men back to the USPHS if they sought care. The USPHS warned the Alabama Health Department not to treat the test subjects when they took a mobile VD unit into Tuskegee in the early 1940s. In 1941, the army drafted several subjects and told them to begin antisiphilitic treatment immediately. The USPHS supplied the draft board with a list of 256 names they desired to have excluded from treatment, and the board complied.

In spite of these efforts, by the early 1950s many of the men had secured some treatment on their own. By 1952, almost 30 percent of the test subjects had received some penicillin, although only 7.5 percent had received what could be considered adequate doses. Vonderlehr wrote to one of the participating physicians, “I hope that the availability of antibiotics has not interfered too much with this project.” A report published in 1955 considered whether the treatment that some of the men had obtained had “defeated” the study. The article attempted to explain the relatively low exposure to penicillin in an age of antibiotics, suggesting as a reason: “the stoicism of these men as a group; they still regard hospitals and medicines with suspicion and prefer an occasional dose of time-honored herbs or tonics to modern drugs.” The authors failed to note that the men believed they already were under the care of the government doctors and thus saw no need to seek treatment elsewhere. Any treatment which the men might have received, concluded the report, had been insufficient to compromise the experiment.

When the USPHS evaluated the status of the study in the 1960s they continued to rationalize the racial aspects of the experiment. For example, the minutes of a 1965 meeting at the Center for Disease Control recorded:

Racial issue was mentioned briefly. Will not affect the study. Any questions can be handled by saying these people were at the point that therapy would no longer help them. They are getting better medical care than they would under any other circumstance.

A group of physicians met again at the CDC in 1969 to decide whether or not to terminate the study. Although one doctor argued that the study should be stopped and the men treated, the consensus was to continue. Dr. J. Lawton Smith remarked, “You will never have another study like this; take advantage of it.” A memo prepared by Dr. James B. Lucas, assistant chief of the Venereal Disease Branch stated: “Nothing learned will prevent, find, or cure a single case of infectious syphilis or bring us closer to our basic mission of controlling venereal disease in the United States.” He concluded, however, that the study should be continued “along its present lines.” When the first accounts of the experiment appeared in the national press in July 1972, data were still being collected and autopsies performed.

THE HEW FINAL REPORT

HEW finally formed the Tuskegee Syphilis Study Ad Hoc Advisory Panel on August 28, 1972, in response to criticism that the press descriptions of the experiment had triggered. The panel, composed of nine members, five of them black, concentrated on two issues. First, was the study justified in 1932 and had the men given their informed consent? Second, should penicillin have been provided when it became available in the early 1950s? The panel was also charged with determining if the study should be terminated and assessing current policies regarding experimentation with human subjects. The group issued their report in June 1973.

By focusing on the issues of penicillin therapy and informed consent, the Final Report and the investigation betrayed a basic misunderstanding of the experiment’s purposes and design. The HEW report implied that the failure to provide penicillin constituted the study’s major ethical misjudgment; implicit was the assumption that no adequate therapy existed prior to penicillin. Nonetheless medical authorities firmly believed in the efficacy of arsenotherapy for treating syphilis at the time of the experiment’s inception in 1932. The panel further failed to recognize that the entire study had been predicated on nontreatment. Provision of effective medication would have violated the rationale of the experiment—to study the natural course of the disease until death. On several occasions, in fact, the USPHS had prevented the men from receiving proper treatment. Indeed, there is no evidence that the USPHS ever considered providing penicillin.

The other focus of the Final Report—informed consent—also served to obscure the historical facts
of the experiment. In light of the deceptions and exploitations which the experiment perpetrated, it is an understatement to declare, as the Report did, that the experiment was "ethically unjustified," because it failed to obtain informed consent from the subjects. The Final Report's statement, "Submitting voluntarily is not informed consent," indicated that the panel believed that the men did not submit voluntarily to an experiment; they were told and they believed that they were getting free treatment from expert government doctors for a serious disease. The failure of the HEW Final Report to expose this critical fact — that the USPHS lied to the subjects — calls into question the thoroughness and credibility of their investigation.

Failure to place the study in a historical context also made it impossible for the investigation to deal with the essentially racist nature of the experiment. The panel treated the study as an aberration, well intentioned but misguided. Moreover, concern that the Final Report might be viewed as a critique of human experimentation in general seems to have severely limited the scope of the inquiry. The Final Report is quick to remind the reader on two occasions: "The position of the Panel must not be construed to be a general repudiation of scientific research with human subjects." The Report assures us that a better designed experiment could have been justified:

It is possible that a scientific study in 1932 of untreated syphilis, properly conceived with a clear protocol and conducted with suitable subjects who fully understood the implications of their involvement, might have been justified in the prepenicillin era. This is especially true when one considers the uncertain nature of the results of treatment of late latent syphilis and the highly toxic nature of therapeutic agents then available. This statement is questionable in view of the proven dangers of untreated syphilis known in 1932. Since the publication of the HEW Final Report, a defense of the Tuskegee Study has emerged. These arguments, most clearly articulated by Dr. R. H. Kampmeier in the Southern Medical Journal center on the limited knowledge of effective therapy for latent syphilis when the experiment began. Kampmeier argues that by 1950, penicillin would have been of no value for these men. Other have suggested that the men were fortunate to have been spared the highly toxic treatments of the earlier period. Moreover, even these contemporary defenses assume that the men never would have been treated anyway. As Dr. Charles Barnett of Stanford University wrote in 1974, "The lack of treatment was an established advantage of the study."

