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Kraepelin and modern psychiatry

Abstract A summarised account is given of Emil Kraepelin's research in the field of mental disorder, underlining his emphasis on objectivity and natural science and the need for a multi-disciplinary approach. At the same time attention is drawn to the limitations of his general outlook and to his political views, which in their historical context carry disturbing overtones of proto-fascism. It does not detract from the value of his work as a clinical scientist to conclude that his philosophical amblyopia, allied to an ineradicable chauvinism that was shared by many Germans of his class and status, resulted in a failure to demarcate the boundaries of his professional expertise and distorted his judgement on the wider implications of his own achievements. The lessons for the theory and practice of psychological medicine are briefly discussed.

Key words Kraepelin · Clinical science · German history · Medical and social implications

"Modern psychiatry begins with Kraepelin". This judgement by the knowledgeable authors of an authoritative textbook (Slater and Roth 1969) would seem in accord with much contemporary opinion. It has received powerful support from many 'biological' psychiatrists worldwide and is explicitly acknowledged by the 'neo-Kraepelinian' movement in North America, although only a small proportion of his publications have been translated into English. Since his death in 1926 Emil Kraepelin's reputation has become iconic.

Icons exist to be worshipped. They cannot be understood, however, without reference to their origins in the context of time and place. In this case it is imperative to recall that Kraepelin was born a German in 1856 and came to maturity during the epoch that followed his country's victory in the Franco-Prussian war and subsequent unification in 1870. Under Bismarck's chancellorship Germany rapidly became a great military power and a leading nation in every sphere of material and intellectual activity. Much importance was attached to the natural sciences and their potential contribution to the Bismarckian state, which was initially conceived as a form of liberal autocracy. Medicine shared in these expanding developments and psychiatry was a major beneficiary. In the course of one generation the foundations of institutional and academic psychiatry had been laid by the end of the 19th century. Kraepelin himself was to sketch its evolution in his book. 'A Hundred Years of Psychiatry' Kraepelin (1962). By 1911, he calculated, approximately 500 institutions for the mentally ill had been constructed, and all German medical schools could boast university departments of psychiatry. "We are", he comments, "in this respect superior to all other nations of the world".

Many German clinicians had studied the inmates of the asylums throughout the 19th century. Kraepelin acknowledged the work of the previous representatives of 'romantic' psychiatry, but he equated the true beginnings of his discipline with "the victory of scientific observation over philosophical and moral meditation", and quotes with approval Heinroth's sketch of the attributes needed by the new breed of alienist:

> ... he must possess good health and physical endurance ... He must be fearless and not shun toil ... His profession must interest him and take first place in his life; he must practice it with fervour and with love. He must be sincere, trustworthy and sympathetic ... He must have the power to be firm as well as gentle ... He must be not only a man of science and art but also a doctor in the broad sense of the word – one educated through study and skilled through practice. He must be neither a rank empiricist nor an idle speculator. He must adhere to the world of nature and live in the world of ideas. He must be guided by reason in his struggle against the absence of reason. He must be experienced in the ways of the world and know how to treat men as individuals. Finally, he must thoroughly understand from both the theoretical and the practical viewpoint the psychic methods of treatment of every expert, not just one therapeutic practice. He must have the capacity to experiment and to observe. If he is to advance the science of psychiatry, he must exhibit intelligence, not fanaticism; true genius is methodical but not mechanical (pp 107–108).

These high-minded standards were met more or less by a long line of German physicians including such impor-

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tant figures as Griesinger, Gudden, Wernicke, Kahlbaum, Sommer, Möbius, Nissl, Alzheimer and many others. Kraepelin takes his place in this company as primus inter pares. For two generations psychiatry as a branch of medicine was pre-eminent in the German-speaking world and he was its principal representative.

