THE NECESSITY FOR CODE OF ETHICS IN RESEARCH

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Abstract: Experiments and fieldwork that shocked the scientific world are presented and the development of code of ethics for proper research, which followed in their wake, will be discussed. Especially the introduction of informed consent is scrutinized. Strict compliance to informed consent can result in practical and epistemological problems. After a presentation of classical examples of scientific fraud and misconduct, the Vancouver requirements for good scientific work are surveyed. Special attention is given to the new principles concerning authorship preventing ghost-authorship. In the light of the recent misuse of science to propagate political ideologies, the responsibility of editors of scientific journals is discussed.

Introduction

Do we really need code of ethics to guide research? Are scientists not deeply concerned with the physical and social well-being of their research subjects? Are not researchers dedicated to honesty, keeping close to facts and avoiding distortion of their data? Though most of the researchers are honorable truth-seekers, the 1960's and 1970's have revealed that there are black sheep in every flock. Exposure of the increasing number of ethical misconducts and fraud caught the scientific community unprepared to deal with this new situation. As a consequence, a thorough revision of the early codes of ethics in research became imperative. Symposia are held to discuss the disclosure of malpractices and to develop ethical regulations. National research foundations have established Committees to investigate suspicions or accusations of cheating, as forgeries of data, and ghost-authorship. In Denmark, for example, The Danish Medical Research Council established in 1992 a committee to look into scientific misconduct within the health sector. It later published guidelines for good scientific practice.¹

Experiments that shocked the world

It seems that the development of ethical standards within the different disciplines of science follows in the wake of the disclosure of grave experimentations
with human beings and scientific misconduct. There are a number of notorious experiments that shocked not only the scientific world but, when becoming known to the public, created much furor. It began with the revelation of the Nazis medical experiments, revealed during the Nürnberg trial. According to Mitchell's well-documented case material, inmates condemned to death were placed in airplanes without oxygen mask at different altitudes, in order to study the bodily reactions to airsickness. Many of them died. Others were fully dressed placed in water between 2.5°C. and 12°C. in order to make detailed studies of bodily reactions to hypothermia. These experiments were carried out irrespective of the existing knowledge at that time that subjects would die at 28°C.

Not only the Germans performed atrocious experiments with human beings. As Eileen Welsome, here quoted from Kimmel,3 so cogently wrote: "Americans recoiled when the Nazis conducted brutal experiments on humans. But as the world was learning of those horrors, US scientists injected plutonium into 18 people without their informed consent to see how the element that fuels atomic bombs reacts in the body. The identities of these human guinea pigs were hidden for almost 50 years." What Welsome refers to are the government-sponsored radiation studies taking place between 1940 and 1950 where radioactive substances were injected into humans, including pregnant women, children, and terminally ill patients, in order to "track its course in the human body". These studies were only revealed in 1987, and were not the only controversial studies which were brought to light. Among them were the Tuskegee Syphilis Study, the Brooklyn Cancer Experiment and the Willbrook Hepatitis Experiment.

The Tuskegee Syphilis Study was a long-term study (1932-1972) of syphilis patients. It was carried out in Tuskegee Ala, USA by the United States Public Health Service. The aim was to study the natural course of syphilis in its tertiary state, i.e. how untreated syphilis developed especially during the final phase of the disease. At the onset of the study nothing was wrong with the research, since at that time very little was known about the disease and no effective medicine available. The problem arose when the study continued after 1946. At that time it had been documented that penicillin was:
"a safe and extremely effective cure for syphilis". Nevertheless, 399 black patients with syphilis were kept untreated. Many of those died as a result of being denied appropriate treatment.  

The Brooklyn Cancer Experiment took place in the 1960's at the Jewish Chronic Disease Hospital in Brooklyn, New York. In order to study the immune response, live cancer cells were injected into 26 geriatric non-consenting patients. Luckily, none of the patients died. The researchers were found guilty of scientific misconduct, but as Kimmel adds: "Ironically, a few years later, one of the researchers was elected president of the American Association for Cancer Research."  

In the same decade as the Brooklyn Cancer Experiment took place, the Willbrook Hepatitis Experiment was conducted. In a New York State institution for retarded children, some of the inmates were subjected to hepatitis virus in order to test a vaccine. The rationale behind this experiment with living humans was "that a serious liver infection, hepatitis, was in effect endemic in the hospital anyway."  

