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Militarizing the Disabled: "Total War" and the Economy of the Body in WWI Germany

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In 1916, the German Association for Cripple Care [Deutsche Vereinigung für Krüppelfürsorge, DVK] and the German Orthopaedic Society [Deutsche Orthopädische Gesellschaft, DOG] convened successive special congresses to map out the future medical treatment and social expectations of disabled soldiers. Though some present-day historians of medicine may argue that the crucible of war does not encourage medical innovation, contemporary doctors in Germany certainly understood their experiences in the Great War to be a kind of Promethean trial through which modern medicine was proving its superiority.¹ Therefore it is not surprising that for three full days German doctors from across the empire, as well as her ally, Austria-Hungary, debated medical strategies to heal and restore the rapidly increasing number of crippled war veterans. What *is* surprising, however, is that the community of medical professionals at this "extraordinary conference" included not only the orthopaedists, surgeons and other medical experts that one would expect, but also representatives of the military, heavy industry, insurance officials, school administrators, agricultural commissioners, architects, engineers, private cripple-homes and the German Empress and Austro-Hungarian Archduke.² By 1916, the fate of the war wounded had clearly become more than a medical concern, and the decisions reached at this conference and made in other war-time medical circles would have important repercussions for Germany's disabled.

When Dr. Konrad Biesalski, a nationally recognized pioneer in the care of disabled children, opened the conference by reminding those present of the importance of "awakening the will to work"³ in wounded soldiers, he was quickly supported. Dr. Schultzen of Berlin agreed, adding that:

¹ For more on this, see my forthcoming essay, Heather Perry, "The Thanks of the Fatherland? WWI and the Orthopaedic Revolution in Disability Care," in Wolfgang U. Eckart, et.al. *Bodies and Souls in Distress: Soldiers and Physicians, 1914-1936* (Centaurus Verlag, forthcoming).

² The Ausserordentliche Tagung der Deutschen Vereinigung für Krüppelfürsorge was held 7 February 1916 in Berlin. The Ausserordentlich Tagung der Deutschen Orthopädischen Gesellschaft was held immediately thereafter on the 8th and 9th of February, 1916 in Berlin.

³ Biesalski, 75. "Bericht ueber die ausserordentliche Tagung der Deutschen Vereinigung für Krüppelfürsorge" in *Zentralblatt fuer Chirurgische und Mechanische Orthopaedie*. 10 (1916) 74-88.

of the utmost importance is social reinforcement. Prevention of the pension-psychosis epidemic must be practiced. Healing and treatment is simply a precursor to the ability to work. Therefore job re-training should begin earlier and, under the supervision of doctors, be led with strict discipline.⁴

The district administrator for Düsseldorf (a city in the Ruhr, the heart of German industry) noted that "The goal of all medical care must be to make the wounded fit again to work in productive labor. The will to work [*Arbeitswille*] will not be reinforced through discrete manual skills or ideas, but instead through practical job training. This is also the best manner for overcoming the pension-fear."⁵ Dr. H. Gocht, professor of orthopedics at the University in Berlin was even more explicit in his comments regarding the wartime goals of cripple-care. In discussing the fundamental aims of modern prosthesis design, Gocht pointed out that the disabled often erroneously placed overwhelming importance on the artificial limb's capacity to hide the disfigurement. He argued, rather, that in the new design of artificial limbs

the restoration of function, that is the ability to work again and the ability to accomplish something, is of the greatest importance. And not simply with regard to the limbs of the severely injured and his will to work, but also for the general public, for the entire nation, and for the State.⁶

Two years into the European conflict that many had originally expected to be over by Christmas 1914, it had become clear to the German medical community that the overwhelming casualties generated by this war required a new approach to war disabled care and treatment. No longer content to marginalize the disabled person in German society, the ideas expressed at this conference and other wartime medical and social circles marked a turning point in orthopaedic medicine and rehabilitative therapies in the German Empire. Moreover, although spurred initially by the extreme conditions of "total war," at the end of the conflict these innovations in "cripple care" were extended to civilians across the nation. This paper will examine first the revolution in orthopaedic medicine and rehabilitation technology, outlining the revolutionary approach to "cripple care" that emerged during the war. It will then discuss how these new ideas regarding "bodily capacity" were significantly linked with the mobilization of society under the economic pressures of "total war." Finally, it culminates in the description of the militarized "economy of the body" which emerged in World War I Germany, suggesting the ways in which the violence of war not just encouraged, but eventually depended upon this re-organization.

