



## Concepts of the Human Constitution in Weimar Medicine, 1918-1933

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**Concepts of the Human Constitution**  
**in Weimar Medicine,**  
**1918-1933**

**A dissertation  
submitted to the University of Manchester  
for the degree of MA (Econ)  
in the Faculty of Economic and Social Studies.**

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**History and Social Anthropology of Science, Technology and Medicine.**

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## **Declaration**

I declare that no portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institution of learning.

## **Acknowledgements**

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## **Introduction**

Much has been written about Weimar Culture and its inherent conflicts. The problems of the Republic, so it has been assumed by many historians, evolved from a peculiar confrontation of old elites and the overcome value system of the Empire on the one hand with avantgarde modernity on the other hand, and from their unwillingness to contribute to a democratic political culture. Modernization, according to this argument, took a *Sonderweg* in Germany, different from other Western countries. The historiographical evaluation of the Republic and of its achievements has been coloured by its end in the Third Reich. The first series of influential studies of Weimar political culture, written in the 1960s, examined the republic years mainly in search for the causes of Germany's turn to fascism and of the Nazi crimes.<sup>1</sup> These early accounts tend to draw the polarized picture of a fierce conflict between an anti-modernist right and a modernist left. The parties are usually presented as monolithic blocks. The picture these historiographies convey is that of a pressure cooker of anti-modern and anti-democratic ideology that was bound to blow up sooner or later. The republic hardly existed in these accounts as anything but a transition state between Empire and Third Reich. Only recently, a more differentiated historiographical view has been developed, of a Weimar Republic in its own right, with a multiplicity of relevant groups profiting or suffering from daring reforms and social experiments during those crisis-ridden fifteen years. The most comprehensive work in this young tradition is the late Detlev Peukert's important monograph.<sup>2</sup> Peukert shows that Weimar did not necessarily have to lead to Auschwitz; he stresses contingencies and doubts that the outcome was determined from the start.

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<sup>1</sup> See, for example, Stern (1961), and Sontheimer (1962). More recent monographs on Weimar culture or aspects of it are Gay (1968), Laqueur (1974), and Herf (1984).

<sup>2</sup> Peukert (1987). For a good introduction to the political history and a comprehensive bibliography of studies on particular aspects of Weimar culture, see Kolb (1993).

Peukert's monograph draws upon up a multiplicity of studies on particular aspects of Weimar culture, published in the last three decades. Science and medicine were part of Weimar culture, and they were part of the controversies about modernity. Rational science and technology were at the focus of *Lebensphilosophie's* criticism of a materialist and mechanized, modern "civilization", which had allegedly been depleted of the "organic soul" of German culture. Paul Forman's seminal study of Weimar physics has explained the second quantum revolution with the response of physicists to an interwar intellectual environment that was extremely hostile to causal explanations and demanded a leading role for soul and intuition instead. The picture Forman presents is one of scientists who stopped doing what they used to do and betrayed rationality, who capitulated under pressure from the society outside. He does not bridge the inside-outside divide, does not show scientists shaping culture as well as they responded to it. Biology and medicine, on the other hand, especially the holist and organicist tendencies which were adopted by the *Lebensphilosophen*, have sometimes been presented by historians as inherently unscientific and as directly or indirectly linked with fascist ideology: a slippery slope into the Third Reich.<sup>3</sup> But a number of historians of the biomedical sciences have recently worked on studies that can be seen as parts of an enterprise attempting to overcome the determinist interpretations in this historiography. Their accounts point towards the existence of a high diversity of positions and objectives in the biological sciences and in medicine, of conflicts and controversy beyond the old debates between modernism and anti-modernism, materialism and idealism, vitalism and mechanism.<sup>4</sup>

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<sup>3</sup> See for example Cay-Rüdiger Prüll's forthcoming essay on constitutional pathology in a volume on holism in the biomedical sciences, edited by Christopher Lawrence and George Weisz. I am grateful to C.-R. Prüll for the permission to cite his manuscript.

<sup>4</sup> The most recent examples from this historiography are Anne Harrington's brand new book on holism in the life and brain sciences (1996), which I have not had the time to deal with in depth, Mitchell Ash's book on gestalt psychology (1995), Nick Hopwood's studies of the socialist embryology professor Julius Schaxel (forthcoming) and of the popular science journal *Urania* (1996), as well as Jonathan Harwood's studies of the German genetics community (1993) and of the geneticist and friend of Hermann Hesse, Richard Woltereck (1996). On the mechanism vitalism debate in biology, see Cassirer (1950).

The story of the Weimar years is one of continuities and discontinuities. On the first view, the end of the war in 1918 and the revolution meant a break, in science as well as in society. The years of optimism, of faith in a scientifically secured future were over, now there was crisis. One indicator of this break is the general rise of anti-causal thinking discussed by Forman. Another may be the call for a new theory in biology, or for that matter, the rise of constitutional pathology in medicine which I have studied for this dissertation.<sup>5</sup> One might be tempted to explain these phenomena in the same way as Forman does, as a capitulation of scientists in the face of a milieu hostile to the very traditions of their science. On the surface, in the public debates Forman has analysed, we might see more discontinuity than continuity. Recent historiographies, though, suggest that the story looks much more like one of parallel developments with roots going back before Weimar, more like one of negotiations between existing traditions than of their capitulation in the face of the zeitgeist. If we look closer, we find many continuities hidden behind the “crisis” rhetorics. Jonathan Harwood and Nick Hopwood show in their latest studies how biologists dismissed some aspects of mechanistic thought and rescued others, and by doing so proposed a variety of ways of how to tackle biological problems, beyond both vitalism and mechanism.<sup>6</sup> They selected those traditions they wanted to continue, partly driven by the experience of war and crisis, but also using the zeitgeist as an opportunity to stake their claims. I will argue that the same can be stated for the medical sciences. Moreover, I try to draw a more symmetrical picture by pointing out how some of the propositions made by medical scientists in the early 1920s were then taken up as potential solutions to the intellectual “crisis” proclaimed in the late 1920s by followers of *Lebensphilosophie*.

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<sup>5</sup> Not much has been written on the German “*Konstitutionslehre*”. See Rainer Krügel (1984) on Friedrich Martius, one of the pioneers of constitutional thought, and Prüll (forthcoming). See also Klasen (1984).

<sup>6</sup> Harwood (1996), and the forthcoming study by Nick Hopwood.



In many respects the medical sciences and biology went the same way. There are, though, a few fundamental differences, which gave to the debate in medicine a slightly different direction. While some of the theoretical treatises in both biology and biomedicine read quite similar, their practices were rather different: biologists did not have to fill the role of the healer. For medical scientists, this resulted in a fundamental conflict between their perceived roles as researchers in human biology and as doctors. In prosperous times, this conflict could be easily contained. But the Weimar years were a time of economic crisis and of increased competition for scarce resources.<sup>7</sup> For the medical profession this led to the rhetoric of a “crisis of medicine,” which has been the subject of Eva-Maria Klasen’s 1984 thesis.<sup>8</sup> But biomedical scientists and medical practitioners in Weimar culture were not a passive, monolithic block. A wide variety of traditions had developed over the years, long before the war. After 1918, different groups tried to use the changed political constellation to reshuffle the cards and break up entrenched power structures, in order to gain a better position for the realization of their particular interests. To some, the “crisis” of medicine was ammunition in their campaigns, while others simply denied the existence of a crisis.

The crisis of the interwar years bred a few peculiar plants in biomedical theory. The 1920s and 1930s stood under the sign of holism. This holist turn was not confined to Germany, as recent studies in the history of science show: of the American physiologists Walter B. Cannon and L.J. Henderson by Stephen Cross and William Albury, and of the Scotsman J.S. Haldane by Steve Sturdy, as well contributions to a recent conference on

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<sup>7</sup> For an excellent collection of studies and documents on medicine during the Weimar years, see Pross, Aly and Ärztekammer Berlin, eds. (1989), especially Michael Hubenstorf’s study on professional politics in the same volume. See also Grossmann (1995), and Winau (1987), pp. 310-50.

<sup>8</sup> Klasen (1984). I will discuss her thesis in further detail in chapter 2 of this dissertation.

holism in biomedicine.<sup>9</sup> Cross and Albury, and Sturdy, suggest that the holisms of their protagonists were contributions to political as well as scientific debates. Paul Weindling states the same for the German biologist Oskar Hertwig.<sup>10</sup> With this dissertation I am making a modest contribution to this historiography, partly because the main points in the debate have been made and partly for the more mundane reason that my material does not allow for more. While historical actors made their openly political statements mostly in monographs and in letters, I have based this dissertation mainly on articles in three major German medical weeklies: *Klinische Wochenschrift (Kl.W.)*, *Deutsche Medizinische Wochenschrift (D.M.W.)*, and *Münchener Medizinische Wochenschrift (M.M.W.)*.<sup>11</sup> These journals were designed as organs of communication for scientific research, medical practice, and professional politics. Only occasionally, did authors cross the boundaries between the three areas.

Constitutional pathology, the central subject of chapter one of this dissertation, was an attempt to cross the boundary between scientific research and clinical practice. It was first promoted as a clinical complement to the theoretical constructs of cellular pathology and bacteriology. Its pioneers were firmly based in the scientific thought of the nineteenth century, and I call them the *rationalists* to stress that their main ideas were not merely responses to the neo-romantic, irrationalist *zeitgeist* of the Weimar years. They saw themselves as participating in a longstanding tradition of progress in biomedicine. The Rostock clinician Friedrich Martius had developed his full scientific credo by the turn of the century.<sup>12</sup> Graz internist Friedrich Kraus wrote his book on *Fatigue as*

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<sup>9</sup> Cross and Albury (1987), Sturdy (1988). The conference proceedings, edited by Christopher Lawrence and George Weisz, are being prepared for publication. I am grateful to Christopher Lawrence for the opportunity to read the manuscripts.

<sup>10</sup> Weindling (1991).

<sup>11</sup> Amongst the authors I cite are a number of Austrians and some Swiss. Some, but not all have spent part of their careers in Germany. Strictly speaking, this study is one of the German speaking medical community at the time of the Weimar republic, and not restricted to the German national borders.

<sup>12</sup> Krügel (1984). Cf. Martius (1901).

*Measure of the Constitution (Ermüdung als Maß der Konstitution)* in 1897.<sup>13</sup> The war and the interwar years, though, boosted the reception of their theories. They clearly profited from the *zeitgeist*.

Constitutional pathology not only profited from the spirit of the interwar years, however, it also contributed to that spirit. Its rationalist pioneers did not make the connection between their scientific theories and a “crisis of medicine.” But this connection was made by authors whom I call the *neo-romantics*, who offered constitutional medicine as a holist solution to the crisis they believed to be caused by the fragmentation of the patient’s body by cellular pathology, as well as the fragmentation of the medical profession by specialization in modern medicine.<sup>14</sup> They attempted to cross all the boundaries, between scientific theory, clinical practice, and politics, and advocated an eradication of these very categories in favor of a holist view. The issues raised by *neo-romantics* put the scientific and cultural framework of the *rationalists* under pressure. Their idealistic attitude and the move towards historical idols like Paracelsus and Hippocrates linked them with the traditions of the youth movement. Neither *rationalists* nor *neo-romantics*, however, could be identified with a particular party political line. This dissertation is instead an attempt to show how negotiations between several professional groups under pressure, due to economic crisis and rhetorics of intellectual crisis, have driven the debate over holism.

Constitutional thought in its *neo-romantic*, individualist variety can be seen as catering to anti-mechanist tendencies in the interwar years. But the early rise of constitutional pathology in the aftermath of the First Worldwar interlocks with another historiography. Cay-Rüdiger Prüll demonstrates that research in the constitution had

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<sup>13</sup> Kraus (1897). On concerns with fatigue, compare the chapter on Mental Fatigue, Neurasthenia, and Civilization in Rabinbach (1990).

<sup>14</sup> On specialization in medicine, see George Rosen’s PhD thesis: Rosen (1944).

highly utilitarian aspects.<sup>15</sup> Constitutional pathology to some researchers was identical with “war pathology” and, after 1918, with “labour pathology”. This aspect of the history of constitutional pathology places it in the historiography of Worldwar One medicine: the human organism had to be understood and controlled, in order to keep it functioning under the high demands of a exceptionally stressful environment, like the trench or the modern factory.<sup>16</sup> This variety of constitutional thought might still be called holist, but it was certainly not anti-mechanist. I associate it with the *rationalist* tradition. It was informed by the materialist framework and the laws of energy conservation developed by Helmholtz, Du Bois-Reymond, and the Berlin school of physiologists, but many of its methods were closely related to those of physical anthropology. To war and labour pathology the organism was a physiological machine which should work as a unit with the machines in factories and with the war machinery.

My story of “*Konstitutionslehre*” is of course not an isolated episode in the history of medicine and the biomedical sciences. It can be linked up with several historiographical threads. The most obvious of them is the history of disease theory and its two poles: on the one hand the ontology of disease, and on the other the history of the patient. Disease ontology was the focus of Sydenham’s natural history of disease, of Paris medicine’s post mortem practice and the identification of specific organ lesions, of Virchow’s cellular pathology and of bacteriology’s search for direct causes of illness. The history of the patient, on the other hand was the centre of attention in biographical, bedside medicine.<sup>17</sup> The pioneers of “*Konstitutionslehre*” claimed that their theories would rejoin the two strands, but they stressed the “soil” over the “seed” in their explanations of the

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<sup>15</sup> Prüll (forthcoming). See also literature on eugenics, for instance Faith Weiss (1987) and Weindling (1989).

<sup>16</sup> See Cooter (1993). On medicine and war, see his article, *War and Modern Medicine*, in Bynum and Porter (1993). On the efficiency issue, see Rabinbach (1990).

<sup>17</sup> Cf. Rosen (1944). On the different historiographical threads, see Pickstone (1993). On biographical medicine and modernization in late 19th century Britain, see Lawrence (1985).

course of illness. It made them the speakers of clinicians, general practitioners and physiologists, who were interested in the living patient, rather than pathological anatomists and bacteriologists whose focus was on disease ontology. Biographical medicine is generally associated with an individualist approach: the doctor's and the patient's bodies are undivided, unfragmented: individual confronts individual in search for therapy. Social medicine and analytical medicine both rely on division of labour and on certain managerial principles.<sup>18</sup> In modern, analytical medicine, both patient and doctor are fragmented. Specialization was seen by many advocates of individualized medicine as one of the main causes of the "crisis" in medicine, and constitutional medicine was embraced as a solution. This position can be identified with what I call *neo-romantic* thinking.

In its individualist variety, constitutional medicine moved from researching individuality in a biological sense towards discussing its much broader cultural and social meanings. For Friedrich Martius, individual, biological differences in the course of illness provided the basis for a science of the constitution. Friedrich Kraus and his students, Theodor Brugsch and Gustav von Bergmann, developed a school of what today we would call psycho-somatic medicine. They worked on pathologies like stomach ulcer, where links between psychological and physical illness and wellbeing could be convincingly established.<sup>19</sup> All three, Kraus as well as Brugsch and von Bergmann were interested in philosophy and general cultural questions, and they moved on to develop a "biology of the person," which was not restricted to the medical discourse but became involved in the anthropological enterprise of researching human beings in their environments. The encyclopedic work, *Die Biologie der Person*, co-edited by Brugsch, in fact, included several articles with ethnographic and religious focus. They crossed the

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<sup>18</sup> Compare Rosen (1944).

<sup>19</sup> See the memoirs of Brugsch (1957) and von Bergmann (1953).

boundary between medicine and anthropology. This move seems to have been encouraged and accelerated by a *neo-romantic* trend in the interwar years, but it started with the work Kraus had done before the turn of the century. Again, we might say that *Personalismus* contributed to the trend as much as it profited from it.

The members of the various groups and schools of medical practitioners embraced different positions in metaphysical debates according to their professional foci, their training, traditions and role models. The dominance of one approach to medicine over the other - localist over generalist, for example, or mechanist over vitalist - is probably best understood in terms of hegemonies of one or the other group in the relevant media. These hegemonial relationships changed, and the result has sometimes been analysed as a sort of pendulum history: the late nineteenth century had been too localistic and mechanistic, and that prompted the rise of generalism and holism in the early twentieth century.<sup>20</sup> The holists, according to the pendulum historians, in turn went too far, and consequently we live under a localist and reductionist dogma in pathology today. I think that, considering all we know about the social history of biomedicine, we can dismiss this historiographical model. The pendulum effect is what I would call an artefact of a historiography which only listens to the noisy demagogues and forgets that there might be quite a few silent players behind the scenes. The holists probably had the loudest voices in the 1920s and 1930s, but most of the publications in the journals were part of a straight mechanist and localist tradition. I suspect that most authors of the latter were not overly interested in metaphysical questions. Sequential historiographies were often used by historical actors in order to further their own case. As historians today, we have to make sense of them, evaluate them critically and confront them with what we know about the hegemonies and power structures of the period which could explain the heavier

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<sup>20</sup> An example is Mayer (1952). Krügel (1984) buys into Mayer's pendulum approach. See, for example, *ibid.* pp. 13, 20, 24-5.

weight of one position in a political debate or the noisy behaviour of a particular group at a particular time.

