

EXPERIMENTAL OBSTETRICS AND NATIONAL SOCIALISM: THE CONCEPTUAL BASIS OF REPRODUCTIVE TECHNOLOGY TODAY

HEIDRUN KAUPEN-HAAS

Universitaet Hamburg, Institut fuer Medizin-Soziologie,
Martinistrasse 52, 2000 Hamburg, 20, FRG

Synopsis—In this article I detail the way in which population control in Nazi Germany – to promote those “worthy of reproduction” and to eliminate those “unworthy of reproduction”—influenced the international research in genetic and reproductive technology. The research of Carl Clauberg in block 10 of the Auschwitz concentration camp and a hospital nearby is only one especially striking example of the research potential of Heinrich Himmler and the SS for the development of the “Institute for Research on Reproductive Biology.” The institutional links are shown between the experiments in biology, the so-called therapy-experiments, the mass experiments on healthy women in the concentration camp of Auschwitz and the international postwar research.

Synopsis — Im folgenden Aufsatz zeige ich auf wie die nazistische Bevölkerungspolitik mit den beiden Seiten “fortpflanzungswürdiges” Leben zu fördern und “fortpflanzungsunwürdiges” Leben zu eliminieren die internationale Gen- und Reproduktions-Forschung beeinflusst hat. Die For-schung von Carl Clauberg im Block 10 des Konzentrationslagers Auschwitz und in einem Krankenhaus in der Nähe von Auschwitz ist nur ein besonders spektakuläres Beispiel für das Forschungspotential über das Heinrich Himmler und die SS verfügte und das auf die Errichtung eines ‘Reichsforschungsinstitut für Fortpflanzungsbiologie’ zielte. Die institutionellen Klammern zwischen Experimente in der Biologie, sog. Therapie-Experimenten, Massenexperimenten an ge-sunden Frauen im Konzentrationslager Auschwitz und der internationalen Nachkriegsforschung werden aufgezeigt.

Modern genetic and reproductive technology is described as a “dramatic biological revolution” (Corea, 1986: 9). It is generally looked upon as something new and in a positive way, and it is generously endowed with public money. As the most popular example of the “positive” application of this technology, the ‘infertile woman’ is cited as one who can be helped by reproductive technology to have her wish for a child fulfilled.

This view, however, is not only one sided but also misleading, as only few women do have a baby at the end of a procedure in which they serve as human guinea pigs. Genetic and reproductive technology, however, has a long-standing political, scientific, and practical past. Its present dimensions were already shaped in the Third Reich. The application of Nazi research in the scientific department in block 10 at Auschwitz concentration camp and in two hospitals near Auschwitz had two functions (Sehn, 1959: 67):

1. To promote those “worthy of reproduction” and
2. To eliminate those “unworthy of reproduction”

It is thus important to emphasize that the extermination of “unworthy” forms of life and the promotion of desired forms of life are by themselves inseparable parts of this technology.

In 1942, when World War II was raging, plans were finalized for radicalizing Nazi obstetrics. Alternatives were the “treatment of infertile women suitable for procreation,” and the sterilization of “women unworthy of or unsuitable for reproduction.” The aim of this was genocide, as has been documented as “The Medical Case” in the Proceedings from the Nuremberg trial of the Military Tribunal in 1947 (Mitscherlich and Mielke, 1978: 237–248, 290) and from the Kiel trial on Carl Clauberg of the German Prosecution in 1955 (Sehn, 1959: 3–31). According to the Nazi population planners the war was

costing too much human life on the “German” side and too little on the side of the Jews, gypsies, Poles, and Russians. Before the war a promotion of those worthy for reproduction could not be achieved either by family planning or by plans to promote extramarital or paramarital fertility. The promotion of bigamy and extramarital fertility by the SS organization “Lebensborn” did not have the expected success, as women’s organizations as well as the Wehrmacht opposed it (Kaupen-Haas, 1986: 107, 111).

