separate indices) and cover more than one point in time for analyzing change (for instance 1990, 2000, 2009). Furthermore, the cluster solution has not been stable when controlling it by using other cluster procedures, a problem that might be solved when adding further institutional indicators.

Despite these shortcomings, the analysis suggests the following preliminary conclusions: The “*Health service provision oriented type*” identified by Wendt (2009) has been reproduced even when excluding a typical social insurance type indicator (social insurance contributions) that has been used in the earlier study and when adding further countries. Interestingly, not only most European social insurance countries are grouped in this cluster but also Canada and New Zealand that are mainly funded out of taxes. These healthcare systems seem to support especially the *idea of “security”* in the sense of easy access to healthcare services that is fostered by low access regulation, low private co-payments, and a high level of service provision in out-patient healthcare. Doctors’ autonomy when providing healthcare services is promoted through fee-for-service remuneration. Some of these aspects are currently subject to major health reforms in these countries. It is an important health policy question analyzing whether current changes negatively affect “*security*” since this might violate one of the core principles of these systems and might lead to more unstable systems in general.

The second group is in line with the “*Universal coverage – controlled access type*” (Wendt 2009) and covers the NHS systems of Great Britain, Denmark, and Sweden, furthermore Ireland with a not fully institutionalized NHS and different principles of coverage for various social groups in 2001 as well as the Netherlands that has been organized as a social insurance system. Due to high access regulation, a low level of out-patient healthcare providers, and capitation payment, the Netherlands is closer to Great Britain, Denmark, and Sweden than to France, Germany, Austria, and Luxemburg. The absence of free choice for patients and the low level of out-patient healthcare indicate that the principle of “security” is given lower attention, while low private co-payments and strong access regulation indicate a strong role of the principle of “equality”.

The other identified groups of healthcare systems are more difficult to assess. It seems to be the case that the “*Low budget – restricted access type*” identified in the earlier study of 15 European countries is also apparent when including further countries. Australia and Finland are grouped together with countries from Southern Europe. These countries have been mainly organized as NHS schemes, and certain characteristics like strong access regulation and salary payment of doctors in the out-patient sector, too, indicate that the principle of “equality” is given higher priority than “security”. However, other characteristics as the low level of public funding and high private co-payments contradict the idea of “equality”, which seems to be incompletely institutionalized due to limited resources.

Belgium and Switzerland, which form a fourth group of healthcare systems, show some characteristics that are partly in line with the principle of “security” such as high service provider levels in both sectors and low access regulation. Low public funding and high

out-of pocket funding, however, indicate that not all population groups have access to high quality healthcare in these countries.

The United States, which does not share major similarities with any other healthcare system, can be taken as an example where different ideas are still in conflict with each other and neither the principle of “security” nor “equality” has obtained a dominant position. It shows that healthcare systems are more open to the influence of other ideas as soon as these core principles are weakened. In this case it is most likely that ideas of the market become dominant in the field of healthcare that, not by political regulation but through market forces, negatively impact on doctors’ autonomy and patients’ access to healthcare services.

However, whether the idea of “security” or “equality” is institutionalized to a higher extent in the respective healthcare system has to be tested by further research that combines a macro analysis of healthcare systems with a micro analysis of attitudes towards healthcare systems, health utilization, and health outcomes respectively. So far, studies have not provided a consistent picture of the effects of macro structures on the micro level. It seems to be the case that countries like Denmark, Sweden, and Great Britain show a more homogenous perception of the healthcare system by different social groups (Wendt et al. 2009) which indicates a higher level of equality. Furthermore, Denmark, Sweden, and the Netherlands are characterized by lower inequality among different educational groups than Germany and France when analysing utilization of specialist services (Reibling and Wendt 2008). Comparative studies of the effects of healthcare systems on health outcomes are hardly available. Some studies concentrate either on the effects of welfare regimes or of the wider political institutional structure on

health outcomes (Conley and Springer 2001; Eikemo et al. 2008; Beckfield and Krieger 2009) and in general argue that the variation in health is only to a minor extent related to welfare state characteristics (Eikemo et al. 2008).

While the analysis of healthcare systems and public opinion could provide better insights in how institutions structure processes of orientation, the questions of utilization and outcomes focus more directly on the relationship between institutions and social behavior. There is a wide range of possibilities of how people behave if being in need of healthcare services and how service providers respond to these needs. A closer look at the relationship between institutional structures and patients' and doctors' behavior might therefore provide new insights in how health systems can provide high quality healthcare without breaking the bank. Taking the underlying "guiding ideas" into account, furthermore, might help to adjust the healthcare systems' institutional order in a way that new solutions do not serve alternative ideas such as the principle of profit making which would negatively effect basic principles of modern health systems and in the long run reduce patients' access to healthcare as well as doctors' autonomy.