The Revolution in German Orthopaedics

As evidenced in the excerpts from the 1916 DVK congress, discussion of rehabilitation centered on the prosthetic re-creation and the physical re-training of soldiers in order to return them to productive labour. These discussions differed markedly from pre-war ideas surrounding the disabled. Before the war, orthopaedists had rather limited experience with accident victims or amputees. A nascent medical specialty, orthopaedics concentrated rather on the congenital deformities of children or the stiffened limbs and joints of middle class patients who could afford their care. Indeed the field was in the process of breaking away from its "parent" specialties of surgery and pediatrics, seeking to establish its medical independence. In fact, just a few short months before the July Crisis, University

⁴ Schultzen, Bericht DVK, 75-6.

⁵ Horion, Bericht DVK, 77.

⁶ Gocht, 215. "Bericht der ausserordentlichen Tagung der Deutschen Orthopädischen Gesellschaft" in *Zeitschrift fuer orthopaedische Chirurgie*. 37 (1916), 209-671.

of Munich professor, Dr. Fritz Lange, published the first orthopaedic textbook (*Lehrbuch der Orthopädie*) in which he and other specialists outlined the history of the field while simultaneously demarcating its patient focus, practice and major domains.⁷ Nowhere in this 1914 text was there a discussion of artificial limbs, industrial medicine, battle field medicine or even amputation surgery. Perhaps not surprisingly, the concept of physical rehabilitation had gained little currency among doctors, employers or patients, who preferred to draw a pension than return to work. In some ways, the Bismarckian system of social insurance implemented in the 1880s worked too well; why be healed, many wondered, if the state would support you when injured?⁸ The manpower crisis of the First World War changed this, however. No longer in a position to cast aside the disabled, and thus branding them useless to society, or even worse—burdens, German orthopaedists decided to rebuild them. Through their attempts to return the disabled to the workforce, German orthopaedists and engineers would forge a revolution in artificial limb technology and invent modern German orthopaedics.

Orthopaedists quickly discovered that the existing array of pre-war artificial limbs would be of little use in their new mission. If orthopaedists were going to return the thousands of Germany's disabled to the workforce, they needed more than the wooden "Sunday-arm" and the simple work-claw available to them before the war [show images]. According to Biesalski and others, Sunday-arms were prostheses inappropriate to assign to the multitude of Germany's war-disabled because they were "useless" in the workplace. Intended primarily as a cosmetic piece, an artificial arm of this type was capable of little more than masking the disability. In a war-time pamphlet published to help convince the disabled and their families that they would be able to return to a normal work-life, Biesalski argued,

An artificial arm with a hand is, as all lay-people must be told, essentially useful for nothing more than to hide the disfigurement. That is, it should be worn during strolls and used for simple movements: eating, holding a piece of paper, while writing and reading, etc. For any kind of *important function*, it has little value.⁹

Furthermore, the construction of a natural-looking arm that was capable of work remained beyond current technology. In discussing artificial arms and hands for war-disabled, military surgeon O. Witzel remarked,

The human hand--whether it be performing high-culture or serving the wage-laborer--remains at present irreplaceable. It is especially impossible to fulfill demands that a prosthesis take into consideration both appearance and work ability.¹⁰

⁷ Lange, Fritz, (ed.) *Lehrbuch der Orthopädie*. Jena: Verlag von Gustav Fischer, 1914

⁸ Greg Eghigian elaborates on this phenomenon in his work on the social entitlement state. See Greg Eghigian, *Making Security Social: Disability, Insurance, and the Birth of the Social Entitlement State in Germany* (Ann Arbor: University of Michigan Press, 2000); especially chapter three, "Embodied Entitlement: The Policy, Practice, and Politics of Disability, 1884-1914" pp 67-116

⁹ Konrad Biesalski. *Kriegskruempelfuersorge: Ein Aufklaerungswort zum Troste und zur Mahnung*. (Leipzig: Leopold Voss Verlag, 1915), 12.

