

Georg Büchner's *Woyzeck*

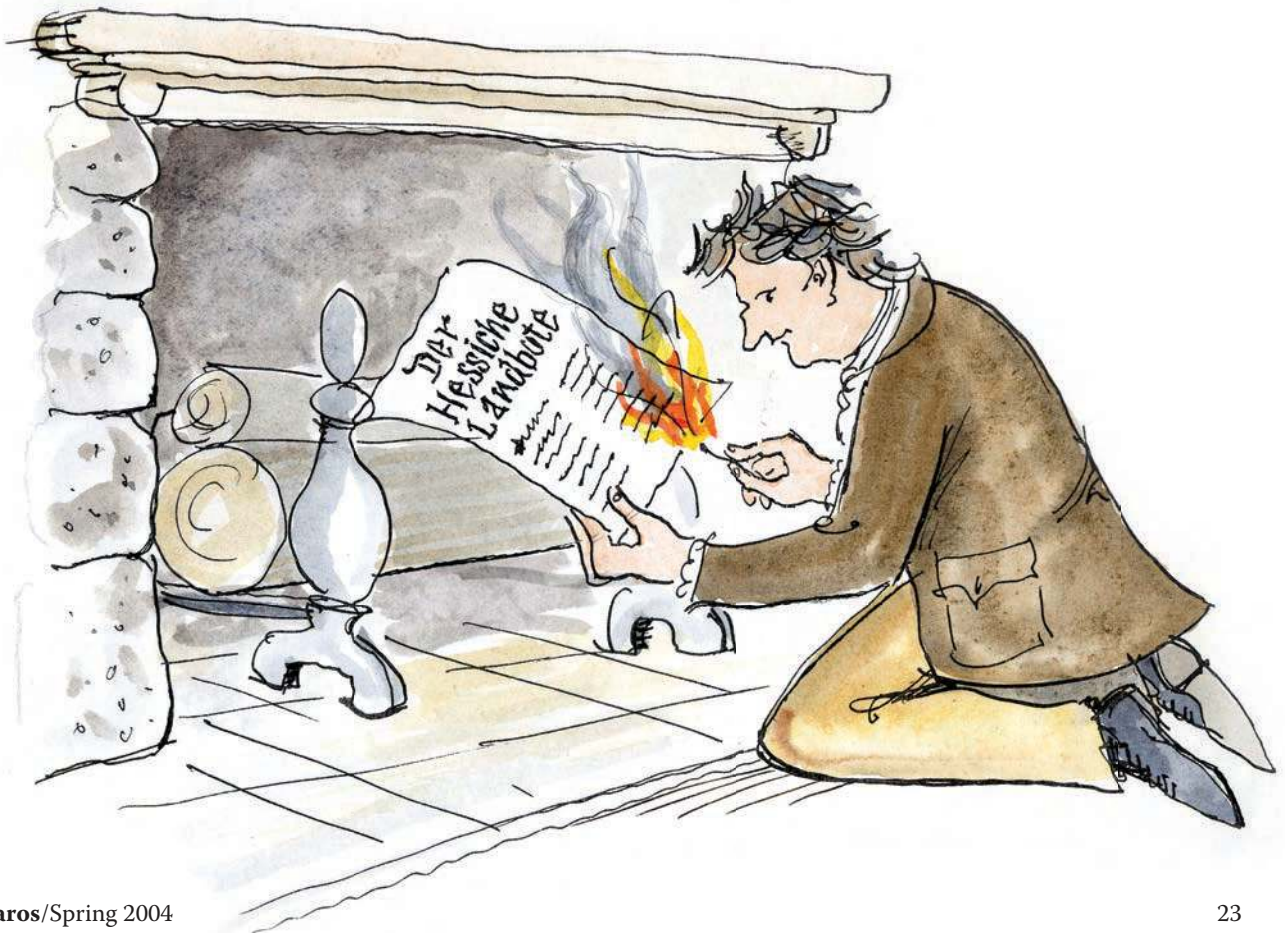
A tragic example of human experimentation without informed consent

