A number of scientists from outside the University of Jena contributed to research at the Institute. In addition to Günther Just, other scientists such as the Director of the Institute for Racial Hygiene at the German University in Prague, Professor Karl Thurns and the pharmacologist, Professor Gustav Kuschinsky, also from Prague, conducted research in collaboration with the Institute and received financial support from the Institute. Karl Astel also invited one of the best known tobacco researchers of the time, Fritz Lickint, to collaborate with the Institute. The gynaecologist, Paul Bernhard from Duisburg, made use of the focus on tobacco at the University of Jena and submitted his habilitation on ‘The effects of tobacco poisons on the health and fertility of the woman’ in January 1942. The process was successfully concluded in March 1942 and the revised version of Bernhard’s text was published less than a year later.

Despite all the activities of Karl Astel, the Scientific Institute for Research into the Dangers of Tobacco achieved only marginal scientific significance and reputation. Astel committed suicide ten days before the end of the war, presumably to avoid facing the consequences of his activities as a leading racial hygienist in the Third Reich and the Institute was disbanded and remained forgotten for half a century.

References

Commentary: The Third Reich—German physicians between resistance and participation

E Ernst

To evaluate the role of the medical profession in the Third Reich is a delicate and difficult task. Its participation in major atrocities was, to a large extent, hushed up and recent reports of medical opposition may, in many cases, be exaggerated. Much of the evidence has been destroyed or is not easily accessible. Furthermore, an objective view is potentially clouded by a number of issues related to the past or outlook of the evaluator. Finally, when looking at history with hindsight, there is the danger of arrogance in those who have not actually lived through it.

The following account therefore makes no claim to be either objective or complete. It is a personal analysis of a (non-Jewish) German physician who was born after the war and struggles to understand what happened.

Active participation

History of ‘race hygiene’

In the second half of the 19th century, ‘Social Darwinism’ had spread throughout Europe. This theory assumed that nations, like animal species, fight for the survival of the fittest. The fittest nation would be the one that is genetically the ‘purest’. German
proponents of Social Darwinism were to expand the theory significantly: Alfred Ploetz coined the term ‘race hygiene’ (Rassenhygiene), Ernst Haeckel was the first to consider the killing of ‘weaklings’, and the physician Fritz Lenz formulated his concept of racial inequality which directly influenced Hitler. Binding and Hoche finally lobbied for the extinction of ‘life unworthy of living’ suggesting that this could be a curative measure (Heilbehandlung) not necessarily requiring consent from its victims. Growing anti-Semitism and ‘Social Darwinism’ added together resulted in ‘race hygiene’. As the word implies, ‘race hygiene’ was essentially a medical issue.

Medicalization of racism
Hitler frequently referred to the Jewish race in medical terms, as a ‘bacillus’, ‘parasite’ or ‘disease’. His followers adopted these medical analogies. In their minds, the ‘biological body of the German people’ (Volkskörper) was threatened by the Jews. Actions against Jews were promoted as acts of defence (Notwehr-Antisemitismus) in the all-deciding struggle for survival. On 15 September 1935, a law was passed that made marriages and extra-marital intercourse between Aryans and Jews illegal. It was termed ‘Law for the Protection of German Blood and Marriages’.

The German medical profession bore and promoted the belief that curing patients was one thing but to heal the nation was incomparably more important: ‘The maintenance of a genetically homogeneous and healthy stock of the German people is the main duty of the German physician’. The vast majority of the German medical profession were willing to adopt the ideas of race hygiene; many even went further and perverted them into applied racism. Race hygiene had been initially developed by and was later entrusted to the German medical profession. To a large degree, the medical profession was not politicized but politics were medicalized.

Involuntary sterilization
To stop the ‘contamination’ of the German people by ‘inferior’ blood, forced sterilization was legalized on 14 July 1933, soon after Hitler took power in January 1933, through the ‘Law for the Prevention of Genetically Diseased Offspring’ (Gesetz zur Verhütung erbkranken Nachwuchis). The quick move had been possible because of much preparatory work during the Weimar Republic, initiated not least by the medical profession. The law provided that (allegedly) handicapped individuals were to be identified, examined by a jury of ‘experts’ and subsequently sterilized. Some 200 ‘Genetic Health Courts’ were instituted. They ordered the involuntary sterilization of approximately 400 000 individuals. In 1934 alone, 28 286 men and 27 958 women thus became the victims of involuntary sterilization.