The canadian psychiatrist and first president of the World Psychiatric Association, D. Ewen Cameron, performed some outrageous experiments at McGill University in the early 1950's. He was obsessed by the idea of finding a fast and effective cure for schizophrenia. In order to create 'differential amnesia' the patient had to undergo a phase of total amnesia and then gradually regaining the memory of his or her usual behavior, but forgetting the schizophrenic. This was obtained by dragging the patient through a 15-30 days cure of drug-induced sleep therapy, combined with two to three daily electroshocks of 150 volts. This procedure was called 'depatterning'. Later on, he added a program called 'psychic driving', where the patients up to 16 hours a day for several weeks were bombarded with repeated verbal messages. Dr. Cameron, who then had become interested in sensory deprivation, exposed in one case a 52 year old woman to 35 days of sensory deprivation, repeated depattening and 101 days of psychic driving. The 'patients' actual problem was that she "was going through menopause".
Also the social sciences had their enfant terrible. In sociology, it was Laud Humphreys' notorious research of homosexual activities in a public toilet that created an uproar. Without informing the actors about his intention to collect data on their fellatio activities, he took the stand as a watchqueen at the window, notifying them of strangers approaching the toilet. By secretly writing down their car license plate numbers, he was able to identify their names and home addresses in order to make a socioeconomic profile of his population. Later, after changing his physical appearance, he volunteered in a social health survey and thus got access to many private informations about the men observed in the public toilet. For this unethical research, where he never disclosed his intentions of doing research and gained access to their home under false pretenses, he received the C. Wright Mills Award. Later on, when the severity of his transgression of privacy was comprehended, he was "socked ... on the jaw" by an indignant colleague.

Another sociological study which created great turmoil among sociologists was When Prophecy Fails, done by Leon Festinger, Henry Riecken and Stanley Schachter's. Interested in knowing what happens when an unsurmountable cognitive dissonance appears between strong attitudes and actual facts, the researchers infiltrated a sect, whose members believed that doomsday was near. Through 'automatic handwriting' an American housewife had learned that the earth would be flooded on a certain day. Soon proselytes gathered around her. Disguised as true believers, the researchers studied the group from within, without ever revealing their real purpose.

Another study that upset the scientific community was the Wichita Jury Study in 1954. A group of law professors and social scientists wanted to study the deliberation of juries and installed hidden microphones in the rooms, where members of the juries met. Whereas the opposing council and the judges were informed about the research, the jurors, defendants and plaintiffs were not. The revelation of this project created a tremendous outcry since it had threatened the privacy of members of the jury and led to the promulgation of new laws to protect the jurors deliberations.

The history of ethical problems in anthropology reaches far back. In 1919, the
founder of American anthropology Franz Boas, complained about the US government's use of anthropologists as spies. But nothing stirred the anthropological world as much as the exposure of the true nature of the Project Camelot\textsuperscript{13}. The American Army made a grant of six million dollars available for social scientists to study "counterinsurgency in Latin America". In plain language, as done by Miles and Hubermann: "The funders wanted to know how to suppress popular revolts."\textsuperscript{14} In another study, involving the CIA, LSD was secretly poured into drinks and given to customers to a brothel or bars. Their behavior was sometimes recorded through a one-way mirror. These and other examples of how psychiatrists, psychologists, anthropologists, chemists, and botanists placed their scientific training at the disposal of the CIA can be found in John Marks remarkable book *The search for the 'Manchurian Candidate'. The CIA and mind control.*\textsuperscript{15}

Psychologist do not fall short of other social scientist in developing experiments, which invited for a closer ethical scrutiny. Campbell et al. conducted a classical conditioning experiment, where five alcoholics were given an injection of scolin (succinylcholine chloride dihydrate), which created a temporary respiratory paralysis for one to two minutes. As CS was used a 600-cps tone. The subjects were told that the experiment was "connected with a possible therapy for alcoholism".\textsuperscript{16} The article does not indicate that the experiment had any real therapeutic effect. But, the uninformed subjects experienced horrific minutes, all of them reported that "they thought they were dying".

*Berken's Army Stress Experiment*\textsuperscript{17} is another example. In order to study young recruits' reaction to psychological stress in military settings, 22 young men were placed aboard a military aircraft where first one engine stopped and, later on the landing gear was malfunctioning. While listening to the communication between the pilot and the control tower, where a crash-landing was discussed, the recruits had to fill out two forms. One, the Emergency Data Form, dealt with the "disposition of the individual's personal possessions in case of death". None of the participants had been informed that they participated in a psychological experiment.
The experiment which really agitated the scientific mind was Milgram's renowned study *Obedience to Authority*[^18-19] starting in 1963. In a deception experiment about learning, subjects had to administer electrical shocks to a subject - a stooge pupil - whenever he or she made a mistake. The subjects believed the pupil received a real electrical shock - which in fact he never did. However, 65% of all subjects in the standard experiments provided electrical shocks up to 450 volt. Critics of these experiments[^20] claimed that the subjects became psychological wrecks and lost their self-esteem.