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German author and social revolutionary Georg Büchner (1813 to 1837) studied medicine and lectured in anatomy at the University of Zürich. He wrote the unfinished drama *Woyzeck* at the end of his short life. The play was considered to be *avant garde* and is viewed as the forerunner of naturalism and expressionism in drama. *Woyzeck* tells the story of a 30-year-old fusilier living among the lowest of social classes. Woyzeck is exploited by his superiors, treated like an animal, and stripped of his humanity. He earns extra

money to support his girlfriend and illegitimate child, serving as batman to his captain and by doing odd-jobs. Woyzeck soon becomes an experimental subject of a nameless doctor in exchange for a small amount of money. The doctor, who is interested in metabolism, requires Woyzeck to eat only peas for three months while the doctor attempts to isolate novel chemical substances from Woyzeck's urine. Woyzeck has major difficulties with the 24-hour urine collections. Even though the investigations adversely affect Woyzeck's health, the doctor continues them. These imaginary medical studies, performed without what is now termed informed consent, could thus be considered a literary precursor to Nazi human experimentation a century later. The play fragment ends with Woyzeck a hallucinating victim of social circumstances. He murders his mistress after discovering that she has betrayed him by taking up with a drum major. Büchner's life, *Woyzeck's* origin, and the play's modern implications are the subject of this report.



Georg Büchner—

a short but eventful life

Carl Georg Büchner was the eldest son of Dr. Ernst Büchner and his wife Caroline; he was born on October 17, 1813, in Goddelau, a small village not far from Darmstadt. Darmstadt belonged to the Grand Duchy of Hessen at the time, and is in the middle of today's Germany.¹ The Büchners had a long medical tradition—many of Georg's ancestors were military surgeons—and Dr. Ernst Büchner was senior medical officer to the Grand Duchy, as well as being involved in forensic medicine. The play *Woyzeck* was based on a true criminal case, and Georg may have first read about the case in his father's study.

Georg was taught initially by his mother, but subsequently went to a private school, and then to the Darmstadt Gymnasium (university preparatory school). In school, Georg's literary and rhetoric talent became obvious, but his father was a practical physician who did not approve of unprofitable literary endeavors, and Georg began medical studies at the University of Strassburg in 1831. The young Büchner made his political and social consciousness known: he wore a Phrygian cap, a French revolutionary anti-royal symbol of freedom.¹

In Strassburg, Büchner lived in the vicarage of Johann Jaeglé where he met the vicar's daughter Wilhelmine, who later became his fiancée. His political and social activities increased, and he made friends with a group of radical students. Büchner believed that society's central problems were the suppression of free speech and the abject poverty in the general population. In Germany, repression of many freedoms was the rule after the liberation wars against Napoleon. The Congress of Vienna in 1815 was designed to restore the *status quo*, favoring the nobility and the wealthy.

After returning to Darmstadt in 1833, Büchner continued his medical studies at the University of Giessen. He and his friend, Ludwig Weiding, another political activist, wrote and distributed the pamphlet *Der Hessische Landbote* (*The Hessian Courier*) in 1834. This tabloid featured articles entitled: "Peace to the hovels! War to palaces!" Imagine the consternation of the palace inhabitants of Hessen-Darmstadt! Büchner did not believe his pamphlet would ignite a revolution, but wanted to gauge the attitude of the lower classes to the prospect of social reforms and more democracy. Unfortunately, most peasants were illiterate and handed the pamphlet to the local police. Weiding went to jail, and died in prison two years later, after repeated hearings and tortures.¹ This was a generalized phenomenon in Germany at the time, which culminated in defeat of the liberal democratic forces by the restored authoritarian Prussian government in the revolution of 1848. Germany thus failed to accrue a liberal or

democratic tradition, in contrast to France or Great Britain. This failure was multiplied thousands-fold in the periods 1914 through 1918 and 1939 through 1945.