The overwhelming majority of the medical experts’ reports were later found to be of unacceptable scientific quality; almost all had recommended sterilization. It is estimated that 50 000 women were forced into eugenically directed abortion performed by German gynaecologists while, at the same time, the laws against voluntary abortions were tightened and the total number of abortions therefore declined.

In their view it generated human ‘ballast’ and an economic burden which had to be eliminated by other means. Thus, the concept of involuntary medicalized killing, wrongly termed ‘euthanasia’, was developed.

Involuntary euthanasia
The NS euthanasia programme secretly started in specialized medical departments in 1939. In theory, the programme was aimed at disposing of children suffering from idiocy. Down’s syndrome, hydrocephalus and other abnormalities. Even though this programme was not specifically directed against Jews, it was sufficient for physicians to fill in the diagnosis ‘Jew’ to issue what in essence was a death sentence. At the end of 1939, the euthanasia programme went into its second stage by being extended to adults ‘unworthy of living’. Almost 100 000 (predominantly psychiatric) patients became its victims. The programme disposed of an estimated four-fifths of all psychiatric patients, and psychiatrists started wondering whether there would be enough patients left to keep their speciality alive.

‘Action T4’ (named after the address of its Berlin headquarters in Tiergartenstrasse 4) was the organizational centre of the programme which was run by some 50 physicians. They sent out questionnaires to psychiatric and other hospitals urging doctors to name candidates for euthanasia. These patients were then transported to specialized centres where they were gassed or poisoned and subsequently cremated. Others were executed through lethal injections or starvation in psychiatric hospitals. Hitler himself discontinued the programme on 24 August 1941, following increasing opposition from both the general population and the clergy. The medical profession’s protest to these activities (see below) was minimal and ineffective. Despite Hitler’s official decree, the programme continued as ‘wild euthanasia’ without official authorization. Even in 1944 (i.e. shortly before the collapse of the NS state), the directors of psychiatric institutions received an appeal to relieve the pressure on beds by disposing of (Beseitigung) their patients.

‘Action T4’ amounted to medically supervised murder. Its true significance, however, lies in the fact that it was a pilot project for the ‘Final Solution’. The Final Solution
‘Without psychiatry, the holocaust would probably not have taken place’. The technical know-how of ‘action T4’ provided the basis for the anticipated total extinction of all Jews within the (then) expanding Reich. The link between ‘T4’ and the Final Solution was ‘Action 14f13’ termed after the file-number it obtained in the official files. ‘Action 14f13’ was initially designed to kill all handicapped and insane prisoners in the concentration camps. It grew into an elaborate programme of killing all individuals of Jewish or other non-Aryan blood. The diagnosticians who decided over life and death within this monstrous project were, according to Himmler’s wish, experienced psychiatrists. Almost without exception, those physicians who had gained experience in ‘action T4’ took charge of the Final Solution. The strategy for the anticipated extinction of the Jewish race was decided on 20 January 1942 at the Wannsee-Conference: ‘in the course of the Final Solution, Jews should be brought... to work in the East... a majority will doubtlessly drop out through natural decimation... The eventual rest... will have to be treated accordingly...’. To be ‘treated accordingly’ meant to be killed.
Jews from all parts of the Reich were transported to one of numerous concentration camps. Those who had survived the transports were ‘selected’. The choice was either to go to the gas chambers immediately or to be exploited as labourers until too weak to carry on. This, in turn, also meant death through gassing.

The ‘selection’ was strictly a medical task, performed by teams of SS-doctors who formed an essential part of each camp. One of the camp doctors later stated: ‘There were the various officers, the doctor in charge and the unit commander. He had the task of making sure that everything remained orderly. I only saw it twice myself. The Kapos (camp inmates—criminals, political prisoners, and later, Jews—used by the Nazis to head the labour squads) would carry out a large pre-selection of children, very old women, and old men. There were additional selections carried out by certain personnel, after which the doctor had to decide. Now a lot depended on the size of the transport. If it was very large, the selection process was very superficial. If it was a normal-size transport, then things were done more thoroughly. The transports came at night, and if you had your normal duties during the day and then had to work extra at night, well...’ While the pilot project (action T4) had killed thousands, the Final Solution eliminated millions under the trained guidance and supervision of physicians.

