Professional ethics in gerontechnology: A pragmatic approach

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H. Bouma. Professional ethics in gerontechnology: A pragmatic approach. Gerontechnology 2010; 9(4):429-432; doi:10.4017/gt.2010.09.04.018.00 Ethics is a basic ingredient of gerontechnology, relating to the responsibility for all intended and foreseeable effects of one's actions. This editorial is not devoted to the learned study of ethics, but to professional ethics as it appears in practical gerontechnology projects. It starts from the assumption that professional behaviour rests on the best available evidence, which is theory-based insight into needs and ambitions of older people in their environment. This is an interdisciplinary endeavour. As far as such insight is still pending, practical solutions are available as well. The basis of responsibility in gerontechnology remains with a genuine interest in the lives of the targeted older persons.

Keywords: professional ethics, pragmatic, responsibility

Ethics deals with intended and foreseeable effects of human actions onto others. Direct effects upon one or more persons can be traced one-to-one to earlier actions of one or more actors. More often, indirect effects may be traced back to a number of earlier actions and situations. Then we may speak of foreseeable changes in likelihood of certain effects. The basic issue is to consider what effects and side-effects (risks, misuse) might result from our actions and in what circumstances.

In daily life, most of our actions are directed at immediate effects, while other actions are intended to have effects in the future, based upon some model of reality and earlier experience. Inasmuch as many of our actions do affect not just us but other persons as well, ethical behaviour is an ever-present reality, usually covered by the term 'responsibility'. If effects of our actions can be foreseen to be mainly negative on others, we may speak of unethical or irresponsible behaviour.

Quite a few professions have to deal with ethical problems and have developed protecting tools: professional oaths (Hippocrates' foremost), approval by ethical committees, informed consent, disclosure of financial support, etcetera. In the engineering disciplines, these seem to have carried little weight so far. However, the absence of operational tools should not prevent us from adhering to the underlying main directive: to take a genuine interest in older persons and their lives, and advance positive effects while minimising negative effects. We will argue that this needs to be done in a multidisciplinary setting.

Ethics as a learned subject

Ethics as a learned subject is concerned with the study of foreseeable effects of human actions, whether these can be considered positive (good) or negative (bad), and how to strike a balance between the two[1]. Obviously, 'good' and 'bad' are not constants, but dependent on culture, as an encompassing term for present law, religion, and custom. I am not in any position to discuss philosophical and historical aspects of ethics. For gerontechnology , general approaches have been proposed before[1,2], including the special ethical dimension of care[3]. However, since ethics is a component of all our actions, it is legitimate and desirable as professionals to think about intended and unintended effects

and likelihood of effects of our research, development, design, and distribution (RDDD) on our target groups of ageing and aged persons, for which we take on responsibility.

In gerontechnology

In gerontechnology, we start from the assumption that the effects of our professional actions should be beneficial to ageing persons directly or indirectly. Such benefits are to come via technology products and services that fit goals and ambitions of older persons in their physical and mental living environment, their social situation, and their care situation, while avoiding negative effects. So we need insight into relevant aspects of the lives of ageing persons in our society. As professionals, we wish to serve positive goals of older people, add quality to their lives, and apply the best available knowledge, expertise, and methods available for achieving these.

Here we enter the problem area. What are the goals and ambitions of older persons and what are their physical, mental, and social situations and their care environments? Although we may perhaps agree that dignity, autonomy, and privacy are rather universal values, ageing people are heterogeneous in many respects including ambitions, education, culture, former profession, family situation, housing, health, and wealth or poverty. How to make sure that our professional actions will prove beneficial to the intended part of the ageing population without detrimental effects on themselves and others?

Solutions

Since the problems have been with us for some time, solutions have been tried and found. All issues of this journal, of related journals, and of all of the seven international Gerontechnology conferences are filled with analyses and solutions, some of which have explicitly mentioned the ethical aspects[4,5].

Intuition and trial-and-error

As members of our own society, we have our intuitions, but professionals know that intuitions may be right or wrong. An example of a valid intuition is the hybrid electrical bicycle, which has turned out a real success[6]. On the other hand, many aids lie at rest in cupboards. These aids were once honestly meant for compensation. Substantial differences between generations may make intuition of younger professionals an even more misleading compass. If combined with 'trial and error', this may turn out a costly solution as well as professionally the lower in rank.

Interdisciplinary collaboration

As professional engineers, the better course is to turn to the learned professions of ageing and to relevant literature to help out and provide the insights we need: physiology, psychology, sociology, and medicine of ageing. A general insight can be found in the concepts of individual and socio-structural lags, which characterize older people in a rapidly changing technological environment[7]. Out of many[8,9], three examples may be illuminating:

(i) The concept of 'technology generation' states that the types of technology one grew up with in one's formative years (say until 30 yrs) remain the permanent basis on which later technologies can only be added without really replacing them. Evidence for this concept comes from user-interface studies[10], and anyone watching the Internet skills of children may be open for the much wider significance of the concept of 'technology generations';

(ii) The concept of temporal discounting indicates the decrease with future time of subjective values attached to products and services if their realization shifts further into the future, connected to expectations about the likelihood of age-related diseases and the end-of-life[11];

(iii) Theories about technology acceptance[12] increasingly unravel factors that advance or hamper the use of new products and services by ageing persons.

In general, interdisciplinary research between technology disciplines and the disciplines of aging is adding daily to insights, and

consequently to predictive power of professional efforts to foresee and weigh the consequences of our efforts in gerontechnology. Efforts have been made to translate insights from psychology specifically for designers[13].

Evaluation

A third option is that we as engineers may find out ourselves in evaluation projects of the products and services that we intend to provide. If we wish to do just that professionally, we will have to turn to the human sciences again for the use of proper methodologies. However, a better course is to turn to well-developed inclusive design methods.

Inclusive design

Probably the more developed practical solution is called Inclusive Design, which intends to design products and services such that the weaker members of the target group can use these, assuming that the stronger members will have even less difficulty.

The concept has also been called 'Universal Design' or 'Design for All'[14-16]. For my part, I prefer 'Inclusive Design' because it needs specification of who is to be considered inclusive, as no design can be made really universal or for all without any exception. What is more important than the name is the methodology that has been developed to investigate or ascertain that the stated goals will indeed be met. A basic ingredient is the participation of representative samples of members of the target group, as focus groups in discussions and as subjects in experiments or try-outs. One example out of many of a user-driven project is the Soprano project, directed at frail and dependent older persons in their 4th age[17].

Pragmatic ethics

The royal road toward pragmatic ethics is insight and understanding. The more we understand relevant aspects of the lives of ageing people, the better we will be able to predict their needs and ambitions and supply the answering technology for enhancing their quality of life. The problem in this approach is that new understanding is a gradual and sometimes slow process and it would be unwise to wait for the perfect insight before providing proper products and services. Nevertheless, it is equally unwise not to profit from existing insights, substantiated theories, and design methodologies.

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A NOTE ON THE COVER

'Flying Pins' is a monumental work of art of Claes Oldenburg and Coosje van Bruggen showing action in Eindhoven, the Netherlands. Since May 31, 2000 it is the first view of train travelers walking towards the university campus. It has been chosen as vignette for the ISG*ISARC2012 conference, an event also meant to stir up.

Photograph by Irma van den Bouwhuijsen-Somers