Kraepelin's early professional experience, supplemented by a spell of experimental psychology in Wilhelm Wundt's department, equipped him for a long productive life-time of clinical research and organisational activities in the field of mental disorder. To evaluate the significance of his work for modern psychiatry it is helpful first to establish the major contributions by which he is best known, namely his clinical method and its application to the field of classification. Here he was very much a man of his time. As Zilboorg has pointed out: "The history of German psychiatry of the 19th century is the history of psychiatric somatization...in the middle of the century German psychiatry asserted the supremacy of the brain over any other structure and proceeded systematically to produce a psychiatry without a psychology" (Zilboorg 1941). When it became apparent that the physical substrate of many psychotic states was not readily identifiable, increasing attention was paid to the clinical delineation of the onset, course and outcome of these disorders. Karl Ludwig Kahlbaum was a prominent advocate of this approach, best illustrated by his monograph on catatonia (Kahlbaum 1973), but Kahlbaum was less concerned with diseases than with 'symptom-complexes' and the forms of abnormal behaviour ('Krankheitsformen'). Kraepelin borrowed and elaborated this method of inquiry but, unlike Kahlbaum, he posited the existence of disease entities, with general paresis as the paradigm. Pending the discovery of the pathological basis of these disorders he directed his clinical work towards the construction of a series of defined syndromes by means of careful observation of the phenomena and their natural history. By studying many thousands of cases he attempted to delineate the form and content of the psychoses, abetted in this task by the virtual absence of effective treatments. In this endeavour he was less concerned with the mechanisms of disease than with the pattern of symptoms construed as biological facts. The work was conjoined to studies based principally on the objective psychology of Wundt, with particular regard to psychophysiological and pharmacological experimentation.

The evolution of Kraepelin's nosological thinking is best traced in the successive edition of his textbook, which grew from a brief conventional compendium of 384 pages in 1883 to a two-volume 'Lehrbuch' of 2425 pages in 1927. Changes were introduced in each edition, most radically in the 5th edition (1896), when the combined study of symptoms and outcome had come centre stage, and psychological speculation was virtually jettisoned. Traditionally accepted categories such as secondary dementia, 'Wahnsinn' and degeneration were discarded, and a much-simplified schema of disease groupings was proposed, leading to the fertile suggestion of two major groups of functional mental disorders, the older notion of dementia praecox and the new rubric of manic-depressive psychosis. The latter appears first in the 6th (1899) edition of the textbook and is distinguished from the former by its clinical features and its relatively favourable outcome, although the boundaries of this binary grouping were constantly changed throughout Kraepelin's career.

Kraepelin himself described his method of procedure as follows:

> I went through all the available index cards relating to the different pathological forms I had to refer to. The index cards contained a very condensed resume of all information on each case. Then, I excluded all those cases which seemed to be incomplete or questionable and began to group them under different aspects. The most similar cases were collected into larger or smaller groups and the clinical characteristics of these sub-types were defined more precisely. Thereby, the hereditary behaviour, proven external causes, the distribution of age, sex and profession were ascertained. Furthermore, genetic development, individual physical and mental symptoms, the course and outcome were taken into consideration. By examining the numbers, I gained criteria to judge whether the trial group arrangement was justified or should be altered (Kraepelin 1987, p 156).

It is apparent from this description that despite his emphasis on objectivity there was a strong subjective element in this procedure. Kraepelin, by his own admission, was no mathematician and formal statistical analysis was not undertaken. He admitted the weakness by conceding:

> I must admit that one could have serious objections to my form of procedure not to represent the progress of my clinical findings in scientific individual accounts accompanied by the other relating documents and observations but rather to present it as the current state of knowledge in successive editions of my textbook. My expressed opinions often changed over a few years and I could not be sure that my colleagues would agree with me, especially as I did not inform them of the observations that formed the basis of my opinions. With these extensive studies I simply could not spare the time to substantiate my opinions, and although I tried to encourage my pupils to do so they could, unfortunately, only fill the gap incompletely. I decided not to give those opinions which were generally accepted at the time, but I felt that I should write what seemed to me to be the nearest to the truth based on the recent scientific point of view (Kraepelin 1987, p. 159).

Towards the end of his career Kraepelin acknowledged in effect that his efforts to delineate two separate major psychoses had failed, but he remained confident of the existence of the disease entities which, he asserted, would eventually be established (Kraepelin 1974). Jablensky and his colleagues have provided some limited empirical support for the distinction in a recent study (Jablensky et al. 1993). These workers have re-examined the clinical data on the original 'counting cards' ('Zahlkarten') relating to all 721 patients admitted to the Munich University Psychiatric Clinic in 1908, when Kraepelin himself was in charge and supervised the diagnostic procedure. All the cards were assessed independently by two experienced clinicians. The information was rated in terms of standardized diagnostic instruments and subjected to sophisticated statistical analysis. The analysis of their data on the 63 patients diagnosed originally as 'dementia praecox' and the 134 patients with 'manic-depressive insanity' demonstrated some degree of concordance between the original diagnostic groupings and current diagnostic con-

cepts, although the more significant data ran counter to Kraepelin's expectations, the clinical pictures proving to be more important than the longitudinal patterns of disease.

