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National Socialism and the politics of calculation

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This article examines the way in which mathematics and politics intertwined in National Socialist Germany, particularly in relation to the period between 1933 and 1939. As Heidegger's critical writings on the regime showed, one of the particular issues was the way in which what he calls machination and later technology depended upon a particular notion of metaphysics, a particular casting of being, that is, to be is to be calculable. Nazism seeks control of the earth in a way that both makes possible and exceeds its quest for world domination. Following a discussion of the notion of Gleichschaltung—synchronization or political co-ordination—and its ontological underpinnings, the reading moves to two key examples: the calculation of race in the Nuremburg laws; and the calculation of space in geopolitics. These come together in the racialized notion of Lebensraum. Although this paper takes its point of departure from Heidegger, it focuses on the historical period at hand in order to illuminate both a particular instance of the politics of calculation, and a calculative understanding of the political.

Key words: National Socialism, calculation, politics, Gleichschaltung, Heidegger, ontology.

Introduction

In their study of *The Nazi Census* Aly and Roth suggest that

It was neither through the ideology of blood and soil nor through the principle of guns and butter, upheld until the end of 1944, that the National Socialists secured their might or carried out their destructive activities. It was the use of raw numbers, punch cards, statistical expertise, and identification cards that made all that possible. Every military and labor column existed first as a column of numbers. Every act of extermination was preceded by an act of registration; selection on paper ended with selection on the ramps. (2004: 1; see Burleigh 2002 [1988]: 8)

The study of the technical, rational, scientific techniques utilized by National Socialism has been made in numerous studies (see also e.g. Aly and Heim 2003; Bauman 1989; Black 2002), and though these need to be balanced with the work that shows that the claims to efficiency are overstated (e.g. Broszat 1981; Kershaw 2000), the use to which technology was put is important to a full understanding of this complex phenomena (see also Adorno and Horkheimer 1973; Arendt 1963, 1973).

Indeed, despite the undoubted irrationalism of much of the foundations of Nazi thought, what is continually found is research that sought a scientific ground for, in particular, its racist and expansionist claims (see e.g. Gasman 2004).

However, the question goes beyond merely an understanding of the techniques that made particular actions possible. Rather the question is one of the conditions of possibility for the techniques themselves, a deeper problematic that seeks to account for the technical, rational, scientific mindset itself. The question of conditions of possibility is a Kantian term, where in the *Critique of Pure Reason* he seeks to uncover the grounds for synthetic *a priori* knowledge. His question is 'how are synthetic *a priori* judgements possible?' (Kant, 1988: B19). But this is not merely a question of epistemology, but, precisely because it enquires into *how* 'what is' *is*, a question of ontology, as Heidegger has argued (1997).

Ontology as the investigation of how 'what is' is, the question of conditions of possibility, can also be found in a number of thinkers following in Kant's wake, including Nietzsche, Heidegger and Foucault. But in their work it is radically transformed, as the question is historicized. As Nietzsche suggests, we should replace the Kantian question 'how are synthetic *a priori* judgements possible?' by the question 'why is belief in such judgements necessary?' (1966: §11). In other words, how, in certain times and places, are certain beliefs and orderings necessary in order to effect particular outcomes. This is one way to read both Heidegger's later work on the history of being; and to understand Foucault's investigations of madness, discipline and sexuality not as studies of those subjects in themselves, but in order to understand reason and the modern subject (for discussions see Elden 2001, 2003; Gutting 1989; Han 1998).

The question of what made National Socialism *possible*, and therefore of why certain modes of thought were *necessary* is the central concern of this paper. Although this paper therefore takes its point of departure from this philosophical position, it focuses on the historical period at hand in order to illuminate both a particular instance of the politics of calculation, and a calculative understanding of the political. It undertakes this through an examination of the way in which mathematics and politics intertwined in National Socialist Germany, particularly in relation to the period between 1933 and 1939.

The reason for these dates is twofold. First, that it does seem to make sense to delimit two periods with Nazism. These are the periods 1933–39 and 1939–45, in other words the period before, and the period of, the war. This is not an absolute distinction. As shall become apparent, Germany was geared up for a war economy long before 1939, albeit not for the slave economy it became, and many of the mechanisms derived in the pre-1939 period continued after it. But it seems a convenient break, and this is the second reason: this distinction enables the paper to put to one side—to bracket—*Blitzkreig* and the Final Solution. This is obviously not to say they are unimportant, but that there is an already extensive literature. Nor is it to suggest that they do not fit the analysis made, although, as the conclusion makes clear, the Holocaust is the limit case for the study and the applicability of this perspective on the question of Nazism.

In any case, the period of 1933–39 offers a wide range of important and challenging issues to investigate the politics of calculation. I will concentrate here on two key instances: the understanding of race, particularly as found in the Nuremberg Laws; and the spatial planning aspects of geopolitical strategy. In order to investigate these two

areas, I will first spend a while investigating the ontological presuppositions behind the notion of *Gleichschaltung*, suggesting that this illuminates the very basis of calculative politics. Essentially the claim of this paper is that through a particular sense of the politics of calculation Nazism sought control of the earth in a way that both *made possible* and therefore *exceeds* its quest for world domination. This control is to render it as something understandable through number and calculation.