More effective means were sought out. Women, the target group for Nazi obstetrics were, like animals, subjected to the alternatives of selective breeding, sterilization, castration, or the slaughterhouse. Anticipating modern trends in animal and human breeding, the production of human life was shifted more and more into the laboratory. This both intensified and obscured experimentation. The resulting theory and practise from the laboratories of genetic, brain, and hormone researchers became the “new” obstetrics (Corea, 1986: 10). Today, these are known as genetic and reproductive technology. In clinical medicine, too, there were impulses to modernize obstetrics with experimental methods. By means of animal and so-called therapeutic experiments with infertile and fertile rabbits and women, results were achieved in the treatment of fertilization. The plans of the international elite of geneticists were concentrated on eradicating the — as they saw it — rapidly increasing morbid hereditary dispositions of the majority of populations, and on preserving and improving the “good heredity” of the elite. The high status of international research in the field of genetics helped to structure the Nazi concepts of how to deal with human breeding (i.e., artificial insemination, the female hormone cycle, and sperm banks (see in particular Roth, 1986: 41–43)).

1. Attempts to extend the “old” obstetrics: Experiments under the cloak of therapy

At the turn of the century, with the discovery of radium in physics and its

application in research and in medicine, a dual character of these “successes” began to emerge. The discovery of radium earned Marie Curie-Sklodowska not only the Nobel prize for physics (1903 together with Pierre Curie) and for chemistry (1911), but also brought her mutilated hands from radium burns, and, in 1934, a premature death as a result of the persistent effect of radiation on her spinal marrow. Marie Curie-Sklodowska also voluntarily exposed herself to X-rays in World War I when with mobile teams she organized and helped to operate on a massive scale X-ray machines in French field hospitals (Curie, 1937: 161, 169, 230, 312).

In the first two decades of this century, X-ray and radium treatment was also offered in German clinics without any significant protection for staff or patients. The intention was to cure infertile women and those suffering from cancer. The result, however, was often temporary or permanent sterilization through the application of X-rays or radium. The somatic and genetic damage caused to women led to the development of new clinical fields. But not only protection from radiation was the aim of those new research areas. Many possibilities were seriously considered including the definitive sterilization of women by radiation as a genetic prophylaxis.¹

Another field of experimentation was opened for clinical medicine through the introduction of the Law of July 1, 1933 on the Prevention of Hereditarily-ill Progeny. In particular, the inmates of institutions, but also so-called hereditarily ill people outside institutions with such diagnoses as severe alcoholism, congenital (or moral) feeble-mindedness, schizophrenia, manic depression, epilepsy, Huntington’s chorea, hereditary blindness, and hereditary deafness were sought out for compulsory sterilization. According to contemporary estimates, 1 to 5 percent of those operated on died as a result of the operation (Schmacke and Guese, 1984: 122–124). And under the cloak of “radiation treatment,” radium sterilization and X-ray castration were legally introduced for

women unable to undergo surgical sterilization (see also Kaupen-Haas, 1986: 46). Such applied medicine, including compulsory sterilizations, castrations, and abortions within the framework of sterilization law, were financed primarily through health insurance schemes and welfare organizations.²

2. International biology and extermination prophylaxis

Reflected in the title *Brave New Man. The Change of Paradigms of Classical Genetics and its Effects on the Population Biology in the "Third Reich"* (1986), Karl Heinz Roth points out the influence of research of genetics on human breeding and its contribution to the acceleration of the Nazi policy of the extermination of unworthy life. The so-called catastrophe theory about the morbid hereditary dispositions of the majority of the population ("genetic burden") was coolly deduced from experiments as genetic truth, when in fact it was but an artificial product from the fruit-fly laboratory. Such generalizations are a problem not only from a moral but also from a theoretical and methodological point of view:

- As a generalization from experiments on flies and laboratory experiments to the generative behavior of human beings

- On account of its theoretical foundation, which is a reductionist scientific approach: a physical model (the theory of inorganic matter) is transferred to human beings

- As a statement on the spread of mutations based on inbreeding experiments on flies, which does not correspond to human generative behavior. As human generative behavior is characterized by exogamy, according to the theory of the manifestation of recessive hereditary characteristics in succession of generations, such results can be dismissed as artefact (Roth, 1986: 11–15).