In order to understand hegemonies in medicine we have to talk about politics. A medical administrator dealing with public health in urban slums was quite likely to hold a different opinion on what medicine is all about than a practitioner who ran a practice for predominantly wealthy people, and of course we will find all shades of grey between these two extremes. The social experiments of the Weimar republic, on the one hand, moved medical administrators into exposed positions of responsibility, and, due to the precarious economical situation, made them highly vulnerable to criticism. General practitioners, on the other hand, came under pressure due to the growing number of medical graduates jamming a job market restricted by state and insurance policies. The conflict potential that built up here, was imposed on other debates, like that between biographical and analytical medicine.

After having mentioned the historiographical context on which I base my work, let me outline the organization of the dissertation. Chapter one is structured around the rationalist tradition which, as I argue, dominated constitutional thought in the first half of the 1920s. Most authors in the three medical journals, *Kl.W.*, *D.M.W.*, and *M.M.W.*, made concessions to 19th century causalism when they developed their ideas. Chapter two focusses upon the *neo-romantic* way of thinking, which dominated the second half of the decade. Medicine was identified with the *art* of healing rather than with biomedical science. *Neo-romantic* authors stressed the importance of *intuition* over that of rationality. Medical scientists who had catered to rationalism early in the 1920s, promoted the idea of *synthesis* to rescue some of the scientific traditions which had taken flak from the *neo-romantic* critics. This, in a nutshell, is the story I want to tell. I am not focussing on any particular historical actor, and I have not included many biographical

details in the main text. In the appendix, however, the reader will find a section with short biographical sketches of the authors involved in the debate.



## **Chapter 1. The Rationalists and the Rise of the “Constitutional Problem.”**

When he wrote the obituary for his late Rostock colleague Friedrich Martius in 1923, the Berlin clinician Friedrich Kraus, director of the second medical clinic of the old Berlin university hospital, the Charité, included a brief reflection on the impact with which the “constitutional problem” had hit medical science, a concept that was central to the theoretical works of both Martius and Kraus.<sup>21</sup> Martius, he wrote, would have to be remembered as a lonely pioneer of the concept in pathology and internal medicine, who especially emphasized the importance of heredity for the field. He had understood, wrote Kraus, “to hammer his theories (*seine Lehre*) into the contemporary consciousness and to make them popular. Today,” Kraus added, “constitution is almost too much an object of fashion.” His hope that constitutional science would maintain the impulse “to create some productive work” sounds almost like a warning. If we look at the index entries under “Konstitution” and related terms in two medical weeklies,<sup>22</sup> we get an idea what Kraus might have had in mind when he wrote about a fashion. In both *Deutsche Medizinische Wochenschrift* and *Münchener Medizinische Wochenschrift*, we find hardly any entries on “Konstitution” in the first decade of the century, well below ten per year in the following decade, and an apparent boom of publications on constitutional ideas in the interwar years.<sup>23</sup> In this chapter I will take a closer look at the concepts sold under the umbrella of the human constitution and at the people who tried to sell them. What exactly was it Kraus was worried about? How did the constitution make its big entry into

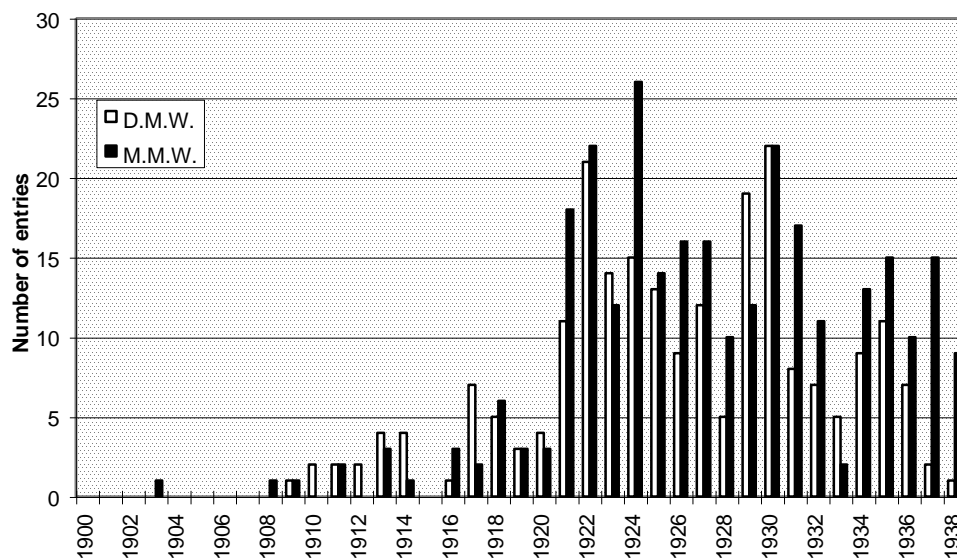
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<sup>21</sup> Kraus (1923).

<sup>22</sup> Like “Konstitutionslehre,” “Konstitutionsanomalie,” “Konstitutionskrankheit,” and other similar terms.

<sup>23</sup> See figure 1.

the medical journals? Why should it be a problem for its advocates if a scientific concept became too popular?<sup>24</sup>



**Figure 1:** Number of index entries on constitution in the medical weeklies, “*Deutsche Medizinische Wochenschrift*” (D.M.W.) and “*Münchener Medizinische Wochenschrift*” (M.M.W.) between 1900 and 1938.

### Concepts of the constitution in classical medicine.

To what extent was the science of the constitution really as new and revolutionary as some of its advocates in the late 1920s suggested? The constitution had been the predominant organizing system in medicine through centuries of bedside practice. In order to teach medicine in ways different from apprenticeship, the existence of some kind of systematic organisation of knowledge is essential. The medical historian, Henry E. Sigerist, suggested in 1929 that there were only two possible ways to set up a teachable system: either one organized it around the patient, or around the disease as an entity.<sup>25</sup> Classical Hippocratic-Galenic medicine was organized around the human being and the four humors, which had elementary qualities: blood was warm, phlegm cold, yellow bile

<sup>24</sup> Cf. Bauer (1920), who saw the science of the constitution in a state of flowering.

<sup>25</sup> Krügel (1984), p. 6.

dry, and black bile moist. An individual was ill if the humors were out of balance. Their composition determined a person's temperament. If, for instance, black bile slightly dominated the balance of humors, without necessarily causing disease, the individual belonged to the melancholic type (today probably diagnosed as slightly manic-depressive). The melancholic type was associated with men of genius: philosophers, statesmen, artists.<sup>26</sup> The other three constitutional types according to the Hippocratic-Galenic system were: the choleric, the sanguinic, and the phlegmatic type. Today the old constitutional system would be classified as a holist concept: A disease was something which could only be addressed by treating the whole human being.<sup>27</sup> From the renaissance on, this system slowly gave way to a localist dogma focussing on the diseased organ, tissue, and finally, in Virchow's late 19th century cellular pathology, the group of cells. At the same time Koch's bacteriology introduced the most advanced concept so far of disease as an entity. Exogenous causes of disease moved to the centre of interest in scientific medicine, and by the second half of the 19th century constitutional thinking had almost completely disappeared from medical theory. But "[n]ot from the practice," wrote medical historian Paul Diepgen in 1933, "and from there it was rediscovered."<sup>28</sup>

### **War pathology and nationalism: the secondary literature on constitution.**

The secondary literature in English so far has not had much to say about the renewed interest in the constitution in the 1920s. Paul Weindling mentions constitutional pathology only in passing in his book *Health, race and German politics between national*

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<sup>26</sup> Sigerist (1962), pp. 152-3. See also Ciocco (1936).

<sup>27</sup> I am using the subjunctive mode here for the simple reason that the term holism makes sense only as a reaction to the localized approach. Today we might be tempted to say that premodern doctors approached the sick in a holist way, but from a historical point of view this is wrong. The concept of holism is a modern one. The term was coined by Jan Smuts, after the Greek word for the whole: Cf. Mayer (1952).

<sup>28</sup> Diepgen (1933).

*unification and Nazism*.<sup>29</sup> He is mainly interested in Martius' connections with the race hygiene movement before the First Worldwar and interprets it as a means for biologists to establish a power claim. But as we have seen, the debate about matters constitutional really took off after 1918, and there are reasons for that. A convincing explanation for the timing of this boom of constitutional pathology can be found in Cay-Rüdiger Prüll's essay on *Holism and German Pathology*, which is - as far as I know - the first and only study of modern German concepts of the constitution so far in English.<sup>30</sup> Despite the title, Prüll focusses more on constitutional pathology's utilitarian aspects than on its holist implications, more on the rationalist tradition than on the neo-romantic camp. Prüll explains the rise of constitutional thought as a product of the Worldwar and "war pathology," established, amongst others, by Freiburg pathologist Ludwig Aschoff, with the support of Otto von Schjerning, head of the Army Medical Service (*Feldsanitätswesen*). The program of "war pathology," according to Prüll, was worked out at a 1916 congress in Berlin, with half the pathology chair holders at German universities participating. Prüll draws the picture of constitutional pathology as a vehicle for German nationalist thought. He sees its foundation in a *deutschnationalem* milieu of rightwing professors who first employed it as their contribution to the German war effort. After 1918, according to Prüll, they dedicated the same concepts to collecting data on the adaptation of the human organism to the extreme conditions of the modern working environment: the worker in the factory was thought to be subject to similar influences as the soldier in the trench. A similar analogy had been constructed by the rightwing poet Ernst Jünger, an eminent representative of the so called "Conservative Revolution" in the Weimar Republic, in his book *Der Arbeiter* (1932). This parallel, as well as the nationalist political outlook and sometimes *völkische* perspectives of influential

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<sup>29</sup> Weindling (1989), pp.232-5.

<sup>30</sup> Prüll (forthcoming)

pathologists like Ludwig Aschoff and Otto Lubarsch at Berlin lead Prüll to see constitutional pathology in the Weimar Republic firmly rooted in the political camp of the anti-democratic *Deutschnationale Volkspartei* (German National People's Party). Prüll delivers a consistent account of some aspects of constitutional pathology, but in focussing on the pathologists, he leaves out important contributions of clinicians, who viewed constitutional thought from a different angle. Moreover, I think that his political statement cannot be sustained if we include liberals like the clinicians Theodor Brugsch and Gustav von Bergmann in the picture, or for that matter, the pioneer of constitutional thought, Friedrich Martius.<sup>31</sup>

Rainer Krügel's 1984 dissertation, *Friedrich Martius und der konstitutionelle Gedanke* (Friedrich Martius and Constitutional Thought), introduces the concepts of constitutional pathology with a particular focus on Martius's key role on the threshold of the 1920s boom of constitutional thought, his philosophical and medical background in 19th century positivism, as well as his connections with hereditary science and eugenics. Krügel's work gives a detailed and convincing account of Martius's personal development, but he is not strong on explanations for the enormously increased interest in the works of Martius and others on constitution after the war. He explains the turn to the, in his view inherently holist concept of the constitution as a necessary, self evident consequence of a too dogmatic mechanism and localism in medicine in the late 19th century. I find his explanation unsatisfactory and I will return to it in chapter 2. As I will show in this chapter, and as in fact Krügel shows for Martius's case, the pioneers of modern constitutional thought conceived it not primarily as an idealist alternative to late 19th century materialist medicine, but as a theoretical complement for the clinical practice.

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<sup>31</sup> I will return to the political dimension of holist thought and the constitution in later section.

## **Modern constitutional thought.**

I have briefly introduced classical constitutional thought in the previous section. Let us now turn to the modern concepts. Confusion about what constitutes constitution makes it difficult, for me as well as it was for medical authors in 1920s Germany, to present a universally valid, modern definition of the term. If we take a closer look at titles of publications on constitution we find that a programmatic debate about what constitution actually was, continued throughout the interwar period. However, already from about 1921 the concept was applied in a variety of ways to disciplines like gynecology, urology and especially psychiatry, and it was used to boost the impact of the young disciplines of genetics and endocrinology in a clinical context.<sup>32</sup> Each of the authors of these articles offered definitions of the general nature of the human constitution. Though these definitions often contradicted each other, it is important to stress that hardly any of these programmatic papers of the 1910s and early 1920s talk about a crisis.<sup>33</sup> Their authors presented themselves as part of a tradition with the medical scientists of the late nineteenth century. They frequently referred to Rudolf Virchow and excused his more than reserved attitude towards the dominant role of the constitution in the medical practice of earlier periods with the spirit of his time.<sup>34</sup> It had been necessary and historically understandable, Otto Lubarsch argued in 1921, to stress the role of cells for the nature of disease when Virchow did so.<sup>35</sup> The term ‘constitutional’ to Virchow meant the opposite of identifiable, according to Lubarsch, because it had commonly been used by pre-cellular pathology practitioners who did not want to acknowledge that local disorders could lead to what might look like general disease. This was why Virchow stressed the local over the general, and dismissed, rightly so in Lubarsch’s eyes, a

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<sup>32</sup> Gynecology: Aschner, Mathes; urology: Posner; psychiatry: Kretschmer.

<sup>33</sup> The exception is Aschner (1924).

<sup>34</sup> Cf. Lubarsch (1921), Rößle (1921).

traditional, unscientific and ill-defined understanding of the constitution. The hostility with which Koch's school of bacteriologists treated constitutional interpretations of disease was also historically understandable, Lubarsch argued, at least as long as they had to fight for their credibility. Their "exaggerations" and "one-sidedness," though, had prepared the ground for the pioneers of the new science of the constitution, amongst them the clinicians Friedrich Martius and Friedrich Kraus and the pathologists Carl Hart and Lubarsch himself. They did not dismiss bacteriology and cellular pathology but argued the need for a constitutional concept to complement and integrate their knowledge. Neither of the two concepts, they thought, was able to deliver a sufficient basis to explain disease: Why did some people get sick and others did not, if exposed to the same bacteria? Did not this question show that it was necessary for a theory of disease to take into account both exogenous factors, like bacteria, and endogenous factors, like, yes like what? These endogenous factors, human disposition and response to disease, were to be the objects of the science of the constitution.

### **Friedrich Martius.**

The observed differences in the course a disease takes in different individuals, made it sensible and necessary, according to the Rostock clinician Friedrich Martius in one of his influential writings, to scientifically investigate the variability of the human constitution.<sup>36</sup> It was a fact that humans reacted differently to bacteria than culture dishes. In the bacteriologists' practice, experiments in petri dishes and with animals had to follow a standardized pattern; all agar cultures had to have exactly the same constitution. But humans were subject to individual differences due to endogenous factors. Martius goal was explicitly not to develop a grand new disease theory. He avoided using the term

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<sup>35</sup> Lubarsch (1921). Lubarsch occupied Virchow's pathology chair at the Charité. Rößle was going to be his successor.

<sup>36</sup> Cf. Martius (1922).

constitutional pathology (*Konstitutionspathologie*) but talked about introducing constitutional thought (*den konstitutionellen Gedanken*) to medicine instead.<sup>37</sup> Biological phenomena observed in clinical practice, which so far could not be dealt with in the frameworks of cellular pathology and bacteriology should nevertheless be subject to empirical, scientific research. Martius wanted the human constitution to be an exclusively empirical concept: “philosophy due to its intuitive character [did] not have a place in scientifically oriented medicine, as this [was] the case with religion.” Even if a great deal of the medical literature seemed to be filled with vitalist ideas and if its language suggested purposiveness in many biological processes (he addressed the biologist turned philosopher Hans Driesch’s claims and their reception amongst medical scientists), this was to be understood mainly didactically: a matter of terminology, not ontology. He doubted, Martius wrote, that there was anybody out there who would seriously welcome if scientists resumed deriving medical facts from abstract, higher principles and from intuition.<sup>38</sup> He seemed to think, however, that there was no real danger of that happening, as in his view experience and experiment were the firm foundations of a “medicine which was once and for all based on natural science.”<sup>39</sup> He was not interested, he wrote, in the final causes of the phenomena. In Martius’s eyes, the only branch of philosophy with significance for medicine was epistemology. As the most promising scientific keys to human constitution and to the different disposition to disease in various individuals, he suggested the sciences of heredity (*Vererbungslehre*) and of protein chemistry.

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<sup>37</sup> Paul Mathes did not want to speak of “constitutional pathology” either, because the constitution, he wrote, was just an abstract term (*Begriff*). Cf. his (1922) and (1923).

<sup>38</sup> Martius (1922b). He responded to Oskar Wolfsberg who accused him of not doing Driesch justice.

<sup>39</sup> *Ibid.*



Martius did not develop his theories out of the blue, as Krügel points out. Decisive influences were Ottomar Rosenbach, Adolf Gottstein, and Ferdinand Hueppe.<sup>40</sup> Rosenbach was a clinician turned savant who criticized the central role of the experiment to late 19th century medical science. He suggested to put more emphasis on the observation at the bedside. Gottstein, a Berlin social hygienist and medical publicist, wrote on problems of hygiene and epidemiology. He developed a mathematical formula for the disposition to infectious diseases. Mathematical formulae were also central to the writings of Hueppe, bacteriologist and hygienist, who attempted to make the constitution a quantifiable entity. Both Martius and Hueppe saw disease as mathematical functions: expressing a phenomenon as formula to them was the ultimate goal of all empirical science.<sup>41</sup> They referred to the laws of the conservation of energy, developed in thermodynamics: the cause for a phenomenon had to be sought in the composition of the body, in its potential energy.<sup>42</sup> In Hueppe's terms:

This cause in an epistemological sense is identical with the concept of potential energy in a mechanical context. The inner composition has to contain everything, qualitatively and quantitatively, that becomes apparent upon influences from outside, in other words, the sufficient cause for fermentation processes and diseases lies exclusively in the construction of the infected host, in his arrangement and composition, in the constitution of the fermentable body.