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## Appendix

**Table A1: Construction of service provider indices, 2001**

|                 | Specialists      | Nurses            | In-patient<br>index <sup>1</sup><br>per 1,000 inhabitants | General<br>practitioners | Pharmacists      | Out-patient<br>index <sup>2</sup> |
|-----------------|------------------|-------------------|---|--------------------------|------------------|-----------------------------------|
| Australia       | 1.2              | 9.9               | 87.8  | 1.4                      | 0.6 <sup>4</sup> | 113.6                             |
| Austria         | 1.9              | 7.1               | 93.1  | 1.4                      | 0.6              | 113.6                             |
| Belgium         | 1.8              | 14.8 <sup>7</sup> | 131.4   | 2.1                      | 1.1              | 183.3                             |
| Canada          | 1.1              | 10.0              | 85.4  | 1.0                      | 0.8              | 105.1                             |
| Denmark         | 2.1              | 14.1              | 136.3   | 0.7                      | 0.2              | 50.3                              |
| Finland         | 1.4              | 6.6               | 75.9  | 0.8                      | 1.5 <sup>9</sup> | 139.6                             |
| France          | 1.7              | 6.7               | 85.1  | 1.6                      | 1.1              | 156.5                             |
| Germany         | 2.2              | 9.6               | 115.1   | 1.1                      | 0.6              | 97.5                              |
| Greece          | 3.2              | 2.9               | 108.3   | 0.3                      | 0.8 <sup>3</sup> | 67.7                              |
| Ireland         | 0.6 <sup>5</sup> | 14.8              | 96.6  | 0.5                      | 0.8              | 78.4                              |
| Italy           | 3.4 <sup>8</sup> | 5.4               | 127.4   | 0.9                      | 1.1              | 119.1                             |
| Luxembourg      | 1.6              | 10.4              | 102.0   | 0.7                      | 0.7              | 82.6                              |
| Netherlands     | 1.0              | 9.4 <sup>6</sup>  | 79.3  | 0.5                      | 0.2              | 39.6                              |
| New Zealand     | 0.7              | 9.6               | 71.7  | 0.8                      | 1.0              | 107.3                             |
| Portugal        | 1.6              | 3.8               | 66.7  | 1.6                      | 0.8              | 137.2                             |
| Spain           | 1.8              | 6.8               | 88.6  | 0.8 <sup>5</sup>         | 1.0              | 107.3                             |
| Sweden          | 2.3              | 10.1              | 120.7   | 0.5                      | 0.7              | 71.9                              |
| Switzerland     | 2.1              | 13.2              | 131.5   | 0.4                      | 0.5 <sup>3</sup> | 53.6                              |
| United Kingdom  | 1.4              | 11.5              | 102.1   | 0.6                      | 0.6 <sup>4</sup> | 70.8                              |
| United States   | 1.4              | 10.2              | 95.2  | 1.0                      | 0.8              | 105.1                             |
| OECD 20 average | 1.7              | 9.3               |   | 0.9                      | 0.8              |                                   |

Notes: <sup>1</sup> Construction of In-patient index: specialists (in % of OECD 20 average) + nurses (in % of OECD 20) / 2;

<sup>2</sup> Construction of Out-patient index: general practitioners (in % of OECD 20) + pharmacists (in % of OECD 20) / 2;

<sup>3</sup> 2000; <sup>4</sup> 2002; <sup>5</sup> 2003; <sup>6</sup> 2004; <sup>7</sup> 2005;

<sup>8</sup> Number of specialists has been constructed by subtracting the number of GPs from the total number of physicians;

<sup>9</sup> Data from WHO HFA database

Sources: OECD Health Data 2008; WHO HFA Database, online access: July 10, 2009

**Table A2: Coding of payment systems and construction of access regulation index, 2001**

|                | Remuneration of<br>GPs <sup>1</sup> | GP registration | Access regulation<br>Access to specialists | Access regulation<br>index <sup>2</sup> |
|----------------|-------------------------------------|-----------------|--|---|
| Australia      | 1                                   | +               | Referral                                   | 4                                       |
| Austria        | 0                                   | --              | Skip&pay                                   | 1                                       |
| Belgium        | 0                                   | --              | Skip&pay                                   | 1                                       |
| Canada         | 0                                   | --              | Free                                       | 0                                       |
| Denmark        | 1                                   | +               | Referral                                   | 4                                       |
| Finland        | 2                                   | +               | Referral                                   | 4                                       |
| France         | 0                                   | --              | Free                                       | 0                                       |
| Germany        | 0                                   | --              | Free                                       | 0                                       |
| Greece         | 2                                   | --              | Free                                       | 0                                       |
| Ireland        | 1                                   | +               | Skip&pay                                   | 3                                       |
| Italy          | 1                                   | +               | Referral                                   | 4                                       |
| Luxembourg     | 0                                   | --              | Free                                       | 0                                       |
| Netherlands    | 1                                   | +               | Referral                                   | 4                                       |
| New Zealand    | 0                                   | --              | Referral                                   | 2                                       |
| Portugal       | 2                                   | +               | Referral                                   | 4                                       |
| Spain          | 2                                   | +               | Referral                                   | 4                                       |
| Sweden         | 2                                   | +               | Skip&pay                                   | 3                                       |
| Switzerland    | 0                                   | --              | Free                                       | 0                                       |
| United Kingdom | 1                                   | +               | Referral                                   | 4                                       |
| United States  | 0                                   | --              | Free                                       | 0                                       |

Notes: <sup>1</sup> Coding for remuneration: fee-for-service = 0; capitation = 1; salary = 2;

<sup>2</sup> Coding for index construction (additive index): -- (no) = 0; + (yes) = 2; free = 0; skip&pay = 1; referral = 2.

Sources: Reibling and Wendt 2008; expert interviews.