The Genetics Department at the Kaiser Wilhelm-Institute for Brain Research in Berlin was at the forefront of basic gene research in the area of breeding and

selection. It is revealing that the Emergency Organisation of German Science (Notgemeinschaft der Deutschen Wissenschaft) – today the German Research Foundation (Deutsche Forschungsgemeinschaft) – the Rockefeller and Carnegie Foundation as well as German industry supported the Institute (Roth, 1986: 28). On the question of collaboration between researchers in the areas of hormone, brain, and gene research with respect to the development of modern molecular neurobiology and gene and reproductive technology, we are faced with the problem of huge gaps in knowledge, especially concerning the theoretical distinctions between basic and applied science, between population control, warfare, and profit making and between Nazi and modern international science. *We do know, however, that the scientific basis of modern gene and reproductive technology was firmly established in the Third Reich.* Biologists were united under the huge institutional roof of the respectable Kaiser Wilhelm-Society (besides some university institutes), which were supported by the Emergency Organization of German Science (since 1936 especially warfare research), the Rockefeller Foundation in New York, and German industrial companies.

A famous example is the efficient cooperation in sex hormone research between the chemist Adolf Butenandt and the pharmaceutical companies Schering-Kahlbaum AG. In 1928, Adolf Butenandt succeeded in synthesizing the follicle hormone together with a team of the Schering-Kahlbaum AG, which was the beginning of continued research collaboration over the 1930s and 1940s and the prerequisite for worldwide delivery transactions of Progynon and Prolutin of that company before World War II (Butenandt, 1929, 1936).³ Butenandt was also financed by the Emergency Organization of German Science (1931–1944) and the Rockefeller Foundation (1934–1936), which opened career opportunities in the United States

(e.g., an offer from Harvard University for a post of \$8000 a year) as well as in Nazi Germany. He preferred to pursue his career in Germany. In 1936, he became director of the Kaiser Wilhelm-Institute of Biochemistry in Berlin with excellent research conditions. One year after his appointment in Berlin he was seen by his former American sponsors as increasingly involved as a Nazi “(getting to be a red-hot Nazi).”⁵

In 1939, Butenandt was offered the Nobel prize for his studies of sex hormones.⁶ Butenandt declined this award, abiding to Hitler’s decree forbidding Germans to accept Nobel prizes.

3. Attempts to rationalize obstetrics and establish genetic and reproductive technology: Scientific experiments

Genetic and reproductive policies administered in National Socialist Germany were not original to the Nazis; the ideas were widespread in the international scientific community including England and the United States (Roth, 1986: 41; Wess, 1988). In 1942, the Leader of Third Reich Doctors (Reichsaerztfuehrer), Leonardo Conti, suggested to the SS Leader Heinrich Himmler to introduce artificial insemination for “high quality” unmarried women, as well as making unmarried motherhood and polygamy legitimate. This venture was viewed sceptically at that time as former birth and family policy had been declared failures. Himmler considered the feasibility of enforcing artificial insemination an “extremely hot iron.” However, in 1942, as a precaution, a “Reich Working Group for Help to the Childless in Marriage” was set up with the aim to treat sterility in “worthy” marriages. This Working Group promoted artificial insemination when hormone therapies (for men and women) and uterotubal insufflation had failed. They guaranteed genetically “high value” sperm from anonymous donors of flawless origin. At the same time, intensive research on artificial insemination took

place. Experiments were carried out on women to investigate the female hormonal cycle in order to be able to determine the optimum insemination time. A secret “Working Group for Active Population Policy” with the Reich Health Leader had since 1942/43 been engaged in a project to make unmarried middle- and upper-class women useful for the “reproductive economy of the nation” (Roth, 1986: 41–43).