Claude Bernard on Human Experimentation (1865)

Experiments, then, may be performed on man, but within what limits? It is our duty and our right to perform an experiment on man whenever it can save his life, cure him or gain him some personal benefit. The principle of medical and surgical morality, therefore, consists in never performing on man an experiment which might be harmful to him to any extent, even though the result might be highly advantageous to science, i.e., to the health of others. But performing experiments and operations exclusively from the point of view of the patient's own advantage does not prevent their turning out profitably to science. . . . For we must not deceive ourselves, morals do not forbid making experiments on one's neighbor or on one's self. Christian morals forbid only one thing, doing ill to one's neighbor. So, among the experiments that may be tried on man, those that can only harm are forbidden, those that are innocent are permissible, and those that may do good are obligatory. Claude Bernard, An Introduction to the Study of Experimental Medicine (1865). Trans. Henry C. Green (New York: Dover Publications, 1957).

From the HEW Final Report (1973)

1. In retrospect, the Public Health Service Study of Untreated Syphilis in the Male Negro in Mason County, Alabama, was ethically unjustified in 1932. The judgment made in 1973 about the conduct of the study in 1932 is made with the advantage of hindsight and sharpened over some forty years, concerning activity in a different age with different social standards. Nevertheless, one fundamental ethical rule is that a person should not be subjected to avoidable pain or physical harm unless he freely and intelligently gives his consent. There is no evidence that such consent was obtained from the participants in this study.

2. Because of the paucity of information and the lack of knowledge in a given day on the manner in which the study was conceived and conducted, a scientific justification of a short term demonstration study cannot be ruled out. However, the conduct of the longitudinal study, partially reported in 1936 and through the years, was not to be scientifically unsound and its results were proportionately stronger compared with known human subjects involved . . .
ment was not contrived by the USPHS but was an established fact of which they proposed to take advantage. Several doctors who participated in the study continued to justify the experiment. Dr. J. R. Heller, who on one occasion had referred to the test subjects as the "Ethiopian population," told reporters in 1972:

I don't see why they should be shocked or horrified. There was no racial side to this. It just happened to be in a black community. I feel this was a perfectly straightforward study, perfectly ethical, with controls. Part of our mission as physicians is to find out what happens to individuals with disease and without disease.87

These apologies, as well as the HEW Final Report, ignore many of the essential ethical issues which the study poses. The Tuskegee Study reveals the persistence of beliefs within the medical profession about the nature of blacks, sex, and disease — beliefs that had tragic repercussions long after their alleged "scientific" bases were known to be incorrect. Most strikingly, the entire health of a community was jeopardized by leaving a communicable disease untreated.88 There can be little doubt that the Tuskegee researchers regarded their subjects as less than human.89 As a result, the ethical canons of experimenting on human subjects were completely disregarded.

The study also raises significant questions about professional self-regulation and scientific bureaucracy. Once the USPHS decided to extend the experiment in the summer of 1933, it was unlikely that the test would be halted short of the men's deaths. The experiment was widely reported for 40 years without evoking any significant protest within the medical community. Nor did any bureaucratic mechanism exist within the government for the periodic reassessment of the Tuskegee experiment's ethics and scientific value. The USPHS sent physicians to Tuskegee every several years to check on the study's progress, but never subjected the morality or usefulness of the experiment to serious scrutiny. Only the press accounts of 1972 finally punctured the continued rationalizations of the USPHS and brought the study to an end. Even the HEW investigation was compromised by fear that it would be considered a threat to future human experimentation.

In retrospect the Tuskegee Study revealed more about the pathology of racism than it did about the pathology of syphilis; more about the nature of scientific inquiry than the nature of the disease process. The injustice committed by the experiment went well beyond the facts outlined in the press and the HEW Final Report. The degree of deception and damages have been seriously underestimated. As this history of the study suggests, the notion that science is a value-free discipline must be rejected. The need for greater vigilance in assessing the specific ways in which social values and attitudes affect professional behavior is clearly indicated.90

NOTES


12 "Castration instead of lynching," Atlanta J. Rec. Med., Oct. 1906, 8: 457. The editorial added: "The badge of disgrace and emasculation might be branded upon the face or forehead, as a warning, in the form of an 'R,' emblematic of the crime for which this punishment was and will be inflicted."


