The Athlete as Machine: A Figure of Modernity in Weimar Germany

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Between 1920 and 1922 the Berlin artist George Grosz produced a series of figures in a cool, detached style, which emulated engineering drawings; many of the figures, which lacked facial features and resembled artists' mannequins, represented athletes, particularly boxers (fig. 1), but some were also themselves engineers. All of the stylistic qualities of this series were markedly different from Grosz's usual, and more widely known, social satires. Several years later, beginning in 1924, the Stuttgart based artist Willi Baumeister also made images of athletes as mannequins, mostly drawings and gouaches, which were clearly indebted to the earlier work of Grosz (fig. 2). Baumeister termed these works *Sportbilder* (*Sports Images*) and continued to produce them until about 1928, when he turned to an increasingly abstract and increasingly biomorphic formal vocabulary, eventually repudiating much of his figurative work of the mid-1920s. Picturing athletes in a severe, simplified and even anonymous style, both Grosz and Baumeister depicted the athletic body as a mechanized automaton, the product of controlled technological processes. In this essay, I wish to suggest a reading of these images as programmatic responses to, and partially constitutive of, a discourse of crisis surrounding the body and bourgeois subjectivity.

The discourse of the body in crisis – part of the larger discourse of modernity in Germany – was especially voluble and diverse in the long aftermath of the First World War. The body, traditionally understood as the vessel of subjectivity and individuality, seemed to be threatened from all sides by an increasingly mechanized and technologized

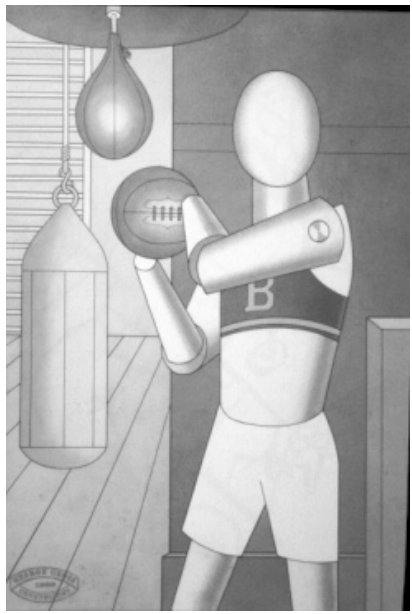

Fig. 1: George Grosz: Sportler (1922).

landscape. For pessimistic conservative cultural critics, the perceived threat to the body was an outward sign of an inner decay and loss of identity. For the artistic and literary avant-garde, however, the supposed withering away of subjectivity and individuality was euphorically welcomed as necessary and central to the overthrow of bourgeois values. In this case, the fashions of sports and modernist architecture functioned as important indicators of a liberation rather than a decay. To those who staked their avant-garde position on the demise of the bourgeois subject itself, the discourse of the threatened body offered room within which to maneuver into startlingly radical positions – Ernst Jünger's scenarios of future-shock spring to mind. The figure of the man-machine ("Maschinenmensch"), and specifically that of the athlete-as-machine, must be seen as an eager reiteration of the threat to the authentic bourgeois individual subject. This posture of emptying out subjectivity, along with the attendant fantasy of the machine-like body, was politically ambiguous, espoused by intellectuals on the left and right, as well as those with no avowed political stance. But it was clearly opposed to traditional notions of bourgeois culture and subjectivity, and in this it was typically avant-garde.

Fig. 2: Willy Baumeister: Hochsprung (1928).

In the case of George Grosz, in particular, the depiction of the machine-like body has often been mistakenly read by art historians as an ironic gesture, intended as an indictment, not an embrace, of a dehumanizing capitalist industrial culture (see Schmied, 1969: 46; Güssow, 1980: 90; McCloskey, 1997: 84; Whitford, 1997). I argue that, to the contrary, Grosz's images, like those of Willy Baumeister, should be understood not as an ironic critique, but rather as a celebration of what they depict: a genuine embrace of the engineer's objective style of representation, the mechanization of the body and the liquidation of bourgeois subjectivity along with familiar notions of the artist. Their chosen subjects, the athlete and the engineer, were two figures unified, as we shall see, by the sciences of "work physiology" ("Arbeitsphysiologie") and "sports physiology" ("Sportphysiologie"), disciplines that applied engineering principles to the bodies of workers and athletes with the goal of enhancing bodily performance ("Leistungssteigerung") – a concept that resonated powerfully in the wider culture of the Weimar Republic. Grosz and Baumeister both produced their mechanical drawings of athletes and workers by applying a technological mode of vision to the body, which was in turn produced as a technical construction, a machine. Thus they re-imagined both the body and their own subjectivity as better prepared to withstand the onslaught of urban experience.