Carl Clauberg, a gynecologist, played a spectacular role in modernizing SS birth control. Clauberg is a national and international well-known neuroendocrinologist. His articles on experimental hormone research were published in the main German gynecological journal (1929–1940). He is represented in the Library of Congress in Washington with two books on neuroendocrinology experiments, especially with animals, which he published in 1933 and 1937. He also published on obstetrics. Clauberg is reputed to be an expert who developed a test to diagnose pregnancy at an early stage. He published important articles on infertility or so-called women’s diseases, especially on “follicle hormone cures” and on uterotubal insufflations, which he completed with a hysterosalpinogram in order to check the treatments’ success and to achieve the “blowing up of residual adhesions by pressure with the contrast fluid.”⁷ Wartime gave him the chance to give up the limited experimentations with patients and to start with mass experiments with women.

In 1942, Clauberg suggested to the SS Reich leader Heinrich Himmler the establishment of an “Institute for Research on Reproductive Biology.” In addition to an animal experimentation station he proposed to set up two departments, one for the treatment of infertile women desirable for reproduction, and clinical advanced research on previous apparently hopeless cases of infertility, the other to perform sterilizations on women in an ambulant nonsurgical way. First, women not worthy of reproduction or not

desirable for reproduction were to be used to test the operationless method; later, he suggested it would become routine (Sehn, 1959: 67).

During wartime, these three departments were not all set up under one roof. The installation of a program for “Women for sterilization in an ambulant, nonsurgical way” – life-endangering experiments – took place in the Auschwitz and Ravensbrueck concentration camps with young and healthy women: 100 from Greece, 110 from Belgium, 65 from Berlin, 70 from France, and 40 from Holland. Horst Schumann, formerly the medical director of an euthanasia institution and consultant in the Nazi extermination program, and Clauberg competed in block 10 at the Auschwitz concentration camp in the development of the most efficient sterilization methods. The SS provided men and women as “material” for these experiments, which made genocide more efficient. The drug company Schering-Kahlbaum AG supplied Clauberg not only with the X-ray contrast meal to check the results of sterilization but also with a chemist, Dr. Goebel, who helped to realize the sterilization programme technically and practically. Women were subjected to the torture of the experiment, were mutilated, died from the medical interventions and the lack of hygiene, or were gassed (Mitscherlich and Mielke, 1978: 23, 237–48; Roth, 1981:50).

Clauberg got the animal experimentation station and also found the opportunity he desired for “the treatment of infertile women suitable for reproduction.” He studied apparently hopeless cases of infertility in two gynecological clinics near Auschwitz, in which he was director since 1940. In 1944 he reemerged as the medical director of a maternity and convalescent home of the National Socialist Welfare Service (NSV)– called the “City of Mothers”–with a capacity for 800 mothers and 200 small children (Sehn, 1959: 14).

4. The problem of the continuity of

experimental obstetrics

Clauberg was imprisoned in the Soviet Union between 1945 and 1955. After his return to Germany, he tried to continue his reproductive medicine programme. As “former director of Reich Institute for Research on Reproductive Biology” he started to put into action Himmler’s postwar policy at the University Hospital in Kiel by recruiting new personnel. He was stopped. Preliminary proceedings were started by the prosecution of Kiel. He was arrested in 1955. His colleagues, who had given him the opportunity to reorganize, dropped him as a consequence of national and international publicity accorded to the Clauberg trial and the pressure of Jewish organizations.⁸ Clauberg died as prisoner awaiting trial. But this is only one side of the Clauberg case.