Gleichschaltung and the politics of calculation

The notion of *Gleichschaltung* is an interesting and important term in the lexicon of National Socialism. It is usually translated as co-ordination or synchronization, but has a sense of unification, of bringing into line or the elimination of opposition. Literally the word means 'same wiring' or 'connection', the bringing of things under a common measure, subordination (see Bracher 1972; Friedlander 1980 ; Klemperer 2000). The two *Gleichschaltung* laws passed in 1933 co-ordinated the Federal *Länder*—regional governments—with the *Reich* as whole, and served two crucial purposes: to give the *Länder* the same post-Enabling Act powers as the *Reich*; and to ensure their conformity with the *Reich* they were to politically mirror the make-up of the *Reichstag* (for the text of documents, see Hofer 1957; and Noakes and Pridham 2000). While reforms in early 1934 effectively abolished the *Länder*'s powers entirely, and dissolved the *Reichrat*—the second chamber of parliament, comprising regional deputies—the reforms of sub-national government were models to be followed elsewhere.

Gleichschaltung was therefore effectively a mechanism for the way in which all parts of society were homogenized and organized. Some parts were suppressed, outlawed or violently disbanded. The Sturmabteilung (SA) , itself to be violently repressed in June 1934, was essential to this co-ordination (Frei 1993: 10). The *Gleichschaltung* of the *Länder* did not only mean that local unity was achieved, but was a euphemistic expression for the obliteration of independent regional government and the centralization of power (Bracher 1972: 121; Broszat 1981: Chap. 4; Frei 1993: 39). In particular, the distribution of seats in the *Länder* would mirror that of the *Reichstag*, and the *Reich* Governors would be chosen by Hitler, except in Prussia, where he would be the Governor himself (Frei 1993: 41).

Universities were part of this overall organization or synchronization with the *Reich* Ministry for Science, Education and Adult Education created in 1934, rebranding University rectors as 'Führers of the Universities' (Frei 1993: 97). Many other organizations were *gleichgeschaltet*: there were associations of National Socialist lawyers, doctors and so on. Racial profiling for such organizations was crucial, forming the model for and later based explicitly on the model of the Nuremberg laws to be discussed below. Equally we can see a concern for synchronization in the reaction against particular forms of art and literature, taking the form of boycotts, book burnings and denunciations, and in the reorganization of areas such as broadcasting. Indeed, as Frei notes, 'in no other area of culture and mass communications was the grip of the new rulers comparably efficient' (1993: 63).

The ideas behind *Gleichschaltung*, that humans, groups and organizations can be understood as either the same or different, and in the latter case rendered the same is,

ontologically important in terms of understanding what was happening in Germany. Determining things as different and seeking to render them more equivalent, or counting them the same in the first place, requires a number of important moves: most importantly recognizing things as sufficiently similar in their essence that they can be summed or evaluated against each other. Rather than a logical structure based on identity or nonidentity, *Gleichschaltung* requires a notion of difference, in that things are not so irreconcilably distinct that they cannot be compared, but that they can be rendered the same, or similar, *Gleich*. *Gleichschaltung* therefore requires a disruption of the binary of identity or non-identity, where something is either 'A' or 'not A', but in thinking that the difference can be changed, or reduced to 'A' it is similarly distinct from the notion of 'difference' advanced in recent European thought.

This is not to suggest that this thought worked on simple binaries, of Aryan or not-Aryan, for example. In practice, all sorts of gradations could be possible, codified and represented. Although these differences could be qualitative, in that actions could be co-ordinated to be more similar, or a homogenization could be put through in education or the arts, these differences could also be quantitative. In fact, as the establishment of quotas in the Four Year Plan shows, co-ordination could be around numerical targets, but in terms of an overall determination *Gleichschaltung* depends on the understanding that underpins calculative politics.

Despite his own direct involvement in the regime, Heidegger's work can be useful here. In the mid-1930s, as his disillusion with the movement he had once enthusiastically supported waned, he developed an analysis of what he called 'machination', a term that later becomes the more famous question of technology. For Heidegger, machination depends upon a particular notion of metaphysics, a particular casting of being, that is, to be is to be calculable. Heidegger traces this shift to developments in what is sometimes called the scientific revolution in the sixteenth and seventeenth centuries, focusing on the roles of Galileo, Descartes, Leibniz and Newton, especially the second. To explore this transition in detail is beyond the scope of this paper, but a number of issues can be taken from his work to inform an analysis of National Socialism.

For Heidegger there are three ways in which the question of being—his key concern—has come to be forgotten in the modern age. These are calculation [*die Berechnung*], massiveness [*Massenhaften*] and acceleration [*die Schnelligkeit*]. In all three we see interlinked themes of measure [*Maß*], and calculative thinking, grounded on a particular way of reckoning [*Rechnung*], based on number and the celebrative of quantitative enhancement (Heidegger 1989: 120–121). Throughout many works of the mid-1930s on, Heidegger is regularly concerned with the way notions of measure and calculation or reckoning are used (see Elden, 2005b).