**Ethical standards for research**

After the disclosure of the above mentioned studies of objectionable research, as well as the revelation of several other cases, it became apparent that the *Nuremberg Code of Ethics* - developed in 1947 as a consequence of the atrocities conducted in the name of science during the reign of the Nazis - were not sufficient to ensure the safety and socio-psychological well-being of the research participants. The Civil Rights Movement, The Rights of Prisoners and The Mentally Ill, and other organizations also exerted pressure for safeguarding human beings and to ensure their democratic rights when participating in any kind of research. In 1964 the *Declaration of Helsinki I. Recommendations guiding doctors in clinical research* was adopted. Already few years later, a revision of the Helsinki Declaration I was felt necessary. In 1975 the *Declaration of Helsinki II* was approved. Without going into any detailed discussion of these declarations, it should be stressed that the term 'informed consent' was specified in the *Declaration of Helsinki II*. Informed consent is one of the basic principles in the declaration and refers to the right the individual has to decide his or her participation in a research project. The decision for participating should be made after a thorough information about the research objective, applied methods, and implications has been given. Such a consent should, as a rule, be obtained in writing.[^21-22] Besides the general medical code of ethics, specific codes have been developed for psychiatry.[^23] Interesting is also that Third World Countries like Nepal, now have developed their own ethical guidelines for health and medical researchers.[^24]
Also the social sciences were forced to reconsider what kind of research could be regarded as good scientific studies and what should be deemed scientific misconduct. According to Kimmel social scientists did not seriously discuss ethical questions in relation to experiments with human beings prior to 1960. The American Psychological Association (APA), founded in 1892, appointed in 1938 a Committee on Scientific and Professional Ethics to explore the necessity for developing ethical standards for psychologist and psychological research. But only in 1952 was the code drafted and approved. As Pope and Vetter noticed laconically: "The American Psychological Association (APA) faced ethical problems without a formal code of ethics for 60 years." Since then, several revisions have appeared. Pope and Vetter stress the uniqueness of the origin of the psychological principles. It is based on the practical experiences by their members "rather than prescribed by a committee." Like the Declaration of Helsinki II, APA's Principles ' 6.11 also stresses the importance of informing research participants about their right to decline participation in any experiment and the necessity to obtain informed consent of the research participants. Informed consent is also required "prior to filming or recording them in any form..." (' 6.13). A special paragraph, ' 6.15, deals with deception in research, which should be avoided unless it "is justified by the study's prospective scientific, educational, or applied value and that equally effective alternative procedures that do not use deception are not feasible." Remembering what tremendous fury Milgram's deceptive studies created, it is amazing to read the freedom for interpretation contained in this paragraph. Whether or not deception can be part of the research design thus has to be negotiated, based on a cost-benefit analysis. The special problems when giving psychological services to ethnic groups are dealt with in specific guidelines for psychologists.

During the last two decades also the sociological, educational and anthropological professions have developed their own code of ethics. Conducting sociological research today also requires respondents informed consent. Presumably, due to the hidden agenda in the CIA sponsored Camelot Project and Humphreys' covert research, the Code of Ethics of the American Sociological Association has a special paragraph dealing with gathering intelligence for organizations or governmental organizations and disguised data collection. In their research principles B, ' 1, it is stated
that "Sociologists should not misuse their positions as professional social scientists for fraudulent purposes or as a pretext for gathering intelligence for any organization or government. Sociologists should not mislead respondents involved in a research project as to the purpose for which that research is being conducted."

After the severe attack on the reputation of the anthropological profession following in the wake of the Camelot project and the clandestine research under the Vietnam War, *The Code of Ethics of the American Anthropological Association* from 1998 makes secret research anathema. In some earlier code of ethics it was explicitly stated that: "Members should not agree to clandestine employment by sponsors." However, the present code of ethics for anthropologists does no longer use the term 'clandestine' but talks in more general terms about the anthropologist's responsibility to "review the purposes of prospective employers, taking into consideration the employer's past activities and future goals."

**Informed consent**

One of the central topics of the ethical issues concerning research in medical and social sciences revolves around the problems of informed consent, which include:

1. Freedom to abstain from participation or to withdraw from any experiment or research project.
2. Information on objectives of the research and the procedures to be used.
3. Information on eventual consequences.
4. Respect of privacy and confidentiality of data.