Clauberg’s research on the metabolism of progesterone (Clauberg *et al.*, 1933: 61–81) was seriously discussed in the postwar reception of international hormone research (see Pearlman, 1948). As though nothing had happened, Hans-Joachim Lindemann, director of the Elisabeth clinic in Hamburg, continued sterilization experiments with the Clauberg technique of coagulating the fallopian tubes, and discussed his results (which were specifically aimed at women in the Third World) with his national and international scientific peer group (Lindemann, 1974; Rimkus and Semm, 1974). Kurt Semm, director of the Gynaecological Clinic at the University Hospital in Kiel, competed internationally with Lindemann in the development of the most efficient sterilization method. As though nothing had happened, Kurt Semm represents not only the “negative” side of birth control, he and his colleague Liselotte Mettler tried to improve also the techniques to bring infertile women to fertility (“positive” birth control, Roth, 1981: 43–60. Today, both are involved in the IVF program at Kiel (Hafez and Semm, eds. 1982; Mettler *et al.*, 1982).

The story of gene and reproductive technology proves that there is no such

thing as a “positive” and a “negative” side to that technique. Rather, this highly financed technology in its totality is an extraordinarily dangerous enterprise for women as the target group for both sides of birth policy, especially for women “unworthy of reproduction.”

ENDNOTES

1. See in particular Hans Luxemburger (1932:685–688) and C. J. Gauss (1933:150). Other recommendations were (a) to institutionalize “Archives for genetically damaged girls and women” as an efficient prerequisite for sterilization (Luxemburger, 1932: 685–688), (b) to prohibit marriages (Lahm, 1930:397–401), (c) to intensify prenatal care (Wagner, 1933/34: 401–403); and (d) to reduce radiation (Martius, 1926: 248ff and *ibid.* 1931:55ff)

2. See the decision to enact a law to prevent hereditary-ill progeny in Koerner, 1936: 1,12gl.

3. See Commandement en Chef Français en Allemagne. Groupe Français du Conseil de Contrôle. Délégation Economic et Financière. Division des Finances. Section des Investigations Financières. Etudes sur les Avoirs à l’Etranger de Schering AG, Berlin, Berlin 1, 48. In National Record Center, Suitland, Maryland, RG 86, Box 390.

4. See 10. Bericht der Notgemeinschaft der Deutschen Wissenschaft (Deutsche Forschungsgemeinschaft). Berlin 1931:38; Bundesarchiv Koblenz (BAK.DFG-Personalakt (R73). Adolf Butenandt (10568ff)

5. From the Fellowship Report of T. R. Hogness, University of Chicago, August 16, 1937. In Rockefeller Archive Center (RAC), 700D, 1.1. (Natural Sciences), Box 21, Project of Danzig Technical High School, Chemistry (Butenandt) 1932–1939.

6. Excerpt from *Trustee Confidential Bulletin*. December 1939. Nobel Laureates. In RAC. 700D, 1.1. Box 21.

7. See References for the long list of Clauberg’s (etal.) publications.

8. Ermittlungen der Staatsanwaltschaft Kiel gegen Carl Clauberg wegen Verdachts der schweren Koerpverletzung im Amt (2 JS 3484/55).

REFERENCES

Butenandt, Adolf. 1929. Ueber “Progynon” ein kristallisiertes weibliches Sexualhormon. *Die Naturwissenschaften* **17**:87.

Butenandt, Adolf. 1936. Ergebnisse in der biologischen Erforschung der Keimdruesenhormone. *Die Natur-*

wissenschaften **24**:534.

Clauberg, Carl and Koetter, Herbert. 1929. Das klinische und anatomische Bild der genitalbedingten Sepsis. *Archiv fuer Gynaekologie* **138**:469–493.

Clauberg, Carl. 1930. Das Hormon des Corpus luteum. *Zentralblatt fuer Gynaekologie* **54**: 7-19.

Clauberg, Carl. 1930/1931. Zur Physiologie und Pathologie der Sexualhormone, im besonderen des Hormons des Corpus luteum. *Zentralblatt fuer Gynaekologie* **54**: 2757–2770; **55**: 45–70.