The idea of massiveness is not merely hugeness or enormity, although it may superficially take such forms. Rather it is grounded in the very notion of measure [*Maß*], and is related, Heidegger contends, to the notion of the gigantic. But this too he understands in a very particular way.

The gigantic was determined as that through which the 'quantitative' is transformed into its own 'quality', a kind of magnitude or greatness [*Größe*]. The gigantic is thus not something quantitative that begins with a relatively high number (with number and measurement)—even though it can appear superficially as 'quantitative'.

The gigantic is grounded upon the decidedness and invariability of 'calculation' and is rooted in a prolongation of subjective re-presentation unto the whole of beings. (Heidegger 1989: 441)

For Heidegger what is central to understanding the modern world, of which Nazism increasingly becomes its most acute symptom, is therefore not the mere size, scope or ambition of its various projects, but the very issues underpinning this. The politics of calculation that emerges from this is thus an important tool for an understanding of modernity, and is a way in which Heidegger can be used politically, and indeed, for political purposes he would not himself have condoned (for discussions, see Bambach 2003; Elden 2006; Janicaud 1990; Ott 1993; Wolin 1993). While to my mind therefore Heidegger offers us the opportunity of a powerful critique of National Socialism, and—within certain tightly circumscribed limits—a useful tool for analysis more generally, it is important to note right at the outset that Heidegger avoids any kind of moral position. This is the limit case: a point to which I shall return in the final section of this paper.

The Nuremberg laws

A particularly stark example of the problematic reduction of qualitative differences to quantitative ones can be found in the Nuremberg laws of 1935, based on a calculation of race. An earlier tradition within anthropology had given the twofold distinction of *Volkskunde* as the study of traditional German customs and *Völkerkunde* as studying dark-skinned races. The second term is the German title of Friedrich Ratzel's anthropological study translated into English as the much

more neutrally sounding *The History of Mankind* (1896–98). In this work and others of its kind (Chamberlain 1911; Gobineau 1967 [1853–55]), there was an explicit attempt to link cultural practices to physiological differences, in other words to equate qualitative differences with quantitative ones that they felt could be measured in more mathematical ways. While in part this may first rely on observation of the qualitative, once models have been created, the quantitative can be used to make judgements in itself (see Borneman 1997; Pick 1989). In this there is a conflation of a number of elements. Race and the *Volk* became increasingly related, and the nation seen as the congregation of a racially pure *Volk*. Neumann helpfully explains their understanding:

Race is an entirely biological phenomenon: the concept of 'the people' contains an admixture of cultural elements … The concept of a *racial* people, a term the Germans are fond of, is, however, based primarily on biological traits; the cultural elements serve only to distinguish various groups within one race. In contrast the nation is primarily a political concept. (1966 [1944]: 99; see Hitler 1939: 229)

The *Reich* Citizenship Law of 15 September 1935 attempted to clarify matters. In Article 2.1 it declared that 'a citizen of the *Reich* is that subject only who is of German or kindred blood and who, through his conduct, shows that he is both desirous and fit to serve the German people and *Reich* faithfully'. What comes through here is both a measure of blood, that is race, but also one of disposition, a more cultural element. The same day saw the 'Law for the Protection of German Blood and German Honour', which prohibited marriage and sexual relations 'between Jews and nationals of German or kindred blood' (sections 1 and 2). Although these build on

the 18 October 1933 laws for the 'protection of the hereditary health of the German people', as Agamben (1998) has shown, what gets introduced here is an important distinction between those of German blood, defined as four German grandparents, who are citizens, and those who are not German but still fall under the jurisdiction of the state. This distinction between state subjects [*Staatsange-hörige*] and citizens [*Reichsbürger*] was one that Hitler had made back in *Mein Kampf*, where he had suggested a three-part division of citizens, subjects of the state and aliens, that is subjects of another state (1939: 247). It was something that had first been put into practice on 14 July 1933 when all people naturalized between the end of the First World War and the Nazi takeover had their citizenship removed (see Nathans 2004: 219–221; on the drafting see Kershaw 2000: 107–108).

In order to clarify the gradations of state subjects the First Supplementary Decree of 14 November 1935 created charts which demonstrated how different numbers of Jewish grandparents created both Jews (three or four grandparents) or *Mischlinge*, those of mixed race. What we find here, lest there be infinite regress in determining the racial characteristics of the grandparents that determine the race of the grandchildren, is the shift from cultural traits to race (supposed to be scientific and non-cultural). For the definition is that 'full-blooded Jewish grandparents are those who belonged to the Jewish religious community' (Article 2.2). These indications were supposed to be scientifically proven (see Aly and Roth 2004; Borneman 1997: 101; Stolting, 1987: 192–193; more generally Gould 1996). The charts created included ones where they showed the various permutations of unions between 'Aryans', *Mischlinge* and Jews as combinations of circles cut into quarters coloured black or white for

Jewish or Aryan grandparents. (It is important to note here that Aryan was defined negatively, as not being of Jewish descent.) These potential pairings were defined as either allowed, forbidden or allowed in various circumstances. Other charts indicated this in more graphic form with either outline or silhouette figures in family trees of three generations, showing the race of the offspring, and then diagrams showing various pairings allowed into buildings together or not: the buildings being registry offices. What we have here is the rational, calculative and bureaucratic as a gloss on the 'irrational' anti-Semitism.