It is perhaps surprising to claim that any images by George Grosz were politically ambivalent; an early member of the German Communist Party (KPD), he is traditionally viewed as a deeply committed artist (see Lewis 1971; Schneede 1975). But I do not think that Grosz's affiliation with the KPD, taken at face value, provides the key for understanding his images of machine-like bodies; one should not dismiss out of hand the idea that they might have been politically ambiguous, anti-humanistic works, which can productively be compared with Ernst Jünger's later descriptions of the worker as a machine in *Der Arbeiter* (1932) and related texts. I find it far more plausible that producing impersonal technical drawings of mechanized men and joining the Communist Party were both meant as provocative anti-bourgeois gestures in the spirit of Berlin Dada. But Grosz's contemporaries wrote little about his images of mechanized bodies, and the evaluation of irony and provocation in historic images and literary texts is notoriously difficult. Therefore it will be best to begin this study with Baumeister's later *Sportbilder*, about which critics had more to say, and work back to Grosz's images. In this way, I hope to reveal the specific cultural valences of the athlete-as-machine image in Weimar era figurative art.

Willy Baumeister: The Image and the Science of Sports

The subjects of Baumeister's *Sportbilder* included not only participants in modern, Anglo-American sports like boxing, soccer and field hockey, as well as track-and-field athletes, but also airplane pilots (understood - not just by Baumeister - as athletes who worked with machines). The figures in his drawings are shown in a variety of positions determined to some extent by the typical gestures and motions of the sports they were engaged in. At the same time, the figures are simplified to the point of schematization; their facial features, in particular, are pared to a diagrammatic minimum of standardized linear forms. Simple landscape elements are combined with straight lines and rectangles, which suggest the boundaries of playing fields. The *Sportbilder* exhibit at least two sets of concerns behind the image of the mechanized body in the wider culture of the Weimar era: the depersonalized, stereotypical body, from which individual psychology, perceived as a liability, has been eliminated; and a conception of modern sports and their training regimens as a process which, with the help of sports physiology, transforms the body into a rationalized collection of mechanical motions, reconfigured in the

most efficient means possible. Such at least were the terms in which these images were received in the late 1920s.

In 1929 for example the art critic Willi Wolfradt published an essay in the influential art journal *Der Cicerone* in which he discussed Baumeister's mechanistic representations of athletes (Wolfradt 1929). Over Wolfradt's explication of the *Sportbilder* is reproduced a painting entitled *Hochsprung* (*High Jump*, see fig. 2). It depicts a technological landscape consisting of modernist architecture and towers for high-tension wires or possibly radio towers; in the foreground, several female athletes can be seen in various postures of repose surrounded by gymnastics equipment. In addition to these icons of 1920s modernity and *Neue Sachlichkeit,* the image also includes a racecar in the middle distance, which in this context connotes not only speed and the dynamism of machines, but also a particular form of modern, machine-oriented sports. Over this landscape, dominating the upper third of the canvas, another female figure is jumping over the highbar; her body, stretched out horizontally, is fixed at just the moment in which it crosses over the bar.

Now lost, this painting has received little scholarly attention, but it is a central work from this period and develops many of the themes of Baumeister's *Sportbilder*. Those themes need to be put into their original context, which included a specific range of cultural valences that were attached to the athletic body, such as objective, "Americanist" rationality over and against interiority, which was understood as a German quality. Upon such closer examination, it becomes clear that the female figure in *Hochsprung* functions as an icon of Americanism, and specifically of the technocratic discipline of sports physiology.