Clauberg, Carl, Koetter, Herbert, Thiel, H. W., and Zicker, R. 1933. Untersuchungen zum Nachweis des Luteohormons (des spezifischen Hormons des Corpus luteum) in menschlichen Geweben und Koerperfluessigkeiten. *Archiv fuer Gynaekologie* **152**: 61–81.

Clauberg, Carl. 1933. *Die weiblichen Sexualhormone in ihren Beziehungen zum Genitalzyklus und zum Hypophysenvorderlappen*. J. Springer Verlag, Berlin (listed in the Library of Congress (LC) no. QP 261.06).

Clauberg, Carl. 1933. Akute “Vorderlappen” Hormonwirkung am Ovar und deren diagnostische und therapeutische Ausnutzung. *Deutsche medizinische Wochenschrift* (Wochenschrift) **1**: 525ff.

Clauberg, Carl. 1934. Die biologische Fruehdiagnose der Schwangerschaft. *Berichte ueber die gesamte Gynaekologie und Geburtshilfe sowie deren Grenzgebiete* **25**: 177–272.

Clauberg, Carl. 1935. Grundlagen fuer die moderne Therapie mit weiblichen Sexualhormonen. *Med. Welt*: 44–51; 367–370.

Clauberg, Carl. 1936. Kuenstlich erzeugtes Tubenwachstum, ein Mittel zur Behandlung des Eileiterverschlusses. *Archiv fuer Gynaekologie* **161**: 140–143.

Clauberg, Carl. 1936. Experimentelle Untersuchung zur hormonalbedingter Sterilitaet. *Zeitschrift fuer Geburtshilfe und Gynaekologie* **112**: 4–23.

Clauberg, Carl. 1937. Zur Technik der Loesung hochgeschlagener Arme. *Zentralblatt fuer Gynaekologie* **34**:134–138.

Clauberg, Carl. 1937. *Innere Sekretion der Ovarien und der Placenta*. J.A. Barth, Leipzig (listed in the LC no. QP 261.055).