Inevitably, given the construction of these tables, Jews could neither be citizens nor aliens, rather they would fall into the categories of subjects of the state: that under the jurisdiction of laws, but denied rights and a role in the legislative process. As Sax notes:

From the Nazi point of view, the Jews were an anomaly and therefore impure. The Jews did not fit into received classifications, being neither nationals nor foreigners … Other groups persecuted by the Nazis were also ambiguous. The handicapped, almost by definition, are anomalies; so are homosexuals. (2000: 155)

As Foucault has shown in numerous works (e.g. Foucault 1999), models of classification that are used to classify sexualities bear close comparison to those of race and other forms of supposed abnormality. It is worth noting that the word Foucault uses—*anormaux*—can equally mean 'anomalies' or 'irregularities' as it can 'abnormals'. Trading on pioneering work by Canguilhem (1978), Foucault is interested in how a statistical notion used to catalogue and codify behaviour or traits becomes one that categorizes individuals. As one of Foucault's lecture courses notes, the

categorizations of race are behind both reactionary forms of politics and, transformed into notions of class and class enemy, more 'progressive' forms (1997; see Enoch 2004). Foucault's analysis is useful in a number of ways, but perhaps most on this topic when he suggests that there is a break or a cut, a *coupure*, that is fundamental to racism, one which fractures the 'biological continuum of the human species'. This continuum, like the continuum of geometry divided by Descartes in the seventeenth century, is fragmented by 'the apparition of races, the distinction of races, the hierarchy of races' and their qualification as good or inferior. The 'first function of racism is to fragment, to make caesuras in the biological *continuum* biopower addresses' (1997: 227). The human species is subdivided into subgroups that are thought of as races, in a manner which is akin to the modern, orderable, calculable view of space.

Indeed, when the territories of the East were seized, there was a question about how useful foreign races (i.e. Balts and Ukrainians) could be separated from the 'undesirable tribes'. The anthropologists of the Kaiser Wilhelm Institute were involved in such decision making (see Frei 1993: 126), and as Burleigh (2002 [1988]: 8) notes, the *Ostforscher*—academic researchers on the East—'had a distinctive contribution to make to the accurate "data base"—the statistical and cartographical location of persons—upon which *all* aspects of Nazi policy in the East, as elsewhere, ultimately rested'.

Geopolitics and spatial planning

One of the standard complaints in National Socialist rhetoric was that the map-making of the Versailles treaty had excluded German *Volk* from the borders of the country (Articles 27 and 28). Although this was not new, in that

German territory and that occupied by German-speaking peoples have rarely been the same (see Herb 1997; Urwin 1982), in the Weimar period it did raise a number of issues. An expansionist foreign policy could come in many forms, but included those which wanted a return to 1914 borders, those which sought to incorporate all German-speaking people within the confines of the *Reich*, and even more aggressive attempts to expand even beyond these confines (see Herb 1997). Hitler, for example, declared the idea of a return to 1914—i.e. a straightforward overturn of Versailles and a return to the borders following German unification under Bismarck and the Kaiser in 1871—as 'a glaring political absurdity that is fraught with such consequences as to make the claim itself appear criminal' (1939: 357); 1871—the second *Reich*—could not be looked at as a lost ideal.

The notion of *Lebensraum*—living space or room for the German *Volk*—was an important issue for Hitler in *Mein Kampf*, where he talked about the restrictions on the German living space, and that the solution to this was not to be sought in merely colonial acquisitions—the 'place in the sun' claims of previous generations since unification. Germany, because of its late emergence as a unified nation-state, lagged behind its European neighbours in colonization. But the aim was not simply to dispossess and catch them up. Rather the living space was to be attained through an expansion of the German territory itself, a greater magnitude. For Hitler this was essential: 'the right to territory may become a duty when a great nation seems destined to go under unless its territory be extended … Germany will either become a World Power or will not continue to exist at all' (1939: 360).

What is striking is that not only does Hitler clearly outline the need for expansion, as is well known, but that he continues to use

measures of quantitative extent: magnitude, greatness, proportion. Russia, with her extensive landmass, and the buffer countries between Russia and Germany, are the prime targets: eastward expansion.

Germany is not at all a World Power today. Even though our present military weakness could be overcome, we still would have no claim to be called a World Power. What importance on earth has a State in which the proportion between the size of the population and the territorial area is so miserable as in the present German *Reich*? At an epoch in which the world is being gradually portioned out among States many of whom embrace whole continents one cannot speak of a World Power in the case of a State whose political motherland is confined to a territorial area of barely five-hundred-thousand square kilometres. (1939: 354)

As is well known, ideas of *Lebensraum* have a long pedigree. The crucial initial source is Friedrich Ratzel's *Politische Geographie* (1897) and his later 'Der Lebensraum' (1901), which discusses the laws of the spatial growth of states. The term itself came from a review of Darwin's *Origin of Species* by Oscar Peschel (see Borneman 1997: 100). It is worth noting that Ratzel was influenced by his trips to the USA, seeing the vast landmasses available (1988 [1876]; Kamenetsky 1961: 28–29). Indeed, Hitler used comparison with America as a justification of an expansionist aim in his response to Roosevelt's peace telegram of 28 April 1939 and earlier in *Mein Kampf* (Neumann 1966 [1944]: 130–131; Hitler 1939: 351).