*ad 1. Freedom to abstain from participation or to withdraw from any experiment or research project.* Based on the principle that every research project should respect the dignity of the research participant, the Helsinki Declaration very clearly stresses the individual's "liberty to abstain from participation in the study and that he or she is free to withdraw his or her consent to participation at any time." Humans are regarded as self-reflecting individuals, who have their free will to decide.
When it is impossible to obtain legal informed consent, the Helsinki Declaration, Basic principles '11, states, that "informed consent should be obtained from the legal guardian in accordance with national legislation." The ethical principles of psychologists demands that in a situation where the potential research participant is legally incompetent of giving informed consent, "psychologists nevertheless (1) provide an appropriate explanation, (2) obtain the participant's assent, and (3) obtain appropriate permission from a legally authorized person, if such substitute consent is permitted by law."32

In democratic countries these principles usually do not create any problems, but in totalitarian states one can always procure a 'legal guardian' or a 'legally authorized person' being willing or forced to declare a person to be 'legally incompetent'. The principle of voluntarity is not so simple as it sounds. Who, for example, should give the consent when interviewing school children? The child, the parents, or the superintendent of the school? What should one do if the child wants to participate, but one of the other parties objects? Another problem deals with the participant's psychological self-instruction. Some patients may be afraid to say 'no' out of fear for not receiving optimal treatment afterwards; prisoners may believe a 'no' means they will miss their chance of a conditional release; a student in financial need may have no alternative, and, low status people may feel a pressure to consent when standing face to face with a 'white coat' researcher. Sometimes people might be forced to participate - without the researchers' knowledge. Then, there are the participants, who after signing the informed consent, forget their rights to withdraw from the experiment at any time. This was clearly demonstrated in Milgram's obedience experiments, where only few participants withdrew - despite their psychological agony in giving electrical shocks. Thus, a researcher should set aside enough time to unravel a person's self-instruction for participating before accepting their consent. After all: how free is free? If informed consent should be taken literally, a researcher should during the research project continuously remind the research participant about his or her rights to withdraw. Just wonder, whether this has ever been practiced. With the demand that research participants should be informed about their rights to say 'no' to participate in a research project, covered or disguised research as reported in Spradley and Mann's The Cocktail
Waitress,\textsuperscript{33} where the junior author applied and worked as a cocktail waitress in a bar and at the same time worked as a participant observer, can no longer be conducted. One may wonder, how a researcher, who wants to study behavior in a public setting, could obtain informed consent from the people present.

2. Information on objectives of the research and the procedures to be used. Obtaining informed consent also demands that: "... each potential subject must be adequately informed of the aims, methods, anticipated benefits and potential hazards of the study and the discomfort it may entail."\textsuperscript{34} Giving a full and detailed description of the objectives of the research and its methods can be very difficult, especially if this has to be done in a "language that is reasonably understandable to participants" as said in the APA principles (’ 6.11). Not only will it be very time consuming, but also most lay people unfamiliar with research, will have difficulties in following a detailed description. Probably, they will become more confused than enlightened. A short, overall explanation given in a positive atmosphere where there will be time to answer questions seems to be a more productive strategy. Especially, because the presentation of the necessary informations in a relaxed social-psychological climate, gives space to discuss questions, which the research participants may have. Questions, a researcher hardly ever will envisage.

In intensive qualitative studies as conducted in the social sciences, the demand of giving full information about the objectives and methods used is not very feasible, since larger part of the study can be explorative in nature. Special problems arise when researching members of non-industrialized cultures. No matter, how scrupulous a researcher may be in his attempt to explain the nature of the study, his or her informants will mostly be unequipped to grasp the character of the study. Once, after I had introduced a new research topic on a Polynesian island, a local man asked: "How come, white men always play?" And, how should I explain a research project about street kids in Nepal to the potential informants, or explain the Rohrshach test to psychiatric patients?

From medical research one learns that informed consent may significantly influence the research results. Adair et al\textsuperscript{35} refer to studies on the negative aftereffects
of noise. Studies with informed consent "gave subjects a sense of control and removed the effects of the stressor." Thus, studies conducted with or without consent may come up with different research results.

The present declarations, principles and guidelines for ethical research prevent a reckless and unimpeded use of experiments where people unknowingly participate in research experiments like those mentioned earlier. Likewise, experiments where a researcher lives for two months in a mental hospital disguised as a patient or, a police officer trained in social sciences conducts participant observations in the police department where he works,\textsuperscript{36} can no longer be conducted without further proof of its necessity. Similarly, experiments where research participants intentionally have been misinstructed about the real purpose of the study, the so-called deception experiments, must now be presented and accepted by an ethical committee. A heated discussion followed in the wake of the acceptance of the Ethical Principles preventing research based on deception or disguise. Some argue, that "it is perfectly legitimate to expose nefarious institutions by using a measure of deceit."\textsuperscript{37} Others, as Erikson - quoted from Punch - argue that "it is unethical to misrepresent deliberately the character of one's research". A final answer to this delicate question can not be given. Unequivocally, researchers must respect the ethical principles in research. On the other hand, there can be situations where deception is necessary, as in the studies conducted by Rosenthal and Jackson's in 1966. Teachers expectations about certain students intellectual development - based on false informations passed from the researcher to the teachers - was shown to influence the pupils' IQ.\textsuperscript{38} The responsibility for giving permission to such experiments is with the national committees of ethics. However, a great responsibility lies on the shoulders of the members, since rejecting certain research designs can be unethical too.\textsuperscript{39}