15 Even among the educated, only a very few will carry out the most elementary instructions as to personal hygiene. One thing you cannot do, and that is to convince the negro that he has a disease that he cannot see or feel. This is due to lack of concentration rather than lack of faith; even if he does believe, he does not care; a child of fancy, the sensations of the passing hour are his only guides to the future." Murrell, "Syphilis in the American Negro," p. 847.


18 "The anatomical and physiological conditions of the African must be understood, his place in the anthropoligical scale realized, and his biological basis accepted as being unchangeable by man, before we shall be able to govern his natural uncontrollable sexual passions." See, "As ye sow that shall ye also reap," Atlanta J. Rec. Med., June 1899, 1: 266.

19 Taliaferro Clark, The Control of Syphilis in Southern Rural Areas (Chicago: Julius Rosenwald Fund, 1932), pp. 53-58. Approximately 35 percent of the inhabitants of Macon County who were examined were found to be syphilitic.


21 Taliaferro Clark to M. M. Davis, Oct. 29, 1932, Records of the USPHS Venereal Disease Division, Record Group 90, Box 259, National Archives, Washington National Record Center, Suitland, Maryland. (Hereafter, NA-WNRC). Material in this collection which relate to the early history of the study were apparently never consulted by HEW investigators. Included are letters, reports, and memoranda written by physicians engaged in the study.

22 H. S. Cumming to R. R. Moton, Sept. 20, 1932, NA-WNRC.

23 Clark to Davis, Oct. 29, 1932, NA-WNRC.

24 Cummimg to Moton, Sept. 20, 1932, NA-WNRC.

25 Brueggaard was able to locate 309 living patients as well as records from 164 who were deceased. His findings were published as "Ueber das Schicksal nicht spezifisch behandelten Luetiken," Annales Dermatologie & Syphilis, 1929, 157: 309-312. The discussion of the Boeck-Bruengaard data is in E. Robert Moore and Niels Danbolt, "The Oslo Study on the natural history of untreated syphilis," J. Comp. Dis., Sept. 1955, 2: 311-344.


27 Ibid., p. 236.


29 Ibid., p. 236.

Stokes, U. J. Wile, T. Clark, T. Parran, J. H. Ualt- on, "Cooperative clinical studies in the treatment of syphilis: latent syphilis," *Veneral Disease Information*, (Sept. 20, 1932), 13: 331. The authors also concluded that the late syphilitic were potential carriers of the disease, thus meriting treatment.

Clark to Paul A. O’Leary, Sept. 27, 1932, NA- WNRC. O’Leary, of the Mayo Clinic, misunderstood the design of the study, replying: "The investigation which you are planning in Alabama is indeed an intriguing one, particularly because of the opportunity it affords of observing treatment in a previously untreated group. I assure you such a study is of interest to me, and I shall look forward to its report in the future." O’Leary to Clark, Oct. 3, 1932, NA-WNRC.


Moore to Clark, Sept. 28, 1932, NA-WNRC. Moore had written in his textbook, "In late syphilis the negro is particularly prone to the development of bone or cardiovascular lesions." See Moore, *The Modern Treatment of Syphilis*, p. 35.

O. C. Wenger to Clark, Oct. 3, 1932, NA-WNRC.

Clark memorandum, Sept. 26, 1932, NA-WNRC. See also, Clark to Davis, Oct. 29, 1932, NA-WNRC.

As Clark wrote: "You will observe that our plan has nothing to do with treatment. It is purely a diagnostic procedure carried out to determine what has happened to the syphilitic Negro who has had no treatment." Clark to Paul A. O’Leary, Sept. 27, 1932, NA-WNRC.

D. G. Gill to O. C. Wenger, Oct. 10, 1932, NA- WNRC.

Clark to Vonderlehr, Jan. 25, 1933, NA-WNRC.

Vonderlehr to Clark, Feb. 28, 1933, NA-WNRC.

Ibid., Nov. 2, 1932. Also, ibid., Feb. 6, 1933.

Clark to Vonderlehr, Mar. 9, 1933, NA-WNRC.

Vonderlehr later explained: "The reason treatment was given to many of these men was twofold: First, when the study was started in the fall of 1932, no plans had been made for its continuation and a few of the patients were treated before we fully realized the need for continuing the project on a permanent basis. Second it was difficult to hold the interest of the group of Negroes in Macon County unless some treatment was given." Vonderlehr to Austin V. Diebert, Dec. 5, 1938, Tuskegee Syphilis Study Ad Hoc Advisory Panel Papers, Box 1, National Libary of Medicine, Bethesda, Maryland. (Hereafter, TSS-NLM.) This collection contains the materials assembled by the HEW investigation in 1972.