The *Sportbilder* by Baumeister (and Grosz), with their depiction of Anglo-American sports, emphasize forms of bodily practice understood in Germany during the 1920s to be particularly modern and to maintain a natural affinity with the mechanical and technological. In what follows, it will be necessary to examine some of the discourses of athletics within which these images clearly enunciated their positions. To conservative cultural critics, Anglo-American sports and its techniques embodied everything identified with modernism and modernity: Enlightenment thought, along with economic and political liberalism, parliamentary democracy, rationalism, scientific empiricism, materialism, technological progress and urbanization. Likewise, for its supporters and its detractors alike, the emphasis on high performance and its improvement ("Hochleistung" and "Leistungssteigerung" respectively) in sports functioned broadly as an analogy for rationalization and the increase, through technocratic management, of industrial and even white-collar labor. It clearly connoted American methods of management. In the binary *Welt-*

anschauung of conservative cultural criticism, modern sports was aligned with an artificial Western *Zivilisation* and opposed to an authentic German *Kultur*: it was closely associated with England and, especially after the First World War, America, and with the American emphasis on competition, quantifiable measurement, record-breaking performance and the specialization by athletes that facilitated individual achievement. For cultural conservatives, modern sports represented everything wrong with modernity.

But if there were conservatives in Weimar Germany who loathed the focus on quantifiable measurement, record-breaking and high performance in modern sports, there were also those who embraced these qualities. One was Robert Werner Schulte, a member of the faculty at the Deutsche Hochschule für Leibesübung, whose book "Leistungssteigerung in Turnen, Spiel und Sport" clearly indicated its agenda in its title. Politically reactionary, Schulte nonetheless embraced the modernity of modern sports and was a pioneer of the discipline of sports physiology ("Sportphsyiologie"), which was in turn a spin-off of work physiology ("Arbeitsphysiologie"). The science of work analyzed the working body into a bundle of mechanized systems in an effort to integrate it more completely into the technological and mechanical systems with which it labored, while at the same time eliminating the cumbersome and costly process of trial and error. The science of sports essentially followed suit. As with the science of work, the science of sports increased productivity (rendered into improved performance on the playing field) by identifying the most effective bodily motions or sequence of motions, while eliminating unnecessary ones. The peculiarity of sports physiology, however, was that it lacked the economic imperative of rationalization, which drove many of the efforts of work physiology. And yet modern sports presented the science of the body with a field rich in new forms of bodily motion to analyze (see Rabinbach 1990).

A central target of the new sciences of sports and work physiology was any sequence of motions performed by the worker or athlete that was traditional, followed conventional wisdom or had otherwise not been subjected to empirical, technological examination. The rules of thumb taught to an apprentice on the shop floor by an old hand, as well as the motions taught to a young athlete by a coach, were typically judged inefficient and in need of unlearning. A new, externally contrived set of motions was determined with the aid of technological instruments such as film cameras and electromechanical devices. In other words, work and sports physiology took an athlete's interior sense of his or her own natural, unselfconscious movements and rhythms and rendered it

separate, alien. The body was perceived through a technocratic apprehension, and this mode gave it back its own movement as objective expertise rather than subjective experience. This is a profound and intimate way in which many experienced the cultural work of modernity – the revolutionary transformation of the familiar into the alien, the subjective into the objective – at the level of one's relationship to one's own body.

Representative of this work of modernity on the body, or on the *experience* of one's own body, are Wilhelm Knoll's filmic motion studies of hurdle jumpers. Of Swiss origin, Knoll (1876-1958) had served as the head physician of the Bündner Lungenheilstätte in Arosa, Switzerland before being appointed as professor at the Institut für Leibesübungen in 1929 (see Joho 1986/87). As an example of his work, let us take an image produced under Knoll's direction at the Institut für Leibesübungen of the University of Hamburg and published in *Die Körpererziehung* in 1930 (Knoll 1930). The photograph, "Hürdenlauf; Läufer auf den Wegkurven (Spreizbein)" (fig. 3), records – rather than pictures – a track runner's performance. An athlete can be seen jumping a hurdle, the solid and dashed lines indicating the path along which points of the body move; in a second, related photograph published in the same essay, the athlete's body vanishes along with the landscape of track, hurdles and sports field through which it moves. All that remains are the traces of his body, rendered as white dashes against a black field, as he jumps an invisible hurdle. In keeping with the methods of motion studies developed