- Clauberg, Carl. 1938. Der Eintritt der Geburt als hormonales Problem. *Zeitschrift fuer Geburtshilfe und Gynaekologie* **116**: 430–486 (Forschungsprojekt der DFG).
- Clauberg, Carl. 1939. “Verante” Geburtsmechanismen. Ihre Korrektur durch retrograde Konstruktion eines neuen Geburtsmechanismus. *Zentralblatt fuer Gynaekologie* **20**: 1132–1142.
- Clauberg, Carl. 1940. Die Behandlung der chronischen Eileiterentzündung unter besonderer Berücksichtigung der Anwendung des Follikelhormons. *Berichte ueber die gesamte Gynaekologie und Geburtshilfe sowie deren Grenzgebiete* **40**: 43–44.
- Corea, Gena. 1986. *Mutter Maschine, Reproduktionstechnologie, Von der kuenstlichen Befruchtung zur kuenstlichen Gebaermutter*. Rotbuch, Berlin.
- Curie, Eve. 1985. *Madame Curie*. Fischer, Frankfurt (originally published in 1937).
- Gauss, C. J. 1933. Gegenwaertiger Stand der Roentgenbehandlung der gutartigen Frauenleiden. *Strahlentherapie* **47**: 150.
- Hafez, A. E. S. and Semm, Kurt, eds. 1982. *In Vitro Fertilization and Embryo Transfer*. Alan R. Liss, New York.
- Kaupen-Haas, Heidrun. 1986. Der Sachverstaendigenbeirat fuer Bevoelkerungs- und Rassenpolitik. In Kaupen-Haas, Heidrun, ed., *Der Griff nach der Bevoelkerungs Aktualitaet und Kontinuitaet nazistischer Bevoelkerungspolitik*. Greno, Noerdlingen.
- Kaupen-Haas, Heidrun, ed. 1986. *Der Griff nach der Bevoelkerung. Aktualitaet und Kontinuitaet nazistischer Bevoelkerungspolitik*. Greno, Noerdlingen.
- Koerner, Johannes. 1936. *Deutsches Arztrecht. Sammlung von Gesetzen, Verordnungen und Entscheid-ungen*. Gruener Verlag, Berlin: 1,12gl.
- Lahm, B. 1930. Die aertzliche Fortbildung auf dem Gebiete der Krebsbekaempfung. *Strahlentherapie* **37**: 397–401.
- Lindemann, Hans-Joachim. 1974. Transuterine Tubal Sterilization by CO₂ Hysteroscopy. In Sciarra, John J., Butler, Julius, and Speidel, Joseph J., eds., *Hysteroscopic Sterilization*. Intercontinental Medical Book Corporation, New York and London.
- Luxemburger, Hans. 1932. Temporaere Strahlenamenorrhoe und menschliche Erbforschung. *Strahlentherapie* **45**: 685–688.
- Martius, Heinrich. 1926. Die sogenannte Reizbestrahlung in der Gynaekologie. *Strahlentherapie* **41**: 248ff.
- Martius, Heinrich. 1931. Keimschaedigung durch Roentgenbestrahlung. *Strahlentherapie* **41**: 55ff.
- Mettler, Liselotte, Baukloh, V., and Riedel H.-H. 1982. Immunological and Other Problems with Human Spermatozoa. In Edwards, R. G. and Purdy, Jean M., eds., *Human Conception in Vitro*. Academic Press, London and New York.
- Mitscherlich, Alexander and Mielke, Fred, eds., 1978. *Medizin ohne Menschlichkeit, Dokumente des Nuernberger Aertzeprozesses*. Fischer, Frankfurt (originally published in 1948).
- Pearlman, William H. 1948. The Chemistry and Metabolism of Chemistry of Progesterone. In Pincus, Gregory and Thieman, Kenneth V., eds. *The Hormones. Physiology, Chemistry and Applications*. Academic Press, New York.
- Rimkus, V. and Semm, Kurt. 1974. Sterilization by Carbon Dioxide Hysteroscopy. In Sciarra, John J., Butler, Julius, and Speidel, Joseph J., eds. *Hysteroscopic Sterilization*. Intercontinental Medical Book Corporation, New York and London.
- Roth, Karl Heinz. 1981. Als ob nichts gewesen waere. Die Frauenaerzte Hans-Joachim Lindemann und Carl Clauberg, Ein Beitrag zur Geschichte der Zwangssterilisierung von Frauen seit der NS-Zeit. In *Autonomie* **7**: 43–60.
- Roth, Karl Heinz. 1986. Schoener neuer Mensch. Der Paradigmenwechsel der klassischen Genetik und seine Auswirkungen auf die Bevoelkerungsbiologie des “Dritten Reichs.” In Kaupen-Haas, Heidrun, ed., *Der Griff nach der Bevoelkerung. Aktualitaet und Kontinuitaet nazistischer Bevoelkerungspolitik*. Greno, Noerdlingen.
- Schmacke, Norbert and Guese, Hans-Georg. 1984. *Zwangssterilisiert, Verleugnet, Vergessen. Zur Geschichte der nationalsozialistischen Rassenhygiene am Beispiel Bremen*. Brockkamp, Bremen.
- Sehn, Jan. 1959. Claubergs verbrecherische Unfrucht-barmachungsversuche an Haeftlings-Frauen in den Nazi Konzentrationslagern. In *Hefte von Auschwitz* **2**: 1–89.
- Wagner, G. A. 1933/34. Die Funktion und die Funktionsstoerung des Ovariums und ihre

- Bedeutung fuer die Volksgesundheit. *Archiv fuer soziale Hygiene und Demographie* **8**: 401–403.
- Wess, Ludger, ed. 1988. *Die Traeume der Genetik, Gentechnische Utopien zur Verbesserung der Menschheit*. Greno, Noerdlingen.
- Westphal, U. and Buxton C. L. 1933. Failure to Recover. *Proc. Society for Experimental Biology and Medicine* **42**: 74g.