What is not assigned there cannot come to appearance.<sup>43</sup>

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<sup>40</sup> Krügel (1984), pp. 38-42.

<sup>41</sup> Ibid., p. 64.

<sup>42</sup> On the application of thermodynamics to the function of the human body and society, see Rabinbach (1990).

<sup>43</sup> Hueppe (1893), p. 27. Quoted after Krügel (1984), p. 60. Lubarsch (1919) criticized Hueppe's and Martius's causality theories and embraced conditionalism instead, which can be found in the writings of J.S. Mill and of Lubarsch's contemporaries Verworn and v. Hansemann. Lubarsch also cited R. Semon.

Martius started his campaign for the constitutional concept around 1898, when he gave a programmatic speech at the *Versammlung deutscher Naturforscher und Ärzte* in Düsseldorf on causes of diseases and predisposition, which already contained his “full pathogenetic creed.”<sup>44</sup> Martius’s concept of the constitution was a materialist one, informed by positivist epistemology and thermodynamic theories, and firmly based in the late 19th century. He did not do much original research, but he did the public relations, publishing mainly theoretical essays. In the following two decades, increasing numbers of medical scientists became interested in the human constitution. No definite consensus, however, could be reached about how to define it.

### **Agreements and controversies.**

While Martius’s writings stood under the sign of a predominant sense of continuity, and while there was no talk about a crisis of medical knowledge, a number of authors were aware of diverse meanings of “*Konstitution*” and sought to reconcile these. The pathologist Lubarsch and the Munich pediatrician Meinhard Pfaundler. commented on the main controversies, in 1921 and 1922 respectively.<sup>45</sup> Lubarsch’s and Pfaundler’s basic understanding of constitutional theory was the same, despite their different careers and institutional contexts. Lubarsch had a strong background in biological research, in pathology and physiology. He was head of the Berlin University Pathological Institute and Museum since 1917. Pfaundler was a clinician. He had spent some time in Hofmeister’s Physiological-Chemical Institute at Strasbourg, but already in 1906 he was made director of the Munich University Children’s Hospital. Actually, most authors interested in the constitution would agree, Pfaundler wrote, that the foundation of constitution had to be seen in the “individual response to stimuli” (*der individuellen Art*

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<sup>44</sup> Martius (1898). Quote from Martius, autoergography, p.125, after Krügel (1984), p. 34.

<sup>45</sup> Pfaundler (1922).

*der Reizbeantwortung*), a definition he referred to Martius.<sup>46</sup> Constitution could not be the response as such; it was the “composition of the body or its parts which results in the response, coincides with it, or is otherwise correlated.” If, despite the efforts of many researchers, there was still disagreement over the role of the constitution for the course of illness, Lubarsch stated, that was “due to the facts being extremely ambiguous.”<sup>47</sup> He named what he saw as the four main controversies (*Hauptstreitfragen*) amongst medical scientists interested in the human constitution:

- 1) Do we have to understand constitution as something unchangeable, inborn, inherited?
- 2) Does constitution refer exclusively to the body or does it include the soul?
- 3) Is the constitution an exclusively morphological or also a functional concept?
- 4) Is the concept of the constitution a unitary one which refers to the whole organism, or is there also a partial constitution, a particular organ, tissue or cell constitution?<sup>48</sup>

### **Genotype or phenotype.**

Let me discuss now in greater detail the first one of Lubarsch’s points, which was also of paramount interest to Pfaundler. Could the term constitution be strictly reserved for the “outcome of the hereditary material”?<sup>49</sup> In other words: was the constitution merely a manifestation of an individual’s genotype? Lubarsch listed amongst others the names of Carl Hart, Berlin anatomical pathologist, Julius Tandler, Vienna pathologist

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<sup>46</sup> Lubarsch, however, did not agree with Martius’s causalist approach, referred instead to Verworn’s and Hanseemann’s conditionalism. See his (1919). He was also quite impressed by the “*mneme*” theories of Richard Semon. See entry for Lubarsch in Wininger, Salomon. *Große jüdische National-Biographie*, Vol. 4 (1929), cited after *Deutsches Biographisches Archiv, Neue Folge*. Munich: K.G. Saur, 1989.

<sup>47</sup> Lubarsch (1919), p. 36.

<sup>48</sup> Lubarsch (1921), p. 813.

<sup>49</sup> Pfaundler (1922).

and social reformer, Julius Bauer, Vienna clinician, and Ernst Kretschmer, Tübingen neurologist and psychiatrist, under yes: the constitution was more or less synonymous with the genotype, determined by the germ plasm.<sup>50</sup> Pfaundler added the Innsbruck gynecologist, Paul Mathes.<sup>51</sup> Lubarsch's list of the other side included Friedrich Martius, Friedrich Kraus and Theodor Brugsch, all three clinicians, as well as his own name, as proposing a concept of constitution that was not only based on the genotype. To this list, Pfaundler added Robert Rößle, pathologist at Jena, Fritz Lenz, Munich professor of race hygiene, Karl-Heinrich Bauer, Göttingen surgeon, and Hermann Werner Siemens, Munich dermatologist. Pfaundler himself argued for a phenotypical definition of the constitution on the grounds of clinical utility: a genotypical constitution, he wrote, would be fairly well defined, but rather esoteric, could not be measured, and would be almost inaccessible to the clinician's observation. Lubarsch argued along similar lines and dismissed what he called "radical" positions regarding the role of heredity for the constitutional problem. With Martius and Kraus he supported the concept of a partially and subsequently acquired constitution, based on the actual physiological organisation at every stage of the organism's life span. This would, for instance, include the acquired immunity to certain diseases. An equation for constitution, proposed by the clinician and Kraus-student Theodor Brugsch, might clarify what factors the advocates of a concept based on the phenotype included in their definitions.<sup>52</sup>

$$\textit{Konstitution} = I \begin{array}{c} \rightarrow \\ \leftarrow \end{array} O \begin{array}{c} \rightarrow \\ \leftarrow \end{array} A$$

'I' and 'A' were the inner and the outer conditions of a living organism, respectively, and 'O' was the organised matter of the biological being. The organism had to maintain an equilibrium of inner and outer conditions in order to be alive, and this was the ground on

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<sup>50</sup> Cf. Bauer (1920).

<sup>51</sup> Cf. Mathes (1923).

which constitution had to be defined. According to this definition, every process, every interaction which somehow maintained the function of an organism, was constitution. It was a very open definition, which could easily be applied to any aspect of biological life, as well as society.

The social applicability could of course also be claimed by supporters of the genotype definition, and constitutional arguments were widely used to support eugenic ideas.<sup>53</sup> Was there a “criminal constitution,” an “alcoholic constitution” or a constitutional disposition for TB?<sup>54</sup> Could geniuses be recognized from the dimensions of their bodies?<sup>55</sup> Interestingly enough, in the medical journals I have consulted, race is only discussed and related to constitution from the second half of the 1920s onwards. The social applicability of the genotype concept was recognized, readily by some, reluctantly by others. Comparing both genotype and phenotype concepts in a 1929 article, the Vienna clinician Julius Bauer mentioned his satisfaction about the fact that the former had turned out to be the by far more useful one (*zweckmäßiger und brauchbarer*) and was applied by a majority of authors, especially botanists and animal breeders. If the phenotypical constitution was to be taken literally, he mocked, a haircut would already result in a constitutional change. Bauer was interested in the problem of human degeneration (*Abartung*). He had coined the term of the “*Status degenerativus*” for a “universal constitutional anomaly,” characterized by “inferior adaptation, lower resistance to disease and vitality, biological inferiority.” Commenting on criticism from the Swiss clinician Otto Naegeli, who particularly objected to the evaluation of human beings on a biological basis, Bauer stressed that he himself had “always strongly emphasized that the inferiority of a *status degenerativus* is to be understood strictly from

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<sup>52</sup> Brugsch (1918). Cf. Kraus (1922) whose definition is similar, without the equation.

<sup>53</sup> On German eugenics, cf. Weindling (1989) and Faith Weiss (1987).

<sup>54</sup> Cf. Edel (1919), who did not think that this made sense.

<sup>55</sup> Cf. Kretschmer (1925).

a biological point of view, never from a sociological or a cultural one.” This statement suggests that he was quite conscious of potential political implications of his work. That the *Biographische Handbuch der deutschsprachigen Emigration* mentions his strong opposition to Nazi eugenics policy after 1933 and his emigration following the German annexation of Austria in 1938, suggests that we might want to take his affirmations at face value.<sup>56</sup> Whatever his intentions, however, Bauer’s concepts are amongst the most readily applicable to social darwinist purposes in the range of articles on constitution I have found in the medical weeklies before 1933.<sup>57</sup>

### **Body and soul.**

Central to the Hippocratic-Galenic concepts of the constitution was the determination of constitutional types as a means to relate matters of the soul to bodily features. This brings us back to Lubarsch’s list: Is the soul part of the constitution? Lubarsch thought so, and I have not found any author who would have disagreed. The Kraus school at the Berlin Charité, Kraus himself as well as his students Theodor Brugsch and Gustav von Bergmann, introduced a significant amount of psychosomatic thought in their theoretical writings. They did their research on pathologies like heart disease and stomach ulcer, where they established direct connections between psychology and somatic illness. Kraus introduced the term “*vegetative system*” to

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<sup>56</sup> Vol II, pp. 58-9.

<sup>57</sup> It has been pointed out by historians of eugenics, that eugenic concepts were embraced on the political left as well as on the political right. However, what makes Bauer’s position interesting is his apparent reluctance to assign biology any social relevance. Degeneration was to be seen strictly biological, no political and social consequences were to be drawn. His research was applicable but he did not want to see it applied in a social context. Interesting in this context is also Martius’s stance on degeneration. (Cf. Krügel, 1984, pp.84-9). According to the self proclaimed “cultural optimist” Martius, degeneration applied only to the individual, the hereditary material remained unaffected, i.e. the problem of degeneration was solved by the death of the degenerated person. Most eugenicists, on the other hand, assumed that degeneration progressed in the whole population and spoiled a whole people’s hereditary material. To Martius, the “real disease” was exactly this fear of degeneration promoted by “culture pessimists.” Nevertheless, he was member of the German Society for Race Hygiene. “The new fashionable disease of our time is our cultural pessimists’ fear of degeneration, which rises with the thrust of mass suggestion,” he stated. “Big fuss about degeneration from all sides! And this fear grows like a

medicine.<sup>58</sup> Kraus and Brugsch called their version of constitutional pathology “*Personalismus*,” the science of the whole person: Kraus published an “*Allgemeine und spezielle Pathologie der Person*.” Von Bergmann called what he did “*functional pathology*” and presented himself in his memoirs as one of the pioneers of psychosomatic medicine. Brugsch co-edited a four volume encyclopedia titled “*Die Biologie der Person*.”<sup>59</sup> The book, published between 1926 and 1933, crossed the boundary between medicine and anthropology. Most of the articles discussed medical subjects in terms of the psycho-physical and functional orientation of “*Personalismus*.” It also contained contributions on philosophical issues, like an essay titled *The Problem of Individuality* by Erwin Straus, which Julius Bauer in a review called a “*naturphilosophische Abhandlung*.”<sup>60</sup> Volume four, titled *Sociology of the Person*, had chapters on concepts of individuality in Russian, Indian and Japanese cultures, as well as some on the individual in different religions: Catholicism, Protestantism, Islam and Judaism. Bauer’s review of the latter is short: They are interesting, he writes, but “[t]he theological considerations are obviously beyond natural-scientific, biological critique.”<sup>61</sup>

### **Measuring bodies.**

Issue number three of Lubarsch’s list pointed to what some advocates of constitutional thought saw as the main progress from 19th century pathology. The latter had been dominated, so their argument, by anatomists who gained their knowledge exclusively through post mortems. They worked from a morphological angle and, as

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cancer. One copies it from the other, until finally everybody is convinced that ‘völkisch’ it is going unstopably downwards with us.” (Martius, 1914, pp. 67 and 68. Quoted from Krügel, op. cit., p. 84)

<sup>58</sup> Österreichisches biographisches Lexikon 1815-1950, vol. 4 (1969), cited after Deutsches Biographisches Archiv, Neue Folge (1989).

<sup>59</sup> Cf. v. Bergmann (1953), pp. 135-141. Brugsch, Th. and Lewy F. W. eds. *Die Biologie der Person. Ein Handbuch der allgemeinen und speziellen Konstitutionslehre*, 4 vols.; 1. Allg. Teil d. Personallehre (1926), 2. Allg. somatische u. psychophys. Konstitution (1931), 3. Organe u. Konstitution (1930), 4. Soziologie d. Person.

<sup>60</sup> *Klinische Wochenschrift* 5 (1926), 1096-7.

<sup>61</sup> *Klinische Wochenschrift* 7 (1928), 2070, and 8 (1929), 1321.

Garland Allen puts it, “were regarded from the younger generation as neglecting functional studies. It was felt that the study of form had totally eclipsed the study of function.”<sup>62</sup> Clinicians with physiological interests, like Friedrich Kraus and his students, used the angle of “function” to set claims in medical theory: the clinician’s object was the living patient, not the dead body. On the one hand, this functional orientation led to the psycho-somatic concepts mentioned in the previous section. On the other hand it justified extensive anatomical studies on living patients.

Numerous authors proposed concepts for modern constitutional typologies, linking the psychological with the physical.<sup>63</sup> The most successful and most frequently cited contribution to the question came from the Tübingen psychiatrist Ernst Kretschmer in form of his theories of correspondence between physique and character, for which he measured and photographed the bodies and heads of numerous mental patients.<sup>64</sup> He distinguished between three types of physique: the pyknic, the athletic, and asthenic type. Kretschmer’s types were mainly applied to psychiatric disorders, but also to potential predispositions for tuberculosis and venereal diseases. How could constitution be judged or even quantified? By measuring bodies. Introducing his method, Kretschmer wrote:

Investigation into the build of the body must be made an exact branch of medical science. For it is one of the master keys of the constitution - that is to say, to the fundamental question of medical and psychiatric and clinical work. ... There is nothing for it: we must plod along the bitter, wearisome road of systematic verbal description and inventory of the whole outer body from head

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<sup>62</sup> Allen, Garland: *Life Science in the Twentieth Century*, New York: Wiley, 1975, p. 9. Quoted after Krügel (1984), p. 20.

<sup>63</sup> Cf. Ciocco (1936).

<sup>64</sup> I am quoting from the English translation of his book: Kretschmer (1925). I take the high number of short reviews of articles in various journals in the “*Klinische Wochenschrift*,” referring to the “Kretschmer types,” as a measure of success. For a short presentation of his thoughts, see Kretschmer (1922). Quantification of the human physique and constitution was not an exclusive interest of German speaking scientists: cf. Draper (1924) and Sheldon (1940).



to foot; wherever possible, measuring it with calipers and tape measures, photographing and drawing. And not only must we do this in a few interesting cases, but we must take hundreds of observations, using every patient we can get hold of, and for each must we make out the same complete scheme. Above all, we must use our eyes, to see at a glance, and to observe without a microscope or a laboratory.<sup>65</sup>

What follows this paragraph, is a four page questionnaire with nine major sections, covering: face and skull, physique, surface of the body, glands and intestines, measurement, type of personality, and heredity. Remarkable is the combination of meticulous measurement procedures and the claim that the doctor should be able to judge the constitutional type or “habitus” of a subject at a glance.

Remarkable is also the appeal to “use every patient we can get hold of.” Patients the constitutional researchers could get hold of in order to perform meticulous measurements in the first three decades of the century were mainly young soldiers who they measured in their function as army doctors, and mentally ill patients in asylums, both groups apparently constituting readily available “patient material,” probably because they were in a situation where individual human rights were temporarily suspended.<sup>66</sup> The Munich clinician Hermann Rautmann was quite open about the use of data he collected on grounds of his access to soldiers’ bodies during the war, and how the opportunity to measure “healthy young men from 20 to 30 years old” promoted his research on the human constitution.<sup>67</sup> The aim of constitutional research was, according to Rautmann, to gain a “reliable scientific foundation for judgements on the physical and mental composition of the individual human being” (which he also called the

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<sup>65</sup> Kretschmer (1925), p. 5.

<sup>66</sup> After 1933, “research material” with suspended human rights was even more readily available. Cf. Pross and Aly, *Ärztchamber Berlin*, eds. (1989) and Aly, Chroust and Pross (1994).

*Gesamtbeschaffenheit des Kranken*). The first step to build this foundation would be to establish norms for the healthy human being, which in Rautmann's view should be supported by solid statistics. Clinical findings should be classified according to the frequency with which they were observed in the population, not more and not less. Rautmann's work is an example for the program of "war pathology," as discussed by Cay-Rüdiger Prüll.<sup>68</sup> Rautmann collected his initial data as a member of a wartime commission for the selection of air pilots and he intended to continue his research with similar methods after 1918. His statistical norms can be seen a worldwar spinoff, collected in systematic measurements of the body weights, lengths, chest circumferences, heart sizes, blood pressures and heart paces of healthy young soldiers. With data like his and the resulting norms, wrote Rautmann, researchers should be able to establish connections between constitutional types and various pathologies.

