INTRODUCTION

This collection is the result of research carried out within the framework of the Incentive Program Ethics and Political Issues, which is supported by the Netherlands Organization for Scientific Research (NWO). The aim of this research was to find and develop a form of ethics tailored to the moral problems and social conflicts that are typical for an entirely technological culture like ours.

Our modern technological culture has a highly dynamic character: old ways of life are continually being replaced by new ones, norms and values are constantly being put up for discussion, and we regularly find ourselves confronted with new moral problems. However, neither traditional philosophy nor current bioethics seem to possess a vocabulary that can accommodate this dynamic character adequately. This is due to the fact that bioethics has little insight into the moral significance of technological artifacts and systems. To remedy this blind spot, it would be necessary for bioethics to open up the "black box" of technological design and development.

In this respect bioethics could learn a lot form modern science and technology studies (STS). While classical philosophy of technology considered technology and culture as each other's opposites and could see the notion of a "technological culture" only as an oxymoron, science and technology studies have, from the outset, placed the interplay of technology and culture at the center. STS adhere to the assumption that there is a "co-evolution of technology and society". On the one hand, technological developments take place in a social field of influence and are the outcome of negotiations in which many different actors are involved. On the other hand, the successful introduction of technological artifacts depends on certain changes in the fabric of society. Technological artifacts carry a script or a scenario within them; they require particular role patterns and role divisions and lay down a specific "geography of responsibilities".

Science and technology studies seem to offer the necessary scope for the normative assessment and the democratic control of technological developments. However, these studies exhibit an agnostic or even antagonistic attitude towards ethics. They describe and analyse the emergence of norms and values in the same

empirical and objective way as the construction of facts and artifacts - without reference to intentions or reasons, but only in terms of allies and opponents, strategic negotiations and tactical manoeuvres.

It is clear that a stalemate is reached: while bioethics has to a large extent remained blind to the normative impact of technological artifacts, science and technology studies are characterized by a certain hostility towards ethics. This impasse can, we believe, be broken by a re-evaluation of pragmatism. Pragmatism shares with science and technology studies its central insight in the co-evolution of technology and society, but it differs from STS in that it gives serious ethical consideration to the associated normative implications.

In order to substantiate this claim we have first sketched the contours of a pragmatist ethics, which is better equipped to dealing with the problems of a technological culture than are traditional forms of ethics. In the Prologue, "Ethics in a Technological Culture: A Proposal for a Pragmatist Approach", we explore the problems and perspectives of a pragmatist alternative to traditional ethics. Pragmatist ethics does imply a number of interconnected changes of emphasis: from epistemology to methodology, from product to process and, above all, from justification to discovery. The tasks for pragmatist ethics include: describing problem translations, sketching possible future scenarios and developing new moral vocabularies.

This first sketch was presented as a discussion paper to six experts in the fields of pragmatism, STS and/or bioethics, with the request to write an elaborate reaction. These six papers were supplemented with three more papers of our own, in which the first sketch of a pragmatist ethics is further developed. This total of nine papers formed the subject matter for a two-day workshop ("Conference on Bioethics and Pragmatism") held in June 2001 in Wageningen, The Netherlands.

The results of this workshop have been collected in this volume. The volume consists of the nine papers, all with brief comments by one of the conference participants. Our first discussion paper forms the prologue, while as an epilogue we have added an extensive evaluation and processing of the results of the workshop. Apart from the Prologue and the Epilogue, this volume consists of four parts: "Technology and Ethics", "The Status of Pragmatism", "Pragmatism and Practices", and "Discourse Ethics and Deliberative Democracy".

1. TECHNOLOGY AND ETHICS

The part on technology and ethics opens with a paper by Larry Hickman. In this paper Hickman wants to show that if we take seriously the core claims of pragmatism, especially those advanced by John Dewey, then we will begin to develop a new vocabulary to deal with issues involving technology.