¹⁰ Witzel, O. "Die Aufgaben und Wege fuer den Hand- und Armersatz der Kriegsbeschaedigten." *Muenchener medizinische Wochenschrift*, 44 (1915) pp 1491-1492., 1491.

Ultimately, orthopedists would not be able to combine their vision of a practical, useful arm with that of a cosmetic one and so opted to dispense with the focus on hiding the disability.

Rather, orthopaedists opted to replace the functional capacity of the hand and not its appearance. In designing substitutes for lost body parts, these men turned to the theories and practices of *Arbeitswissenschaft*, or the "science of work." In the mid-19th century, the human body was conceptualized as an animate machine that could be finely-tuned and trained. Human engineers concentrated on harmonizing the physical movements of human body with the increasing mechanization of work under industrial capitalism. By streamlining the corporeal activity of a worker, German scientists of work aimed to eliminate wasted motion and thereby increase worker productivity.¹¹ In designing artificial arms, German orthopedists adhered to a similar set of principles, analyzing the movements and tasks necessary in a variety of occupations and then crafting limbs which would facilitate or mimic these motions [show image]. By focusing on the "work" each arm might perform, rather than on the appearance of the body part it was to replace, doctors and engineers were able to physically re-build the men's bodies and outfit them technologically to resume their pre-war work [show image]. Whereas before the war the wearer's occupational identity had mattered little in limb development, during the war, it became the guiding principle in design.

Due to this intimate relationship between work and limb design, it is not surprising to learn that these new prosthetics physically inscribed class identity upon their wearers. Just as uniforms, hats, or other working gear were simultaneously sartorial markers of class identity, so too did the new artificial limbs reflect their wearer's socio-economic status to others. Arms designed for agricultural workers [see image] or craftsmen [see image] were markedly different from those devised for clerical staff or other *Kopfarbeiter*—men whose jobs relied more on "mental work" than manual labor [see image].¹² Indeed, this was necessary, as Dr Peter Janssen noted,

"because of the demands we must place on an artificial arm, which are completely different, depending on whether it has to do with the *Kopfarbeiter*, the industrial worker or the agricultural worker."¹³

Quite simply, different jobs required different arms. In some designs, artificial limbs became interchangeable with work-place tools and no longer represented attempts to replicate the anthropomorphic body [see Siemens arm image]. Indeed this philosophy of construction—letting function dictate form—led orthopedists and engineers to artificial arms that were highly specialized and divided along class lines. By war's end, German medical professionals had created over 300 different artificial arms, legs and other prosthetic devices all of which were designed, they maintained, to *eliminate the disability* of the wearer.¹⁴ [show images of Siemens Arm at work.]

However, while in one way these innovations in artificial limb technology were part of a larger modern project to elide the *physical* differences or *bodily inequalities* of disabled soldiers by re-abling

¹¹ In Germany scientists emphasized the social utility of their discoveries specifically the creation of more efficient workers, the reduction of fatigue (the debilitating *mal de siecle*), and higher industrial productivity. Two good sources for further reading on this subject include: Matthew Hale's *Human Science and Social Order: Hugo Munsterberg and the Origins of Applied Psychology* (Philadelphia: Temple UP, 1980) and Anson Rabinbach's *The Human Motor: Energy, Fatigue and the Origins of Modernity* (Basic Books, 1990) pp 179-205.

¹² *Kopfarbeiter* generally translates as "white collar worker" but is a word whose literal definition—"head worker"—is more interesting in this context.

¹³ Peter Janssen, "Was muss der Lazarettarzt von der Prothese wissen?" *Feldaerztliche Beilage zur Muenchener medizinische Wochenschrift*. 12 (1917) 398-401., 400.