How detailed measurements had to be in order to yield reasonable results, was an issue of dispute, and several constitutional indexes and habitus models were proposed by various researchers.<sup>69</sup> Julius Bauer, for example, thought that a rather small number of measurements of major bodily features would be sufficient for clinical purposes, while anthropological research needed the more meticulous and detailed measurements of *Kollektivmaßlehre*. Anthropologists, he argued, collected their data in order to gain knowledge about the characteristics of a race. They had to calculate average values. Constitutional science, on the other hand, was concerned with individual differences between human beings: the deviations from a norm. Constitutional medicine related these individual deviances with the individual disposition to certain diseases, "hence, it [did] not relate a number with a number like anthropology, but a number with something

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<sup>67</sup> Rautmann (1923).

<sup>68</sup> Prüll (forthcoming).

<sup>69</sup> For opinions on norms, cf. Kaup (1922) and Bauer (1929). Ciocco (1936) mentions a number of habitus formulae and indices.

completely different.”<sup>70</sup> As far as norms were concerned, Bauer suggested that values for any of the measured features shown by less than 4.5% of the population should be seen as signs of degeneration, strictly biological, as he stressed more than once.<sup>71</sup>

### **The parts and the whole.**

How holistic was constitutional pathology? Rainer Krügel writes that there was a strong connection between vitalism, a holist point of view, and constitutionalism.<sup>72</sup> Due to constitution pathology’s functionalist angle, he argues, it was inherently holistic.<sup>73</sup> But was the case so clear? In the fourth issue on his list of controversies in “*Konstitutionslehre*”, Lubarsch raised the question whether there was only a unitary constitution of the whole body or also partial constitutions of organs, tissues, and cells.<sup>74</sup> Friedrich Martius, he wrote, was one of the advocates of partial constitutions. Friedrich Kraus, on the other hand, had always stressed the unity of the organism, where a “unitary constitution” would “manifest itself in all organs and parts, individually and characteristically.”<sup>75</sup> Lubarsch himself suggested to assume both the existence of an overall constitution and of partial ones.

To Julius Bauer and Friedrich Martius in 1920, “the constitution of the whole organism [could] be broken up into a sum of partial constitutions of all tissues and organs.”<sup>76</sup> No word in Bauer’s article of the whole being more than its parts. This was simply not what he was interested in. Whether a disease was based on the degenerative state of the whole organism or of a single organ, did not matter to him. It remained a disease. For Bauer, we remember, the constitution was identical with the genotype. As

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<sup>70</sup> Bauer (1929), p. 146.

<sup>71</sup> See also Bauer (1924).

<sup>72</sup> Krügel (1984), p. 16.

<sup>73</sup> *Ibid.*, p. 20.

<sup>74</sup> Lubarsch (1921).

<sup>75</sup> *Ibid.*, p. 815.

immediate causes for constitutional malfunctions, he suggested disturbances of the embryological development, which lead to “*infantilism*” of certain organs, and in very rare cases of the whole organism. A harmonic course of development and growth, he wrote, was guaranteed - apart from the energies inherent to every single part of the body - by the purposeful (*zweckgerichtet*) synergy of the nervous system and the various endocrine organs. Bauer’s argumentation was pragmatic: if he had to take systems of higher order into account, he was willing to admit that their organization was “purposeful,” an expression associated with the teleological ideas of romantic medicine. If it made more sense to look at the parts only, though, he was ready to do that.<sup>77</sup> He did not explicitly refer to metaphysics, neither dismissive like Martius, nor appreciative. Like Martius, however, Bauer committed himself to the marriage of medicine and exact science. “*Konstitutionslehre*” was not a necessarily holistic concept to rationalists and pragmatists like Martius and Bauer.

## **Conclusion.**

The human constitution, norms and the individual, remained in the focus of medical attention far into the 1930s and became part of the doctrine of “Biological Medicine” supported by the Nazi establishment.<sup>78</sup> If institutionalization is a measure of success, constitutional theory had been fairly successful. Several chairs in clinical and internal medicine, surgery and pathology were occupied by advocates of a constitutional approach.<sup>79</sup> The Berlin Charité even installed an “*Ambulatorium für*

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<sup>76</sup> Bauer (1920), p. 402.

<sup>77</sup> His pragmatic attitude is reminiscent of the 19th century “teleo-mechanists” Timothy Lenoir (1982) writes about.

<sup>78</sup> Cf. Jaensch (1933). The head of the Charité *Ambulatorium* and *Führer der Dozentenschaft* (see biographical appendix) presented *Konstitutionsmedizin* as a potential pillar for the new state.

<sup>79</sup> Chairholders with constitutional approach (in brackets: year and place of the first chair): F. Kraus (1894, Graz, internal medicine), F. Martius (1899, Rostock, clinical medicine), M. Pfaundler (1906, Munich, pediatrics), Lubarsch (1907, Düsseldorf, pathology), J. Tandler (1910, Vienna, anatomy), R. Rößle (1911, Jena, pathology), G. v. Bergmann (1916, Marburg, internal medicine), O. Naegeli (1918, Zurich, internal medicine), E. Kretschmer (1926, Marburg, neurology and psychiatry), T. Brugsch (1927, Halle,

*Konstitutionsmedizin*,” headed by Walther Jaensch and supported by a Rockefeller grant.<sup>80</sup> Towards the late 1920s, the emphasis in the debate over constitutional concepts partially shifted away from a search for agreement on a fundamental definition of the problem, according to Bauer, not because all parties had agreed on one position but because apparently everything had been said.<sup>81</sup>

Different interests and institutional backgrounds accounted for differences in the approach to constitution. The questions, for example, whether a constitutional concept should be based on the phenotype or the genotype, and whether it should include psychology, mirrored the practical interests of the medical scientists referring to the concept. Those with a more practical, clinical angle to medicine as the “art of healing” preferred the phenotype model and the more experimentally oriented ones embraced the genotype model, signalling that they were in touch with the latest genetic theories. That the soul should be part of the constitution was more or less a consensus; the question was how. Here again we can distinguish between a “healing” and an experimental approach, one leading to what we call today psycho-somatic thinking, the other to attempts of measuring bodies and estimating dispositions for psychiatric disease. The stress on the role of the soul became even more eminent with the rise of neo-romantic thought. The same can be said about the holist implications of constitutional concepts. They were used to argue for holism in the late 1920s and in the 1930s. But in Martius’s and Bauer’s articles in the early 1920s, holism as a concept did not play a role.

As we will see in the next chapter, the renaissance of the human constitution became an argument in itself, in the debate about an alleged “crisis in medicine” and a fundamental reform of the scientific worldview. Rationality was out of fashion,

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internal medicine), H. W. Siemens (1929, Leiden, dermatology), K.H. Bauer (1933, Breslau, surgery), F. Lenz (1933, Berlin, race hygiene). For biographies and sources, see Appendix 1.

<sup>80</sup> *Münchener Medizinische Wochenschrift* 79 (1932), p. 209. Cf. Jaensch (1933).

irrationality and intuition were in. The stress on individuality and holist concepts of the person in his or her environment, embodied in some writing on the human constitution, as well as the association with the constitutional concepts of pre-modern medicine, made it suitable for use in a campaign for the romantic concepts of a new “*Naturphilosophie*,” for neovitalism, hippocratism and a Paracelsus renaissance. The emphasis on these ideas invested constitutional thought with new meanings. What Martius had conceived as a complement to cellular pathology and bacteriology, was about to be turned, in the writings of the *neo-romantics*, into a concept competing with the rationalist and mechanist traditions of late nineteenth century scientific medicine.

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<sup>81</sup> Bauer (1929).

## **Chapter 2. Neo-romantics: How to Proclaim and Solve a Crisis in Medicine.**

Friedrich Martius, rationalist pioneer of “the constitutional problem,” stressed the continuities of his work with the scientific achievements of cellular pathology and bacteriology. Nevertheless, part of the attraction of constitutional pathology, especially in the later 1920s, resulted from what were seen by some as its holist implications and from a zeitgeist of crisis in the sciences, turning against materialism and the “mechanist worldview of the nineteenth century,” as well as Weismann’s and Roux’s “machine theory” of life.<sup>82</sup> “There is crisis everywhere in the spiritual life at present,” the philosopher Adolf Meyer wrote in 1931:

*Technology and medicine, so far never seriously challenged in their theoretical dependence on the exact and organic natural sciences, are starting to realize that in many, especially in fundamental questions, they have to go their own ways and come to an autonomous theory of their procedures, one which cannot be derived from natural scientific theories, which is even independent from the latter.*<sup>83</sup>

Holist, anti-mechanist theories were popular with the general public and resonated with a crisis spirit in society, as well as with idealistic and neo-romantic tendencies in poetry and philosophy.<sup>84</sup> Characteristic of the medical and biological sciences of the time was the call for more philosophy, more theory, more wisdom, to cope with the vast

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<sup>82</sup> For the term holism, see chapter 1, footnote 27. The common German expression was “ganzheitlich”: see Kötschau and Meyer (1936). The metaphor of the machine for an organism was frequently used in the mechanism-vitalism debate, by authors on both sides, so for instance by the philosopher Julius Schultz in his book *Die Maschinen-Theorie des Lebens*. (Göttingen: Vandenhoeck & Ruprecht, 1909). For more recent contributions to the debate about machine and organism and their use as metaphors, see Crary, Jonathan and Sanford Kwinter, eds. *Incorporations*. New York: Zone, 1992.

<sup>83</sup> Meyer, Adolf (1931), pp. 393-4. Emphasis in the original.

<sup>84</sup> On romantic ideas in medicine, cf. Diepgen (1932), and Herxheimer (1927); For crisis talk in the sciences, see Riezler (1928); Meyer, Adolf (1931).

amount of knowledge which, according to the common argument, was gathered without much sense for the harmony of the whole, in an increasing number of specialized fields.

Rainer Krügel explains the holist turn in medical science as a result of oscillations in the predominant worldview in the life sciences: medicine in the late nineteenth century had been so extremely mechanistic, localistic, anatomically oriented, that necessarily we would have to expect a backlash, an extreme turn towards an anti-mechanist, holist, functionally oriented medicine.<sup>85</sup> Localist medicine would be associated with a materialist outlook and a rational and empirical, sometimes inhumane methodology, while holism would be believed to go together with idealism and with an intuitive, emphatic approach to understanding the world and the sick human being. Krügel adopts this position from the American Claudius F. Mayer, who develops a grand narrative which he collapses into a simple graphic representation of the history of metaphysics in pathology.<sup>86</sup> It shows:

- a) an increasingly localized view of disease in smaller and smaller units, down from the organ in Morgagni's system in the 18th century, via Bichat's tissue to Virchow's cellular pathology until finally a holist revolution in the 20th century changes the trend.
- b) Anti-cyclic oscillations of mechanistic and vitalistic ideologies of the nature of life. The first half of the 20th century, Mayer argued, saw a peak of the anti-mechanistic wave and a valley of the mechanistic one.<sup>87</sup>

To me this explanation of the constitution's renaissance is not quite satisfactory, as it seems to be adopted from the accounts of advocates of a holist focus in pathology and clinic, derived from the desire to make the turn to holism look inevitable.

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<sup>85</sup> Krügel (1984). See, for example, pp. 13, 20, 24-5.

<sup>86</sup> Mayer, C.F. (1952).



Cay Rüdiger Prüll in his essay on *Holism in German Pathology* explains the utilitarian aspects of constitutional pathology at the intersection with public health and eugenics very convincingly. In focussing on this longstanding tradition, though, he neglects the rise of neo-romantic ideas in the Weimar intellectual milieu. Despite the title of his paper, he emphasizes the less holist tradition in constitutional theory. I have suggested to distinguish between two different traditions in 1920s constitutional thought: a rationalist and a neo-romantic camp. The rationalists conceived constitutional pathology as a complement to 19th century cellular pathology, whereas the neo-romantics employed constitutional thought in order to overcome, as they saw it, the fragmentation of the medical profession mediated by specialization, as well as the fragmentation of the human body mediated by localist pathologies. To evaluate Mayer and Prüll's rather internalist explanation, and to add the neo-romantic angle to Krügel's account, I am going to present and analyse some of the rhetorics, locating them in the peculiar setting of the interwar period in Germany, in order to then take a closer look at the people using them and at their potential interests.

### **The “crisis” of Weimar medicine.**

The German situation in the interwar years was a peculiar one. What Detlev Peukert has called experiments of classical modernity, the social reforms and cultural changes of the Weimar Republic, had more enemies than friends amongst the medical profession.<sup>88</sup> The majority of medical doctors, especially outside the metropolitan areas, held conservative or even *völkische* worldviews and were seriously disturbed by the events of the 1918 revolution and the apparent chaos of democracy.<sup>89</sup> Moreover, they found the job

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<sup>87</sup> Ibid., figure 1, p. 72.

<sup>88</sup> Peukert (1982). On Weimar social policies, see esp. pp. 132-149.

<sup>89</sup> Hubenstorf (1989), provides an excellent account of the politics of the medical profession (*Standespolitik*) in the Weimar republic. See Michael Kater's introduction to Aly, Chroust & Pross (1994) for the *völkischen* and anti-semitic inclinations of medical practitioners: half of the German medical

market for medical practitioners increasingly jammed. The situation was blamed on a health insurance policy that left a high number of physicians without the opportunity to open a practice and treat insurance patients. The ones who ran a practice approved by the health insurances, complained about a frustrating, conveyor-belt like working mode. Critics like the wellknown Danzig surgeon Erwin Liek saw a “proletarianization” of the medical profession taking place, with doctors basically being salaried employees of despotic health insurances, whereas the “true physician” had to be a free professional to fulfill his great task.<sup>90</sup> At the same time, increased competition from quacks was deplored, who allegedly drew patients by cultivating the priestly aura that orthodox medical practitioners lacked, due - according to the critics - to an overspecialized and mechanized nature of modern medicine.<sup>91</sup> The quacks maintained the ethos of the healer, while, in the eyes of crisis-mongers, the medical practitioners were strong on diagnosis but had forgotten about the real task of medicine: therapy.<sup>92</sup> By the late 1920s, what had started as a debate about a professional crisis, increasingly merged with neo-vitalist ideas of the new “*Naturphilosophie*” and the holist approaches of “*Konstitutionslehre*” and was finally presented as a fullblown “crisis of medicine.”<sup>93</sup>

In her thesis on the “crisis of medicine,” Eva Klasen points out the five main symptoms of the “crisis”:

- 1) a backlash against a mechanistic and causal-analytic worldview,
- 2) scepticism against orthodox medicine,

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doctors were NSdAP members at some stage; a significant number of them joined the party already before 1933. 26 percent were members of the storm troopers, and 7 percent in the SS (Ibid., p. x. Cf. Hubenstorf, 1989). Several Jewish doctors were involved in experiments with social medicine. This made them easy targets for Liek and his fellows: Cf. Loewenstein’s memoirs (1989), and Hahn (1989). Cf. Kohn (1918) and Marx (1919) for reactions of the profession to Revolution and Republic.

<sup>90</sup> Liek (1927).

<sup>91</sup> Cf. Schwalbe (1919), and Goldscheider (1927).

<sup>92</sup> Cf. Klasen (1984), pp. 35-45.

- 3) frustration over its bad therapeutic record and the competition from quacks,
- 4) the consequences of the social insurance system, and
- 5) the fear of a proletarianization of doctors.

There is no doubt that these were the topics of the debate, and Klasen has done a very convincing job in putting the threads together. As her choice of title and the use of quotation marks already show - translated into English it would be *The discussion about a "crisis" of medicine in Germany between 1925 and 1935* - she assumes that the crisis did not really exist but was mainly a matter of rhetoric. In the "crisis" of medicine, she states, "various different but mostly well known problems and debates from the realms of *Weltanschauung*, medical knowledge, professional politics and social politics came to a climax. This climax resulted from the crisis ridden economic and political situation towards the end of the 1920s and went together with a growing pessimism in the face of an uncertain future."<sup>94</sup>

The crisis talk in medicine combined:

- 1) the 19th century debate about the right approach to the life sciences: materialism and mechanism versus idealism and vitalism,
- 2) a new romanticism in art and literature,
- 3) and a pessimist attitude in reacting to a professional and social crisis, informed by books like Spengler's *The Decline of the West*.<sup>95</sup>

The crisis-mongers demanded a break with what they made out to be sick tendencies in western civilization. If we look at their suggestions of how to solve the crisis, we find

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<sup>93</sup> For the indeterminate nature of the intellectual "crisis" in the Weimar period, compare Forman (1971), pp. 26-9; Ringer (1969), p. 245.

<sup>94</sup> Klasen (1984), p. 110.

<sup>95</sup> For the mechanism vs. vitalism debate, see Cassirer (1950). For the new romanticism: Diepgen (1932), 28-34; Spengler(1926) and (1928).

that most of the threads which were tied together in the crisis rhetorics of the 1930s, existed independently from each other in the the early 1920s or even earlier. In the previous chapter I have argued that “*Konstitutionslehre*” could very well be seen as continuous with the 19th century and as commensurable with a rationalist tradition. The crisis-mongers changed its meaning towards that of a patent medicine for a crisis caused by exactly this rationalist thinking. As I am going to point out in the following section, the same was true with the new vitalism which had already been discussed around the *fin de siècle*, without then being sold as symptom or solution of a crisis.<sup>96</sup>

The difficulty of the historian to keep strings apart which on the first glance seem identical or at least pointing into the same direction becomes evident in the context of the “crisis” debate. It was used by a number of interested groups in order to further different, sometimes contradictory cases. Klasen seems to have overlooked this aspect to some degree and presents too monolithic a picture of the crisis talk and the interests supported by employing it. Amongst the crisis mongers were characters as different as the rightwing Danzig surgeon and gynaecologist, Erwin Liek, and the social democrat member of the Prussian parliament and advocate of social medicine, Julius Moses. The “crisis” was discussed in different journals with different angles, as we will see with respect to the reaction to the works of Liek and of Vienna gynaecologist Bernhard Aschner. Klasen is right: most authors of publications on the “crisis” issue were university teachers, but Liek was not, and in his influential book, *The Doctor and his*

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<sup>96</sup> Neovitalism in medicine might be said to go back to the pathologist Eduard Rindfleisch. See his *Neo-Vitalismus*, Extra Beilage der Deutschen Medicinischen Wochenschrift (1895), pp.617-22. After 1933, advocates of what they called a “Biological Medicine” declared the “crisis” to be solved under the new system. The situation on the job market had in fact relaxed, due to the ban of Jewish doctors. Cf. Hubenstorf (1989).