A frequent

"witness" for the police

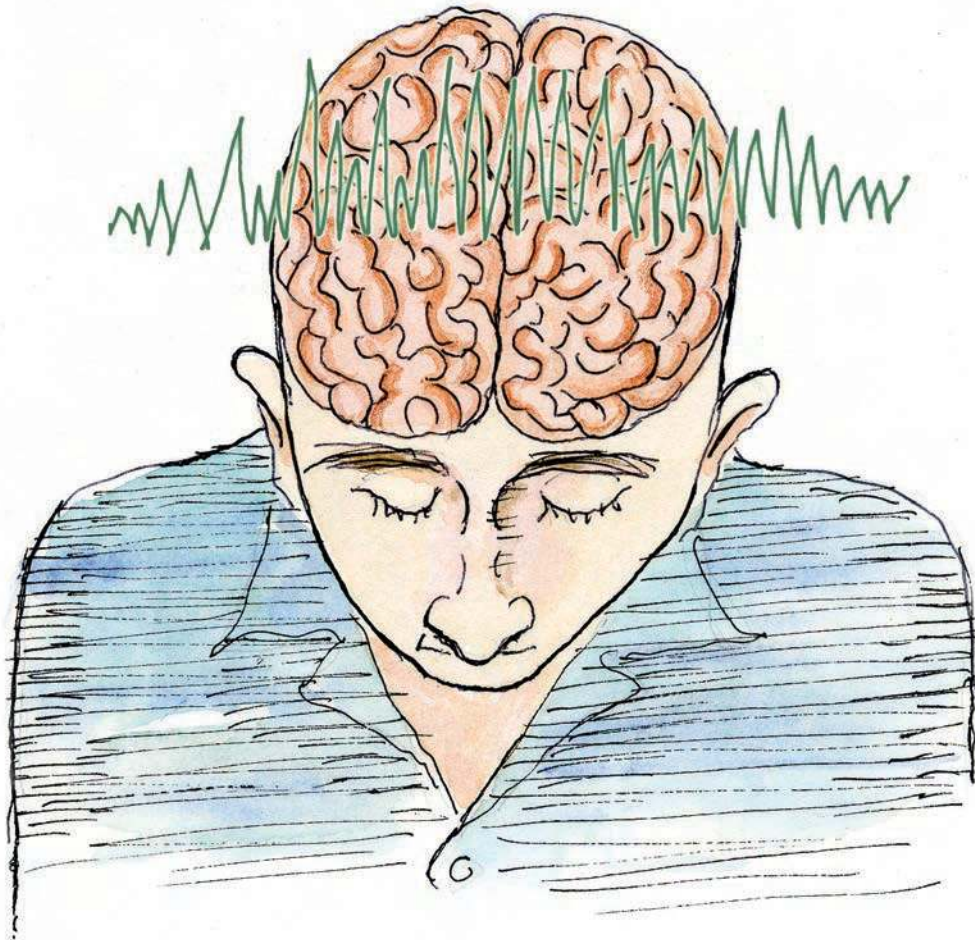
In only five weeks in 1835, Büchner secretly wrote *Dantons Tod* (*Danton's Death*). This tragedy deals with Georges Jacques Danton's disillusionment with the French Revolution, and was the only piece that Büchner saw published during his lifetime. In it, Büchner accurately portrayed human political behavior and how the French revolution turned against itself. While writing *Dantons Tod*, Büchner frequently appeared as a "witness" before the police, an ominous sign of increasing danger. He decided to leave Germany in March 1835, and fled to Strassburg after learning that his arrest was imminent. Not surprisingly, his father was angered, disappointed, and deeply concerned about his son's fate. Büchner lived on money that he received from his relatives and also generated some income by translating two plays by Victor Hugo into German. In Strassburg in the fall of 1835, Büchner wrote the novel *Lenz*. This fragmentary work deals with an acquaintance of Goethe, the "Sturm und Drang" schizophrenic poet Jakob Michael Reinhold Lenz (1751 to 1792).² The book was first published in 1839, two years after Büchner's death.

Eventually, Büchner decided to return to his medical career and to the natural sciences. However, in contrast to his father's career, Büchner engaged in experimental investigations on neuronal connections in fish. This meticulous anatomical work described hitherto unknown connections among cranial nerves. Büchner received a Doctor of Philosophy degree for this work from the newly founded University of Zürich. He was invited to achieve faculty rank ("Privatdozent") and moved to Zürich in October 1836. However, he made very little money from his private lectures. In January 1837, he suddenly became ill and died on February 19, most likely of typhoid fever. He was only 23 years old. Büchner is buried in the Zürich cemetery at the Zeltberg.

Woyzeck—

the original history

Woyzeck is a fragment, composed of different scenes.³ Various versions exist. Büchner's illegible handwriting that faded after chemical treatment of the manuscript, as well as editorial changes made by Karl Emil Franzos, who first



prepared the fragments for publication in 1875, all add to the difficulties identifying the “correct” version. Whether or not *Woyzeck* was ever intended as a play for actual performance is unclear. It is relatively certain that Büchner wrote these drafts in the winter of 1836/37 and that the work was inspired by a true criminal case.