¹⁴ "Gesammelte Arbeiten ueber die Prothesenbau" *Zeitschrift fuer orthopaedische Chirurgie*. Vol 37 (1917). Stuttgart, Verlag von Ferdinand Enke, 1917.

them, ironically they were simultaneously intended reinforce other social inequalities—most notably class and social stratification. Indeed many orthopaedists used the allocation and design of artificial limbs as an opportunity to police social boundaries being blurred by the “upheaval of war.” Take, for instance, Dr. Jakob Riedeinger who was worried that some men in the lower classes might try to parlay their injuries into upward social mobility. He argued that some soldiers tried to use their disability as a way to gain entry into a higher social class by securing a post which did not demand physical labor. At the 1916 special orthopaedic congress he reported that, “older men resume their previous occupations more happily than the younger ones, who are expecting a betterment in their social position.”¹⁵ Moreover, he was not alone in this assessment. Others, too, worried that despite their injury, soldiers from the working classes might secure a position as a porter or doorman, thus moving up socially from their pre-war working-class ranks. Indeed the Prussian government was so concerned that war-related disability might upset the empire’s highly stratified social system that by 1916 they had written into their medical rehabilitation guidelines that “the training and educating of war-disabled from other vocations in order to place them in commercial or clerical positions is to be discouraged.”¹⁶ According to the office for War Disabled Care, many wounded soldiers were “deluding themselves” with the idea that training in bookkeeping or typing would allow them to find an “easy job.”¹⁷ Clearly both doctors and welfare workers were worried that the upheaval of war might result in the crumbling of formerly fixed social boundaries if workers were re-trained and placed into “easy” white-collar jobs. One sure way, then, to reassert these blurring social boundaries was to guard the gateways into these professions by literally re-building a man’s body for a specific occupation. As one proponent of the new war-disabled care noted,

Today’s war welfare, in the most basic sense of the word...has reinvented itself in response to this war. It lifts those whom it serves out of the poor house in the sense that it gives the war-disabled--depending on his social status--not just an assurance of a minimum standard of care, rather it guarantees to him a certain standard of living--according to his status. Indeed, the most important thing about our contemporary war-disabled care is that it does not allow the disabled to fall below his social position.¹⁸

Regardless of their class status or former occupation, however, as the war dragged on all soldiers—wounded, recuperating, and the permanently disabled—were gradually being eyed for their usefulness *during* the war itself. Although the original impetus behind this new approach to rehabilitation had been to return these soldiers to work *after* the war was presumably won, by 1916 army and civilian authorities had realized they could not wait that long—they needed labor and military reinforcements now.

¹⁵ Dr. Riedinger (Würzburg) in “Bericht über die ausserordentliche Tagung der Deutschen Vereinigung für ¹⁵ Peter Janssen, “Was muss der Lazarettarzt von der Prothese wissen?” *Feldaerztliche Beilage zur Muenchener medizinische Wochenschrift*. 12 (1917) 398-401., 400.

¹⁶ See the *Amtliche Mitteilungen der Brandenburgischen Kriegsbeschädigtenfürsorge* 6 (16. September 1916), p. 95. This official newsletter from the Landesdirektor of Brandenburg was distributed to all offices and people to whom war-disabled care was entrusted. Not only was it meant to be archived and used as a reference, but according to its masthead, was also meant to be confidential [*vertraulich*].

¹⁷ *Amtliche Mitteilungen* 6, 96.

¹⁸ R. Hans Roesler, “Deutsche Kriegsfürsorge” *Wegweiser fuer das werktätige Volk* (January 1918), volume 5 (1), p. 11.

The Significance of Total Mobilization

By late 1915, both sides of the armed conflict in Europe had settled into the perennial deadlock of trench warfare on the western front. Gone was the initial confidence that had characterized the German military in the summer of 1914 as the nation's future heroes marched off to war. In its stead arose the grim realization that the victors in this new war of attrition would be determined not by superior military strategy, but rather by troop endurance and the supply of war materiel. Early episodes in the conflict, such as the Battle of the Marne, signaled the importance of outlasting the enemy. The mid-1916 Battle of the Somme—during which both armies tried to “bleed each other white” and endured upwards of 60,000 casualties a day—was simply the most memorable. The successful management and exploitation of a nation's human and material resources would soon become an all-encompassing goal in the economic mobilization demanded of “total war.”

Indeed by 1916 many of the more familiar components of total war were firmly in place in Germany. The creation of the Imperial War Office [*Kriegsamt*] centralized military planning in an otherwise decentralized Imperial Army (composed as it was of the joint forces of various standing state armies, reserve land forces and new recruits). The War Raw Materials Office [*Kriegsrohstoffabteilung*, KRA]—formed in August 1914—provided for the Empire-wide collection, storage and distribution of important, war-related raw materials. In addition to these organizational impulses, an Auxiliary Service Law passed in 1916 marked the institution of a civilian draft in the German Empire, under which all men between the ages of 17 and 60 were to be mobilized for the war effort either as front soldiers, garrison soldiers, or placed in war-industry.¹⁹ The organization and subjugation of all the nation's resources—especially healthy bodies and materials—to the State's wartime needs had become all but routine by the important turning point of 1916.