NS ‘research’

Many camps also engaged in medical research. At this stage misguided science (Social Darwinism) had been perverted into pseudo-science (race hygiene) which, in these research centres, was further degraded into criminal science. Typically the projects were run by SS-doctors with some affiliation to German medical schools. Often the research questions were determined through the ‘necessities of war’: What is the best way to survive in cold water? How can one survive on drinking seawater? How can one stop bleeding after injury? How can one prevent certain infectious diseases be prevented? Other research focused on the ‘purification’ of the German race. This included practical methods of sterilization and mass killing. 20-22 Altogether there were over 60 different research projects carried out in the camps. 23 The hallmark of all of the experiments was their unspeakable cruelty, unprecedented in the history of medicine.

The heads of research were often apparently normal SS-doctors with few signs of overt psychological pathology. 24 The motivation of working for a ‘higher aim’ (e.g. for the best interest of the German nation) was a central theme which, in their minds, freed them from ethical obligations and humanitarian medical traditions. Many of the experiments were designed such that the ‘object’ would die at its conclusion—if only so that (s)he could be further investigated by the pathologist.

Resistance

‘It is also a sign of cowardice, of lack of moral courage when Aryan German doctors ignore this prosecution of Jewish doctors’. 25 Indisputably, there has been relatively little effective German opposition against the horrors of the Third Reich. It has been estimated that, between 1933 and 1945, some 800,000 individuals (15%–20% women) were imprisoned for resistance to the regime. 26 The succession of evil, as outlined above, remained largely unaffected by this opposition. Amongst the resistance that did emerge, only a small part was driven by the medical profession. Why? Should doctors, through their Hippocratic oath, not have been the ideal and natural profession to oppose? And should they not have been aware of what was going on? Several reasons are usually offered to explain this apparent contradiction.

Lack of courage, as quoted above, may be a contributing element but is unlikely to be a major factor. Doctors joined the NS party in higher percentages than any other profession. About 45% of doctors were party members (among teachers about 20% were members), 26% were SA members (about 11% teachers) and 7.3% were SS members (0.4% teachers). 26 Germans have often been characterized through their sense of duty, their patriotism (before 1945), their need for law and order and their high level of obedience. These qualities do not readily lend themselves to resistance against a dictatorship. Yet such arguments do not explain why German doctors offered less resistance than other professions (see below).

Doctors might simply not have been aware of what was going on. Clearly not everyone knew everything and some may indeed have known very little. But generally speaking, the profession as such was in an excellent position to realize at least some crucial facts, particularly as not a small proportion was being published in official German medical journals. If doctors did not know, it must have been because they did not want to know.

With hindsight, the most plausible reason for the scarcity of medical opposition is the fact that any emerging resistance was radically crushed in its earliest stages. Within weeks after Hitler came to power in 1933 the German medical system was hierarchically structured with high rank positions being occupied by ‘trustworthy’ SS men. 27 Most professional bodies, particularly those in natural opposition to fascism like the ‘Verein Sozialistischer Ärzte’, were dissolved. All doctors in key positions had to go through a special training programme at the ‘School of Leaders of the German Medical Profession’ in Alt-Rhese. 28 Potential opponents were dismissed, forced into immigration or sent to the concentration camps.

At the Medical School of Vienna, for instance, some 80% of all medical staff were fired instantly after the NS take-over of Austria in 1938. 29 During the first year of the Third Reich, no less than 116 professors and medical researchers were dismissed from German Medical Schools. 30 Between 1933 and 1939, some 8000 academics from Germany and Austria emigrated to the US. Those who remained in office were so highly selected and conformist that ‘Gauleiter’ Streicher could, in a speech at the University of Berlin, ask: ‘If one were to assemble all the brains of University professors and put them on one side of a scale and place the Führer’s brain on the other, which side do you think would outweigh the other?’ 31 Given this most effective prevention of resistance, it may even surprise that any opposition evolved at all.

Various forms of opposition or resistance may be differentiated and require to be judged separately: protest (oral or through publications), passive resistance, emigration (see above), resignation from office, industrial action, material support to organized groups, desertion from military service, refusal to follow orders, sabotage and assassinations. Only a few of these options were chosen by doctors. 32

The subject of resistance against the Third Reich can be viewed as imbedded into a multi-dimensional framework. One dimension is time. Resistance before 1933 has a different meaning...
and importance than resistance at a time when the collapse of the Third Reich was imminent. Another dimension is personal motivation. Resistance for humanitarian reasons must be seen differently from one driven by political motives (e.g. being a communist or socialist) which is different again from resistance on patriotic grounds (e.g. realizing that the war was driving Germany into foreseeable disaster).