Forty-one-year-old Johann Christian Woyzeck, an itinerant wig maker, stabbed his mistress Johanna Woost to death in Leipzig in June 1821. He did so after she cancelled a date with him and entertained instead a handsome soldier.⁴ The case became sensational news, in part because of the doubt about the defendant’s sanity. Woyzeck was examined by Dr. Johann Christian August Clarus, the medical officer of Leipzig and colleague of Dr. Ernst Büchner. In his statement, Clarus meticulously described Woyzeck’s difficult social situation and his symptoms of schizophrenia, such as nightmares and auditory hallucinations. Nevertheless, Clarus concluded that Woyzeck’s symptoms were not associated with madness, but were delusionary in nature. Woyzeck was therefore fully accountable for his crime. This opinion was challenged by the defense. Clarus issued a second report more than a year later reinforcing his original opinion. He maintained that Woyzeck was to blame for his own moral dissipation and that he was sane, even though several of Woyzeck’s acquaintances attested that he behaved like a lunatic. Woyzeck was sentenced to death and was duly executed on the Leipzig marketplace in front of a gaping crowd of spectators on August 27, 1824.

Clarus published his reports in a medical journal to which Georg Büchner’s father subscribed. Büchner used Clarus’s reports to construct his own story.³

Woyzeck – the play

Franz Woyzeck is a fusilier in the army of the Grand Duchy of Hessen. He is so poor that he cannot marry his girl friend Marie, with whom he has a child. Woyzeck’s only personal possession after 15 years of military service is his undershirt. He tries very hard to support Marie and his daughter by earning extra money doing various jobs and volunteering for medical experiments. The continuous pressure of overwork and the hopelessness of his social situation, coupled with the ongoing degradation by his superiors, result in his complete mental and physical exhaustion. Furthermore, the ongoing medical experiments and self-doubts induce in Woyzeck the symptoms of psychosis. He hears voices and experiences hallucinations. When Woyzeck discovers that Marie has been unfaithful to him, he decompensates. His rival, the drum major, has an impressive uniform and possesses a military rank and social status far above what the batman Woyzeck can ever hope to achieve. His frustration and fury turn against the only person he loves. Woyzeck murders Marie by repeatedly stabbing her, and finally cuts her throat. He leaves the knife at the scene of crime and is soon thereafter arrested.

Clearly, *Woyzeck* is much more than a jealousy plot in the tradition of *Othello*. Marie’s deceit is only the final assault upon Franz Woyzeck. The continuous abuse and exploitation

by his superiors, namely those of the higher classes, result in *Woyzeck* being systematically debased, and intellectually and morally murdered by his circumstances.⁵ Even the brutal stabbing is an expression of *Woyzeck*'s dire poverty; he had intended to buy a pistol to shoot Marie, but could not afford one. In this regard, the work anticipated dialectic materialism well before Marx made it fashionable and provides a striking example of the proletariat in nineteenth- and early twentieth-century Central Europe. Along this line, *Woyzeck* has been seen as an early predecessor of the naturalism later exemplified by playwrights such as Gerhardt Hauptmann, who wrote *The Weaver*. Certainly, *Woyzeck* fit well with Büchner's general political views, as expressed in *The Hessian Courier*. *Woyzeck* was so novel at the time that it provoked many interpretations and remains a topic of continuing debate to this day.⁵

Woyzeck in the clinical research center

The medical experiments performed on *Woyzeck* play a pivotal role in his degradation as a human being and ruin his health. The anonymous doctor requests that *Woyzeck* consume only peas for at least three months and that he deliver a 24-hour urine specimen every morning for analysis. In addition, the doctor takes *Woyzeck*'s pulse daily and presents him to his students as if he were a trained circus animal. *Woyzeck* is neither informed nor does he provide written consent. He has no knowledge of the reasons for the nutritional experiments. He receives three groschen (20 cents) remuneration per day. It is certainly no coincidence that the knife that *Woyzeck* later buys to murder Marie costs exactly 20 cents.

One of the key scenes between *Woyzeck* and the doctor, who is as frustrated in having his patient collecting a 24-hour urine sample as are clinical investigators today, is as follows:

WOYZECK. What is it, Doctor ?