Hickman calls to mind the determination which with classical pragmatists rejected the metaphysical idea that there are transcendental truths or the religious idea that there are revealed truths. Although it is by now old news that the pragmatists were anti-foundationalists, Hickman's reminder is by no means superfluous because foundationalism is still very much alive. It flourishes in some

branches of environmental philosophy where foundations are searched for in the earth, not in the sky. It also plays an important role in popular debates concerning biotechnology. Hickman is convinced that so long as we continue to appeal to foundations, whether such foundations be projected up into the sky or planted down in the earth, the problems and prospects of our rapidly changing technological landscape will not be adequately addressed.

Hickman defends a version of experimental naturalism or instrumentalism, that centres on the notion of technology in the broad sense in which Dewey used it, namely as the study of our tools and techniques. Hickman demonstrates the relevance of Dewey's concept of the thought experiment as a "dramatic rehearsal" for problem solving and decision making in bioethics by exploring the case of genetic screening.

In his comments on Larry Hickman, Hub Zwart compares the methodology of Dewey with that of Michel Foucault. He points out a number of similarities, the most important one being the vehement rejection of all forms of foundationalism, but he also stresses that there is a big difference with respect to the ultimate goal of philosophical inquiry. Rather than looking for tools that may help us to find solutions to certain problems, Foucault's philosophy tends to focus on the social and epistemological conditions that allow certain problems and solutions to emerge. In his contribution further on in this volume, Gerard de Vries also underlines that, according to Foucault, the philosopher's job is a 'transcendental' one.

In the second large contribution to the part on technology and ethics, Maartje Schermer and Jozef Keulartz take the case of *In Vitro Fertilization* (IVF) to explore the consequences and effects a new technique can have on society and the way traditional bioethics deals with technological developments. They analyze the shifts in moral responsibilities and social roles and relationships that IVF has caused and give an overview of the debate on IVF as it has taken place in the field of bioethics. Though this debate does already show some pragmatist traits, Schermer and Keulartz propose a more explicitly pragmatist approach and demonstrate what this would imply for the debate on IVF.

Schermer and Keulartz focus on the novel character of IVF and show the emergence of a new entity ("the embryo"), of a new medical practice (productive in stead of curative) and of new (family) relationships. The embryo as a new subject, resulting from the separation of the embryo from the body of its mother, has been discussed at length in bioethics. This was not the case, however, with respect to two other main issues that were raised by IVF.

The first issue concerns the sheer endless possibilities for creating new (family) relationships as a result of the division of biological motherhood into genetic and gestational motherhood. They signal the need to rethink the social, moral and legal basis of family relationships and the meaning of concepts like family and kinship. However, these questions have received rather fragmented and one-sided attention in bioethics. Schermer and Keulartz claim that a pragmatist ethics would argue for an open and creative view on new family constructions and arrangements.

The second key question that is raised by IVF concerns the shift from private procreation to public reproduction. With IVF, Schermer and Keulartz notice, medicine literally became *productive*, for it created new life. The emergence of a new "practice" within medicine, a practice that can be characterized by the fact that it treats people's desires and not their diseases has gone largely uncommented. A pragmatist ethics would emphasize the necessity to create new concepts or a new vocabulary, to define new (social) roles and responsibilities and to develop new rules guiding this practice.

In their comments on Schermer and Keulartz, Guy Widdershoven and Lieke van der Scheer point to the individualistic bias of bioethics. Schermer and Keulartz only notice this bias in passing, without giving it proper consideration in discussing the central issues of the IVF debate. That is why, according to Widderhoven and Van der Scheer, their evaluation of this debate is not entirely convincing. To shed new light on the main issues of the IVF debate, they argue for a "hermeneutic-pragmatic" approach that fits in with the tradition of the "ethics of care" and that focuses on the vulnerability and interdependency of human life.