The target of the resistance also deserves consideration. Clearly resistance against the dismissal of a Jewish colleague is a different matter from opposition against sterilization or euthanasia of (mostly Aryan) psychiatric patients or resistance against (Jewish) genocide. A further dimension is provided by the fact that different individual backgrounds lend themselves to different forms of and motivations for resistance. From these theoretical considerations it is clear that a given individual may have opposed one activity and participated in another (see below).

Because of the combination of scarcity of resistance, on the one hand, and complexity of inter-linked covariables, on the other hand, the following discussion will merely focus on an arbitrary selection of ‘case studies’ describing both individual and organized resistance in some of its guises.

The International Medical Bulletin (IMB)

At various stages of the Third Reich, several publications existed that more or less overtly criticized the NS regime and its actions: Neu Beginnen, Sozialistische Aktion Grenzecho, Der Deutsche Weg, Deutsche Briefe, Blick in die Zeit, Rhein Mainische Volkszeitung, Hochland and Stimmen der Zeit.

To the best of my knowledge, the only medical publication to stimulate opposition was the IMB. The Prague-based journal was re-named in 1934 and published until 1939. It was the official organ of the International Medical Union, an outgrowth of the earlier Socialist Medical Association. Its editors believed that ‘fascism is the end of European culture’. Driven by socialist/ communist convictions they regularly published critical reports on Hitler’s politics. It is unknown how many German doctors read the IMB or what its true impact was. Today the IMB’s re-publication33 provides a rich and intriguing source of information.

Doctor John Karl Friedrich Rittmeister

In 1941 Dr. Rittmeister (born 1898) was appointed director of the Psychotherapeutic Policlinic at the Berlin Institute of Psychotherapeutic Research and Psychotherapy. In this position, he helped many who were pursued by the NS regime for political or racial reasons. In 1941 he came into contact with the ‘Rote Kapelle’ (Red Chapel, a name coined by the NS regime to describe the communist leadership of this group). This organization was a heterogeneous gathering of individuals with different aims and backgrounds. Four of its members were doctors. Their activities range from the distribution of information to sabotage and intelligence work. Rittmeister became the co-author of ‘AEGIS’, the group’s leaflets describing ‘the horrible tortures and atrocities’ of the Third Reich. He was caught in 1942, interrogated and tortured for 9 months and executed in Berlin-Plötzensee on 13 May 1943.34

Other German psychiatrists

Several other German psychiatrists were opposed to the misuse of psychiatry as a murder weapon within the euthanasia programme. Leading figures were Karl Bonhoeffer and Karsten Japerson. Japerson was head of the Department of Psychiatry at Bethel, an institution that was sponsored by the Church. He relentlessly rallied against involuntary euthanasia and refused to co-operate in it. In 1940 he even filed a lawsuit for murder against the programme.35 Dr Japerson was instrumental in stimulating the Church’s protest against euthanasia that eventually helped to stop its official part (see above). He repeatedly tried to organize the protest of the profession but in this he sadly failed. Other opposing psychiatrists mentioned by an eyewitness were: Ewald, Kuha, Creutz, Boestrom, Behringer, Braun, Kleist, Meyer, Willige, Creuzfeld.35

Die Weiße Rose

Several organized resistance groups existed during the Third Reich: Reichsbanner, Rote Frontkämpfer, Eiserne Front, Neu Beginnen, Rote Kapelle (see above) and the Europäische Union. These may have had some medical input but ‘Die Weiße Rose’ was the only one predominantly related to medicine; it was an initiative of medical students. Its founder, Hans Scholl, came from a liberal family background yet was educated in the NS way. He had gone through a period of enthusiastic agreement with this regime, but soon became disillusioned with it. In discussions with other students, he and his sister Sophie began to formulate criticism which was motivated predominantly on moral and ethical grounds. The group was joined by Alexander Schmorell, Christoph Probst, Traute Lahren and Willi Graf who were all medical students. Later they also admitted others unrelated to medicine.