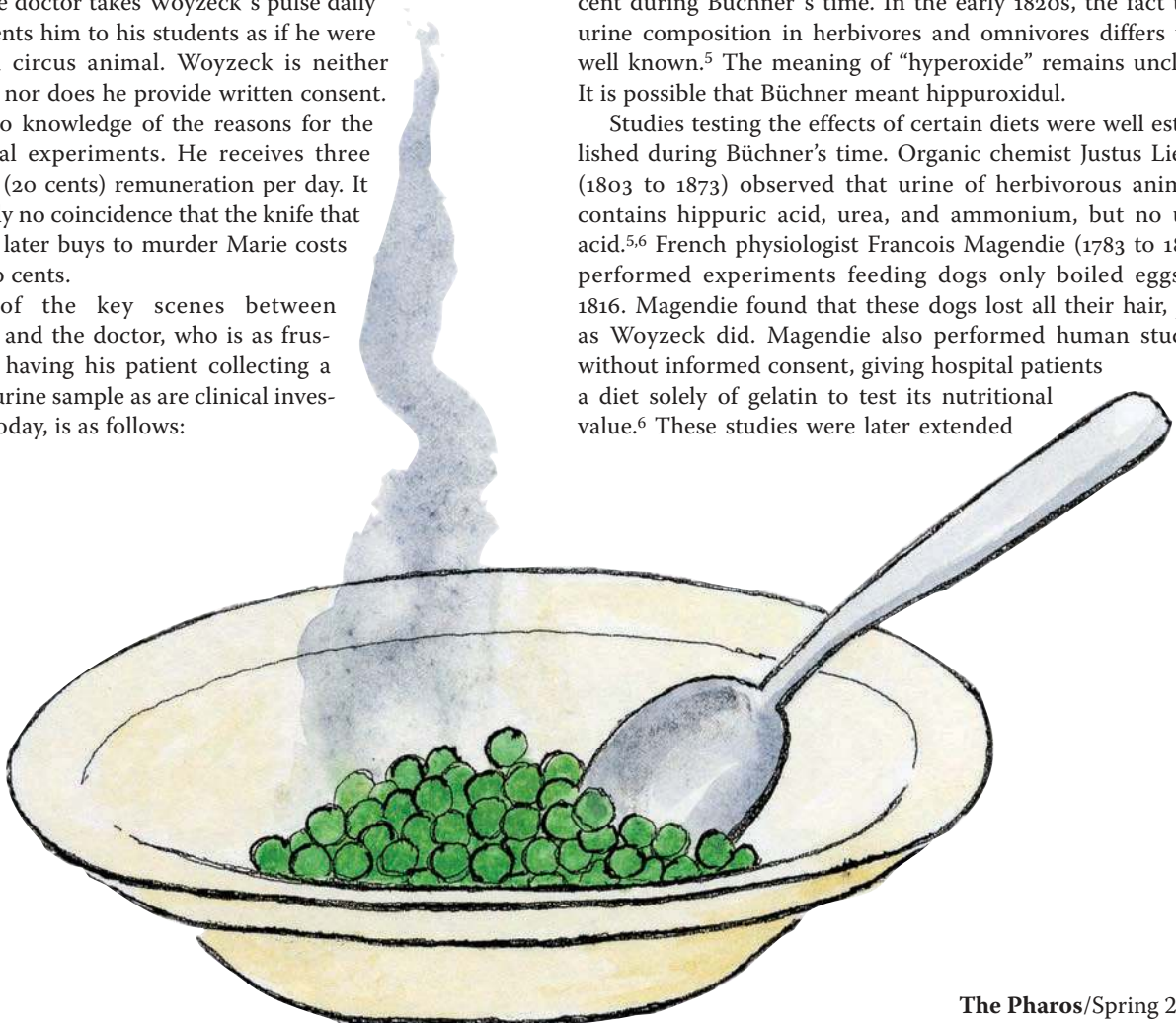
DOCTOR. I saw you, *Woyzeck*, you pissed in the street, pissed against the wall like a dog. And three groschen a day plus food. *Woyzeck*, it's bad, the world is going bad, very bad.

WOYZECK. But Doctor, when nature calls . . .

DOCTOR. Nature calls, nature calls! Nature! Haven't I proved that the musculus constrictor vesicae is subject to the will? Nature! *Woyzeck*, man is free. In man, Nature manifests itself as freedom. Couldn't hold his urine. Have you eaten your peas, *Woyzeck*? Nothing but peas, cruciferae, remember that. There's going to be a revolution in science, I'm going to blow it all to pieces. Uric acid nought point ten, ammonium hydrochlorate, hyperoxide. *Woyzeck*, don't you need another piss? Go in and try.^{3p21}

The doctor is apparently interested in the effect of a vegetarian diet on urine composition. A uric acid concentration of 0.10, assuming that this value represents percent, is indeed very low and is compatible with a low intake of meat protein. Berzelius reported a normal uric acid concentration of 3.0 percent during Büchner's time. In the early 1820s, the fact that urine composition in herbivores and omnivores differs was well known.⁵ The meaning of "hyperoxide" remains unclear. It is possible that Büchner meant hippuroxidul.