Vonderlehr to Clark, Feb. 6, 1933, NA-WNRC.

H. S. Cumming to J. N. Baker, Aug. 5, 1933, NA- WNRC.

Vonderlehr to Clark, Jan. 22, 1933; Jan. 12, 1933, NA-WNRC.

Vonderlehr to Clark, Jan. 28, 1933, NA-WNRC.

Clark to Moore, Mar. 25, 1933, NA-WNRC.

Macon County Health Department, "Letter to subjects," n.d., NA-WNRC.

Vonderlehr to Clark, Apr. 8, 1933, NA-WNRC. See also, Vonderlehr to Wenger, July 18, 1933, NA- WNRC.

Wenger to Vonderlehr, July 21, 1933, NA-WNRC. The italics are Wenger's.

Cumming to Moton, July 27, 1933, NA-WNRC.

Wenger to Vonderlehr, July 21, 1933, NA-WNRC.

Vonderlehr to Murray Smith, July 27, 1933, NA- WNRC.

Wenger to Vonderlehr, Aug. 5, 1933, NA-WNRC.

Vonderlehr to Wenger, Oct. 24, 1933, NA-WNRC.

Controls were given salicylates.


Eunice Rivers, Stanley Schuman, Lloyd Simpson, Sidney Olansky, "Twenty-years of followup experience in a long-range medical study," *Public Hith. Rep.*, Apr. 1953, 68: 391-395. In this article Nurse Rivers explains her role in the experiment. She wrote: "Because of the low educational status of the majority of the patients, it was impossible to appeal to them from a purely scientific approach. Therefore, various methods were used to maintain their interest. Free medicines, burial assistance or insurance (the project being referred to as 'Miss Rivers' Lodge'), free hot meals on the days of examination, transportation to and from the hospital, and an opportunity to stop in town on the return trip to shop or visit with their friends on the streets all helped. In spite of these attractions, there were some who refused their examinations because they were not sick and did not see that they were being benefited" (p. 393).

Austin V. Diebert to Raymond Vonderlehr, Mar. 29, 1939, TSS-NLM, Box 1.

Murray Smith to subjects, 1938, TSS-NLM, Box 1. See also, Sidney Olansky to John C. Cutler, Nov. 6, 1951, TSS-NLM, Box 2.

The USPHS originally requested that the Julius Rosenwald Fund meet this expense. See Cumming to Davis, Oct. 4, 1934, NA-WNRC. This money was usually divided between the undertaker, pathologist, and hospital. Lloyd Isaacs to Raymond Vonderlehr, Apr. 23, 1940, TSS-NLM, Box 1.

Stanley H. Schuman, Sidney Olansky, Eunice


O. C. Wenger, "Untreated syphilis in male Negro," unpublished typescript, 1950, p. 3. Tuskegee Files, Center for Disease Control, Atlanta, Georgia. (Hereafter TF-CDC).


See for example, Vonderlehr to B. W. Booth, Apr. 18, 1934; and Vonderlehr to E. R. Lett, Nov. 20, 1933, NA-WNRC.


Raymond Vonderlehr to Murray Smith, Apr. 30, 1942; and Smith to Vonderlehr, June 8, 1942, TSS-NLM, Box 1.


Raymond Vonderlehr to Stanley H. Schuman, Feb. 5, 1952, TSS-NLM, Box 2.

Schuman and others, "Untreated syphilis . . .," p. 550.

"Minutes, April 5, 1965" unpublished typescript, TSS-NLM, Box 1.

"Tuskegee Ad Hoc Committee meeting—minutes, February 6, 1969," TF-CDC.

James B. Lucas to William J. Brown, Sept. 10, 1970, TF-CDC.

Elizabeth M. Kennebrew to Arnold C. Schroeter, Feb. 24, 1971, TSS-NLM, Box 1.


HEW Final Report, pp. 8, 12.

Ibid.


Although it is now known that syphilis is rarely infectious after its early phase, at the time of the study's inception latent syphilis was thought to be communicable. The fact that members of the control group were placed in the test group which became syphilitic proves that at least some of the men were denied treatment.

When the subjects are drawn from minority groups, especially those with which the researchers identify, basic human rights may be compromised. Hans Jonas has clearly explicated the problem in his "Philosophical reflections on experimentation on human subjects," Dialectics, Spring 1960, p. 237. As Jonas writes: "If the properties we seek are the particular qualifications of the men, the scientific fraternity itself are taken as criteria of selection, then one should look for subjects where a maximum of intellectual understanding, and spontaneity can be combined. For that is, among the most highly motivated, highly educated, and the least captive in the community."

Since the original publication of this article, a lengthy study of the Tuskegee Experiment appeared. See James H. Jones, Bad Blood: The Tuskegee Syphilis Experiment (New York: Free Press, 1981).