Kraepelin's credo is developed most clearly in his late paper, 'Ends and Means of Psychiatric Research' (Kraepelin 1922a). Here, re-affirming the role of general paresis as his prototype, he declares his central objective to be a 'search for unitary morbid processes' which, he states, "always arise from similar definite causes. Apart from certain clinical features often difficult to apprehend, the data for the recognition of such a process are chiefly the course and result, and, in certain groups, the post-mortem appearances" (Kraepelin 1922a, p 120). Ultimately, the final common path of all such research is to be an understanding of cerebral function and the relationship of dysfunction to mental symptoms:

> For a final decision one must be guided by the upshot of the case and, in the event of death, by the finer post-mortem appearances of the brain; also, in certain circumstances, by the history of onset, but only in a minor degree by the details of the clinical picture...What we require above all is a clear characterisation of the post-mortem appearances of the brain in as many morbid processes as possible (Kraepelin 1922a, p. 126).

Along with neurobiological study of the brain and the influences on it, especially endocrinological, goes animal experiment and psychological research on man:

> By the elaborate methods of experimental psychology we can obtain a more exact picture of the changes produced in the mental life by natural processes of disease. So far as the patient is at all amenable to such experiment, we may be able to make out whether and in what degree the perception and understanding of external impressions, their retention in the memory, the rapidity of processes of thought, the content of ideas, the aptitude for improvement through practice, the susceptibility to fatigue, the release of voluntary impulses, the execution of simple movements, and the finer performances of speech and writing, are affected and altered by morbific influences (Kraepelin 1922a, p.130).

Among the ways of studying these phenomena Kraepelin includes the study of the effects of drugs, and his work on 'pharmacopsychology' constitutes an early attempt to foreshadow an important aspect of psychopharmacological inquiry.

Finally, Kraepelin acknowledged the role of the key psychological concept of personality in his approach to mental disorder, emphasising that: "it is extremely important to obtain a fuller understanding of the various forms of the phenomena that constitute human personality" (Kraepelin 1922a, p. 131). For the purpose he lists a wide variety of approaches, all of them based on objective inquiry and including noxious influences on the life-cycle, e.g. genetic and developmental insults, injuries, toxins, degenerative change, infection, drugs and adverse environmental factors. And he goes on to discuss the potential contribution of what he called 'comparative psychiatry':

> The ultimate problem of comparative psychiatry is the determination of the influence of personal disposition or liability to insanity and on the forms that insanity assumes. Of prime importance in both these respects is the original mental make-up of the individual his intellectual development, his temperamental disposition and the qualities of his will, which to some extent, however, can be altered by his conditions of life. For characterising the personality in all these aspects we must invoke the analytical and mensural resources of psychological experiment. This enables us, in some directions at any rate, to resolve our general impressions into clearly defined details. Least accessible by such means are the emotional processes, though even here, by examination of the various kinds of expressive movement, of speech and writing, and of involuntary expressions, as well as of the pulse, the blood-pressure and the respiration, there is some prospect of obtaining valuable results. Such investigations will help to provide a survey of the various modes of composition of healthy personalities. By so determining the range of normal variation, we shall obtain a standard for measuring morbid deviations – a standard that will be of value, not merely for pure science, but for many practical purposes, as for estimating school capacity, military fitness, business talent and responsibility. A first attempt in this direction is seen in the procedure devised by Binet and Simon for gauging the mental efficiency of children of different ages...(Kraepelin 1922a, pp 133–134).

