
Legal Recommendations for Developing Policies for Carrying Out Scientific Research Within Non-Governmental Organizations (NGOs)

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Abstract

Background: The purpose of this research is to help to develop standardized procedures that comport with ethics and legal rules that must be followed throughout the entire research process. **Aim:** Also, it is important for scientists to consider certain ethical questions about what motivates researchers to conduct research and why certain projects get funded. **Methods:** To review the use of the scientific approach to a study. **Results:** Therefore, when we follow legal rules and consider the role of ethics within science, abuses in the ways research is undertaken, can be curtailed. This article explores the ways that scientists and researchers can check themselves to make sure they are in compliance with: ethical, scientific, and legal rules for carrying out funded research.

Keywords

Ethics, Legal Rules, Policies

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1. Introduction

There has been a lot of research carried out that promotes more sustainable energies in recent years [1]. In fact, within the scientific community, the inability to follow guidelines and protocols while carrying out funded or unfunded research may lead to harmful corruptions within society. The importance of record keeping during research experiments maintains the integrity of the findings and can be crucial to building evidence in order to safeguard legal rights [2]. In this framework, three major elements characterize the suggested policies for carrying out research within non-governmental organizations: record keeping, insulation from liability, and replication studies. First, record keeping that is meticulous and accurate allows scientists to correlate data and to establish the ownership of the data. Second, organizations who conduct experiments must protect themselves and those involved by adopting clear policies that

must be adhered to. Accurate record keeping makes it easier for scientists to duplicate studies and that is an integral part of the proof process. Third, the replication process serves to insure the reliability of results and often governmental agencies require it for grants. The importance of meticulous record keeping is underscored because it's required in order to be funded, published, or used by the scientific community [3]. Replicating results and systematically recording them is ethical because it serves as a check and a balance preventing fraud or distortions in research. Once results are recorded in written form it makes it impossible to go back and alter those results later. Also, saving written records helps to prevent loss of data because there are no technical problems. By keeping recorded data in written form, we are trying to eliminate misconduct stemming from undesired research results. Research tends to be conducted ethically when

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researchers follow set procedures and they develop consistent written records documenting it. Thus, by addressing the three research objectives as part of the aforementioned framework, the present research focus calls for the use of a mixed research methods approach [4].

2. Due Diligence

It is part of our due diligence to the funding body or agency that proper written records are kept. Further, scientists whenever possible should provide updates to the funding body about how the research is going. The funding body should be able to review the written records at any time during or after the experiment. This is nothing new within the scientific community as many are used to applying for patents and disclosing their data records to the patent examiner. Scientific research that is ethical, however, should always be conducted as if it will be scrutinized by a patent examiner. If this procedure is followed then the experiment is most likely being conducted scientifically both: ethically and legally. It should be noted that organizations must create and disseminate clear policies about the ownership and disclosure or management of all data. There should be no ambiguities here and a written policy that is disseminated and initialed by everyone involved in the research is a sound practice.

3. Securing Written Data

On the one hand, organization is a key part of maintaining reliable data. On the other hand, often, it is the lead researcher's decision about which data will be recorded in plastic binders to be preserved over time and this is a more secure way to retain confidential information versus the electronic form which is vulnerable to a cyber-attack. Each experiment should be clearly delineated to avoid mixing up data that could lead to unreliable and potentially fraudulent conclusions. Any entry that is made in the plastic binder should be fully explained and clearly identified with a scientist's full name and date. Each binder should have the following details in it: The Experiment's Title, Names of all Researchers including respective affiliations, Involved Starting and Stopping Points, Statement of Goals and Purpose (including answers to the ethical questions proposed later in this article) Techniques or Methods Used, Notations if unorthodox procedures are being used and why this is absolutely necessary, the provisions about how the funding body will be kept apprised of what is going on, Instructions about how data is to be: collected, stored, and expressed (what to do when mistakes are made-cross out is better than erasing as the incorrect material should remain visible in case it's needed later on). The conclusions about the data and how

many times the experiment were repeated. When all these procedures are followed at any time before, during or after the experiment, the study comports with: scientific, legal, and ethical rules.

4. Legal Procedures Regarding Data Storage

All data should be stored between five and seven years in a readily accessible place close to where the study was done. Data should be kept indefinitely and may be stored some other way for practical purposes but under no circumstances should data be discarded. Data includes the plastic binders and anything else in written form that was part of the study. There is no case law regarding computer record keeping. It is unethical to use the computer to create data records since it's easier to change that information. Also, when using computers (as opposed to paper records), most people would not even know that the records were altered (since it does not leave eraser marks). It is wise to limit the number of researchers who have passwords to access data that the computer is analyzing [5]. By limiting access, we can insure the integrity of our results since a limited number of people have access to it. Hence, there is less of a chance that any data could have been intentionally or unintentionally corrupted. Also, a court acknowledges a written record that is signed and corroborated by a witness and this fact should be kept in mind in case future legal problems arise [6].