Studies testing the effects of certain diets were well established during Büchner's time. Organic chemist Justus Liebig (1803 to 1873) observed that urine of herbivorous animals contains hippuric acid, urea, and ammonium, but no uric acid.^{5,6} French physiologist Francois Magendie (1783 to 1855) performed experiments feeding dogs only boiled eggs in 1816. Magendie found that these dogs lost all their hair, just as *Woyzeck* did. Magendie also performed human studies without informed consent, giving hospital patients a diet solely of gelatin to test its nutritional value.⁶ These studies were later extended



to French army recruits. The gelatin diet was subsequently fortified with peas, perhaps to avoid hair loss. It is likely that Büchner based the human studies portrayed in *Woyzeck* on his knowledge of these actual experiments. In the play, the doctor fully expects adverse effects such as thinning hair and bizarre behavior from the unbalanced diet, and eagerly awaits them. It is likely that the diet contributes to Woyzeck's violent behavior.

Nazi medicine,

Woyzeck,

and the Nuremberg code

Nazi doctors committed inconceivable crimes.⁷ Can the human experiment carried out in *Woyzeck* be considered a literary forerunner to such crimes? Several similarities exist between the doctor in *Woyzeck* and Nazi physicians. *Woyzeck's* unnamed doctor voluntarily and knowingly risks the death of his subject. The fate of Woyzeck is irrelevant to the doctor; only the data matter to him. He treats his subject with a disdain similar to that shown to the subjects of the cruel medical experiments performed during the Third Reich.

The uncomfortable question arises: Is unethical (Nazi) science "bad" science from the standpoint of hypothesis testing? Some have argued that Nazi science cannot easily be dismissed as "bad" science. Germany was not a medical backwater performing charlatan studies. The frightening truth is that "good" science does not always correspond to "good" ethics. Nazi medicine, for example, was advanced in anticancer research, and the Third Reich supported a powerful antitobacco movement.⁸

The nutritional experiments performed on Woyzeck were also not mere quackery. Indeed, for the times, they were scientifically sound. The doctor in *Woyzeck* exhibits a profound knowledge of chemical body processes.⁵ In addition, Woyzeck was a formally paid volunteer, not a prisoner forced or "persuaded" to participate in the study. The experiment of *Woyzeck* and those conducted by Nazi doctors are by no means the same. But the unethical attitudes and behavior of the physicians are chillingly similar.

Büchner's play provides a fascinating mirror: The doctor is convinced that Woyzeck has no moral values or moral worth, and tries to teach Woyzeck moral fortitude (at least in terms of collecting a 24-hour urine specimen), while remaining blind to his own lack of moral values or moral worth. In this, he is not unlike German doctors who participated in Nazi war crimes, for example, the Dachau hypothermia experiments.⁹ Although, in contrast to the experiments portrayed in *Woyzeck*, those studies are considered to have been scientifically unsound, the moral depravity of the investigators is the same. Ironically,

the Nazis passed laws in 1933 for the protection of cruelty to animals that would surely satisfy the staunchest animal rights advocate today.⁸

Finally, the nameless doctor in *Woyzeck* can be considered a typical representative of an entire corrupted profession. The Nuremberg trial dealt with only 23 defendants; sixteen were found guilty and a few were hanged. However, historical evidence indicates that, with woefully few exceptions, the majority of German physicians supported the Nazi regime, and many were active SS members. Even more incomprehensible, Nazi experiments were supported by Germany's main science granting agency.¹⁰ The peer reviewers of these studies, who signed the documents to provide funding, were members of Germany's medical elite. They were never called to account.