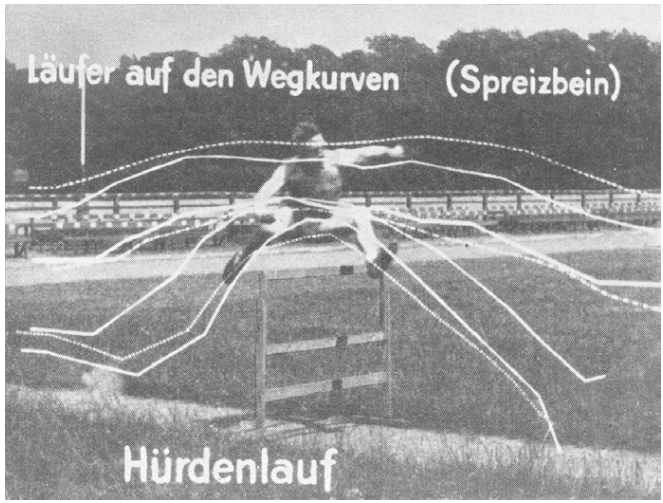

Fig. 3: Wilhelm Knoll (1930): „Hürdenlauf, Läufer auf den Wegkurven (Spreizbein).“

by the science of work, the dashed lines indicate not just the distance traveled, but also the duration of a motion. Each dash corresponds to a fixed unit of time, so that the duration in time and distance in space of a gesture can be correlated.

The image of the hurdle jumper is in fact a still from a film, although it could also function pedagogically as a still, as it in fact did in the article in *Die Körpererziehung*. For the film version, the sequence was run frame by frame on an editing table and eight specific points on the athlete's body were traced as they moved through space (Knoll 1930: 295). Once the trajectories of these eight points had been traced through the entire sequence and the dashed lines drawn onto each frame, the film could be run again at regular speed: the body of the hurdle jumper would then seem to follow its predetermined path, each joint or point on the body following the trajectory inscribed onto the picture plane by/for it. Spliced into a loop, the film segment would repeat, endlessly, the figure of the athlete running a never-ending course, following the identical trajectory at the identical rate of acceleration and then deceleration. The intended purpose of this film was to give "sports instructors, trainers and athletes themselves a concept of the correct technique of the movement in question" ("dem Sportlehrer, dem Trainer, wie dem Sportmann selbst einen Begriff vom technisch richtigen Ablauf der Bewegung…"; Knoll 1930: 299). The looped image of the performing body corresponded to, but also approached fulfilling, this pedagogical purpose, subjecting the viewer to an endless repetition of the ideal bodily motion until "he had gained an understanding of the movement in question through observation" ("bis beim Betrachten das Verständnis für die betreffende Bewegung vorhanden ist"; Knoll 1930: 231). The hurdle jumper in this endless loop no longer corresponds to the original athlete; now automated, he tirelessly repeats the same perfect motions with a mechanized cadence provided by the mechanics of the film projector and corresponding to the unchanging length of celluloid. The stated pedagogical goal is to replace the potential athlete's intuitive sense of his or her own body with an objectively determined, mechanically driven, optimized motion sequence. For the athlete watching this mechanized spectacle, this was the intimate cultural work of modernity operating on his sense of his own body as an objectified apparatus.

In his interpretation of Baumeister's *Hochsprung* from *Der Cicerone,* Willi Wolfradt understood Baumeister's *Sportbilder* as a representation of this intimate cultural work of modernity. Wolfradt dismisses as "personal peculiarities" ("persönliche Besonderheiten") the intuitive sense of how to move one's own body and celebrates its replacement with a scientific method. He sees in Baumeister's geometricizing style a

pictorial expression of this cultural transformation. “Die geometrische Form normt genau so die freiwüchsige Bildung der Naturdinge wie der Sport Stellungen und Bewegungen des Körpers regelt, nämlich der persönlichen Besonderheiten entkleidet und im Sinne eines bestimmten Zweckes der Muskelanspannungen und Gelenkbetätigungen schematisiert“ (Wolfradt 1929: 289). For Wolfradt, it was possible to see Baumeister’s schematization of the athletic body, which emulated the impersonal, detached style of engineers’ diagrams, as a visual equivalent of the rationalizing, mechanizing processes of modern sports training, a training that replaced personal idiosyncrasies with normative motions.