However the material demands of this war of attrition eventually created a kind of manpower paradox. On the one hand, the military's constant demand for new, able-bodied soldiers—those recognized by the military as “*kriegsverwendungsfähig*”—seemed insatiable. On the other, the factory demand for skilled laborers increased as industry struggled to meet the munitions and materiel demands of the army. In short, there simply weren't enough fit men to fulfill both military and industrial demands.²⁰ To make matters worse, the military and civilian drafts combined with the high wages paid in wartime industries to drain men from the rural industries—especially agricultural production. With trade blockades already in place, the German Empire was in immediate danger of starving to death, as indeed many did in the infamous “turnip winter” of 1916/17. Finally, the numbers of disabled soldiers returning from the front continued to mount, draining the human resources of the medical community. As the war continued, the German economy faced an increasingly desperate labor shortage. I contend that the medical goals of making the disabled *wiederverwendbar*, that is, literally “recycling” him, were also led fueled by this crisis in manpower and became linked to the larger war-time effort to exploit the resources of the German Empire. As I demonstrate below, eventually these medical men became part of the war machine itself, enlisted not just as healers, but rather as tacticians, making possible the continued waging of war. Indeed, medicine's newly established ability to recycle these men from front, to hospital, to industry allowed for the freeing up of able-bodied men who could replace those lost in battle. Indeed, ultimately I argue that these doctors created a kind of perpetual relay of useful bodies, an assembly line system of repair and regeneration, what I call a wartime “economy of the body.”

¹⁹ Gerald Feldman, *Army, Industry and Labor in Germany, 1914-1918* (Princeton: Princeton UP, 1966)

²⁰ For an excellent discussion on the shortage of manpower and the resulting conflict between the army and industry in Germany during the First World War, see Feldman, *Army, Industry and Labor in Germany, 1914-1918*

*The Economy of the Body*²¹

The revolution in prosthetic technology and the re-orientation of German orthopaedics toward the physical recreation of the disabled had important repercussions for German war-time society. Eager to inform the public of the success of the new physical reproduction [*Wiederherstellung*] of the war disabled, Germany's orthopaedists initiated a broad public relations campaign designed to re-cast the image and perception of the disabled body. Exhibitions displaying these revolutionary devices and the men they had re-produced traveled throughout the Empire [see image]. The public flocked to films and public lectures touting the success of the new "physical re-education" [see image]. They founded schools across the nation, such as this one in Düsseldorf [see image], with special courses and workshops designed to train and "reclaim" the labour of the maimed.²² Factory managers and hiring agencies were taken through special "economic exhibits" which showcased the handicrafts and piece-work manufactured by disabled soldiers.

Moreover, in addition to all of this, orthopaedists marshaled the popular press in their campaign to redefine public notions of disability. Photo essays in the illustrated weeklies informed Germans of the latest developments in orthopaedic technology, while also demonstrating how these devices sent soldiers cheerfully back to work in the factories and fields. Other articles depicted the recovery hospitals and surgical stations, often housed in the various spas and resort hotels where wealthy Germans had taken health cures before the war [show image]. Images such as these suggested that wartime recovery was not only fun and luxurious, but indeed might even resemble a vacation, as well. Pictures of one-armed men exercising and re-training their bodies convinced Germans of the sturdy, healthy nature of these newly rebuilt bodies [show image]. But of course, all work and no play might make "Jupp" a very dull boy, and so these newspapers also always included photos of the wounded simply enjoying themselves at football and other sporting events. Clearly images such as these published in the *Illustrierte Zeitung* alongside an article titled, "Modern Care for the War Disabled," which pictured the newly-restored as they deftly played sports were all part of the project of convincing readers that everyday life was back to normal for these soldiers.²³