In 1942 the group began to anonymously mail critical texts to selected groups of key personalities in and around Munich: ‘Each word that comes from Hitler’s mouth is a lie...’. The leaflets also spoke of the Germans’ guilt through the Jewish genocide and asked why an entire people could watch apathetically while all this was happening. The group distributed a series of well-written, thoughtful pamphlets, but eventually they grew careless. On 18 February 1943 Hans and Sophie Scholl were caught distributing several hundred leaflets in the university. The intensity of the ensuing rage is evidenced by the fact that, by 22 February 1943, Hans and Sophie Scholl, and Christoph Probst were sentenced to death and executed the same day. Three more death sentences followed after a second trial several days later.34

The group had established contacts with similar-minded students in Hamburg. The ‘Weiße Rose Hamburg’ was founded in 1942. About 30 of its members were arrested in 1944 and 8 were executed.34 Other centres had been planned in Sauerbrücken, Berlin and Köln.36

Professor Sauerbruch

This internationally acclaimed surgeon is seen by some historians as one of the worst NS doctors, while others acknowledge that he opposed certain issues of the regime.34 In several ways his attitude and behaviour can be seen as characteristic of large sections of the German medical profession.

Like many doctors of that time, he was a patriotic nationalist and a monarchist at heart. Thus he was supportive of what he perceived as the NS regime’s ambitions to restore Germany’s honour, integrity and international standing. At the same time he was opposed to certain aspects of National Socialism. His national and international reputation provided him with unusual...
privileges and direct personal contact with men in the highest ranks of power, including Hitler himself.

Sauerbruch occasionally showed courage in directly opposing the NS regime. For instance, he personally prevented SA troops from putting the Swastika flag on the roof of his department. 37 He protected or offered to protect Jewish doctors like R Niessen. Sauerbruch called Niessen, who had been his second man in the department, ‘bloody headed’ when he told him about his decision and motivation to emigrate. 37 It was at Sauerbruch’s house that liberally minded people could make contact. 36 He also spoke his mind, for instance, about Hitler whom, during the final years of the Third Reich, he thought mad, or about the ill-effects of NS politics on medical educational issues. Sauerbruch protested against euthanasia in 1940 34 and he was a member of the ‘Mittwoch Gesellschaft’, an association of liberal intellectuals that was later declared illegal.

On the other hand, Sauerbruch became a willing instrument of the NS regime in many ways. His open and widely publicized letter ‘to the doctors of the world’ was an attempt to reassure the international community that ‘the national German government believes in peace and sees its highest task in safeguarding it’. 38 He also accepted several NS honours like the title of ‘Senatsrat’, the ‘Nationalpreis’ (NS substitute for the Nobel Prize) and the post of Surgeon General of the German Army. The NS officials used his reputation to gain prestige and support for their own aims. There is little doubt that Sauerbruch was aware of this fact and knowingly let it happen or even profited from it. 37

In retrospect it is easy (yet true) to say that Sauerbruch’s attitude was based on a profound misjudgement of the NS State. He tried to oppose certain issues, yet at the same time he allowed himself to be used in many ways. Perhaps most importantly, he failed to do more to prevent the worst. 39 Thus Sauerbruch ‘may aptly serve as a symbol for the ultimate dilemma of German medical scholars under Hitler, in the best and worse times’. 2

The Fourth Reich

On 20 August 1947 the US military court pronounced the sentences against the defendants accused of crimes against humanity in the ‘doctors’ trial’. Such action has no precedent in medical history. Death sentences were given to: Viktor Brack, Prof. Karl Brandt, Dr Rudolf Brandt, Prof. Karl Gebhardt, Dr Waldemar Hoven, Prof. Joachim Mrugowski and Wolfram Sievers. Imprisonment for life sentences were received by: Dr Fritz Fischer, Dr Karl Genzken, Prof. Siegfried Handloser, Prof. Gerhard Rose, Prof. Oskar Schröder, Dr Hermann Becker-Freyseng and Dr Hertha Oberheuser. Two further doctors were given prolonged sentences of imprisonment and seven were declared not guilty.