   In Ratzel's mind, space was the most vital requirement of the state; the struggle for it was dependent on a natural law, in which strength prevails; and the most likely victors were racially pure peoples, rooted in the soil (Kamenetsky 1961: 29), buying into notions

of autochthony (see Bambach 2003). Ratzel felt that colonies were only a potential partial solution (Agnew 2002: 60). There were other important works in the pre-Nazi period, notably Friedrich Naumann's *Mitteleuropa* [*Central Europe*] (1915) advocating a union of countries under German dominance, and Hans Grimm's novel *Volk ohne Raum* [*People without Space*] (1926). The ideas were passed on to the National Socialist leadership particularly through Karl Haushofer, who was in contact with Rudolf Hess while he was in prison in Landsberg in 1920s following the failed *Putsch*, and through Hess, only indirectly, to Hitler (see Heske 1987). As Fest summarizes:

The original idea of a political geography under the catchword 'geopolitics' had undergone an imperialist transformation into a 'pseudo-scientific expansionist philosophy'. It offered the humiliated national spirit the idea that the destiny of Germany would be decided in the East and thus added a fundamental ideological category of National Socialism, that of 'space', to that of 'race'. These two ideas, linked by that of struggle, constituted the only more or less fixed structural elements in the intricate tactical and propagandist conglomerate of the National Socialist *Weltanschaaung*. (1972: 289)

It is important, of course, to understand that while National Socialism sought to contest the particular drawing of boundaries and the amount of 'space' Germany had, mainstream thought did not challenge the ways in which these were conceived. The calculations might be inaccurate or unjust, but calculation itself was not seen as the problem. Indeed much emphasis was given to ideas that Versailles and the other treaties of the Peace of Paris had been based on erroneous maps and data (see Herb 1997). While Heidegger and others sought to challenge a Cartesian notion of space

[*spatium, Raum*] as calculative, bounded and exclusive, and replace it with a more originary sense of place [*locus*, *Platz*, *Ort*]; and certain legislation such as Himmler's decree 'On the Treatment of the Land in the Eastern Territories' saw a particular ecological sense of the land at stake (see Staudenmaier 1995: 16); this was not the dominant critique. Let me take three examples of the more dominant strand in Nazi thinking about space.

The first is found in an important 1940 book by Kopp and Schulte which provided a rereading of the seventeenth-century Peace of Westphalia that was in effect a surrogate attack on the Peace of Versailles. The two treaties signed in Westphalia in 1648 had effectively ended the coherence if not the existence of the Holy Roman Empire—the 'First *Reich*'—and are often, if somewhat misleadingly, seen as the birth of both the modern state and the sense of territory (see Elden 2005a; Osiander 2001; Teschke 2003). Kopp and Schulte's work, to which the party philosopher Alfred Baeumler contributed a 'Foreword', challenged the substance but not the essence of these spatial politics. Similarly, as Neil Smith notes, Alexander Supan's *Leitlinien der aligemeninen politischen Geographie* [*Geometries of German Political Geography*] analysed the 'colonial quotient' as a 'ratio between the area and population of a country's colonial possessions with that of its homeland'. This argued that Germany deserved more territory (Smith 2003: 282). Paul Mombert also used mathematical formulations to look at the relation between population size [*Volkszahl*] and 'feeding capacity' or economic resources (Aly and Heim 2003: 60). These were, effectively, challenges to the distribution and separation of power, the drawing of boundaries and the partition of territory, not to the determination of these ideas.

Second, there was the establishment of a number of research initiatives that show that far from criticizing such a modern notion of space, much National Socialist thought embraced it and sought to understand it better. There was, for example, the establishment of the *Reichsstelle für Raumordnung* (Office for Spatial Planning or Ordering), which was a revised version of the *Reich* Office for the Regulation of Land Claims, on 28 June 1935. Both of these offices planned and organized space, but also studied the concept of space in general, effectively looking at how ideas of 'blood and soil' could be put into practice. This shows that the organic *völkisch* ideas could work with, rather than against, science, in spite of the rhetorical resistance to 'reason' and 'science'. The *Reichsstelle* produced a review called *Raumordnung and Raumforschung* [*Spatial Planning and Spatial Research*] under the editorial hand of Hans Boehm and one called *Zeitschrift für Geopolitik* (Heske 1986; Kamenetsky 1961: 46; Neumann 1966 [1944]: 136ff). It is worth noting that the procedures used in the East were dependent on the 'central place' theory of Walter Christaller, where geometrically drawn regions are orientated around a central town, a hub that provides more efficient services. As Aly and Heim note, the 'degree of centrality' was 'calculated originally in terms of the number of telephone connections' (2003: 97).