It did not take long for German industry to take note of these developments. Taking their cue from the medical specialists who assured them that these disabled soldiers were capable of heavy, manual labor, corporations and municipal governments created programs designed to train and harness the so-called "reserve labour force" of the disabled so that they might be recycled into the war-time economy. Particularly popular were programs and apparati designed to train the disabled for farmwork in the German countryside, where many hoped their transplanted labour might help mitigate against the acute food shortages facing the nation since 1916. Indeed settlement colonies were established to use the labour of these re-furbished veterans to not only raise much needed agriculture but also reclaim the wasteland being conquered in the East.²⁴ On the other hand, large industrial concerns such as the Siemens-Schuckart-Werke in Berlin conducted ergonomic studies and hiring experiments to help determine how best to efficiently use their new workers in munitions production.²⁵ By 1917, they had re-designed some of their factories so that they could more easily

²¹ This is a concept I develop further in my dissertation, Heather Perry, *Recycling the Disabled: Army, Medicine and Masculinity in World War I Germany*, (Bloomington: Indiana University, 2005), as well as my forthcoming manuscript.

²² See for example the brochure of the *Düsseldorfer Verwundetenschule* which was founded by the Lehrerkollegium for service to the Zentralstelle für freiwillige Liebestätigkeit. SachHStaArch (Dresden), LVA 111.

²³ Dr. Julian Marcuse. "Neuzeitliche Kriegsbeschädigten-Fürsorge durch Turnen und Sport," in *Illustrierte Zeitung* (2/1917) Nr. 3864, pp.107-108. (Landesarchiv)

²⁴ See for example the creation of "ländliche Heimstätten" as part of the Domestic Colonization of War Disabled in Sachsen. II 1038. SachHStaArch. LVA 123.

harness the labor of both the blind and the physically disabled. [As you probably noted in the images, one way was to simply mass produce their own Arbeitsarm, redefining somewhat unusually Siemens' role in the war as "arms producers"].

Indeed, by then the orthopaedic community was hardly alone in finding ways to recycle the disabled soldier in the German economy.²⁶ As employers, managers, welfare workers, and municipal authorities experimented with disabled labor, they bombarded their compatriots with tales of their success in making the wounded soldier once again a "productive member of society." Take for instance the booklet by Friedrich Syrup, *The Welfare for War-Disabled Industrial Workers*. In this work, Syrup outlined ways to re-use severely injured soldiers in German industry because, as he pointed out, medical treatment and the award of pensions did not completely fulfill the nation's obligations to its war-wounded. Rather, he maintained that sending them back to work would be the most important and effective means of social welfare.²⁷ In his 1915 study, *How War Disabled and Accident Victims Can Improve Their Situations*, Industry Councilor (Bergrat) E. Flemming outlined the various ways in which the war- and peace-injured could be returned to work in German industry and thereby earn extra income to supplement their disability pensions.²⁸ Other pamphlets were even aimed at convincing the war disabled themselves of this work imperative. For instance, in *The Carefree War Invalid*, Walter Salzmänn argued that although the disabled soldier had every right to his benefits, this right carried with it an on-going responsibility to his country. In outlining this continued obligation, Salzmänn noted, that the war-injured "must not just passively take what he is offered, but rather also actively participate in his own treatment and care and not just for his own individual interests, but in the interests of all war invalids and indeed the entire German nation." Indeed according to Salzmänn, the soldier was still duty-bound to maximize his remaining labor potential and use that labor to contribute to the rebuilding of the German economy.²⁹

At the same time as the civilian population began to take note of the ways in which the disabled could be "easily" re-integrated into society and be of "productive use" to the nation, so, too, did the military. By late 1916, the German military began revising its attitudes and policies toward disabled soldiers. Every military field hospital and reserve lazarette was assigned an orthopaedic advisor who was in charge not only of the physical rehabilitation of the convalescing soldiers, but also of evaluating their level of fitness for service or work. In April 1917 citing the breakthrough in

²⁵ "Die Kriegsbeschädigtenarbeit im Kleinbauwerk der Siemens-Schuckertwerke GmbH, Siemensstadt bei Berlin, als Beleg fuer Durchfuehrung, Wert und Notwendigkeit der Arbeitsfuehrung fuer KB im industriellen Grossbetrieb" LM 330 [Sammelhefte on Schwerbeschaeedigter], Siemens Archive (Munich).