The central figure of *Hochsprung*, the high jumper of the title, is prone; her body, parallel to the highbar itself, defines the horizontal axis of this rigorously structured painting. The schematized, anonymous female athlete passes low over the bar, her torso held parallel to it; the forward arm, having already passed over the bar, points downwards, providing an emphatic vertical line countering the dominant horizontals. Her forward leg is folded underneath her rear leg, its lower portion nearly hidden, as is the rear arm. This is perhaps the most surprising aspect of the figure’s position. The foot and calf of the rear, upper leg have clearly crossed over the bar and begun the downward part of their trajectory; the (hidden) foot of the lower, forward leg lags behind and seems in danger of catching the bar unless the athlete quickly rotates her whole body by swinging her trailing arm up and over.

The technique exhibited by the high jumper is identifiable as the “Osborne jump” (“Osbornesprung”); a refinement of the so-called “American scissor style” (“amerikanische Scherenstil”), it was named for the American H. M. Osborne, who set the world record for the men’s high jump with running start, at 2.03 meters, in 1924 - a record that was still unbroken when Baumeister painted his picture in 1928. The distinctive feature of this jump, which was widely discussed and elaborated in popular journals of physical exercise such as *Die Leibesübungen*, is that the athlete swings his or her legs like scissors, bringing one leg at a time over the bar while rotating her body, always keeping one leg and one arm below the bar to hold the center of gravity low (see Bayr 1928). The Osborne style represented an advance over earlier styles of high jump because the jumper’s careful coordination of her limbs and their separate trajectories and vectors, combined with the horizontal position of the body as it went over the bar, kept the center of gravity so low in relation to the body that, if executed properly, it would actually pass under the bar as the body went over it, thereby increasing dramatically the height a jumper could attain. (Bayr 1928: 313). Formerly, high jumpers simply jumped over the bar in a vertical position, much like a hurdle jumper.

The proper execution of the Osborne style clearly did not come naturally; entire essays in athletic journals were devoted to the step-by-step process of unlearning and retraining. Baumeister, for his part, seems to have gone out of his way to render his athlete's body as illegible as possible, hiding the rear arm and forward foot, in marked contrast to the how-to diagrams of athletic journals. It is as though Baumeister thought to emphasize the gap between an intuition of how to jump the highbar and this new, rationalized, scientific method.

Wolfradt shared Baumeister's understanding of sports as part of a larger process of emptying out the subjectivity of the modern subject, in this case specifically the experience of one's own body. In his article, Wolfradt reads the *Sportbilder* as evidence of Baumeister's own enthusiasm for this project, and he understands the schematized figure drawings as a measure of the transformation of the subject in an industrial, technological culture. The link between painting style and the perceived processes of a broader modernity are expressed in the pictures' "impersonal quality" ("Unpersönlichkeit"), which Wolfradt describes as "a result of technological and sociological processes" ("ein Ergebnis der technischen und soziologischen Prozesse"):

„Die Maschine als immer integrierenderer Faktor unserer Welt […] [hat] die Epoche unter das Zeichen der Unpersönlichkeit gestellt. Sowohl mit seinen abstrakten Figurationen wie mit den Darstellungen sportlich betätigter Körper, die im Schaffen Baumeisters seit einigen Jahren vorherrschen, hat der Künstler sich zu diesem Zeichen bekannt" (Wolfradt 1929: 289).

Wolfradt sees Baumeister's embrace of this process not simply as an understandable gesture, but as a stance to be applauded and emulated. And in the spirit of acquiescence he goes on to describe Baumeister's painting style, seemingly without irony, in the language of a fetishized industrial technology: "Er [Baumeister] formt die Körperoberfläche denn auch aus einem glatten Guß, hängt die ein für allemal den Aufbau des menschlichen Körpers konstituierenden Bestandteile wie serienmäßig gefertigte Stücke gelenkfest ineinander" (Wolfradt 1989: 290). These words would later be echoed in Jünger's essay, "Über den Schmerz," where he wrote of the athlete:

"Das neue Gesicht [...] ist seelenlos, wie aus Metall gearbeitet, wie es heute in jeder Illustrierten Zeitung zu finden ist [...] Es ist eins der Gesichter, in denen der Typus oder die Rasse des Arbeiters sich zum Ausdruck bringt. Der Sport ist ein Teil des Arbeitsvorganges" (Jünger 1980: 186).