3. Information on eventual consequences. In the basic rules of informed consent the Declaration of Helsinki II, \textsuperscript{9} states that the researched should be informed about the "anticipated benefits and potential hazards of the study and the discomfort it may entail".\textsuperscript{40} This is a very difficult task, because one can not always anticipate the 'benefits', 'hazards' or 'discomfort' a study may entail. To fully comply with the demands
of giving a complete description of the anticipated harm demands that the researcher knows the outcome of his research before he or she embarks upon the research. The researchers, who set up the Stanford Prison Experiment, had no chance to anticipate that normal, psychologically well-functioning students acting as prison guards in the experiment, would develop harmful strategies towards their fellow students, acting as 'prisoners'.41-42

An evaluation of the consequences also depends on the evaluator. A psychiatrist, who interviewed 40 participants in Milgram's obedience study, could not detect that any harm had been done to the subjects, whereas Milgram's critic and faultfinder Baumrind, postulated that the research participants were suffering from blows to their self-esteem by exposing their vulnerability to external pressure by giving electrical shocks.43

Reflections about avoiding harm not only refers to single individuals. Groups, organization and even societies can be brandished or even blemished. The fearless journalist G. Wallraff's revelation of the objectionable working conditions of foreign workers in German companies may serve as an example44 as well as Holdaway's revelation of what was going on in the Metropolitan Police of London. Let there be no doubt that the safety and physical, social and psychological well-being of research participants must be ensured. But, if a researcher has the impression that some wrongdoings are going on in an organization, should he or she refrain from exposing it in order to avoid harming the organization? In such a situation one has to ask the question: Is it unethical to do harm to the organization or is it unethical to keep silent?

4. Respect of privacy and confidentiality of data. Confidentiality refers to the assurance given to a research participant or organization that information given to the researcher will be treated with the greatest caution and will not be revealed to unauthorized persons, thus the privacy of the person being ensured. When the APA in 1989 conducted a survey among a selection of their members about ethical problems encountered in the past year, problems of confidence became the most frequently described dilemma.45 Most incidents had to do with clinical practice, as when a
psychologist witnessed how: "The executive director of the Mental Health Clinic ... used his position to obtain and review clinical patient files of clients who were members of his church." Another psychologist's confidentiality was put to a test, when: "One of my clients claimed she was raped; the police did not believe her and refused to follow up (because of her mental history). Another of my clients described how he raped a woman (the same woman)." Many problems arise, when the researcher or practitioner is confronted with medical malpractice, sexual abuse of children or elderly people, robbery or murder. The problem, plainly stated, is whether or not these confidential information should be reported and to whom. A serious question arises for the researcher when he or she - as usually is the case with social scientists - have no immunity from the law.

Another problem, as faced by the anthropologist Michael C. Robbins, arises when a researcher due to his acceptance and trust by the community he studies, is invited to participate in a secret action to be conducted by the local people, whose purpose it is to kill a group of young thieves. Should he participate and share the responsibility or should he withdraw and thus loose the rapport, he had worked so hard to build up?46 Securing the privacy of the person, institution or organization is often done by changing names, locality and, by blurring identifiable features. That is easier said than done. The literature is full of examples, where small societies which had been given fictive names, were easily identified.47 In one case variations in intelligence among four ethnic groups in Malaya was studied. The names of the ethnic groups were given as x, y, z, and u. Nevertheless, it was easy to identify each group according to statistical data in the book.48 Such exposures to the public usually creates embarrassment and furor among the researched, and diminishes the trustworthiness of the researchers.

Disguising the identity of individuals, organizations and localities has certain draw-backs. As Kvale cogently points out, the ethical demand for confidentiality does contravene the "possibility of reproducing the findings by other scientists"49 if one has no information about the researched population. This has to be considered when replication is mentioned as one of the ways to unravel fraud in science.
With the advancement of frequent use of modern recording equipment, it has become necessary to incorporate rules about their use, in order to secure the privacy of people. The ethical principles of psychologists and the code of ethics of the anthropological association state very firmly that informed consent has to be obtained by the individuals or groups being photographed or tape-recorded. These principles will among other things prevent secret photographing and later the publication of non-consenting people. Secret photographing of for example young girls who present their private parts with visible labia mayora, while their faces are turned toward the camera, as photographed by the German human-ethologist Eibl-Eibesfeldt, will no longer be possible. One can only imagine, how embarrassed these girls would feel later as adults, seeing how their private parts were exposed to the public eye.