Third, and finally, the jurist Carl Schmitt, whose legal work on the foundations of the Nazi rule is often discussed, also analysed ideas of space in their legal context in the service of the regime. For example, in 1939 lectures (Schmitt, 1991 [1939]) he analysed the American Monroe doctrine and its potential counterpart for Germany, put forward a notion of *Großraum* of an expansionist territory, a kind of German-dominated *Mitteleuropa*, particularly tied to notions of the *Volk*, and

analysed the legal basis for such claims. While this traded on both *völkisch* and calculative elements, it was not based on the idea of *Blut und Boden*, but rather on a more juristic notion of Land law, deriving in part from Locke's famous argument about the cultivation of the land (see Balakrishnan 2000; Bendersky 1983). Schmitt (1997: 58) relates his work to Heidegger's view of space, but this seems to underplay the differences, particularly around the notion of calculation. Equally Schmitt attempted to distance his ideas from notions of *Lebensraum*, *Mitteleurorpa* and a greater German *Reich* (1995). Rather, his idea was closer to a German Monroe doctrine, with Germany the dominant power and other world powers not involved in the affairs of 'central Europe'. Nonetheless, Schmitt's ideas here were hardly critical of Hitler's expansionist policies to the East.

As Burleigh has shown (2002 [1988]), this academic work was important in putting these ideas in practice. In particular it was realized that if land was conquered it needed to be settled, as the most effective way of ensuring its continued possession. The racial profiling discussed above became extremely important here. So, not only was the space calculated in terms of area, and to a level of some detail, but it was also racially profiled. While Bassin (1987) has argued that we should be careful in seeing too direct a relation between *Geopolitik* and Nazi policy, as there are some important differences, there is unquestionably a relation, and despite inflections of *völkisch* ideas, at root a calculative understanding of territory is at play in both (see Raffestin with Lopreno and Pasteur 1995). In part, as Bassin recognizes (1987: 122), it was the crossing of ideas of *Volk* with scientific racism that was so important. Just as the racism is given a calculative coding, so too is it spatialized, with a stress on the distribution of races. Equally the spaces to be

conquered are extensively mapped, measured and assessed. It is for both of these reasons that the notion of calculation is central to Nazi concepts of *Lebensraum*. And this idea was, of course, crucial to what happened after 1939.

We must realise, that the whole sense of this war rests in a natural enlargement of *Lebensraum* for our people. (Governor Hans Frank, 1 August 1942, Nuremberg Trial Doc. 2233-PS, cited in Kamenetsky, 1961: 25)

Indeed, in a reversal of Grimm's formulation, in 1937 Hitler characterized the east as *volkloser Raum*, space without people, space empty of people. For Agamben, this is not 'a desert, a geographical space empty of inhabitants', but 'the driving force of the camp ... understood as a biopolitical machine that, once established in a determinate geographical space, transforms it into an absolute biopolitical space, both *Lebensraum and Todesraum*, in which human life transcends every assignable biopolitical identity' (2002: 86, see 156; 1998: 169–171, 173–174). Particularly in the lands of the east the calculation of race and the calculation of space come together.

Heidegger, ethics and calculation

Although analysing National Socialism through the lens of calculation is important in a range of ways, and challenges any straightforward equation of the movement with irrationalism and vitalist modes of thought, there are, of course, limits to this analysis. In practice, the National Socialist state was often disorganized and not nearly as hyper-efficient as it might sometimes have appeared. Indeed, Neumann has noted that 'it is doubtful whether Germany can be called a state. It is far more a gang, where the leaders are perpetually

compelled to agree after disagreements' (1966 [1944]: 522). A more nuanced argument can be found in the work of Ian Kershaw, where he analyses the different power blocs operating as competing interests (2000, 2001a, 2001b; see Broszat 1981). In this we might draw on Lefebvre's analysis of technocracy under the French Fifth Republic, where he notes that the technocrats, for all their plans and mechanisms, are often very poor administrators, that their efficiency is often mythical, and that they fail to use technology in the service of everyday, social life (see, in particular, 1967). Perhaps the exception, and the archetypal technocrat of the Third *Reich*, was Albert Speer (see Fest 1972: 300; more generally Speer 1970; Sereny 1995). Speer is an interesting case, for not only was he the most 'efficient' and 'calculative' in many ways, moving from being Hitler's architect to control of arms production, but is also seen as important in that he was the Nazi who admitted at least some measure of guilt at Nuremberg.

Alongside numerous other sources here I have made use of the pioneering analysis of Franz Neumann, a member of the *Institut für Sozialforschung* (Institute for Social Research—also known as the Frankfurt School). Neumann's work *Behemoth* was written in America in exile in the last years of the war, and was a powerful critique and analysis of Nazism, which, given the time of its original publication in 1944, was of course more than a dispassionate academic work. Neumann's analysis is revealing for a number of reasons, but it is worth noting the way in which he thinks allied war policy should proceed.

A military defeat of Germany is necessary. Whether National Socialism can be crushed without a military defeat, I do not know. But of this I am certain: a military defeat will wipe it out. The military superiority of the democracies and of Soviet Russia must be demonstrated to the German people. The philosophy of National Socialism stands and falls with its alleged 'efficiency'. This must be proved untrue. The stab-in-the-back legend of 1918 must not be allowed to arise again. More and better planes, tanks and guns and a complete military defeat will uproot National Socialism from the mind of the German people. (1966 [1944]: xiii)

What is perhaps revealing in this is the suggestion that rather than compete at the level of ideas, in a sense brute force and *greater* efficiency and efficacy is what is needed. Neumann calls for 'more and better planes, tanks and guns'; greater quantities and better quality. In 1940, following France's defeat, Heidegger makes a related point in reverse: the country of Descartes has been beaten on its own terms (1991: 116–117).