Jünger may here refer us to the popular press, but he might just as easily have pointed us to Baumeister's *Sportbilder*. Jünger's equation of sports and industrial work repeats the link made in the texts and images of Schulte, Knoll, Baumeister and Wolfradt.

George Grosz: The Athlete, the Engineer and the Didactic Image

At this point, we can productively turn to the images of athletes-as-machines made by Grosz. His images of machine-like bodies all date from the period between 1920 and 1922. Several were published in *Das Kunstblatt* in 1921, together with an essay by Grosz entitled "Zu meinen neuen Bildern." Several of the images depict boxers, a figure particularly redolent of dynamism and even brutality and an embodiment of many of the qualities associated with both America and modernity in Weimar Germany. The image I would like to consider here, *Sportler* (see fig. 1), now lost, was dated 1922 and so postdates the essay. However, it clearly partakes of the same stylistic elements and cultural concerns. It depicts an athlete explicitly as a mechanical assemblage of parts. The limbs, which consist of slender cones, are held to the torso by large metal pins. In keeping with Grosz's principle – stated in his essay – that modern man is no longer an individual subject, the ovoid head has no facial features whatever. Clothing as a marker of class status or individuality has been replaced by the athletic uniform, emblazoned with a large "B", signifying membership in a team or athletic club. Significantly, this mechanized athlete, like all of Grosz's athletes, is not represented competing, but merely training. Athletic training, a goal-oriented and rationalized activity, has replaced the political conflict of Grosz's better-known images.

In the essay "Zu meinen neuen Bildern," Grosz lauds the engineer and the boxer as two types of men for artists to emulate in an age that demands action, sobriety and self-discipline. "Die Sachlichkeit und Klarheit der Ingenieurzeichnung," he writes, "ist ein besseres Lehrbild als das unkontrollierbare Geschwafel von Kabbala und Metaphysik und Heiligenekstase" (Grosz 1921: 14). The target of Grosz's critique here is clearly Expressionism, specifically in its mystical, post-war variety. In contrast to the highly emotive style of Expressionist art, Grosz renders his athletic figure with a sharp pen in ruled lines and with thin washes of watercolor; modulation of light and dark is accomplished with even gradations, not with the serrated striations of Expressionism. Gone too are the other stylistic markers of intense subjectivity: the jagged lines, clash-

ing colors and especially the distorted facial features of post-war Expressionism. The self-effacing style borrowed from the engineer's diagram is meant to give form to an alleged conceptual clarity and, in particular, to a pedagogical program. Grosz continues: "Meine Arbeiten sind als Trainings-Arbeiten zu erkennen – *ein systematisches Arbeiten am Ball* – ohne Ausblick ins Ewige!" (Grosz 1921: 14). And indeed, the athlete depicted here has in his fitness studio a punching ball and a heavy bag, the training equipment of the boxer. But it seems equally significant that Grosz wants to deny, both to the athlete he depicts and to himself as artist, any "view of eternity" ("Ausblick ins Ewige"), the clairvoyant ability with which the avant-garde artist had been credited since at least Gauguin. This visionary quality, the locus of value of the avant-garde artwork for a previous generation of artists, is replaced with the impersonal objectivity of the engineer. Again, intimate, personal and subjective experience is replaced by an objective, quantifiable model. In the theory of Expressionism, the artist's personal experience was communicated to the viewer, via the channel of the artwork, through the mechanism of empathy ("Einfühlung"). Now Grosz wants the mode of communication to be a pedagogical one; the work of art functions as a "didactic image" ("Lehrbild"). Traditional bourgeois subjectivity, sensitivity and interiority have come to be seen as liabilities by Grosz and perhaps the literary and artistic avant-garde in general. This stance is remarkable not least of all because in the 19th century, it had been artists and writers, above all, who had cherished and nurtured just these qualities. But an inhumane environment seemed, at least to those traumatized by the World War, to call for anti-humanistic attitudes, and so this figure is outfitted with the objectivity of the engineer as well as a trained and mechanized body.