Scientific misconduct

The various codes, principles and guidelines for ethical research have sections as of how to document scientific work, store and dispose data, and how to avoid false or deceptive statements. The advises of how to conduct good scientific research are not exhaustive and sometimes references are made to general principles like: "Biomedical research involving human subjects must conform to generally accepted scientific principles and should be based on adequately performed laboratory and animal experimentation and on a thorough knowledge of scientific literature." Sociologists should comply with appropriate federal and institutional requirements pertaining to the conduct of research" or "Psychologists design, conduct, and report research in accordance with recognized standards of scientific competence and ethical research." In order to remedy the vagueness and uncertainty about what proper scientific conduct is, different organizations and research committees have developed more specific guidelines. In Denmark, for example, The Danish Committee on Scientific Dishonesty, has published "guidelines concerning the presentation of research protocols, data documentation and data storage for basic, clinical and clinical-epidemiological research". The Committee of Medical Journal Editors has developed instructions to authors of scientific medical articles, known as the 'Vancouver rules'.
Gradually these rules are gaining a footing in the social sciences too. Besides being a tool for new generations of scientists to conduct good research, these guidelines also have the purpose to prevent scientific forgery and to act as a baseline for an assessment of whether or not scientific misconduct has taken place.

Studies of scientific misconduct has revealed the intentional suppression of disconfirming data, as done by the American physicist Robert Millikan. In his famous study of how to measure the electronic charge of an electron, for which he received the Nobel prize, he omitted all those data which did not confirm his hypotheses. Only after his death, when access to his notebooks became possible, the swindle was revealed. "Millikan had selected only his best data for publication" writes Broad and Wade. "The raw observations in his notebooks are individually annotated with private comments such as 'beauty, publish this surely, beautiful!' and 'very low, something wrong'. The 58 observations presented in his 1913 article were in fact selected from a total of 140."57 Another example of data manipulating is found in the British psychologist Cyril Burt's studies of intelligence. The knighted psychologist Sir Cyril, showed in three successive studies from 1955, 1958 and 1966 with identical twins raised in different environments, that intelligence is basically genetically determined. These findings had great influence on the British school system. Leon Kamin, however, revealed that Sir Cyril had tampered with his data.58 The correlation between the IQ scores of the separated twins remained the same in all three studies, even to the third decimal. This finding was suspicious and started a close scrutiny of the psychologist's work, whereby several other statistical manipulations emerged. Today very little reliance is placed on the once so mighty and famous Sir Cyril's reseach.

Re-analyses of other researchers' raw data rarely take place but certainly need to be done. A study from the early 1960'ies where a graduate student wrote to 37 authors who had published their results in respected psychological journals within the last few years, showed discouraging results. Of the 37 authors 32 replied but only nine authors made their data available for a re-analyses. The others either had misplaced, lost, or inadvertently destroyed theirs. Only the raw data from seven scientists arrived at time to be re-analyzed. Only conclusions in four of these were found to be valid. The
remaining three contained obvious errors. A demand to retain raw data for a certain period of time and to make them available to other researchers is called for. Within the biomedical science it is now recommended that data should be retained for 10 - 15 years, whereas five years has been recommended for social scientists.

Plagiarism and pure fraud have also made its entry into the scientific community. In the late 1970'ies the AlSabti affair started to unfold. AlSabti was an Iraki medical student, who due to his charismatic appearance and political connections high up in the royal Jordanian family got access to several well-reputed American research laboratories. Within a very short time he succeeded in publishing 60 articles in obscure journals. In most cases they were plagiarized, with only the names of the original authors and the titles being changed.

Genuine fraud has been documented in the writings of Castaneda's books like The teachings of Don Juan, which became a modern bible for the 68-generation, bringing a new conception of reality to his readers and believers. As documented by Richard de Mille, Castaneda never conducted the research, he claimed to have done. Pure fabrication is also Flora Donner's book Shabono about the fierce Ynomamó people in South America. She never visited them, but nevertheless gives detailed description of her fieldwork among the Ynomamó. Artfully, she makes her readers believe that her field notes and films had been burned by the local people. A special case of fraud is contained in the book The Gentle Tasa-day. Highly respected researchers went into the Philippine rain forest of Mindanao to study a group of stoneage people, who were so peaceful, that they did not even have a word for aggression. As it later turned out, they were not stoneage people at all, but were by a powerful former minister of the Marcos government forced to live in caves and behave in a specific way to earn money and fame to their 'discoverer', the minister. Scientists and news media had to pay a handsome amount of money to be allowed to study the 'cave-dwellers' - and then only for a very short time.