In passages of this type Kraepelin shows himself to be aware of the need for a much broader research framework than that with which his name is usually associated, encompassing collaborative investigations with not only neurobiology and physiological psychology, but also with biometrics and epidemiology. Thus far his viewpoint could reasonably be viewed as a logical extension of his own clinical experience. His outlook, however, embraced a much wider spectrum of mental disease:

> The effect of injuries apt to influence unfavourably the mental disposition of man expresses itself, as we may well understand, not exclusively, nor even perhaps most seriously in the occurrence of pronounced mental illness, but much rather in the numberless more or less shocking phenomena of everyday life in which the mental constitution of the members of the community is manifested. Important among these are suicide, crime, vagrancy and prostitution, the frequency and the motives for marriage, the tendency to produce and rear offspring, and the results of education in elementary and higher schools; to some extent military fitness, certain manifestations of political and religious life, migration from rural into towns, business enterprise, and much else ...
>
> The investigation of such phenomena affords insight therefore into the metamorphoses of the popular mind. The study of such manifestations of the popular mind furnishes a means of recognising betimes and so perhaps of counteracting untoward and dangerous changes in its behaivour.
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> ... A mass psychiatry, having at its disposal statistics in their widest scope, must provide the foundations of a science of public mental health – a preventive psychological medicine for combating all those mischiefs that we group under the head of mental degeneracy. (Kraepelin 1922a, pp 135–136)

Kraepelin himself did not engage in epidemiological work along these lines, but the research programme at the Institute that he founded in the last decade of his life included some representation of all these elements and demonstrated, for the first time, the importance of a multidisciplinary approach for mental illness. This achievement was arguably his most durable contribution, as testified by the subsequent creation of similar institutions in other European and North American centres, and it underpins the verdict of Jablensky et al. (1993) that "Kraepelin's approach to the study of mental disorders was essentially a natural scientist's approach of an astonishing breadth. He relied on objective observation but was fully aware of the problems of observer bias and reliability; he introduced the psychological and pharmacological experiment as well as statistics, in clinical research; maintained

a keen interest in technological innovation; and regarded nosological groupings as working hypotheses in continual need of testing and reformulating".

This judgement has been widely endorsed, often without reservation, by Kraepelin's many admirers. However, if we are to evaluate the whole of his legacy it is necessary to pay more critical regard to other aspects of his activities and opinions. The weaknesses of his approach to the functional psychoses were not lost on his contemporaries, and foreshadowed the views of later workers. Wernicke (1906), for example, advanced an altogether different classificatory schema founded on cerebral localization. Hoche (1991) pointed out the need to pay attention to symptom complexes, rather than individual symptoms, as the elements for clinical investigation. Bumke (1993) took issue with the over-inclusiveness of the dementia praecox concept. More recently, the binary division of the functional psychoses has been radically challenged by more sophisticated empirical research (Crow 1987). However, the most searching assessment of Kraepelin's clinical contribution was made by Adolf Meyer. Acknowledging in the early 1900s that "there are very few workers in clinical psychiatry who do not consider Kraepelin's creation of dementia praecox the greatest advance in psychiatry of recent times" (Meyer 1906), Meyer underscored the part played by the methods of empiricism, clinical observation and experiment in this achievement. At the same time he deprecated "the presentation in composite pictures which make all control impossible" (Meyer 1904) and expressed disapproval of the seeming disregard of subjective psychological issues in the Kraepelinian conceptual universe, one where, in Kraepelin's opinion, "so-called psychic causes – unhappy love, failure in business, overwork – are the product rather than the cause of the disease, that they are but the outward manifestation of a pre-existing condition, and finally, that their effects depend for the most part on the subject's anlage" (Kraepelin p. 132). Twenty years laster Meyer, having developed his own notions of reaction types and the "dynamic" formulation of individual cases in place of the diagnostic disease entity, had moved towards an individual, idiographic, rather than a typological, nomothetic standpoint, and was correspondingly sceptical of Kraepelin's work:

> My review of Kraepelin's 5th edition in the Journal of Insanity, vol. 53, p. 298, shows to what extent I accepted Kraepelin's teaching as a workable scheme, no doubt first used outside of Heidelberg by the Worcester Hospital from 1896 on. I stated then 'It may be that clinical methods will reach safe conclusions before the strict proof is brought by chemical and experimental pathology, just as the micro-organisms were recognised to exist before the culture methods existed, even before the pathogenic organisms were seen'. I am, however, now inclined to think that safer clinical methods should be used than the largely prognostic considerations of Kraepelin, and that dynamic formulations come closer to the needs of both physician and patient than the formal and peremptory dichotomy claimed by those who see but one of two fates, either manic-depressive disorder or dementia praecox (Meyer 1922).