If the anonymous, constructed figure depicted in the image is free of the bourgeois subject's sensitivity, which would only render him vulnerable to psychic pain, then the same is true of Grosz himself, or so he wishes to claim. In his essay, Grosz states: "Der Mensch ist nicht mehr individuell, mit feinschürfender Psychologie dargestellt, sonder als kollektivistischer, fast mechanischer Begriff" (Grosz 1921: 14). "Man" ("der Mensch"), in this passage, refers as much to Grosz himself as it does to the depicted athlete. "Das Einzelschicksal ist nicht mehr wichtig. […] Wieder Stabilität, Aufbau, Zweckmäßigkeit - z.B. Sport, Ingenieur, Maschine, doch nicht mehr dynamische, futuristische Romantik" (Ibid.). Grosz presents this transformation as a welcome development, a release from concern with the individual subject, which was no longer suited to the modern world. In its place, Grosz claims for himself a new value of rational "purposiveness" ("Zweckmäßigkeit"), given form through sport

symbols. It is Grosz, the author of this image, who is being trained in objectivity by the discipline and self-control of the engineer's drafting style.

I have suggested here that Grosz was motivated to adopt the impersonal style of engineering drawings, at least in part, as a response to the psychic trauma of the technologized, mechanized landscape of the modern metropolis, perhaps with the mechanized destruction of the First World War as a lingering cultural memory (see Doherty 1996 and 1997). But I would like to suggest another motivation as well. In the emerging pragmatic culture of post-war, post-Imperial, industrialized Germany, the sensitivity and interiority of the bourgeois subject was increasingly devalued in favor of a pragmatic approach to problems increasingly framed in instrumental terms. It may well be that the sources of this cultural transformation are to be sought not only in the experience of the Front, but already in Germany's rapid industrialization after 1871 and in the school reforms of that period, which responded to this transformation of the German economic base by replacing Greek and Latin with math and science as the core of most students' high school education. The engineer replaced the poet as the archetypal producer of German culture. Where the earlier discourse of Expressionism had resisted this transformation, the later discourse of Neue Sachlichkeit accepted and even embraced it. For Grosz, as for other German avant-gardists of the 1920s, the only chance for continued cultural relevance appeared to be the emulation of the objective, dispassionate engineer rather than the intensely subjective and emotionally responsive poet, just as the only chance for physical survival appeared to be the willed self-transformation into a machine. That Grosz was just as concerned with the status of the artist in modern society as he was with modern athletics and the body as machine is made clear in the opening line of his essay "Zu meinen neuen Bildern": "Kunst ist heute eine absolut sekundäre Angelegenheit" (Grosz 1921: 11). In the same essay, Grosz admonishes the bourgeois artist to visit a workers' political meeting, where he will discover just how irrelevant the traditional concerns of easel painting are to the problems of a modern, industrial world (Grosz 1921: 11). To return to the issue of Grosz's political commitment, despite the seeming contradiction between the Marxist doctrine of emancipating workers and the fantasy of workers and athletes reduced to machines, Grosz's affiliation with the KPD and his artistic gesture of emptying out bourgeois subjectivity both respond to the same desire: that of retaining or regaining cultural relevancy in an industrialized and technological culture. This anxiety about the artist's cultural irrelevancy is at least as important a motivation as are the traumas of the war and its aftermath.

Conclusion

In this essay, I have examined the various ways in which Baumeister and Grosz explored the body and the machine, their interactions and their interpenetrations. The themes central to Grosz's images – the mechanization of the body, the predicament of the body in an industrialized landscape and the reciprocity of technologization between the apprehending subject, or his mechanized eye, and the mechanized body – remain central concerns in Baumeister's later *Sportbilder*. The focus on modern, Anglo-American sports is more than a *Neue Sachlichkeit* reproduction of contemporary popular culture. In Baumeister's work, it intersects with the theme of the technocratic management and conceptual mechanization of the (athletic) body. In the *Sportbilder*, the technocratic disciplines of sports physiology and work physiology, with their technological registration and conceptual mechanization of the body, are suggested by the mechanical appearance and standardization of the athletic figure and by the specific gestures of figures such as the high jumper in *Hochsprung*, which imply entire rationalized, modernized training regimens. But the technocratic ideal of the mechanized body is a radically anti-humanist image, an acceptance or even celebration of the threateningly mechanized, technological landscape of the modern world. Baumeister and Grosz are suggesting, as did Jünger, Schulte and so many other would-be engineers of the body, that the best response to the industrialization of war, labor and the landscape is the conditioning of the body and the elimination of sensitivity and subjectivity.

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