The mechanization and specialization of modern medicine, presented as the main cause of the “crisis” by contemporaries, frequently led to criticism in postwar Germany, not necessarily combined with crisis rhetorics. The observer at the Nuremberg war crime trial against medical doctors, Victor von Weizsäcker’s student Alexander Mitscherlich, blamed the crimes of nazi doctors on the mechanization of medicine. Cf. Harrington (1996), p. 200, and Mitscherlich and Mielke (1962). This is a somewhat

*Mission*, he presented himself as the voice of the general practitioners.<sup>97</sup> These two groups were in fact opponents in the “crisis” debate: small town practitioners felt threatened by metropolitan professors, and the “crisis in medicine” gave them an opportunity to forward their case.<sup>98</sup> Klasen is right in noting that some of the main crisis-mongers, like Aschner and Liek, practiced in the highly mechanized disciplines of surgery and gynaecology.<sup>99</sup> But what about the clinician Walther Jaensch, who headed the Berlin *Ambulatorium für Konstitutionsmedizin*? The clinicians were the group in scientific medicine who profited most from a holist turn in pathology and who advocated constitutional medicine to stake their claims against the anatomists in medical theory.

Historical accounts of science and medicine which often rely heavily on published sources - this study is no exception - frequently fall prey to the temptation of their authors to buy into causal explanations used by the historical actors, especially where there is not much secondary literature available, as is the case for the “crisis” of medicine. Due to the lack of historiographical work on 1920s medicine, both Klasen and Krügel use in their theses the analytical accounts of authors who might be seen as interested parties in the debate. Physicians turned historians, for instance, like Henry Ernst Sigerist and Paul Diepgen, increasingly got involved in the debate about a “crisis” in medicine, arguing not as trained physicians but as professional historians of medicine. When building on their analyses of the goings on in Weimar medicine, which I do as much as Klasen and Krügel, we have to bear in mind that these historians most likely had their own agenda in a complex process. They were participants as much as they were analysts, their writings are primary sources as much as secondary literature. History of Medicine was popular at a

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ironical turn, as the advocates of a “Biological Medicine” in the Third Reich presented their theories as anti-mechanist solutions to the “crisis.”

<sup>97</sup> Klasen (1984), pp. 2-3. An example for a practitioner writing on the “crisis” is the poet and doctor Gottfried Benn. Cf. his *Medizinische Krise*, in: *Sämtliche Werke*, vol. III, pp. 153-61.

<sup>98</sup> Cf. Hubenstorf (1989) for the professional politics of organizations catering mainly for these small town practitioners (*Landärzte*).

time when a great number of medical authors called on historical idols like Hippocrates and Paracelsus, and medical historians cultivated a fertile ground for their own professionalization plans.<sup>100</sup>

In order to get to a more differentiated picture of the “crisis” and the effects the rhetorics had on medical science and practice, I will present two traditions which were taken up by crisis-mongers, vitalism and neo-romantic thought, and show how these lines of thought were addressed by academics without employing a crisis notion. Then I will discuss Erwin Liek’s book and the Hippocratism and Paracelsianism of Bernhard Aschner, both arguing for a “crisis of medicine” arising out of the alleged conflict between “analytical” medical science and “therapeutical” medical practice. Finally I will show how representatives of academic medicine responded to the crisis talk and included it in a framework of “synthesis” in medicine.

### **The vitalist attitude.**

“There is hardly another philosophical question which these days concerns the medic as much as the problem of vitalism does,” wrote the philosopher and Driesch student Helmuth Plessner in 1922. His teacher, developmental biologist turned philosopher Hans Driesch was probably the best known and most widely cited advocate of a new vitalism in the life sciences.<sup>101</sup> Plessner suggested that vitalist philosophy was central to medicine, especially with respect to the increased interest in individuality, the patient as a person, as a “psycho-physical unit,” but also where the nature of the organic and its “explicability

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<sup>99</sup> Klasen (1984), p. 3.

<sup>100</sup> Sigerist’s student Owsei Temkin describes the activities at the Leipzig Institute for the History of Medicine in the 1920s in his *The Double Face of Janus*. The Leipzig school moved to Baltimore in the 1930s. See also Diepgen, *Die Aufgaben und Ziele des Instituts für die Geschichte der Medizin und der Naturwissenschaften in Berlin* (1931). For History of Medicine in the Third Reich, see Kümmel (1994).

<sup>101</sup> Driesch started his career in biology as a follower of Roux and his concept of developmental mechanics (*Entwicklungsmechanik*). For his vitalist creed, cf. Driesch, *The Science and Philosophy of the Organism*. Aberdeen, 1908 (Vol. I) and 1909 (Vol. II).

or inexplicability in terms of natural laws” was concerned.<sup>102</sup> With respect to the second, metaphysical point, he was rather critical of his teacher and referred to Martius instead: scientific thinking could never propose new ontologies. “What Driesch has proved was not vitalism but the impossibility of a machine theory on the basis of our current knowledge of biological processes.” Still, he had given a new direction to biological research. The ‘person,’ on the other hand, could not be grasped in terms of natural science: The “difficult synthesis of the psycho-physical picture of the person [could not succeed] without a decision for a certain philosophical theory on the relationship of body and soul.” And this is what it all came down to: Theoretically, vitalism belonged in the realms of philosophy, not of the natural sciences, and not of psychology, because it could, like its opposite, mechanism, “neither be proved nor refuted by facts.” Practically though, “vitalism as conviction” was to be the fundamental attitude of the doctor at the bedside, who had to “treat and to grasp the patient intuitively as an object of nature and subject of a spirit, a character, a person; using scientific knowledge, eternally changing and growing, and the wisdom of the heart, which eternally remains the same.” The bottom line was that vitalism could not be proved scientifically; that meant it had to be kept out of science. The doctor, on the other hand, had to be a vitalist at heart because he was not only a scientist but also a healer.

The Heidelberg clinician and pioneer of psychosomatic medicine, Viktor von Weizsäcker widely agreed with the philosopher Plessner’s argument for a vitalist attitude.<sup>103</sup> Moreover, he warned in his essay on what he called *Gesinnungsvitalismus* (vitalism by attitude), an anti-mechanist dogma in medicine would be as paralysing to the art of healing as the mechanist one. The mechanists and materialists in the 19th century had been as “animated by therapeutic enthusiasm” as were the current anti-mechanists.

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<sup>102</sup> Plessner (1922). All quotes in the paragraph are from this article.

<sup>103</sup> v. Weizsäcker (1923).

They too had been *Gesinnungsvitalisten*. Von Weizsäcker saw the conflict between vitalist bedside practice and rationalist science as a fertile one:

It is in fact the theoretical incommensurability of the mechanistic and the vitalistic theses which keeps both practices, of the scientific spirit on the one hand, and of the 'intuitive' abilities on the other, equally awake; in the tension of this contrast the positive medical achievement matures.<sup>104</sup>

Both Plessner and Weizsäcker stressed the need for a vitalist attitude in medicine. But apparently neither of them felt the urge to proclaim a crisis and a fundamental break with 19th century medicine. Von Weizsäcker did not see the need for a radical turn, and warned of what he suspected to be propaganda: "These theorems and this literature," he wrote in 1923, "may become, that shall be stated, as dangerous for education and development (*Bildung*) of the Doctors of our time as the mechanistic thesis was in its time."<sup>105</sup> He warned that what anti-mechanist rhetorics claimed was a fundamental change of attitude (*Gesinnungswandel*), might actually turn out to be merely a change of scientific style (*Stilwandel der Wissenschaft*). Six years later, exactly what Weizsäcker had seen as a fertile ground for positive medical achievement, the tension between a rationalist tradition and the vitalist attitude of the healer, had become a central subject of crisis talk. The Göttingen doctor Felix Buttersack wrote in 1929:

The crisis in which we find ourselves is nothing but the expression of our critical, dissecting, carving thinking, in which the parts are in a struggle with each other. ... Microscopes and telescopes obscure the pure human spirit. Everybody has carved his piece out of biology and works on it with remarkable diligence and acumen, down to the smallest details. But the overview (*Zusammenschau*), the συνοψις, got lost.



Of isolated knowledge too much has been gathered. Our synthetic, artistic abilities have not caught up with the analytical results. Moreover, the analysis, seemingly continuing towards infinity, has overgrown the idea that at first there must have been something that arranged the things before we humans could analyse them.<sup>106</sup>

### **A new romanticism.**

The medical historian Paul Diepgen wrote a whole range of articles on constitutional medicine, vitalism and the alleged crisis in medicine. In his eyes, these trends were expressions of a neo-romantic tendency in society.<sup>107</sup> Romanticism to him was an attitude, which throughout history influenced human actions. What was known as the romantic period, the early 19th century, was only one period where this attitude was especially influential. The romantic attitude was of central significance for the practice of medicine: “Can one,” Diepgen asks, “at all be a doctor or a medical historian without having that irrational something?”<sup>108</sup> Romantic science, he wrote, looked at reality not from an empirical but from a speculative point of view and saw “the source of understanding not in the rational mind [...] but in a ‘higher organ’, the irrational, which is not susceptible to the contradiction between belief and knowledge” The final goal of romantic science, according to Diepgen, was “the transcendental, the metaphysical, a grasp of the absolute in the appearances.” The main characteristics of romantic medicine were the direct application of philosophy, preferred over experience and experiment, and “the tendency to grasp with the whole at once the parts, with the illustrative (*dem Anschaulichen*) at once the absolute, the metaphysical.” The key to a romantic worldview

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<sup>104</sup> Ibid., p. 31.

<sup>105</sup> v. Weizsäcker (1923), pp. 31-2.

<sup>106</sup> Buttersack (1929)

<sup>107</sup> Diepgen (1932), (1928) See also his (1933) and (1931). Paul Forman (1971) also calls the trend “neo-romantic.”

was the concept of the organism, used on different levels: from the individual to social metaphor. Moreover, he pointed out, romantic philosophy promoted old folk traditions to the rank of official science. All these characteristics of romantic science and medicine, according to Diepgen, could be found in the science and medicine of the 1920s. And not only there; literature and philosophy took romantic turns as well: Diepgen mentioned the poetry of Stefan George as well as neo-vitalism, the interest in Paracelsus and the history of medicine, the quest for meanings in biology and the attempts to assign the soul a place in medical theories.<sup>109</sup>

Diepgen assumed for his analysis of the romantic trend a position quite similar to Plessner's and von Weizsäcker's *Gesinnungsvitalismus*. One could say that he was a *Gesinnungsromantiker*: Romanticism was good and helpful if it was just an attitude. Romantic science, on the other hand, got "stuck in the program": "100 years ago at least, not philosophy but the natural sciences had rescued medicine, if retrospectively one [wanted] to speak of a rescue at all."<sup>110</sup> In his opinion, the "crisis of medicine" did not exist, was merely rhetoric:

the fundamental ideas of 19th century medicine do not need reform. Far from restricting themselves to 'exact' methods - the reformers think primarily of the experiment - the healing art in those days was fertilized by everything what *zeitgeist* and worldview of the century had on offer, be it in political life, in philosophy, in the exact sciences or in biology. And if one fell for one-sidedness, there were always warning voices. In particular the hippocratic

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<sup>108</sup> Diepgen (1932). All quotes in this paragraph are from the same article.

<sup>109</sup> The eminent Berlin surgeon August Bier and the Freiburg pathologist Ludwig Aschoff employed neo-romantic ideas of teleology in their theories of woundhealing and inflammation.

<sup>110</sup> Diepgen (1932).

observation and the artistically individualizing treatment has never been forgotten, at least not by good doctors.<sup>111</sup>

The original romanticism of the 19th century was a reaction to Napoleon's rule in the German countries, and to the teachings of enlightenment. In Diepgen's opinion, the "crisis"- mood in 1920s medicine was due, not to the mechanistic character of medical knowledge, but to the popularization of medicine: the public debate about health insurances, the advertising campaigns of the quacks, the populism of people like Erwin Liek.

**"The most successful medical book of all times."**

One of the central figures in the crisis debate was the Danzig surgeon and gynecologist Erwin Liek. Although author of a number of scientific publications in medical journals, he argued as a science critic and spokesman of practitioners. In his popular and influential book, *Der Arzt und seine Sendung*, Liek drew a dark picture of the future of the German "Volk ohne Raum" (people without space) and its medical profession.<sup>112</sup> The book, first published in 1926, enjoyed its seventh edition in 1929, with 30 000 copies sold alone in Germany. The English translator, J. Ellis Barker, called it "by far the most successful medical book of modern times."<sup>113</sup> Liek's book begins with a number of autobiographical chapters: His studies of medicine, his time as an assistant, his years of practice. He expressed his preferences for the bedside teaching of medicine

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<sup>111</sup> Diepgen (1928).

<sup>112</sup> Quotes are from the English translation: *The Doctors Mission. Reflections, Reminiscences and Revelations of a Medical Man*. London (1930). Cf. Liek (1927), for the "Volk ohne Raum" quote (p. 2104), a slogan featuring strongly in Nazi propaganda. On Liek and his affinities with Nazi ideology, see Schmiedebach (1989). For Liek and his right wing publisher Lehmann, whose publications included the *Münchener Medizinische Wochenschrift*, see Weindling (1989), pp. 469-74.

<sup>113</sup> Liek (1930), p. xv. Barker, not a physician but a medical publicist and son of a medical doctor, called Liek and himself "congenial souls" who "have been translating one another's books, prompted by sheer idealism" (p.xvi). He was the author of several books with titles like *Cancer: How it is Caused and How it Can be Prevented*, *Cancer: The Surgeon and the Researcher*, *Chronic Constipation: Its Cause, Grave Consequences and Natural Cure*, and *Good Health and Happiness: A New Science of Health*. In his introduction, he also quotes a passage from Aschner's *Die Krise der Medizin* (1928).

over dissections and anatomy lessons. There was, he remembered, the highly intelligent but cold hearted and dissection-happy professor: “‘The prognosis is unfavourable: no treatment is required.’ The dissection after death confirmed the diagnosis.”<sup>114</sup> And then there was the kind and humane chief of the clinic who knew that there were “no defects of the heart, no diseases of the spinal cord, etc.” There were “only sick human beings whom we must help to the best of our ability.”<sup>115</sup> One was “merely a medical practitioner,” the other animated by “the spirit of a physician.” The distinction is central to the book: between the “true physician” (German: *Arzt*), who lived according to his vocation, and the “mere medical practitioner” (*Mediziner*) or “surgical mechanic,” who simply did the job, for money or fame, or whatever other low motives.<sup>116</sup> Science and medicine did not necessarily belong together:

It has often struck me that many of my colleagues who have had a scientific training extending over decades and vast scientific knowledge, have been complete failures when trying to practise the art of healing.<sup>117</sup>

With his ideas of the “natural” relations between physician and patient, which had to “be such that the physician has always and under all circumstances the feeling that he stands above the patient, that he occupies a position of authority and that he confers benefits upon him,” Liek must have appealed to the general practitioner whose self confidence had suffered in years of frustrating insurance practice.<sup>118</sup> But in Liek’s view, the doctor not only had a task to fulfill on the individual patient, he also played an important role for “the health of the race.” Nation and race were in deep decline, he claimed, referring to Oswald Spengler’s book *The Decline of the West*, due to the social

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<sup>114</sup> Liek (1930), p. 12.

<sup>115</sup> Ibid., p. 13.

<sup>116</sup> Cf. *ibid.*, p. 65 and Liek (1927).

<sup>117</sup> Liek, (1930), pp. 150-1.

<sup>118</sup> Ibid., p. 52.

insurance system, which encouraged a parasite lifestyle, allowed the weak to survive and procreate, and therefore led to the degeneration of the race. Liek did not hesitate to associate this degenerative state of the nation with the democratic system and the bad influence of socialism.<sup>119</sup> It is easy to see why Liek's book was popular. It appealed to the common sense of people who did not understand why they were doing badly in Weimar society: Medical graduates who meant to follow the true vocation for the art of healing but did not get a chance to open a practice, patients who did not get the attention they thought they deserved and who were told by Liek about all the undeserving parasites who stole the doctor's time and everybody's money, people who felt intimidated by modernity in general and science in particular, who appreciated Liek's critical stance on mechanization, animal experimentation and scientific research, as well as his *völkischen* outlook.

Liek's populist pamphlet - he called it a "*Kampfschrift*"<sup>120</sup> - did not go down too well with representatives of scientific medicine, not surprisingly, considering his reservations against scientific progress and what he called mere "medical practitioners." However, the appalling examples of bad practice that Liek presented in support of his thesis, Goldscheider argued in the *Medizinische Wochenschrift*, would not only be inappropriate for a true physician but also clearly unscientific.<sup>121</sup> Wilhelm His suggested that somebody should write an Anti-Liek.<sup>122</sup> However, representatives of scientific medicine were clearly on the defensive. Liek and his fellows had public opinion on their side.