5. Intersection: How Ethics and Science Overlap

As we try to obtain knowledge we should keep in mind that we have to follow the ethical procedures for handling data outlined above but we also should consider how our research affects people. Below are a series of facts from research studies and experiments in neurobiology and consider how its results impact our society: Experience shows us that spirituality is intensely personal. Spirituality encompasses our deepest desires and our most private thoughts. Our spiritual experiences are often nearly impossible to describe. The purpose of the gift of spirituality from God to humans usually means that these experiences are meant to be shared. Although spirituality can take place in isolation it is associated with the public domain of human life. Hence, spirituality is associated with or named as religion. Further, religious institutions are places of worship and they function as schools and counselors. Consider the following example using the Scientific Approach within this discussion of Memes and Genes. Religious institutions and administrators employ a multitude of functions that directly correlate with

the scientific approach leading to a conclusion that spirituality is heritable [7]. Religiousness does have a genetic component since it is less strong than that of spirituality because memes and not genes transmit religion [8]. Memes are self-replicating units of culture in the form of ideas transmitted to others through ritual, speech, and writing. Rather, it is our genes that make us receptive to spirituality and faith it is our memes that pass down religion to each generation. Also, memes serve to make each religion distinct. Further, spirituality plays the role of gathering together the memes into cohesive religious institutions. Therefore, we should not consider science and religion as enemies. However, in this case science is not trying to prove the existence of God. Here, scientific methods are being used to explore why humans believe in God and therefore, not explore whether beliefs are true or not. The aforementioned memes can be studied using the scientific method and the procedures suggested for carrying out research. Nevertheless, it was scientist Albert Einstein who once said, "Religion without science is blind; science without religion is lame" [9]. Hence, what is an example of a meme? The concept that it is sinful to marry outside of one's faith is a meme. Interestingly, Jewish society worldwide tends to follow this meme as a mandate. When scientists studied their DNA, they saw patterns of DNA snippets that were preserved. Remarkably, Scientists concluded that Jewish populations sustained their genetic heritage and their religious traditions in spite of the Inquisition and the Holocaust. Scientists link these DNA patterns or sequences back 3,000 years which is the Biblical time of the exodus from Egypt. In sum, from the analysis in the aforementioned diagnostic phase of that research process the meme emerged as one important aspect to be viewed in terms of a measurable variable within that particular scientific study. The development of any measurable variable is an important chance to track strengths and weaknesses within a model as researchers develop new sectors setting the stage for future research on a specific topic [10].

6. Relevance of the Aforementioned Scientific Research

The concepts presented above depict how science can mesh together with religion and how this is controversial for people. Therefore, it is not enough for scientists to conduct research and follow the legal rules. Scientists should also comment on the impact on people and society that a study will have. Our moral or personal responsibilities are often engaged when we conduct research. Hence, there are ethical questions that arise from every experiment and not just those that involve humans and animals. There are ethical ways to

conduct experiments and the law guides us how to do that. In order to ensure that our experiments are being conducted ethically the following questions should be answered before the study is begun: Why does this research need to be done? A good reason is that many people will benefit from it. It could save lives or could help with our environmental problems. There should be some kind of moral imperative involved. -Is this something that the world needs to know? We need to consider whether the world rather than just the United States needs this information. Our society is increasingly global in perspective and our research should be too, whenever possible. Has this been tried before? If so, how is my research different/necessary now? As scientists, we should think about how hard it may be to succeed where others have failed. If we are aware that this has been tried before, then we need to inform the funding source. Also, we need to explain how our approach is different and why that difference will make us succeed. This could be something beyond our control, for example, the timing or conditions just may be better now than they were when it was tried before. We have a duty to disclose and full disclosure is the key here but we also have to be realistic. Is it really worth the time, cost, and effort? We have to be good stewards of our time and our natural resources and good stewards of other people's money. Time spent on one thing is a loss of time spent another. We have to try not to waste time on so-called peripheral issues and focus right in the main premise. Will anyone or anything be irreversible physically or emotionally harmed by this? We have to consider how human and animal subjects will respond or be changed by participation in the research. If so, then is it ethical to proceed with it? It may not be ethical and we may have to cancel it. How will society benefit by what I plan to do? There should be some benefit even it's small. How will my career or my employer/institution benefit from this research? In this case, the benefit should be small and incidental. It should, by no means be the only benefit that the research confers. Is that benefit greater than society's benefit? If so, then the research should be canceled. Thus, the provision of an integrated research planning process will often to lead to a more complete understanding of the topic studied and the wider implications for how the research can be applied in solving environmental issues.

7. Conclusion

Therefore, it is by answering these questions or thinking about them before experiments are conducted we can explore the ethical issues in science. It should be a requirement that these reasonable and well thought answers accompany ethical questions like this before institutions or government bodies approve funding. No individual should be conducting

research solely to enhance her career or the prestige of an institution. It is unethical to conduct research without a moral imperative, since it harms the society that we serve as lawyers, scientists, and researchers.

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