²⁶ I should point out that Konrad Biesalski was the secretary of the German Orthopaedic Society [*Deutsche orthopädische Gesellschaft*] and in that capacity he was often charged with writing up the conference proceedings and general protocols of the society. In addition to these secretarial duties, Biesalski was often listed as the author of several of the society's general publications, so that although many of these writings appear to be the sole work of Biesalski, they were in fact often written with the input of other member orthopaedists. Moreover, as the public representative of the organization itself, Biesalski often published or spoke on *behalf* of the organization's membership at large. Thus it is important to understand that Biesalski's opinions and beliefs as expressed in these sources should be understood as the official opinions of the entire organization itself. That is not to say that Biesalski did not have his own, individual opinions or disagreements with the DOG, but when he did, he made a point to not represent himself as "Schriftsteller der Deutsche orthopedist Gesellschaft" but rather as "Director of the [Berlin-based] Oscar Helene Heim für gebrechliche Kinder."

²⁷ SHAD. LVA 111. Friedrich Syrup, *Die Fürsorge für kriegsverletzte gewerbliche Arbeiter* (Schriften des Deutschen Werkmeister-Verbandes, 29.) (Verlag der Werkmeister-Buchhandlung: Düsseldorf, 1916), p. 3. Syrup was a factory inspector from Upper Silesia who would go on to become a high ranking official in the Labor Ministries of both the Weimar Republic and Third Reich.

²⁸ Bergrat E. Flemming, *Wie Kriegsbeschädigte und Unfallverletzte auch bei Verstümmelung ihr Los verbessern können*. (Saarbrücken, 1915).

²⁹ Walter Salzmänn, *Der sorgenfreie Kriegsinvalide: Die Hinterbliebenenversorgung*. (Cassel: Friedr. Lometsch, 1915).

orthopaedic medicine, the Imperial War Office [*Kriegsamt*] issued several reforms to the Auxiliary Service Law of 1916. Under the new law, fit male workers who could be replaced by the rehabilitated disabled could no longer apply for draft exemption. Soldiers convalescing in military hospitals had to be registered with the local mustering committee, which would now conduct weekly re-evaluations of the work potential of all wounded.³⁰ In 1917 the Sachsen Army founded "Wirtschafts-Bataillonen"—so-called "economic battalions" of disabled soldiers organized to meet the specific needs of the war industry.³¹ By 1918 disabled soldiers not engaged in wartime auxiliary service could be officially commandeered to it and tried for "crimes against the fatherland" if they refused—as could the doctors who failed to register them.³² Moreover, they could be commandeered to experimental, rehabilitative surgery, like the Krukenberg Process [see image] if orthopaedic experts claimed it might improve their capacity for work. Though demobilized as soldiers, disabled servicemen were now being remobilized as war-workers on the homefront! Disabled or not, through the intervention of modern medical technology these soldiers were still being treated and considered as though they were able-bodied men. Biesalski's 1915 prediction rang true, "There is no more cripplehood!"³³

Conclusion: "Making Tax-Payers out of Charity Cases"

The First World War had a profound impact on the physical and mental health of Germans. In this paper, I have examined how German orthopaedists responded to this medical crisis. In tracing the innovative response of members in a nascent medical specialty—orthopaedics, I have outlined how the war-time quest to heal the bodies of individual soldiers became inextricably linked with modern ideas about inequality and difference. On the one hand, I have demonstrated how the war inspired German orthopaedists to eliminate physical disability and its attendant prejudices regarding what Biesalski termed "bodily capacity" (*körperliche Leistungsfähigkeit*). Through rebuilding injured bodies and re-inserting these men into the productive relationships and labor economy of the nation, orthopaedists saw in their mitigation of the *results* of injury the effective elimination of the disability itself.

At the same time, however, much of their work was geared toward the reinforcement or buttressing of other social differences—more "traditional" values such as class and social station. In many ways, then, German orthopaedists were engaged in their own medicalized project of creating the perfect national community—or as they called it, *Volksgemeinschaft*. By redirecting their professional goals and revolutionizing their field, German orthopaedists interpreted their work as crucial to supporting the national economy and industrial organization of German society. By making economically productive and useful citizens out of "useless cripples," these medical men saw in their work the very salvation of an empire caught in the upheaval of total war and the preservation of their own middle-class world.