The Matthew effect
In 1973 the sociologist Robert Merton drew attention to a specific phenomenon called the Matthew Effect, named after the evangelist Matthew. The Matthew Effect refers to "a complex pattern of the misallocation of credit for scientific work." The name of known senior researchers or researchers in powerful positions will appear on publications based on studies conducted by junior or unknown researchers. The master-apprentice relationship has frequently been misused and appears both in the natural sciences as within the social sciences. In 1974 Antony Hewish received the Nobel prize for physics for his discovery of pulsars. The only problem was, as it later turned out, that a graduate student of his made the discovery first. Glazer describes a case where a graduate student engaged in anthropological fieldwork, send informations about the progress of her study to her Ph.d. adviser. On her return from the field she discovered that her adviser had published some of her material in his own name, without any acknowledgement to the collector and owner of the data. His rationale was that "she would not have received her research grant without his assistance." Though terribly upset, she did not report this incident as long as she was a Ph.d. student in fear of retaliations from her supervisor.

The Vancouver principles of authorship

Until recently, no clear directions existed for whom should be named as author, co-author of a scientific article and whose contributions should be acknowledged in a footnote. As a result of the 'publish or perish syndrome', researchers wishes to magnify their list of publications, and as a gesture of paying reference to the director of an institution, the numbers of authors on a journal article has increased. In 1995 two articles of six and eight pages respectively were published in *Psychological Science*, naming no less than 13 authors each. Due to the increasing numbers of authors appearing on journal articles, some of whom never substantially contributed to the content, the International Committee of Medical Journal Editors, also known as 'The Vancouver Group', published guidelines about proper authorship. According to their standards, only the first six authors should be named followed by 'et al.'; and "Authorship credit should be based only on substantial contributions to (a) conception and design, or analysis and interpretation of data; and to (b) drafting the article or
revising it critically for important intellectual content; and (c) final approval of the version to be published. Conditions (a), (b), and (c) must all be met. Persons, who do not meet these criteria can be listed in an acknowledgement or thanked in a footnote. That could be those who had given general support to the project, as the departmental chair, or those who had supplied technical or financial support. When a manuscript is forwarded to an editor, a covering letter should be signed by all co-authors including "a statement that the manuscript has been read and approved by all the authors." With these principles the practice of ghost-authorship should be diminished. The Vancouver requirements not only provide scientific credit to those, who deserve it but do also protect recognized senior researchers, who appear as ghost-authors, against being humiliated. The Nobel laureate Lipmann from the Rockefeller University, for example, was greatly humiliated when an article with his name on later on turned out to be based on fraud.

The Vancouver requirements also have a special statement for reviewers of scientific manuscripts. On the bases of the Rodbard-Soman affair from 1979 the requirements now clearly state that a manuscript has to be regarded as confidential and must under no circumstances be copied or shared with others.

Scientific misconduct is a serious problem since it discredits the honesty of an entire discipline. Fortunately, at the moment only a small number succumb to the temptation to tamper with data. But if nothing seriously is done, dishonesty and fraud in science will become an ever growing industry. The conventional wisdom that scientists can put their own house in order, is no longer valid. The 'publish or perish syndrome' now backfires. Therefore, more attention, recognition, economic support and journal space should be given to replication of empirical studies, especially to key experiments. Additionally, each generation of students should have extensive courses in research ethics and within the therapeutic areas. The courses should be mandatory. Chapters on ethics in text books should be moved from their present Cinderella existence as the final chapter of a textbook to a more conspicuous place.

Greater attentiveness about ethical issues has been in progress for some time
and by now no one can any longer play the role of the innocent researcher. As Mirvis and Seashore said: "Naivité [about ethics] itself is unethical."73

**Word poison: Xenophobia disguised as science**

The basic concerns in different code of ethics revolve around the physical, social and psychological well-being of research participants. The codes are built on an ideology of dignity and respect for the human being. Research participants must be protected against the scientific misconduct, malpractice, the exploitation in the name of science and, the research should augment benefits to those being studied. Code of ethics, thus, are intended to intensify the sensitivity of good professional conduct. Unfortunately, the code of ethics do not contain explicit and detailed codes monitoring the conduct among scientists by protecting individuals or group of scientists from unfounded accusations, animadversions, or senseless libellous statements from others.

The need for such scientific code of ethics has been demonstrated by the unscientific, undocumented, and malicious attacks by an American psychiatrist, Dr. Stevan Weine, from the University of Illinois, who accused recognized Serbian scientists, for (1) "covering up the realities of genocide", (2) "functioning as 'apologist professionals'", and (3) "using their professional knowledge, authority, and connections to defend the norms, beliefs, and practices of a government from condemnation for its genocidal activities."74