What is, of course, neglected in such an analysis—made here through an appropriation of various thinkers, but crucially Heidegger—is the question of ethics. It is undoubtedly the case that without some sense of ethics it is difficult to take a position on the topics analysed here. Can the actions of the Allies—including of course the firebombing of Dresden and the atomic bombs dropped on Japan—not be seen as founded on the same techniques and rationalities? Does this render all of this equivalent? The point about these issues is, of course, not just that they were mathematical, but about how mathematics was utilized in particular ways. We find this neglect most explicit in Heidegger's two comments on the Holocaust: a dispassionate equation of this with other forms of quantitative excess of death and calculative disregard for life.

Heidegger's comments are found in two 1949 lectures. The first states that 'Agriculture is now a motorised food industry, the same thing in its essence [*im Wesen das Selbe*] as the production of corpses in the gas chambers and

extermination camps, the same thing as blockades and the reduction of countries to famine, the same thing as the production of hydrogen bombs' (1994: 27). This has been extensively discussed in the Heidegger literature, although rarely with much thought (for two notable exceptions, see Lacoue-Labarthe 1987 and Kisiel 2002). It is essential to note that Heidegger is claiming that these are the same *in their essence*, and not in essence the *same*. This is important, not only because a straightforward equation of agriculture and the Holocaust is abhorrent, but because he hints here at the way that ontologically there may be an equivalence. They rest on the same view of the world as something orderable, measurable, controllable and ultimately destroyable.

The second asks:

Hundreds of thousands die *en masse* [*in Massen*]. Do they die? They perish. They are cut down. Do they die? They become items in an inventory for the business of manufacturing corpses [*Sie werden Bestandstücke eines Bestandes der Fabrikation von Leichen*]. Do they die? They are liquidated without ceremony in extermination camps. And even without such a machinery, millions of poor souls are now perishing from hunger in China (1994: 56).

There is clearly a brutal detachment from the events here. In fact it is the *process*, with the emphasis on the reduction of humans to *Bestand*, standing reserve or stock, that is emphasized. In Agamben's analysis, this actually brings Heidegger close to writers like Primo Levi, who declared that 'one hesitates to call their death death' (Levi 1986: 82), and Hannah Arendt (1963; see Agamben 2002: 70–76).

In a sense the most generous reading of the equation of agriculture as a 'motorised food industry' to 'the production of corpses in the gas chambers and extermination camps …

blockades and the reduction of countries to famine … the production of hydrogen bombs' is to see it as an attempt to suggest an equivalence between the crimes of Stalin, Mao and Communism and the National Socialists, a version of the *Historikerstreit* thirty years in advance (on the *Historikerstreit* see Baldwin 1990; Kershaw 2000: Chap. 10). Heidegger delivered the lecture in early December 1949, shortly after the USSR declared itself a nuclear power, and a few months after the end of the Berlin Blockade. To follow this through would require that the reference to farming is intended to suggest the collectivization and mechanization of Soviet agriculture in the 1920s and 1930s, with the attendant famines and mass slaughter and deportation of the Kulaks; although it could equally refer to the killing of landlords in the reorganization taking place in China following the revolution. Indeed, although Heidegger refers to famine in China in the second passage, he does not make either of these anything like explicit.

To view the Holocaust as a example of modern technology has occasioned critical responses, such as that of Berel Lang, who hubristically describes this as 'a formulation that seems as dramatically revisionist as any other in Holocaust historiography' (1996: 98). Heidegger's analysis is not unique, and elements of it, albeit not penetrating to the ontological level, can be found elsewhere. We could point, for example, to Boria Sax's suggestion that 'Heinrich Himmler, who founded the SS and oversaw the Nazi death camps, was initially a chicken farmer. Many of his ideas for both systematic breeding and slaughter of human beings were simply the extension of mechanised farming to people' (2000: 150). Alternatively, in a much more mainstream analysis, it has been suggested that 'much of the correspondence of Rudolph Hoess, the commandant of Auschwitz, was

concerned with quotas and rates of disposal and sounded as if he were the manager of a synthetic firm of a factory for the conversion of waste materials' (Craig 1982: 327). Finally, as some recent work on animal rights has pointed out, the parallels between the meat production industry and the organization of the extermination camps are not merely coincidental (Davis 2005; Patterson 2002). Generally though, and certainly in Heidegger's case, this is a critique of the ontological casting and not the ethical crime. For Kershaw, 'dealing with the problem of explaining Nazism, historical-philosophical, political-ideological, and—above all—moral issues remain inescapable (2000: 262).