A still more searching critique was mounted by Karl Jaspers on the grounds of the philosophical weaknesses of the Kraepelinian system which, supposedly atheoretical, is in fact filled with such implicit philosophical categories such as Kantian disease entities and the cloudy notion of 'the will', and idealistic objectives such as the notion of the brain-mind nexus as "this highest and perhaps never attainable end" (Kraepelin 1922a, p. 123). While recognising that by introducing empiricism into clinical research Kraepelin had succeeded in stimulating testable hypotheses of a dominantly biological nature, Jaspers observed that..."the biology of this 'biological psychiatry'... expresses the drive of an idea, a philosophical tendency, which perhaps does not quite understand itself but as an object for scientific research it appears quite baseless" (Jaspers 1963, p. 591). More to the point, he continued: "Science is wrongly identified with *Natural Science* ... natural science is indeed the groundwork of psychopathology and an essential element in it but the humanities are equally so and, with this, psychopathology does not become in any way less scientific but scientific in another way" (Jaspers 1963, p. 769).

A closer examination of Kraepelin's writings, however, indicates that his outlok was far from limited to the natural sciences:

> The prosperity of a people depends evidently on whether the injurious or the strenthening influences continue to predominate ... fate must be determined chiefly by the people's mental constitution, it is supremely important to know whether the morbid mental phenomena that in no people are entirely absent keep within moderate limits and can be restrained, or whether they spread and grow. (Kraepelin 1922a, p. 136).

The purpose of a systematic collection of statistics relating to the mental health of the general population, he claims, is nothing less than to assess the forces bearing on 'civilisation' itself:

> On the one hand, we can point to the rarity of mental illness in animals and in uncivilized peoples; to the enormous increase in the number of insane persons requiring care in all civilized nations; to the increase of suicide, crime, drink and syphilis in the great centres of civilized countries; and to the manifold artistic, religious and political extravagances that in this age are so rife. On the other hand, it can be pleaded that disease and poverty were formerly more severe and widespread than now, only less noticed and less combated; that the great mental epidemics of the middle ages would to-day be impossible; that many distressing phenomena of our social life are due to intensification of the struggle for existence rather than to mental degeneracy of the people; that superstitions and crazes have played in bygone times a far greater part than in our day; and that the unparalleled achievements of this present age in every sphere of human activity, and especially our efficiency in war, must at once dispel every suspicion of decadence of our mental qualities (Kraepelin 1922a, p. 140).

The tenor of these reflections is remote from any form of natural science and is rendered comprehensible only in the context of Kraepelin's activities and beliefs affecting the public domain and of his personal characteristics. His view on the body politic ('Volkskorper') are set out in his early paper, 'Crime as a Social Disease', extrapolating from his clinical experience and attributing most criminal behaviour to a 'congenitally inferior predisposition' (Kraepelin 1906, 1907). His attitude towards alcohol and venereal disease provides further evidence of a similar nature. Several of his publications had to do with these is-

sues, and his life history makes it clear how deep his interest was in these matters. By contrast to the fatalistic determinism that characterised his view of mental diseases as essentially degenerative disorders, his approach to mental hygiene was altogether more positive. From his earliest days he was active in the forensic field and, basing his stand on his extensive experience of institutional psychiatry, he expressed himself forcibly on alcoholism and syphilis, two of the indisputable causes of severe psychosis (Engstrom 1991). From 1895 he embraced total abstinence from alcohol and thenceforward was a tireless – even a fanatical – supporter of anti-alcohol campaigns. His efforts were largely in vain, as he conceded in a poem which indicates the extent of his personal involvement:

Trusting in the wings of my will
I swore to dispatch the misery of my people,
To drive us through peril and danger
And fulfil the promise of their prosperity.
Arduous and long the journey. In bloody victories
And with an ardent heart did I execute my mission
To but one enemy was I to succumb:
The thanklessness and delusion of my own people (Kraepelin 1928)

He felt similarly about syphilis, a disease that Kraepelin regarded as a major threat to the health of the German army in the First World War. Accordingly, he launched a campaign to establish a national screening programme that involved him in a tenacious, but ultimately unsuccessful, struggle with the Ministry of War. Frustrated by this failure he entered the political arena, joining the People's Committee for the Prompt Subjugation of England, helping to draw up the annexationist 'Guidelines for Path to Lasting Peace', advocating the overthrow of the chancellor and calling for more authoritarian rule in Germany (Engstrom 1991).