Weine refers to the book *The Stresses of War,*75 as testimony for his claim of abuse of psychiatry by so-called apologetic professionals. A close scrutiny of his reference does not support any of his claims - on the contrary. In a letter to the editor76 the 'accused' psychiatrists call for the accuser's documentation of his assertions. But, it is not surprising that Weine failed to reply. By publishing the accused's letter, the editor of the journal - like Pontius Pilate - may feel that he has washed his hands of the entire situation. But is it ethically acceptable for a psychiatrist to cast public doubts on the professional conduct of colleagues, and then fail to respond when he is questioned about his scientifically degrading and devastating statements?
Such diabolic writings should not get access to the scientific journals. The editor should have asked for documentation before printing Weine's unsubstantiated assertions. The only possible way the accused have to exculpate themselves from the insults against their professional reputation is through a private lawsuit. This, however, is time consuming and costly. As for now, a personal assault has besmirched the honesty of some researchers free of charge for the offender. Code of ethics which protect scientists from embarrassing and undocumented accusations from other professionals certainly are needed.

Likewise, there are no ethical principles or guidelines condemning the unscientific behavior of so-called scientist besmirching the dignity of whole nations and even continents as done by the Croatian psychiatrists Dr. Eduard Klain and Dr. Miro Jakovljevic. Trying to understand the atrocities taking place in the present Balkan War, they pretend to give a description of the Serbs national character - as opposed to the character of the Croats, Slovenes, Macedonians, Montenegrins, and Bosnians - based on psychoanalytic and group-dynamic assumptions. In a special issue of the Croatian Medical Journal, War Supplement 1, Dr. Klain describes:

(1) The Afghans, Iraqis, African tribes and Serbs as "primitive people" manifesting "destructive aggression of the archaic type".

(2) During the Second World War, "The destructive cannibalistic needs of various ethnic groups disguised in projections (revenge) were realized."

(3) "The Serbs often have the complex of inferiority, because they are aware of their lower level of civilization and culture."

(4) "In Serbs, the group regression is more frequently at the level of the schizo-paranoid position in the development of a personality, accompanied by complete destructiveness and irrationality brought along by this phase."

(5) "As a people, they [the Montenegrins and the Serbs] are quite poor and have a rather low cultural and civilization level, in spite of their royal tradition."

(6) "Some [Serbs in Knin] were insecure persons with the need of group identity and feeling of belonging to a group. Some were delinquent personalities, mostly
robbers."

(7) Jakovljević passes on the attributions given by unnamed others which describe the Serbs as "Wild/barbaric nations"; "Descendants of Turkish bastards"; and "Guardians of traumas and celebrators of defeats." A favorable contrast to the Serbs are the Croats, who regard themselves as a "Freedom-loving nation"; "Peaceful nation"; "Civilized nation with thousand year-old culture and tradition." And "The tradition of Croats is based rather on faith, work, obedience, dialogue, and justice."

Additional statements of the same kind can be found in other papers published in the War Supplement 1 and 2. That atrocities unfortunately are part of wars and people suffering tremendously should make it a challenge for scientists to unravel the underlying principles. But this should be done in a proper, scientific way and not as in the mentioned articles as political manifestations masqueraded as science or as objective truths. Using the language of classical psychoanalysis the authors postulate instead of documenting their viewpoints. By using theories of unilinear evolution from days of long ago, certain nations, and especially the Serbs, are placed on a lower level of development than others. We have been down this road before, when the Nazis looked for scientific proof of their ideology.⁷⁹

The authors' application of the ontogenetic theory of culture is also antiquated (i.e., that a pattern of life in a certain culture is the result of certain infantile experiences, which will be acted out in adult life). The psychoanalytically oriented culture-and-personality studies emerging in the 1930's - trying to find a relationship between socialization practices and the emergence of dictatorships and war behavior - have been heavily criticized and are totally abandoned now.

Social phenomena have to be studied from a social or social-psychological perspective and not from an individual state of consciousness, subconsciously, or from postulated unconscious trauma. It is distressing to read Klain and Jakovljević's negative and sketchy political attacks on a whole nation, whose members are depicted as being cruel, primitive, paranoid, having a complex of inferiority, etc. These descriptions are more the product of prejudices rather than of
scientific findings.

Unscientific articles like the ones referred to will certainly damage the reputation of the psychiatric and medical profession. The responsibility for the content of the articles resides with the authors; but what about the editor of the journal? "Editors [of medical journals]", it is stated in the Uniform Requirements of Manuscripts Submitted to Biomedical Journals, "must have full authority for determining the editorial content of the journal." Though editors do not have any responsibility for the scientific content of an article, they should endeavor to produce a journal "...with due respect for the stated aims of the journal.." (ibid). If an editor, as the one who was responsible for the War Supplement 1, accepts such articles, it then must be the official 'aim of the journal'. In such a case, the journal should be excluded from being internationally indexed. Again, the different ethical committees should address this question openly. We should not close our eyes to statements, which are not in accordance with the ethical principles of science. The times, when xenophobic raids disguised as science could pass, must be over.
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