Conclusion

Moral issues are of course crucial, but it is worth remembering that while it is not difficult to condemn National Socialism today, to analyse what made it possible is necessarily a more complex and challenging issue. This is not, in terms of the Holocaust, merely in terms of the 'historical, material, technical, bureaucratic, and legal circumstances in which the extermination of the Jews took place', which, as Agamben has argued, has been detailed extensively (see e.g. Aly and Heim 2003; Bauman 1989; Black 2002; and particularly Sofsky 1997). Nor is it merely, as he suggests, that the 'ethical and political significance' of these events is much less examined (Agamben 2002: 11). Rather, it is that ontologically this is even more the case. A particular grasping of the politics of calculation is a contribution to this ongoing analysis. As Frei notes, the regime modelled itself on particular scientific and industrial theories. It may have been research on the limits—such as eugenics—but it testified to a fascination with the rational, the calculative and the hyper-efficient. Indeed

Frei suggests that a younger breed of technocrats, coming in the wake of Hitler's old generation, envisaged 'a post-war order, informed by the Nazi *Weltanschauung* but founded on science, which was supposed to be much more "rational" and efficient than the Hitler State of its quasi-revolutionary beginnings' (1993: 154–155).

From this perspective—which admittedly moves into the realm of historical speculation—the question arises, once again, of the structural capabilities of National Socialism as a system and the modernity of the 'Führer State': the many 'modern' elements of Nazi rule then appear, not simply as unintended or even dysfunctional side effects of a basically reactionary, atavistic political philosophy, but rather as the harbingers of an attempt to complete the project of the modern in the particular variant of a racial order. Technical rationality and efficiency were the absolute values in this dead, technocratic world. Barbarism wore the clothes of modernity. (Frei 1993: 155)

Yet this is not something that we can feel is safely consigned to the history books. Many of the most pressing issues of today can be seen as distinctly related: the simplistic division of 'with us or against us', and the coercion of the 'willing' into a coalition against the 'axis of evil'; biometrics and offender profiling, and the denial of basic rights to selected individuals in extra-territorial spaces; the ever greater expansion of markets and the requirement of the state to makes its companies competitive; along with the geopolitical strategies required to underpin and support such policies. Once again the moral question arises, both as a distinction and as a cause. As Aly and Roth conclude their study of statistics and the Nazis:

Many of the bureaucratic and scientific techniques used by the Nazis have not been taken in account.

This is probably because they are, in many respects, considered normal techniques of the modern state—used, to be sure, in extreme cases, but by no means considered shady. (2004: 149; see Aly and Heim 2003: 295)

But it is not merely the techniques, the technologies of the state, that parallel. It is the essence of these technologies, their conditions of possibility. This is why Heidegger is useful because he enables us to see how the politics of calculation displayed in Nazism showcases a much broader calculative understanding of the world, a calculative understanding of the political. This ontological determination necessarily exceeds any ontic politics. This particular grasp of the political can be approached through a historical analysis, a historical ontology of the politics of calculation.

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Abstract translations

Le national socialisme et le calcul politique

Cet article traite de la manière dont les mathématiques et les politiques étaient étroitement liées dans l'Allemagne national-socialiste particulièrement au cours de la période entre 1933 et 1939. Comme le montre Heidegger dans ses textes critiques sur le régime, un enjeu parmi d'autres étaient la manière dont ce qu'il appelle la machination et par la suite la technologie passait par telle ou telle notion métaphysique, par un certain projet d'être, c'est-à-dire qu'être c'est être calculable. Le dessein du nazisme était une forme de contrôle de la planète qui à la fois préconise et dépasse son objectif de dominer le monde. Après une discussion sur la notion de *Gleichschaltung*—la synchronisation ou la coordination politique—et de ses fondements ontologiques, l'interprétation renvoie à deux exemples déterminants: le calcul de la race dans les lois de Nuremberg; et le calcul de l'espace dans la géopolitique. Ces deux calculs s'inscrivent dans le

cadre de la notion racialisée de *Lebensraum*. Si Heidegger sert de point de départ, cet article met l'accent plutôt sur la période historique en cause pour faire la lumière sur un cas particulier des politiques du calcul et une conception calculatrice du politique.

Mots-clefs: national-socialisme, calcul, politique, *Gleichschaltung*, Heidegger, ontologie.

Socialismo Nacional y el cálculo de lo político

Este artículo examina el modo en que la matemática y la política se entrecruzaban en la Alemania Nacional Socialista, en particular con relación al período entre 1933 y 1939. Como indicaron los textos críticos de Heidegger sobre el régimen, una de las cuestiones particulares fue el modo en que lo que él llamaba maquinación y, más tarde, tecnolo-gía, dependía de una noción particular de la metafísica, una idea particular del ser, es decir, el ser es ser calculable. El nazismo trata de controlar la tierra de una manera que tanto hace posible como excede su búsqueda de dominación mundial. Después de un debate sobre la noción de *Gleichschaltung*—sincronización o coordinación política—y sus raíces ontológicas, el análisis ofrece dos ejemplos claves: el cálculo de raza en las leyes de Nuremburg; y el cálculo de espacio en la geopolítica. Éstos se unen en la noción racializada de *Lebensraum*. Aunque este papel tiene como inicio el punto de vista de Heidegger, se centra en este período histórico para iluminar tanto un caso particular de la política de cálculo como un entendimiento calculativo de la política.

Palabras claves: Socialismo Nacional, cálculo, política, *Gleichschaltung*, Heidegger, ontología.