2. THE STATUS OF PRAGMATISM

With regard to the status of pragmatism there is considerable difference of opinion between the two main contributors, Andrew Light and Glenn McGee. Light is rather skeptical about the proposal of Keulartz et al. for a pragmatic reform in applied ethics. Such a reform is neither a necessary prerequisite to focus one's attention on technology, nor to advocate the virtues of open and public debate. With reference to arguments provided by Jonathan Moreno, Light contends that as a form of applied ethics, bioethics is already pragmatic: it is a social activity, strives for solutions, relies on experience and is policy-oriented. To adequately apply a moral theory in practice to actual problems in the real world some form of casuistry is required, and it is this commitment to casuistry that accounts for the inherent inclination to a pragmatist methodology in bioethics.

But embracing such an inherent methodological pragmatism does not at all compel us to have recourse to the teachings of Dewey, James, Pierce or Rorty. Quite the contrary, Light insists, we better refrain from such an explicit reference to more pure philosophical versions of pragmatism. Given the disdain for pragmatism of the classical American variety in graduate schools of philosophy, attempts to convert our colleagues to an explicit pragmatist approach would all be highly counterproductive. Moreover, promoting pragmatism vis-à-vis consequentialists, deontologists, or principalists, would come down to a retreat into metaethics and would not contribute to the resolution of any problem at hand.

Absorbed in purely philosophical disputes, one tends to forget that more often than not there is little disagreement on ends. Where convergence on practical ends occurs pragmatists would be ill advised to keep on sparing with other philosophers on issues of disagreement but should join forces to achieve their common aim. In this situation the public task of the philosopher is to articulate the arguments that will most effectively morally motivate policy makers and the general public to accept that end. Light stresses that this public task of philosophers sometimes calls for a form of what he calls "moral translation", that is to say the translation of their views into a language that resonates with the moral intuitions of the broader public.

Bart Gremmen opposes Light's general claim that good bioethics is necessarily pragmatic. Moreno's arguments only show that bioethics as a form of applied ethics is always involved in some kind of practice. Now the problem with the different schools in bioethics, according to Gremmen, is that they exhibit an individualistic bias, an observation already made by Widdershoven and Van der Scheer. As a consequence of this bias they are insufficiently equipped to operate on the level of practices. To alter this situation Gremmen encourages us to develop the concept of practice. In this respect especially Alasdair MacIntyre already has done some groundwork, but Gremmen is skeptical about his emphasis on virtue ethics and argues instead for a more pragmatic elaboration of the concept of practice.

With respect to the status of pragmatism in applied ethics in general and in bioethics in particular, Glenn McGee takes a view that is contrary to Light's. Whereas Light urges us to refrain from explicit recourse to pragmatism and from philosophical exegesis of classical texts, McGee is alarmed precisely by the circumstance that pragmatism in bioethics and other forms of applied ethics is divorced from the epistemological problems at the core of classical American philosophy. The focus on the issues at hand should not go at the expense of a careful treatment of the problem of foundations.

Of course a pragmatist conception of epistemology is quite different from the Cartesian conception. For pragmatists, McGee claims, knowledge is not grounded by some pre-given reality apart from experience, but is, quite the reverse, formed and textured by experience. Following Edmund Husserl and Richard Zaner, one of the pioneers of bioethics in the 1970s, McGee gives a phenomenological account of experience as the "everyday" experience of the common world. This experience mostly goes unnoticed and it is, according to Zaner, an important task of a phenomenological epistemology to make this implicit experience explicit.

An important method to make explicit what has hitherto been implicit is what Zaner calls "aporia", a "dis-engaging" from the concerns of the moment and the assumptions that characterize everyday life, mostly provoked by a breakdown of current rules and common routines. What an epistemological inquiry would require is systematically to persevere in this kind of disengagement and methodically to explore what then is disclosed to us. Some such method is also needed in bioethics if we want to examine the fundamental assumptions we make in our everyday deliberations and negotiations at bedside rounds, case conferences, et cetera. If we neglect to carry out this kind of epistemological inquiry, McGee warns us, we run the risk that pragmatism in bioethics will degenerate into a dressed-up form of relativism.

Peter-Paul Verbeek supports McGee's plea to take seriously the role of experience in pragmatist epistemology. But unfortunately, Verbeek maintains, in McGee's