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<sup>119</sup> Ibid. e.g., p. 91, p. 107. For other voices on social insurance, cf. Klasen (1984), pp. 46-60.

<sup>120</sup> Liek (1927).

<sup>121</sup> Goldscheider, *Zeit- und Streitfragen der Heilkunst*. II. Liek: Der Arzt und seine Sendung (1927). For more criticism, cf. Schwalbe, *Noch einmal: "Liek, Der Arzt und seine Sendung"* (1927) and Schwalbe, *Lieks ärztliche Sendung* (1927).

<sup>122</sup> His (1927).

## **Paracelsus and Hippocrates: “new” historical models for medical practice.**

Medical men in the 1920s frequently referred to the history of their discipline in search of idols, or *Führer*.<sup>123</sup> In the early 1920s, constitutional researchers had stressed their continuities with the scientific achievements of the 19th century: In 1921, Rudolf Virchow’s 100th birthday was an occasion for Otto Lubarsch to present his views on constitutional pathology in a special issue of the journal *Naturwissenschaften*, dedicated to *Pathology as a Biological Science*.<sup>124</sup> Robert Rößle did the same in the *Münchener Medizinische Wochenschrift*.<sup>125</sup> While the pathologist Gotthold Herxheimer in 1927 still referred to Virchow as the designer of pathology’s framework,<sup>126</sup> medical writers increasingly showed a tendency to choose their idols further back in history: Hippocrates and Paracelsus were invested with the values many authors wanted to see in modern medicine.<sup>127</sup> The Hippocratic texts were celebrated as the foundations, the unadulterated roots of medicine as healing practice. Paracelsus enjoyed the privilege to be the first “Great Doctor” north of the alps. Liek, for instance, referred to Paracelsus when arguing against scientific “gibberish”: “I believe with Paracelsus,” he wrote, “that the German physician should be German in word and thought.”<sup>128</sup> According to the medical historian Henry Ernst Sigerist:

“It was with Paracelsus that the northern world appeared upon the stage of medicine. Its entry was fierce, impetuous, characterized by a Faustian urge

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<sup>123</sup> The expression *Führer* (leader) was not only used by right wing authors.

<sup>124</sup> *Die Naturwissenschaften* 9 (1921), Heft 41, pp. 802-38.

<sup>125</sup> Rößle (1921).

<sup>126</sup> Herxheimer (1927).

<sup>127</sup> Cf. Klasen (1984)pp. 92-7. For short biographies of Hippocrates and Paracelsus, written in the contemporary spirit, see Sigerist (1971, first English edition in 1933), pp. 29-37 and 109-21.

<sup>128</sup> Liek (1930) p. 189.

towards completion. ... Paracelsus broached the basic problems of the healing art, those which will for all time be part of the essentials of physicianship.”<sup>129</sup>

Sigerist presented his hero with great sympathy as if he was an early representative of the turn of the century youth movement, a strong influence on Sigerist’s thinking in the 1920s.<sup>130</sup>

Bernhard Aschner, gynaecologist in Vienna, from 1940 in New York, was one of the most outspoken advocates for the use of Hippocratic and Paracelsian thinking in everyday medical practice.<sup>131</sup> He translated the works of Paracelsus into high German and wrote numerous articles in which he argued for a return to traditional therapeutical concepts in medicine. From the early 1920s on he called for a “renaissance of humoral pathology” and the re-implementation of a constitutional therapy, using the traditional methods of bloodletting, laxatives, and other means to restore the balance of humours. Throughout the decade, he also referred to a “crisis in medicine.” In a 1924 paper on constitutional science and humoral pathology he argued that “all medical science is about to go through a great change, in a way undergoes a crisis.”<sup>132</sup> In Aschner’s eyes the medical system building on Bichat’s and Virchow’s organ and cellular pathology had “led into a blind alley from which we have to find an escape as quickly as possible.” Unlike Lubarsch and Röbke, Aschner demanded a break with the 19th century tradition. It had resulted, he wrote, in a high degree of specialization and led to progress mainly in diagnostic and operative techniques but to a loss of historically grown knowledge and a deviation from what he called the “mainstream of medical-historical development,” based on humoral pathology. In order to make further progress in the medical sciences

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<sup>129</sup> Sigerist (1971), p. 121. Please note that Sigerist was a liberal, but nevertheless he presented Paracelsus as a *Führer*. For information on historical writing on Paracelsus after 1933, see Benzenhöfer (1994).

<sup>130</sup> Cf. Sigerist (1927).

<sup>131</sup> Aschner (1941). For a bibliography of Aschner’s works, see Lorenzsonn (1973), pp. 162-79

<sup>132</sup> Aschner (1924). The following quotes in this paragraph are from this article. See also his (1922).

possible, he advocated a return to this mainstream with its “universalistic [i.e. all-embracing] orientation.” Constitutional pathology to him was synonymous with a re-established tradition of humoral pathology on the grounds of modern science and technology. The universalistic orientation should compensate for the high degree of specialization in medicine, which Aschner perceived, like Buttersack in the passages quoted above, as leading to counterproductive and dangerous narrowmindedness.

In 1928, Aschner presented his arguments in booklength under the title *The Crisis in Medicine. Constitutional Therapy as a way out*.<sup>133</sup> The book went through five editions by 1934, with a changed subtitle as *Textbook of Constitutional Therapy*. Its popularity was similar to that of Liek’s book, although it did not have the the latter’s *völkische* orientation. The response by rationalist representatives of scientific medicine in the weeklies, though, was as unfavourable to Aschner as it had been to Liek. Wilhelm His, himself an advocate of constitutional pathology, reviewed Aschner’s book and called it, “despite the right tendency not a valuable addition but leading astray.”<sup>134</sup> He blamed Aschner for uncritically accepting positive results claimed by various schools of fringe practitioners. Julius Bauer, one of the rationalists in constitutional pathology, reviewed an earlier book of Aschner’s for the same journal.<sup>135</sup> “Has this strange book really been written by the same Bernhard Aschner,” he asked, “the same meritorious researcher whom we have to thank for fundamental studies in the field of the inner secretion?” In Bauer’s view, the book was unscientific and anachronistic. Like His, he suspected that Aschner’s writings might invite quackery. To those amongst the advocates of constitutional thought who remained confessing rationalists, Aschner’s writings must have given rise to serious worries. Here was a wellknown *Privatdozent* who had

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<sup>133</sup> Aschner (1928). For Aschner’s flavour of Konstitutionstherapie, see Klasen (1984), pp. 72-83. For a short summary of the contents, see Wilhelm His’s review of the book: His (1932).

<sup>134</sup> Ibid.: “Daher ist das Buch, trotz der an sich richtigen Tendenz, keine Bereicherung, sondern eine Irreführung der Medizin.”



published a number of scientific papers and who now seemed to promote anti-scientific ideas. All Bauer could do was warn: “May only the experienced and critical physician lay hand on Aschner’s book!”

### **Synthesis.**

How was the clash between neo-romantic crisis-mongers and rationalist advocates of scientific medicine to be resolved? By the early 1930s, the debate in the *feuilletons* of *Kl.W.* and *D.M.W.* were increasingly dominated by calls for synthesis (*Synthese*) and unity (*Einheit*) in medicine.<sup>136</sup> In 1930 at Riga and in 1932 at Marienbad, two conferences for the ‘Advancement of Synthesis in Medicine and a Medical Worldview’ were organised, following an initiative of M. Sihle, professor at Riga. The congress proceedings were edited by Theodor Brugsch, then professor at Halle.<sup>137</sup> The meaning of “synthesis” in this context becomes clear from an article by the clinician Heinz Zimmermann, head of a *Sanatorium* near Munich.<sup>138</sup> He used the term “*ärztliche Synthese*” almost synonymous with holism.

In his 1934 article, Zimmermann pointed out what in his view constituted medicine after the “turn to the whole” (*Wendung zur Ganzheit*).<sup>139</sup> It was not falling from one extreme into the other: the picture of the whole would be empty if it did not function as the framework for recognizable details and parts, and the latter should not be neglected in favour of the former. The relationship between whole and detail had to be understood as an interconnected unity. *Synthese* meant a combination of everything on offer. There was too much detail knowledge available to be controlled by a single person. That meant that specialists were necessary. The great doctor, though, could keep the holistic overview

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<sup>135</sup> Bauer (1924b).

<sup>136</sup> Cf. Zimmermann (1934), and his (1932).

<sup>137</sup> Brugsch, ed. (1933/1935).

<sup>138</sup> Unfortunately I could not find any further biographical information on Zimmermann.

(*ganzheitliche Übersicht*), due to his genius. With mechanistic eyes he would understand biological and chemical processes and with a vitalistic vision deal with the higher order phenomena that constituted life. This he would accomplish with an understanding of the influences of the soul and the human being's relationships with environment and *gemeinschaft*. Finally, he would be aware of the "metaphysical keystone of human consciousness." "A synthetic approach," Zimmermann stated, had to "take all these aspects into consideration and combine them to a harmonious unity."<sup>140</sup> He warned against vitalist speculation and the exaggeration of *Volk* and race over the individual. Harmony and moderation seemed important to Zimmermann also with respect to the conduct of the debate: he criticized Liek for his polemic distinction between *Mediziner* and *Arzt*.

A 1928 essay on *Natural Science and the Art of Healing* by the Berlin physiologist Wilhelm Trendelenburg provides an example for an academic's response to the neo-romantic attacks against exact science. Trendelenburg's account suggests that the synthesis idea provided pragmatic medical scientists with an opportunity to stand up to crisis-mongers and anti-rationalists.<sup>141</sup> Trendelenburg replied to the common criticism that scientists could not really understand phenomena if they did not primarily treat them as wholes but broke them down in ever smaller fragments. He addressed the neo-romantic's calls for intuition and their emphasis on the "art" (as opposed to science) of medicine. "[I]n every science," he argued, "the synthesis, which leads to a picture of the whole, constitutes the complement of the analysis." Synthesis, on the other hand, was "impossible without critical and detailed analysis." Intuition, which he defined as "to gather or observe a thing in a not clearly conscious way," was as central to the pursuit of

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<sup>139</sup> Zimmermann (1934).

<sup>140</sup> Compare with Brugsch's formula for the human constitution in chapter 1.

<sup>141</sup> Trendelenburg (1928). The quotes in the paragraph are from this article.

the exact sciences as it was to medicine, and, moreover, was not of much help if not complemented by scientific method. As far as “art” was concerned, the term could be understood in two different ways. If art meant a skilled practice, he argued, one might as well speak of the art of performing experiments. If art was understood from an aesthetic point of view, it was subject to differences between peoples, personalities and historical periods.<sup>142</sup> But the goals of medicine, he wrote, were not of aesthetical, scientifically inexplicable nature. The goal was a practical one: the healing of the patient. The aesthetic value of the means were secondary. The art of healing, Trendelenburg argued, was in terms of aims and means much closer associated with the natural sciences than with the fine arts. In fact, both were “inseparably connected.”

Both Trendelenburg and Zimmermann reacted to demagogues like Liek and promoters of romantic healing practices like Aschner, who argued for a break with nineteenth century rationalism and the institutions and traditions of scientific medicine. *Synthese* provided an opportunity to satisfy or at least respond to the crisis-mongers on the one hand, and stick to the scientific traditions of the 19th century on the other. In that sense there is a continuity with Plessner’s and von Weizsäcker’s *Gesinnungsvitalismus*. But while Plessner and von Weizsäcker in the early 1920s had acknowledged contradictions between scientific theory and medical practice as inevitable and fertile, the synthesis idea stood for a harmonious unity where these contradictions did not exist.

### **Conclusion.**

In the late 1920s, under the impression of a neo-romantic trend in German culture, crisis talk in the sciences and a critical professional situation, several authors proclaimed a “crisis of medicine.” The crisis rhetoric was aggravated by popular books like Erwin

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<sup>142</sup> Trendelenburg may respond here to the cultural relativism of Spengler’s “The Decline of the West.” Cf. Forman (1971) for the references physicists and mathematicians payed to that book.

Liek's *Der Arzt und seine Sendung* and Bernhard Aschner's *Die Krise der Medizin*, suggesting that the gap between scientific medicine and the practice of healing had become so deep that only a radical break with the 19th century traditions of cellular pathology and bacteriology (Aschner's basic argument), as well as with the modern insurance based medical system (Liek's main focus) would solve the problems of modern medicine: too much analysis and too little therapy, too much focus on lesions and dead bodies and not enough interest in the living patient. The problems as well as the solutions suggested by the crisis-mongers had been discussed already long before the crisis rhetorics were used to make a holist turn (*Wende*) or a "renaissance" of the healer look inevitable. Many of the therapeutic ideas had been incorporated in the constitutional concepts of Martius and Kraus, and the philosophical background was discussed by *Gesinnungsvitalisten* like Plessner and von Weizsäcker, both without employing crisis rhetorics. The concept of *Synthese* in medicine, which featured strongly by 1930, was a response to the crisis talk by representatives of scientific medicine, an attempt to contain the calls for a break and to secure a continuity with 19th century scientific traditions. But where Plessner and von Weizsäcker earlier had embraced a dualism of mechanist research and therapeutic "vitalism of attitude," the synthesis thinkers promoted *Einheitsbestrebungen*, a striving for unity.

## **Conclusion: Holism and Politics, and the Politics of Holism.**

The neo-romantic spirit moved “*Konstitutionslehre*” into the focus of a wider public, as a potential solution to the “crisis of medicine,” and changed its meaning from a complement to cellular pathology and bacteriology to being an alternative to 19th century analytical medicine. When the neo-romantics proclaimed the “crisis of medicine,” they called for a break with the groups, the worldviews and traditions which allegedly dominated the debate: materialism, mechanization, specialization, insurance medicine. Demagogues like Liek attempted to help their particular *Weltanschauung* to a more dominant position by presenting it as the legitimate view of a silent majority which was suppressed by a powerful minority. In turn, the neo-romantic opponents of an alliance of medicine with science, came to play a role that forced representatives of traditions not inclined to neo-romantic thought into making concessions, of either rhetorical or practical nature. This raises an important question which I can answer only incompletely, due to my focus on the medical weeklies. What were the media which reflected the mood in science and medicine?

My analysis of the *Deutsche Medizinische Wochenschrift (D.M.W.)* and the *Klinische Wochenschrift (Kl.W.)* allows a few conclusions. I have found hardly any article admitting that medicine was undergoing a crisis, or was at a turning point in the first two. Most authors, while they agreed that some things may or may not be to the best, rather stressed continuities with the 19th century and insisted on the necessary alliance of natural science and medicine. There was enough scientific progress in the biological sciences to make it a question of choice to speak of crisis: every doctor reading these journals could also have chosen to believe in the achievements of science. To perceive a crisis was *not a necessary consequence* of the circumstances, as Liek, Buttersack and others wanted to make their contemporaries believe; it was a *value judgement*. In order to

understand why they were successful in doing so, it is not enough to focus only on the official medical journals. A significant part of the debate was carried out in a more public sphere: newspapers, for instance, provided their readers with medical advice in special sections or medical supplements. And exactly this fact was at issue in many statements of established medical scientists published in *Kl.W.* and, especially, *D.M.W.* As we have seen, Diepgen blamed the crisis talk on the popularization of medicine. Julius Schwalbe, the editor in chief of the *D.M.W.*, wrote a whole score of editorials on the topic, directed against right wing popularizers like Liek, as well as against leftist and liberal critics of the medical establishment.<sup>143</sup> His line seems to have been, that on the one hand internal problems of therapy and medical practice should not be opened up to lay persons, and on the other that the medical journals should stay off daily politics unless it could not be avoided.

The case was a little bit different for the *Münchener Medizinische Wochenschrift* (*M.M.W.*). The journal came out of the same publishing house as Liek's book.<sup>144</sup> The publisher Lehmann sympathized with rightwing nationalism and Liek's "mission" had a strong backing in the *M.M.W.* This was the journal where he published his replies to the harsh criticisms of Schwalbe and Goldscheider in the *D.M.W.*<sup>145</sup> Significantly, reviews of Aschner's works were also positive in the *M.M.W.*, while they were critical in *D.M.W.* and *Kl.W.*<sup>146</sup> While the "crisis" hardly existed in the latter two before 1933, it was highly present in the former, in form of publications like the Buttersack paper I have quoted above. This difference makes it clear that journals which

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<sup>143</sup> For criticism of Liek's book, see Schwalbe, *Noch einmal: "Liek, Der Arzt und seine Sendung."* (1927), and his *Lieks ärztliche Sendung* (1927). For criticism of a doctor who writes about medical problems in the *Vossische Zeitung*, see his *Gegen das Übermaß medizinischer Volksaufklärung* (1927) and an article under the same title in the following year (1928), as well as *Unzweckmäßige medizinische Volksbelehrung* (1928). Unfortunately, the scope of this study does not allow me to attempt a more detailed analysis of the debate in the general press.

<sup>144</sup> Cf. Weindling (1989), pp. 471-4.