And yet, I will also underscore that this new, wartime goal of German orthopaedists to make disabled soldiers "*wiederverwendbar*," (literally "re-usable,") is not simply evidence of technological innovations in medicine or even an example of how notions of class informed early twentieth-century German medicine. In my opinion, it represents much more than the clever physical re-creation of the human body—a re-creation which ironically was made both necessary *and* possible due to the industrial innovations of the First World War. Rather, more than some modernized Hippocratic response to disability, this ideological revolution in so-called "cripple care" was also firmly rooted to

³⁰ "Heranziehung genesender Lazarettkranker zur Arbeit." Nr. 2095 V v. 7.7.17. KVBl. 1917. SachHStaArch,

³¹ "Begründung der Errichtung von Wirtschafts-Bataillonen (WB)" SachHStaArch, KA (P) 18188

³² Kriegsministerium, Nr. 1504/6.18 C 1 b. SachHStaArch, KA(P) 6826/2.

³³ Biesalski, *Kriegskrüppelfürsorge*

the changing nature of modern warfare itself—a change which occurred during the First World War under the aegis of “total mobilization.” Still, when the war ended, not surprisingly orthopaedists sought to extend these dearly bought innovations—and, of course, their own authority over them—to all disabled Germans in the post-war world.

In 1922, Dr. Konrad Biesalski published a volume carefully outlining the goals and objectives of the new “disability care” (*Krüppelfürsorge*). The new *Guidelines for Disability Care (Leitfaden der Krüppelfürsorge)* gathered together the various developments and medical innovations from the war while also outlining how to use them for improving the care and welfare of all Germany’s disabled persons—“war cripples” and “peace cripples” alike. Published under the auspices of German Association for Cripplecare and the German Orthopaedic Society, the volume revised the German Empire’s guiding principles for and expectations from treating its disabled citizens. The impact of the war on medical practice, the experiences gained from treating disabled soldiers, and above all the recent passage of the new “Prussian Law for the Severely Disabled” had culminated in a veritable revolution in the healing therapies for permanently injured.³⁴

Indeed ultimately, through the 1920 law and the re-organization of the German military after its defeat, there became little legal or medical distinction between the civilian and military disabled as the “thanks of the fatherland” developed for wounded soldiers was effectively extended to civilians, as well.³⁵ Sending the disabled back to work was just as essential in peacetime as it was during the war, only now it was not because of the shortage of labor, but because of the shortage of welfare resources. If disabled Germans—regardless of the cause of disability—could be made fit enough to “earn their own bread,” then the State would have less financial responsibility for them. Moreover, as wage-earning tax-payers, these disabled workers would actually be contributing to the national economy in even more direct ways. In the words of the post-war disability care publications, the modern Cripple Care [*Krüppelfürsorge*] programs could “make tax-payers out of charity cases.”³⁶

In sum, whereas before the war disabled Germans had been fundamentally dependent on the state, after the war these same citizens—soldiers and civilians alike—found themselves in fact beholden to it, expected by many to prove their continued economic and social usefulness to the nation. Thanks to the revolution in orthopaedic technology, being a healthy citizen in the post-war democracy of the Weimar Republic meant that *all* disabled Germans—veterans or not—were obligated to be “productive members” of the *Volk*—policies and expectations which would have disastrous consequences for many after 1933.

³⁴ Konrad Biesalski, *Leitfaden der Krüppelfürsorge* (Leipzig: Leopold Voß, 1922), 3.

³⁵ For another volume detailing the extension of the war-time innovations to civilian accident victims, see chapter five “Die orthopädische Übungsbehandlungen auf Grund der Erfahrungen des Krieges,” in Gocht, *Die Orthopädie in der Kriegs- und Unfallheilkunde*. For an illuminating discussion of the 1920 Prussian Law for the Severely Disabled, see Christopher Jackson, “Infirmative Action: The Law of the Severely Disabled in Germany,” *Central European History* 26:4 (1993): 417-55

³⁶ For more on the slogan, “aus einem Almosenempfänger einen Steuerzahler machen” see Biesalski, *Die Fürsorge für unsere heimkehrenden Krieger, insbesondere die Kriegskrüppelfürsorge* (Leipzig: Leopold Voss, 1915).