None of these projects came to fruition and Kraepelin devoted his post-war years to the building up of the German Research Institute for Psychiatry. Of this he wrote in 1921:

Of course our institute should be home of vigorous science. But at the same time we never want to lose sight of the ultimate goal envisioned by the patrons: to serve the nation's health and to work toward healing the deep wounds which bitter fate has inflicted upon our fatherland (Kraepelin 1922b).

More specifically, in his paper 'Psychiatric Observations in Contemporary Issues', he declared himself to be "a psychiatrist (who) takes a stand on contemporary issues, reporting from the perspective of his professional experience" (Kraepelin 1992). Extracts from this revealing document illustrate his views on a number of social and political topics. On 'war psychosis':

... there can be absolutely no talk whatsoever of a morbid disorder. The drive of self-assertion is the primal and most powerful force behind all individual and group action.

On the German emperor, William II:

... it is simply impossible in the case of William II to posit the existence of an acute mental disorder.

On combat neurosis:

... the exact parallel to the accident neurosis (that is, the reluctance of weak-willed persons to return to work after suffering an injury) familiar to us from peace-time and which has been spawned by pension legislation.

On morale:

In part it was the women who proved to be ill-prepared for the prolonged state of war and who tormented their sons and husbands at the front with their complaints and who at times breached the trust of those in the field.

On the occurrence of 'hysterical disorders':

Based upon broad experience I believe we can view these apparently arbitrary upheavals of the will as the response of primal defence mechanisms to the dangers of life ... In the case of the mature and emotionally well-anchored male, these antiquated defence mechanisms against overwhelming external pressures no longer have a role to play.

On "individuals with distinctly hysterical traits":

... among the leaders of current and past upheavals one also finds a surprising number of people who in one way or another fall outside the bounds of normality.

In this latter category he includes 'dreamers and poets', 'swindlers' and Jews:

The active participation of the Jewish race in such upheavals has something to do with this. The frequency of psychopathic predisposition in Jews could have played a role, although it is their harping criticism, their rhetorical and theatrical abilities, and their doggedness and determination which are most important.

On the causes of social unrest:

What struck the informed observer was the wholesale ignorance of the collective psyche...Experience with accident neurosis has shown that providing pensions to those unwilling to return to work breeds an artificial work-disability which under certain circumstances can result in lasting mental decrepitation...The government measures ... presume that humans by nature tend to perform their duties, to work hard and to commit themselves to the common good. The development of every child teaches us that this conviction is false ... we cannot escape the fact that the natural and self-evident drive behind all actions is *selfishness* and that in the case of popular rule this selfishness will seek its due with violent force as soon as the powers of the state designed to hold it in check are destroyed ... It must be made absolutely clear that the stratification of human society is certainly far more the expression than the cause of the immeasurable inequality among humans. Accordingly, the emergence of classes of people would very much depend, if not for the individual then certainly for the succession of the lineages, on those abilities which come to be developed in them. And the proletariat would be chiefly a conglomeration of those countrymen whose ancestors could not, over the centuries, rise to the top ... true popular rule is entirely impossible. Invariably the masses submit to individual leaders who by virtue of certain qualities have risen to the top. *They* are true leaders; those led by them are left with only the *appearance* of sovereignty. It is not they who divide, but rather the superior leaders who understand how to force the others to follow.

On future measures:

We will have to work systematically and employ all of our resources in the physical, mental and moral regeneration of our people. The essential framework has already been explicated numerous times during the course of the war, especially by doctors. Attention must be focused above all on the fight against all those influences threatening to destroy future generations, in particular hereditary degeneration and genetic influences resulting from alcohol and syphilis. Furthermore, the following will be necessary: the greatest possible encouragement of early marriage, the fostering and strengthening of the joys of parenthood, the protection of the younger generation from the changes of physical, mental and moral neglect, the strenghtening of the body, of the mind, and in particular of the will, by means of their regular and appropriate engagement.