<sup>145</sup> Goldscheider (1927); Liek (1927).

appear unpolitical on the first glance could be used as efficient political instruments. “These [Lehmann’s medical journals] were at one level strictly scientific,” writes Weindling, with an eye to eugenics. “But on another they served to racialize medical science.”<sup>147</sup>

Having discussed the roles of both rationalists and neo-romantics in the rise of constitutional pathology and of holism in German medicine, I finally want to locate my story in Weimar politics. Cay-Rüdiger Prüll sees a close connection between constitutional pathology and right wing ideologies, emphasizing mainly Otto Lubarsch’s and Ludwig Aschoff’s political background in the German National People’s Party, DNVP. One could almost say that Prüll’s account of constitutional pathology has an air of determinism to it. When he writes about the 1920s, he is thinking about 1933 and the Third Reich. Advocates of Third Reich “*biologische Medizin*” did in fact embrace crisis rhetoric, holist ideas and constitutional thought.<sup>148</sup> Moreover, after 1933 we find several opportunists retrospectively acknowledging the “crisis” and welcoming the “turn” (*Wende*) in politics and medicine in order to further their particular interests by adopting a holist attitude. One example was the historian of medicine, Paul Diepgen.<sup>149</sup> But if holism was supported by the political right, does this in turn mean that all supporters of anti-mechanist ideas subscribed to right wing ideologies?

The pioneers of anti-mechanist thought in German biology and medicine were not exclusively members of the nationalist camp.<sup>150</sup>

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<sup>146</sup> Compare His in the KI.W. (1932), with Koch in the MMW (1929)

<sup>147</sup> Liek (1927), p. 471.

<sup>148</sup> See Kötschau and Meyer (1936); Jaensch (1933).

<sup>149</sup> See Kümmel (1994). Diepgen’s colleague, medical historian Henry E. Sigerist was a left liberal with sympathies for the Soviet Union. Unlike Diepgen, he left Germany in 1932, to become director of the Institute for the History of Medicine at Johns Hopkins University, Baltimore. Cf. Temkin, 1977.

<sup>150</sup> Cf. Harwood (1996), conclusion.

- Hans Driesch, mentor of neovitalism, was a persona non grata in NS Germany. He had been one of the few university professors who openly supported the Republic in 1918.<sup>151</sup>
- Developmental biologist and socialist Julius Schaxel, who had worked on the project of a theoretical biology beyond mechanism and vitalism, was forced into exile in the Soviet Union in 1933, where he died during the Second World War.<sup>152</sup>

Several of the advocates of constitutional thought in medicine did not belong to the extreme right, either.

- Jew Bernhard Aschner emigrated from Germany to the United States and continued to publish papers on Hippocratism in everyday practice and on holist medicine.<sup>153</sup>
- Vienna constitutional scientist, Julius Bauer, confronted Nazi eugenics and race policies and emigrated via France to the US after the German annexation of Austria in 1938.<sup>154</sup>
- Co-designer of “*Personalismus*,” Theodor Brugsch was forced to give up his chair at Halle in 1935, after years of confrontation with Nazi students and professors, and in 1938 he was excluded from the *Leopoldina* academy of natural scientists because allegedly he was non-Aryan.<sup>155</sup>
- Vienna anatomist and socialist member of the city council, Julius Tandler, was arrested in 1934 and only released due to international protests. He lectured in New

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<sup>151</sup> See Mocek (1974).

<sup>152</sup> Hopwood, in press.

<sup>153</sup> Aschner(1941) and (1958).

<sup>154</sup> Biographisches Handbuch der deutschsprachigen Emigration, Vol. 2 (1983), pp. 58-9. In chapter 1, I present Bauer like a real hardcore rationalist, for the sake of my argument. But, like many, he was not completely dismissive of the whole neo-romantic case. Bauer’s concluding remarks to his (1920) indicate that he finds some of their aims quite legitimate, just wants to achieve them with scientific methods: “What the old doctors grasped with the artist’s glance, and what the younger often neglect in favor of the laboratory, the new constitutional science tries to fathom and clarify it with the methods of the medical and the exact natural sciences.”



York, went to China in 1935 and to the Soviet Union in 1936, where he died in the same year.<sup>156</sup>

To be sure, some of the German holist theories had their origins in a way of thinking which also provided the historical background for the success of National Socialism. What is striking, for example, about the holist ideas presented by Kötschau and Meyer in 1936, is their totalitarianism: the unwillingness to accept the existence of the contradictions and oppositions inevitable in a pluralist system.<sup>157</sup> Kötschau and Meyer contrasted the total harmony of their new, “biological medicine” with the conceptual “crisis” in medicine which they explained as a result of the incommensurability of the phenomena of life with the laws of natural science. “Biological medicine” was going to solve the crisis, after a difficult, revolutionary break with the contradictions in medicine. The pluralism of democracy, as it were, was identified with the perceived incompatibilities between exact natural science and intuitive medicine, between the roles of Liek’s medical practitioner - subscribing to exact science - and the true physician - devoted to holism. The “National-Socialist revolution,” in cleansing society would also bring the desired break in medicine and help abolish 19th century mechanism.

Can we really say, therefore, that constitutional pathology and anti-mechanism paved the way to Nazi fascism? Were holism, idealism and anti-mechanism as responses to the crisis spirit of the 1920s not quite viable without the fascist connections? Recent studies on holism in countries other than Germany suggest that they were.<sup>158</sup> Stephen Cross and William Albury analyse the holist writings of the eminent American physiologists Walter

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<sup>155</sup> Brugsch (1978), pp. 251-67. Cf. Gerstengarbe, Hallmann, Berg (1995), p. 174.

<sup>156</sup> Roeder and Strauss, eds. *Biographisches Handbuch der deutschsprachigen Emigration*, Vol. 1 (1980), pp. 754-5.

<sup>157</sup> Kötschau and Meyer (1936).

<sup>158</sup> At this stage I use the term holism in its widest possible meaning, as organicist alternative to mechanism.

Cannon and L.J. Henderson as contributions to a crisis debate in the United States.<sup>159</sup>

Cannon and Henderson applied Hippocratic models of self organization and self healing to the social and economic crisis of the 1920s and 1930s, to a world “of general instability.” Both developed analogies of society with an organism, using the notion of organic homeostasis as “a modern physiological expression of the ancient Hippocratic conception of the natural relations of freedom and necessity.” Although they had different political outlooks, one liberal and the other conservative, their basic approaches to both physiology and society were the same: homeostasis and the “relations of natural spontaneity and social control.” What led Cannon and Henderson to the use of Hippocratic models, according to Cross and Albury, was “a particular shared naturalistic view of the world and a pattern of intellectual - and ideological - response that derived from a common social background.” To use my categories, however, Cannon’s and Henderson’s holisms had a rather rationalist flavour and the neo-romantic component was weak if not missing.

A study by Christopher Lawrence on clinicians in interwar Britain, though, points towards parallels with the German neo-romantic *zeitgeist*.<sup>160</sup> Buttersack and Liek, as we remember, presented medicine - the “Doctor’s mission” - as something special, incommunicable and beyond natural science. Healing was a secret and holy art, the physician had to be a priest of the unity of the organism.<sup>161</sup> Lawrence finds similar ideas amongst British physicians in the interwar years. He distinguishes between two groups of clinicians, which he calls the ‘patricians’ and the ‘plutocrats,’ whose rhetorics and aims are in some ways compatible with those of my neo-romantics and rationalists. Like their neo-romantic German contemporaries, Lawrence’s ‘patricians’ were concerned with

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<sup>159</sup> Cross and Albury (1987).

<sup>160</sup> Lawrence, *Still Incommunicable: Clinical Knowledge between the Wars*. Conference paper, forthcoming in Lawrence and Weisz, eds.

<sup>161</sup> Cf. Buttersack (1929), and Liek (1927).

cultural crisis and believed that the foundation of medicine (and of society, for that matter) was under threat. They saw this foundation in the art of healing, special skills which could not be taught but only learned through years of experience at the bedside. Like the German representatives of the “crisis”-faction they warned of the dangers of too much specialization and of too much faith in the potential of science. They stressed the “constitutional factor” and claimed to develop a general “biology of man in disease.” The ‘plutocrats,’ on the other hand followed a managerial way of thinking. They believed in the division of labour and in accumulation of scientific knowledge, and promoted laboratory science in the medical curriculum. They became part of a new administrative elite. The conflict between the two, Lawrence argues, was an expression of different cosmologies addressing a general social crisis. While the ‘patricians,’ based on a conservative value system, deplored a decline of the Western world, a disturbance of the organic and social equilibrium as a source of disease, the pragmatic ‘plutocrats’ hoped to find a solution of the crisis based on the application of scientific expertise.

This crude international comparison, as well as the individual biographies of historical actors involved with anti-mechanist thought, point towards the historical contingency of an alliance between holism and fascism. In the introduction I have referred to the literature on Weimar culture, old and new, and have pointed out the traditions and developments in Weimar historiography. What used to be analysed as an intermezzo between Empire and National Socialism has become a history in its own right, characterized by what Peukert describes as experiments with modernity. I see the tinkering with and the competition between mechanistic and anti-mechanistic concepts in the biomedical sciences as part of these experiments. That the totalitarian attitude shown by Kötschau and Meyer was not an inevitable consequence of a critical approach to mechanism in medicine, was demonstrated by the “vitalist attitude” adopted by Plessner

and von Weizsäcker in the early 1920s. They pointed out a potential, democratic alternative to the Third Reich idea of total harmony incorporated in “*Biologische Medizin*”: the willingness to live with and to take advantage of contradictions and compromise.

## Appendix 1: Biographical Sketches<sup>162</sup>

1. **Aschner, Bernhard.** Born in 1883 in Vienna, where he also studied medicine. Demonstrator in anatomy with E. Zuckerkandl. M.D. in 1907. From 1912 to 1914 assistant at Halle University Women's Hospital. *Habilitation* in 1913, in gynecology and midwifery. From 1917 associate professor at Halle. In 1918 *Habilitation* at Vienna, worked as university lecturer. In 1940 head of a New York women's hospital.<sup>163</sup>
2. **Aschoff, Ludwig.** Born in 1866, Berlin, as son of a medical doctor. Classical education. Studies of medicine at the universities of Bonn and Strasbourg, M.D. in 1889, *Habilitation* in 1894 at Göttingen. From 1903 full professor at Marburg and from 1906 at Freiburg, where he also headed the pathological-anatomical Institute.<sup>164</sup>
3. **Bauer, Julius.** Born in 1887, Nachod (Bohemia) as son of a lawyer. Studied medicine at Vienna, worked as assistant at the Vienna University Neurological Institute and at the Innsbruck University Medical Clinic. *Habilitation* in 1919, before he became associate professor for internal medicine at Vienna in 1926. In 1938 emigration to Paris and in 1939 to the U.S. where he worked as professor of clinical medicine, first at Louisiana State University, and from 1942 at Loma Linda University, Riverside, California.<sup>165</sup>
4. **Bauer, Karl-Heinrich.** Born in 1890. Classical education. Studies of medicine in Erlangen, Heidelberg, and Munich. M.D. in 1914, then work with Aschoff in Freiburg and with Stich in Göttingen. *Habilitation* in surgery and associate professor at

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<sup>162</sup> The German academic titles are not completely compatible with the British. I have translated *außerordentlicher Professor* with 'associate professor' and *ordentlicher Professor* with 'full professor'. The *Habilitation* was (and still is, I suppose) a necessary condition in order to become a university teacher in Germany. Once *habilitiert*, academics can carry the title *Privatdozent*. For *Dozent*, I have chosen the translation 'lecturer'.

I have made extensive use of the Deutsches Biographisches Archiv, Neue Folge, Munich: K.G. Saur, 1989, which in the following footnotes will be abbreviated as DBA/NF.

<sup>163</sup> Wininger, Salomon. Große jüdische National-Biographie, Nachtrag in Bd. 7 (1935); Planer, Franz, ed. Das Jahrbuch der Wiener Gesellschaft (1929). Both cited after DBA/NF. Lorenzsonn, Brigitte. Personalbiographien von Professoren und Dozenten der I. und II. Universitätsfrauenklinik und der III. geburtshilflichen Klinik in Wien im ungefähren Zeitraum von 1905-1930. Mit kurzen biographischen Angaben und Ueberblick ueber die Hauptarbeitsgebiete. Erlangen-Nuernberg: Seminar fuer Geschichte d. Medizin d. Universitaet Erlangen Nuernberg.; 1973.

<sup>164</sup> Reichshandbuch der deutschen Gesellschaft, Vol. 1 (1930). Cited after DBA/NF.

<sup>165</sup> Wininger, Salomon. Große jüdische National-Biographie, Nachtrag in Bd. 7 (1935). Cited after DBA/NF. Roeder and Strauss, eds. Biographisches Handbuch der deutschsprachigen Emigration, Vol. 2 (1983), pp. 58-9.

- Göttingen from 1926. From 1933 full professor at Breslau, Silesia. After the war at Heidelberg.<sup>166</sup>
5. **Bergmann, Gustav von.** Born in 1878, Würzburg. Son of a professor of surgery. Classical education. Studied medicine at Berlin, Munich, Bonn, and Strasbourg. Work at Hofmeister's physiological-chemical institute, and M.D. in 1903. From 1903 to 1912 with Friedrich Kraus at the Berlin Charité, 2nd Medical Clinic. *Habilitation* in internal medicine in 1908. Title of professor in 1910. Full professor for internal medicine in 1916 at Marburg, 1920 at Frankfurt, and 1927 at the Charité. After the war on a chair at Munich.<sup>167</sup>
  6. **Brugsch, Theodor.** Born in 1878 in Graz. His father was Professor of Egyptology. Classical education. Studies of medicine at Berlin. M.D. in 1903 as student of Oscar Hertwig at Leipzig. *Habilitation* in internal medicine in 1909, title of professor in 1910. From 1927 full professor at Halle. Took his leave in 1936 after clashes with NS officials. From 1945 full professor at Berlin and director of the First Medical Clinic of the Charité. Played an important role as administrator in setting up the Eastern German higher education system after the war.<sup>168</sup>
  7. **Buttersack, Felix.** Born in 1865. Studied in Berlin, M.D. in 1887. He worked at the *Reichsgesundheitsamt* (Imperial Office of Health) from 1890 to 1892, with Leyden at the First Medical Clinic of the Berlin Charité from 1896 to 1901, when he opened a practice in Göttingen.<sup>169</sup>
  8. **Dieppen, Paul.** Born in 1878 in Aachen. His father was an industrialist. Classical education. Studies of medicine at Tübingen, Leipzig, Bonn, and Freiburg; M.D. in 1902. He worked as an assistant at the Freiburg University Women's Hospital until 1904, then for one year on the internist ward of a hospital in Frankfurt, ran a private practice for another year and worked at the same time in a private gynaecological clinic, before he started his studies in the history of medicine. PhD in 1908. In 1909 *Habilitation* and in 1915 associate professor for the history of medicine, in 1920

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<sup>166</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 1 (1952). Cited after DBA/NF.

<sup>167</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 1 (1932). Cited after DBA/NF. See also v. Bergmann's memoirs, *Rückschau* (1953).

<sup>168</sup> *Reichshandbuch der deutschen Gesellschaft*, Vol. 1 (1930), and *Wer ist wer?* 12. Ausgabe von Degeners *Wer ist's?* (1955), both cited after DBA/NF. See also Brugsch's memoirs, *Arzt seit fünf Jahrzehnten* (1957).

<sup>169</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 1 (1932). Cited after DBA/NF.

- honorary professor and director of the medical history seminary at Freiburg. He continued to work as gynaecologist. From 1930 full professor for the History of Medicine at Berlin.<sup>170</sup>
9. **Gottstein, Adolf.** Born in 1857 in Breslau. Studies of medicine at Breslau, Strasbourg, and Leipzig. M.D. in 1881. From 1882 as assistant at a Breslau hospital. From 1884 he ran a private practice in Berlin, from 1911 he was *Stadtmedizinalrat* (medical officer) in Charlottenburg. After converting from Judaism to Christianity, he became a high official in the Prussian medical administration in 1919. Retired in 1924, he remained active as editor of medical journals. He died in 1941.<sup>171</sup>
10. **Hart, Carl.** Born in 1876. His father was a physician. Studies at Berlin and Erlangen. M.D. in 1901. Work in the pathological institutes at Dresden and Frankfurt, from 1904 pathology assistant at the Friedrichshain Hospital, Berlin. From 1906 at the Rudolf Virchow Hospital, and from 1907 head of the anatomical department and the bacteriological research station at the Auguste Viktoria Hospital, all Berlin. He died in 1922.<sup>172</sup>
11. **His, Wilhelm.** Born in 1863, in Basel (Switzerland). His father was the anatomy professor Wilhelm His (senior, 1831-1904). Studied medicine at the universities of Geneva, Leipzig, Bern, and Strasbourg. M.D. in 1889, Leipzig. Assistant with Curschmann at the Leipzig Medical Clinic. *Habilitation* in 1891, associate professor of internal medicine in 1895. 1901 at the Friedrichstadt Municipal Hospital, Dresden, and from 1902 full professor and director of the Medical Clinic in Basel. From 1906 to 1907 in the same position at Göttingen. From 1907 on the chair of internal medicine at Berlin University and director of the Charité 1st Medical Clinic. From 1928 to 1929 *Rektor* of Berlin University. He died in 1934.<sup>173</sup>
12. **Hueppe, Ferdinand.** Born in 1852 in Heddesdorf, Rhineland. Studies from 1872 at the Friedrich-Wilhelms-Institute, Berlin. M.D. in 1876. As military doctor, in 1879 ordered to work at the *Kaiserliches Gesundheitsamt* (Imperial Office of Health).