The defendants found guilty at this tribunal were the ones known and apprehended at the time. After the tribunal, Mitscherlich and Mielke estimated that a total of 350 doctors had behaved criminally. 22 In the light of data collected since this probably represents a gross underestimation. The more important point is that the German medical profession as a whole made these crimes possible. To put it in the words of Willi Graf, member of the Weiße Rose (see above): every single individual carries the entire responsibility. 40

The medical profession’s ensuing process of coming to terms with the participation in the worst medical violations of humanity in the history of mankind is neither honourable nor complete. Mitscherlich and Mielke’s account of the ‘doctors’ tribunal’ 22 was printed to be distributed at the Annual Assembly of German Doctors in 1948. Almost the entire circulation of 10 000 issues mysteriously disappeared before distribution took place. H-D Sölling called the era following 1945 the ‘Fourth Reich’ indicating that within German medicine (too) much had stayed the same. 41

Many of the above-mentioned prison sentences were served only partly. Many doctors with a history of active anti-Semitism, several with a clear criminal record, were allowed to carry on working in their profession, some in high official positions. 41, 42 In Vienna almost all the perpetrators remained in or regained their positions. 29 The Jewish colleagues who were forced to leave their country were rarely welcomed back. For many years, the subject of NS medicine was an absolute taboo (in Austria it remained so until the 1990s). 29 A recent survey of German gynaecologists 43 showed that 86% believed that the process of discussing the past had not even started.

When, in the 1970s, the first German physicians of the new generation started researching the subject of NS medicine, they were viewed as ‘soiling their own nest’. Very few of their colleagues had (or indeed have) the insight to understand that such an activity is essential for ‘cleaning their own nest’. In the late 1980s, the German Medical Journal (Deutsches Ärzteblatt) finally published a series of articles on ‘Medicine in the Third Reich’. Its response in the letters section of the journal had a flavour of racism ‘that had reached the limit of being bearable’. 42 The German professional body of gynaecologists took until 1994 to issue an official apology to the victims of NS gynaecology. 8 Psychiatric patients who were sterilized during the Third Reich have never been officially acknowledged as victims. No compensation was paid on the grounds that, at the time, forced sterilization was legal. 12 Some leading German psychiatrists even defended sterilization after the war. 44

In 1987 a medical student wrote to Karsten Villmar, president of the German Medical Association asking how the profession could deem itself free of guilt while it still employed doctors who, many thousand times, had violated a basic axiom of physicianship. Villmar responded with the advice to ‘urgently fill the gaps in her knowledge regarding the function of a democratic liberal state’. 41 The same Dr Villmar, who became the highest ranking German medical official in 1978, publicly announced that ‘only a minority of German doctors ... had spoilt the reputation of our profession’. 2

Instead of trying to understand what had happened and how it was allowed to happen, the German medical profession turned the subject of NS-medicine into a taboo. This patho-physiology of silence climaxed in the destruction of documents. Even years after the Third Reich, investigators are confronted with a ‘wall of silence’ when attempting to research the subject. 45

When avoiding the topic was no longer possible, the German medical profession blamed everything on a few diabolically mad exceptions within their ranks. Self-criticism on a broad basis has so far not taken place. Only very few ask the question how the events between 1933 and 1945 have influenced present medical thinking in Germany and elsewhere. Today even reflective German medical opinion leaders take the view that ‘we cannot constantly go on feeling ashamed for others’. The ‘others’ have mostly perished now, and the German medical profession, by and large, has successfully avoided learning an important lesson from its own history.
Conclusions
The participation in the ‘betrayal of Hippocrates’ had a broad basis within the German medical profession. Without the doctors’ active help, the Holocaust could not have happened. Resistance even against the most outrageous crimes was minimal and was certainly not lead by physicians. After the Third Reich, the profession turned the subject of NS medicine into a taboo. When this was no longer successful, it promoted the myth that the atrocities were performed by a tiny minority of deranged outsiders. To the present day, the German medical profession has evaded meaningful introspection or self-criticism. Some of the questions that could have been addressed in this context are: What are the necessary preconditions for such atrocities to happen? How can they be prevented in future? Are there any early warning signals? In what way was the Germany of 1933 unique? Did (do) similar violations of medical ethics happen elsewhere? Where is the line between a doctor’s responsibility to an individual and responsibility to society? Where are the limits of ethical research? Did (does) the (German) medical profession have too little respect for the human being? How can we increase this respect through medical teaching? What are the essential elements of a good relationship between the medical profession and the state?

References
18. As cited in ref 23.
43. Hepp H. Results reported in ref. 8.