Statements of this type, wholly unscientific and with disturbing political overtones, are at first sight difficult to reconcile with the generally accepted picture of the detached natural scientist of legend. Kraepelin himself was renowned for his disinclination to engage in personal reflections, but his public character and outlook stand out clearly in his published memoirs and in contemporary accounts, from which he emerges as an energetic, determined but kindly man, a dedicated patriot with an unshakable belief in his own capacity and in natural science, revered by his family and friends and respected by his opponents. An altogether more complex inner world is revealed by his unpublished autobiography and his poetry, which depict a restless, lonely spirit without formal religious beliefs, but with a quasi-mystical, near-messianic sense of purpose. His credo was an amalgam of scientism, prophetic self-assurance as a latter-day Moses and, above all, a devotion to the Germanic ideal. In an unequivocal admission he remarks:

> I had ... a strongly marked feeling of race and stock and also felt my inner independence as an essential trait of the German nature. My whole heart belonged to my fatherland and I willingly flung away cool objectivity of judgement when it was a matter of German peculiarity (Brink and Jolliffe 1932).

This is a far cry from the judgement of a more profound compatriot, the psychiatrist, Karl Jaspers:

> Political Germany...is not Germany as such, but, viewed from the standpoint of world history, merely a short-time political episode ... What is German is held together only by the German language and by the spiritual life which manifests itself in it ... The political aspect of it is only one dimension, and an unhappy one at that, a history which proceeds from one catastrophe to another (Jaspers 1957).

By contrast, the Germany to which Kraepelin was devoted was already a thing of the past. His fatherland was Bismarck's Germany, created by the political unification of the country in 1870, and based originally on a liberal authoritarianism allied to military might and material prosperity.

In a paper on Bismarck's personality and achievement, written in 1920, Kraepelin (1921) expressed his unbounded admiration of the Iron Chancellor and his objectives, without appearing to realize that the dismissal of Bismarck and the ascendancy of Wilhelm II had heralded the decline of liberalism, not only in the field of politics, but also in science and medicine. The whole complex story has been comprehensively documented by Weindling in his monograph, 'Health, Race and German Politics between National Unification and Nazism, 1870–1945', in which he traces how belief in the possibility of applying the natural sciences to the problems of society at large commenced in the early years of the monarchy and degenerated into a quagmire of social Darwinism, eugenics, racial hygiene and, ultimately, the policies of mass euthanasia and genocide, in all of which psychiatry played a prominent role (Weindling 1989).

This process was greatly accelerated by the German defeat in the war, but Kraepelin, like many members of the educated classes whose outlook had been formed in the hey-day of Bismarck's era, was seemingly unaware of the changes in the world around him. The disastrous political and military consequences of pan-Germanic nationalism were interpreted by him as the result of an unfortunate disease of the body politic that called for prompt treatment and rehabilitation. He was, in effect, misapplying his own brand of medical expertise to the problems of the day, in company with the great majority of similar-minded intellectuals of his generation. A modern historian has summed up the situation and its consequences, formulating a diagnosis along quasi-Kraepelinian lines by providing an account of the symptoms and their outcome:

> The defeat of Germany and the fall of the monarchy in 1918 threw the admirers of Bismarck into confusion ... The great majority of the Bismarckians, with the university professors at their head, remained faithful to the dead monarchy ... They still prized the Rechtstaat, the rule of law, but they supposed it would survive the overthrow of the republic ... The Bismarckians got their way. The republic was overthrown by Hitler in 1933 ... Then the Bismarckians discovered to their horror that, while they had got everything they wanted they had also lost everything that they prized. The Rechtstaat, the rule of law, had vanished. The Nazi barbarians ruled ... Once more, as in 1914, the respectable Germans of all classes tried to present the war (1939–1945) as one of defence, and they clung desperately to the hope that the Rechtstaat would be restored when the war was over (Taylor 1955).

Emil Kraepelin died in 1926. Perhaps it was as well that he did not live to see the birth of the Third Reich. Three of his contemporary compatriots have justly concluded that his "probably greatest and longest lasting influence lies in the *impetus that he gave to psychiatric research*", extending as it has done to neuropathology, psychophysiology, genetics, psychopharmacology, transcultural psychiatry and epidemiology" (Hippius et al. 1987). It detracts in no way from his achievements as a clinical scientist to suggest that the ineradicably chauvinistic elements in his outlook, formed in his youth and shared by many others as part of a national consciousness, seriously affected his judgement on the wider implications of his own contributions. His work illustrates clearly the potential value, but also the evident limitations, of 'Naturwissenschaft' in his chosen discipline. Both lessons are highly relevant to the theory and practice of psychological medicine today.

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