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<sup>170</sup> Reichshandbuch der deutschen Gesellschaft, Vol. 1 (1930). Cited after DBA/NF.

<sup>171</sup> Ibid., Fischer, Isidor, ed. Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre. Vol. 1 (1932), Wininger, Salomon. Große jüdische National-Biographie, vols. 2 (1927) and 7 (1935), all cited after DBA/NF.

<sup>172</sup> Fischer, Isidor, ed. Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre. Vol. 1 (1932), cited after DBA/NF.

<sup>173</sup> Reichshandbuch der deutschen Gesellschaft, Vol. 1 (1930), Hans Staub in Professoren der Universität Basel aus fünf Jahrhunderten (1960), both cited after DBA/NF.

- Training in bacteriology with Robert Koch. He quit military service in 1885, in order to set up a department for bacteriology and hygiene at Fresenius chemical institute in Wiesbaden. Intensive studies on hygiene, and from 1889 professor of hygiene at Prague University. He retired in 1912 and died in 1938.<sup>174</sup>
- 13.**Jaensch, Walther.** Born in 1889 in Breslau as son of a medical doctor. Classical education. Studies of medicine at Breslau, Munich, Halle. From 1919 to 1929 assistant with v. Bergmann at Marburg and Berlin, from 1919 to 1922 also at the Psychological Institute of Marburg University. M.D. in 1920. From 1930 lecturer at the *Deutsche Hochschule für Leibesübungen*, and from 1930 head of the *Charité Ambulatorium für Konstitutionsmedizin*. Member of the organization of NS doctors and of the SS, in 1933 vice leader (*stellvertretender Führer*) of the lecturers.<sup>175</sup>
- 14.**Kötschau, Karl.** Born in 1892. From 1934 associate professor and director of the Jena University “*Poliklinik für biologische Medizin*.”<sup>176</sup>
- 15.**Kraus, Friedrich.** Born in 1858 as son of a tax man in Bohemia. Studied medicine at Prague. M.D. in 1882. Worked as assistant with Hofmeister and Hering at the physiological-chemical and the pathological-anatomical institutes of Prague University. In 1889 *Privatdozent* of internal medicine. From 1890 at Vienna, from 1893 associate professor. From 1894 full professor of internal medicine at Graz, and from 1902 to 1926 at Berlin University. From 1902 to 1927 head of the 2nd Medical Clinic of the Charité. He died in 1936.<sup>177</sup>
- 16.**Kretschmer, Ernst,** was born in 1888 in Wüstenrot, Swabia, as son of a priest. Classical education. Studied philosophy (two terms) and medicine at Tübingen, Munich, and Hamburg-Eppendorf. Worked at the Tübingen Neurological Clinic from 1913 to 1926. *Habilitation* in 1918 and from 1923 associate professor for psychiatry and neurology. From 1926 on a full chair for psychiatry and neurology and head of the Neurological Clinic at Marburg University. From 1946 professor and dean of the medical faculty at Tübingen.<sup>178</sup>

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<sup>174</sup> Ibid.

<sup>175</sup> Ibid.

<sup>176</sup> Degener, Hermann A. L., ed. *Wer ist's? Unsere Zeitgenossen*. 10th edition (1935), cited after DBA/NF.

<sup>177</sup> Österreichisches biographisches Lexikon 1815-1950, Vol. 4 (1969), cited after DBA/NF.

<sup>178</sup> *Wer ist wer?* (1948) and *Reichshandbuch der deutschen Gesellschaft*, Vol. 1 (1930). Both cited after DBA/NF.



17. **Lenz, Fritz.** Born in 1887 as son of a squire in Pflugrade, Pomerania. Educated at a *Realgymnasium*. Studies of medicine at Berlin, Breslau, and Freiburg. M.D. in 1912. In 1919 *Habilitation* in hygiene, and from 1923 associate professor for race hygiene at Munich. Active in the German Society for Race Hygiene. From 1933 full professor at Berlin University and head of the race hygiene department of the Kaiser-Wilhelm-Institute of Anthropology. From 1946 associate professor and from 1952 full professor for human genetics at Göttingen University. Retired in 1955.<sup>179</sup>
18. **Liek, Erwin.** Born in 1878 in Loeben, Western Prussia, as son of a schoolteacher. Studies of medicine at Freiburg and Königsberg. M.D. in 1902. Worked as a ship's doctor and as an assistant in Greifswald, Wiesbaden, and Gdansk, where he practiced as a surgeon from 1909 and later opened his own private clinic for surgery and gynecology. Moved to Berlin in 1932, where he died in 1935.<sup>180</sup>
19. **Lubarsch, Otto.** Born in 1860 in Berlin. His father was director of a bank. Classical education. Studied philosophy and natural sciences at Leipzig, Heidelberg, and Jena, and medicine at Berlin, Heidelberg, and Strasbourg. M.D. in 1884. Assistant at the Physiological Institute at Bern, at the Pathological Institute at Gießen. Scientific work at the pathological institute at Berlin and at the Naples Zoological Station. Assistant in pathology at Zurich, and *Habilitation* in 1890. From 1894 associate professor at Rostock. From 1899 head of the pathology department at the Royal Prussian Institute at Posen. From 1905 to 1907 head of a pathological-bacteriological laboratory in Zwickau. From 1907 full professor of practical medicine at the Medical Academy Düsseldorf, and head of the pathological institute, from 1913 at Kiel University, and from 1917 at Berlin, where he also was the director of the pathological institute and museum. Retired in 1928. He converted from Judaism to Christianity, and was known for his antisemitism. Lubarsch died in 1933.<sup>181</sup>
20. **Martius, Friedrich.** Born in 1850 in Erxleben, Saxonia. Studied medicine at the Charité. M.D. in 1874. Work with H. Kronecker at Du Bois-Reymond's physiological institute. From 1886 assistant at the 2nd Medical Clinic with C. Gerhardt. *Habilitation*

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<sup>179</sup> Reichshandbuch der deutschen Gesellschaft, Vol. 2 (1931), *Wer ist wer?* 12. Ausgabe von Degeners *Wer ist's?* (1955), *Die Religion in Geschichte und Gegenwart*. 3rd edition. (1965, list of collaborators in the index volume), all cited after DBA/NF.

<sup>180</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), *Altpreußische Biographie*. Vol. 1 (1941). Both cited after DBA/NF.

<sup>181</sup> Wininger, Salomon. *Große jüdische National-Biographie*, vol. 4 (1929) and vol. 7 (1935), *Reichshandbuch der deutschen Gesellschaft*, Vol. 2 (1931), all cited after DBA/NF.

- in 1887, internal medicine. From 1891 associate professor and head of the medical clinic at Rostock. From 1899 full professor, from 1901 of clinical medicine. Martius died in 1923.<sup>182</sup>
21. **Mathes, Paul.** Born in 1871 in Vienna. He studied medicine at Greifswald and Vienna, had training in surgery at Königsberg and in gynaecology at Prague. Demonstrator of anatomy with E. Zuckerkandl. Worked from 1899 to 1907 as assistant at Graz, from 1908 as consultant at the Municipal Hospital. From 1913 he worked on the establishment of a department for radiotherapy at the Women's Hospital, in 1915 he was made professor at Innsbruck, where he committed suicide in 1923.<sup>183</sup>
22. **Meyer (Meyer-Abich), Adolf.** Philosopher and Historian of Science. Born in 1893 in Emden. Classical education. Studies at the universities of Göttingen and Jena. From 1921 librarian at the Hamburg University Library. From 1925 *Privatdozent*. From 1929 to 1932 visiting professor in Santiago de Chile. Associate professor at Hamburg in 1931. Confusing career with several visiting terms and temporary jobs abroad. Amongst other short term positions: director of the Institute for Tropical Research in the Dominican Republic in 1938. From 1939 full professor of theoretical biology, natural philosophy, and history of science at Hamburg University.<sup>184</sup>
23. **Naegeli, Otto.** Born in 1871 as son of a physician in Ermatingen, Switzerland. Studied medicine at Lausanne, Strasbourg, and Zurich. M.D. in 1897 with von Monakow. Accepted a call to Tübingen in 1912 and to Zurich in 1918 (probably as associate professor). From 1921 director of the Zurich University Medical Clinic. He died in 1938.<sup>185</sup>
24. **Pfaundler von Hadermur, Meinhart.** Born in 1872 in Innsbruck as son of a university professor. He studied medicine at Innsbruck and Graz and worked from 1896 at the Graz Childrens Hospital. In 1900 he worked at Hofmeister's physiological-chemical institute at the University of Strasbourg. In 1902 he became

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<sup>182</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), cited after DBA/NF. See also the obituary by Friedrich Kraus in the *D.M.W.* (1923) and the articles on occasion of his 70th birthday by H. Curschmann in the *D.M.W.* (1920), and by M. Berliner in the *Berliner Klinische Wochenschrift* (1920), as well as Krügel (1984).

<sup>183</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), cited after DBA/NF.

<sup>184</sup> *Wer ist wer?* (1948), *Kürschners deutscher Gelehrtenkalender* (1931) and (1950), *Wer ist wer?* 12. Ausgabe von Degeners *Wer ist's?* (1955), all cited after DBA/NF.

<sup>185</sup> *Biographisches Lexikon verstorbener Schweizer*, Vol. 2 (1948), cited after DBA/NF.

- head of the Vienna University Childrens Hospital and associate professor. From 1906 he headed the Munich University Childrens Hospital and held a full professorship.<sup>186</sup>
25. **Plessner, Helmuth.** Born in 1892 in Wiesbaden. His father was a physician. Studies of philosophy and zoology at the universities of Freiburg, Berlin, Göttingen and Erlangen. PhD. in 1916. 1917-18 assistant at the Germanisches Museum, Nuremberg. 1920 *Habilitation* in philosophy at Cologne. Associate professor from 1926. Dismissed in 1933 because of Jewish background. From 1934 lecturer and from 1939 professor of sociology at the University of Groningen, Netherlands. During the German occupation, 1943-1945, barred from teaching. 1945 rehired as full professor. 1951 return to Germany; chair of sociology at Göttingen.<sup>187</sup>
26. **Rautmann, Hermann.** Born in 1885 in Bad Harzburg. Studies of medicine and of the natural sciences at Munich. PhD in 1908. M.D. from Freiburg University in 1913. Assistant at the Hamburg *Tropeninstitut*, the Chemnitz Pathological-Hygienical Institute, and the Freiburg University Medical Clinic. *Habilitation* in 1920, from 1924 associate professor of pharmacology. From 1929 head of the Municipal Hospital Braunschweig and associate professor at the Technical College.<sup>188</sup>
27. **Rosenbach, Ottomar.** Born in 1851, as son of a physician in Krappitz, Silesia. Studies of medicine at Breslau and Berlin. M.D. in 1875. Assistant with Nothnagel and Leube at the Jena Medical Clinic. In 1878 *Habilitation* at Breslau University. From 1888 to 1896 associate professor of internal medicine at Breslau. As Jew he could not get a chair. He moved to Berlin where he worked on a comprehensive natural philosophical system and wrote numerous treatises on physiological, pathological, diagnostic, clinical, and hygienic problems. Creator of the concepts of “functional diagnostics” and “functional disease.” He died in 1907.<sup>189</sup>
28. **Rößle, Robert.** Born in 1876 in Augsburg as son of a merchants family. Studied medicine at Munich, Kiel, and Strasbourg. M.D. in 1900, Munich. *Habilitation* in 1904, lecturer of pathology at Kiel, from 1906 at Munich. Work with R. Hertwig

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<sup>186</sup> Reichshandbuch der deutschen Gesellschaft, Vol. 2 (1931). Cited after DBA/NF.

<sup>187</sup> Roeder and Strauss, eds. Biographisches Handbuch der deutschsprachigen Emigration, Vol. 2 (1983), p. 912.

<sup>188</sup> Fischer, Isidor, ed. Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre. Vol. 2 (1933), Handbuch der deutschen Wissenschaft. Vol.2: Biographical Index (1949), Kürschners deutscher Gelehrtenkalender (1950), all cited after DBA/NF.

<sup>189</sup> Wininger, Salomon. Große jüdische National-Biographie, vol. 5 (1931), Biographisches Jahrbuch und Deutscher Nekrolog, vol. 13 (1910), Fischer, Isidor, ed. Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre. Vol. 2 (1933), all cited after DBA/NF.

- (pathology) and with M. v. Gruber (hygiene). From 1909 associate professor. From 1911 full professor at Jena, from 1922 at Basel. In 1929 successor of Lubarsch at Berlin. After 1949 head of the pathological institute of a Berlin hospital. He died in 1956.<sup>190</sup>
- 29.**Schwarz, Oswald.** Born in Brünn, Moravia, in 1883. Classical education. Studied medicine in Vienna and Strasbourg. M.D. in 1906. Worked as assistant in Vienna and Munich, from 1913 to 1928 at the Vienna *Allg. Poliklinik*. 1919 *Habilitation* in urology.<sup>191</sup>
- 30.**Siemens, Hermann Werner.** Born in 1891 in Charlottenburg (now borough of Berlin), as son of the engineer and industrialist Hermann Siemens. Studied medicine at Munich and Berlin. M.D. in 1918. Work with Jadassohn at Breslau, from 1921 at the Munich University Dermatological Clinic. Dermatological *Habilitation* in 1923. From 1927 associate professor. From 1929 full professor at Leiden. Siemens was member of the executive committee of the German Society for Race Hygiene. He was dismissed from his chair and arrested in 1942, and rehired in 1945.<sup>192</sup>
- 31.**Sigerist, Henry E.** Born in 1891 in Paris as son of a merchant. Classical education in Zurich. Studies of philology at Zurich and London, and of medicine at Zurich and Munich. M.D. in 1917. Training with Sudhoff at Leipzig in the history of medicine. *Habilitation* in 1921 and professorial title in 1924. From 1925 full professor of the history of medicine and director of the institute at Leipzig. From 1932 at Johns Hopkins University, Baltimore.<sup>193</sup>
- 32.**Tandler, Julius.** Born in 1869 in Iglau, Moravia, as son of a merchant. Studies of medicine at Vienna. Demonstrator of anatomy with E. Zuckerkandl. M.D. and assistant in 1895. *Habilitation* in anatomy in 1899. From 1902 associate professor. Full professor of anatomy from 1910 as successor to Zuckerkandl. From 1914 to 1917 dean of the medical school. Tandler was socialist and welcomed the 1918 revolution.

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<sup>190</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), *Wer ist wer?* 12. Ausgabe von Degeners *Wer ist's?* (1955), Andreas Werthemann, in *Professoren der Universität Basel aus fünf Jahrhunderten* (1960), all cited after DBA/NF.

<sup>191</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), Emödi, Paul and Robert Teichl, eds. *Wer ist wer? Lexikon österreichischer Zeitgenossen*, both cited after DBA/NF.

<sup>192</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), *Wer ist wer?* 12. Ausgabe von Degeners *Wer ist's?* (1955), both cited after DBA/NF.

<sup>193</sup> *Reichshandbuch der deutschen Gesellschaft*, vol. 2 (1931), cited after DBA/NF. See also Temkin (1977).

From 1919 he was secretary of state (*Unterstaatssekretär*) for people's health. From 1920 member of the Vienna city council for the Social Democrats, and head of the welfare office. Designer of the generous health and welfare system of "Red Vienna." In 1934 arrested and dismissed from his chair. Released due to international protest. Emigrated to the U.S. and lectured at New York University Medical School. In 1935 (?) as advisor in health education matters in China, and in 1936 (?) in the Soviet Union. He died in Moscow in 1936.<sup>194</sup>

33. **Trendelenburg, Wilhelm.** Born in 1877 as son of a surgeon in Rostock. Classical education in Bonn. Studied medicine at Freiburg and Leipzig. M.D. in 1900. From 1902 assistant at the Freiburg Physiological Institute. *Habilitation* in physiology. 1909 title of professor. Associate professor in 1910. From 1911 full professor of physiology at Innsbruck, from 1916 at Gießen, from 1917 at Tübingen, and from 1927 at Berlin.<sup>195</sup>

34. **Weizsäcker, Viktor von.** Born in 1886 in Stuttgart as son of a high ranking state official. Classical education. Studied at Tübingen, Freiburg, Berlin, and Heidelberg. Physiological training with v. Kries from 1910 to 1911. M.D. in 1911. Cambridge in 1914. *Habilitation* as internist in 1917. From 1923 associate professor, and from 1930 full professor of neurology, still at Heidelberg. From 1941 at Breslau. After the war on the chair of clinical medicine at Heidelberg.<sup>196</sup>

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<sup>194</sup> Planer, Franz, ed. *Das Jahrbuch der Wiener Gesellschaft* (1929), Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), all cited after DBA/NF, Roeder and Strauss, eds. *Biographisches Handbuch der deutschsprachigen Emigration*, Vol. 1 (1980), pp. 754-5.

<sup>195</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), Degener, Hermann A. L., ed. *Wer ist's? Unsere Zeitgenossen*. 10th edition (1935), both cited after DBA/NF.

<sup>196</sup> Fischer, Isidor, ed. *Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre*. Vol. 2 (1933), Degener, Hermann A. L., ed. *Wer ist's? Unsere Zeitgenossen*. 10th edition (1935), *Wer ist wer?* 12. Ausgabe von Degeners *Wer ist's?* (1955), all cited after DBA/NF. See also Harrington (1996).

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