The Nuremberg code was formulated in the aftermath of the Nazi crimes and the doctors' trial in the summer of 1947.¹¹ The first principle of this code is: "The voluntary consent of the human subject is absolutely essential."^{12p1436} The code was weakened by the Helsinki Declaration, which placed greater emphasis on the advancement of science.^{12,13} The World Medical Association has promulgated the Declaration of Helsinki since 1964. A tragic irony is that the leadership of the World Medical Association has, in fact, included physicians with direct links to the organizations responsible for the horrors that resulted in the formulation of the Nuremberg code. For example, Prof. Dr. Hans-Joachim Sewering, a former Nazi physician and SS member, was president-elect of that organization in 1992.¹² One important difference between the Nuremberg Code and the Helsinki Declaration is in how they deal with the problem of persons unable to give consent.¹⁴ The Nuremberg Code states that the person concerned must be able to give informed consent. In contrast, the 1964 Helsinki Declaration says that "if [the subject] is legally incompetent the consent of the legal guardian should be procured."^{14p376} Moreover, the 2000 version of the Declaration of Helsinki now allows nontherapeutic research under certain circumstances with persons incapable of giving consent.¹⁵ Another potential problem in the current Helsinki Declaration is the shifting of some decisions to local committees.¹⁶ Article 13 says: "This independent committee should be in conformity with the laws and regulations of the country in which the research experiment is performed."^{15p3044} However, because human rights and laws are different in various countries, clinical studies performed in developing countries may pose severe ethical problems if local laws alone are followed. Thus, the recent revision of the Declaration is best considered a "work in progress."¹⁷

Conclusion

The psychological and physical exploitation of a human being described in Büchner's *Woyzeck* is chilling reading even today. Particularly shocking are the human experiments performed by the reckless doctor and the interaction between this physician

and his human subject Woyzeck. Woyzeck is treated worse than an animal. The experiments are performed without informed consent and the moral attitude of the doctor bears similarities to the behavior of German doctors during the Nazi period. It has been suggested that moral lessons from such crimes must be repeatedly re-learned, particularly in a public health system with increasing bureaucracy, institutionalization, and dependence on government and political support.¹³ Literature such as *Woyzeck* may help us to teach and learn such lessons.¹⁸

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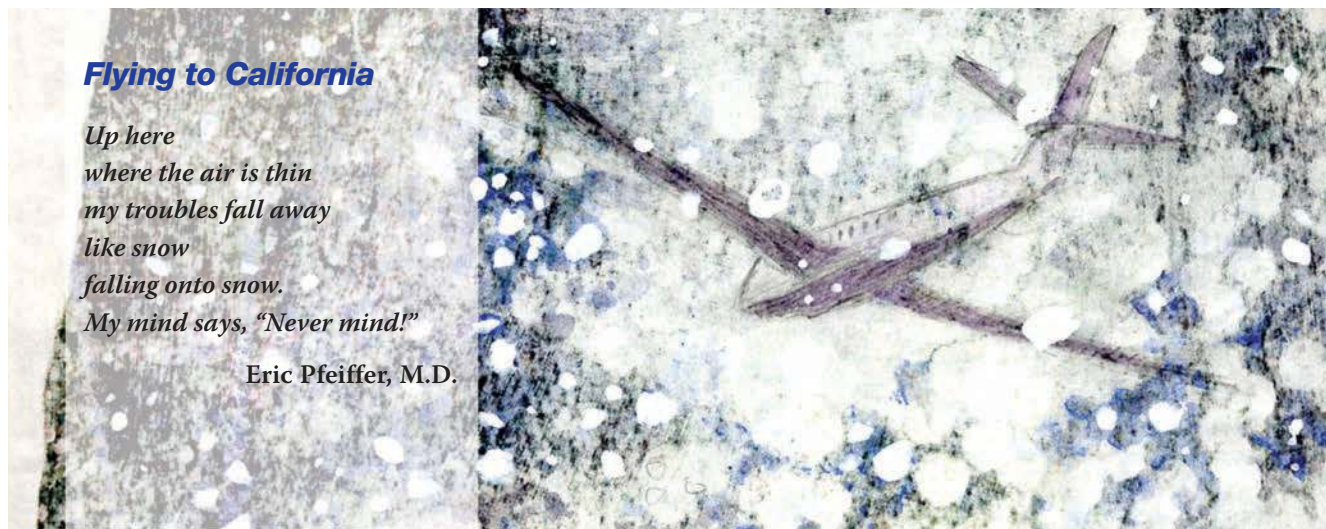
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Flying to California

*Up here
where the air is thin
my troubles fall away
like snow
falling onto snow.
My mind says, "Never mind!"*

Eric Pfeiffer, M.D.



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