

Practical Knowledge and Ethics

Tore Nordenstam

Abstract: Systematic research in the wide field of practical knowledge is a recent phenomenon. In this paper, the approaches which have been developed in the main centres of research into practical knowledge in Norway and Sweden are compared with an emphasis on their potential for revitalizing the study of ethics. The focus on narratives and reflection based on the researcher's own professional experience which is the distinguishing feature of the centre for practical knowledge at the University of Nordland is seen as a very promising addition to the traditional repertory of ethical studies.

Keywords: Practical knowledge. Skill and technology. Ethical theory. Applied ethics. Multifaceted concepts. Examples. Reflection. Scientific essay. Narrative form. The role of philosophy.

1 Introduction

The use of technology, new and old, presupposes that the users have the practical knowledge, including ethics, which is required for handling it in an adequate way. What does that mean? The answer to this question is a never-ending story. Here I shall limit myself to the more humble task of trying to explain why the new research field practical knowledge is not only a much-needed addition to traditional approaches to knowledge with their overemphasis on theoretical knowledge but also a very promising supplement to the traditional repertory of ethical studies with their overemphasis on generalities and theories.

My reflections on practical knowledge and ethics build upon long personal involvement in those fields. In a study of Arabic ethical concepts in the 1960's (Nordenstam 1968), I worked out a perspective on ethics which has followed me ever since. Against that background, the beginnings of research into practical knowledge in the 1970s and 1980s were of great interest to me. I took an active part in some of the projects led by the Swedish pioneers in that field, Bo Göranson and Ingela Josefson, at that time (Göranson et al. 1976; Göranson 1978, 1984; Nordenstam 1980; Josefson 1985); and after the establishment of the research subject skill and technology in Stockholm in 1985 and the centre for practical knowledge in Bodø in 1997, I have followed their development both as a critical observer and as a visiting participant in various capacities.

2 Examples and concepts – circles of understanding

When I was a student in the small department of philosophy at the University of Gothenburg in the 1950s, *Language, Truth and Logic* (Ayer 1936) was one of the set texts. It was a piece of propaganda for the logical empiricists' views on such matters as knowledge, science, ethics and theology, very well-written, but rather disturbing for a young man like me who happened to be seriously interested in art and ethics. According to the young British philosopher (Ayer was 26 when the book was first published), moral judgements and aesthetic evaluations cannot be said to be true or false, valid or invalid; they are just expressions of feelings. Ethics and aesthetics are outside the realm of reason. Rational argumentation in those fields is impossible.

If this was true, philosophers could not contribute much to those areas. But perhaps there was a way out of the impasse after all. It could be that the teachings of the logical empiricists was so over-simplified that they couldn't do justice to the world as it is. My tendencies to think in that direction got nourishment when I spent some months at the University of Oxford in 1957. This was in the heyday of Ordinary Language Philosophy, Oxford was the leading centre for that kind of thing, there were many good philosophers around. The person who impressed me most was John Langshaw Austin. Standing there in his overcoat with the pipe in one hand and a matchbox in the other, he talked about negligence and similar legal concepts. If you want to clarify what negligence means in

the Anglo-Saxon legal tradition of case-law, it is obvious that you have to rely on examples. What is and what is not considered to be the result of negligence is decided by the judges' treatment of individual cases. In every new case, the judges are supposed to be guided by earlier verdicts in more or less similar cases, but there are no binding rules. Reasoning by analogy is the core of the procedure.

Austin's thorough discussions of legal cases helped me to begin to understand the hermeneutic circle of concepts and examples. Concepts are constituted by sets of examples, and examples are examples of something only in the light of something more general like a concept or a rule. Examples and concepts are internally related (Nordenstam 2009, 2013). They are defined by each other.

Austin had a great respect for the existing vocabularies in the various fields of practical knowledge. In a paper from the 1950s (Austin, 1956-57), he formulated it in the following way: 'Our common stock of words embodies all the distinctions men have found worth drawing, and the connections they have found worth marking, in the lifetime of many generations: these surely are likely to be more numerous, more sound, since they have stood up to the long test of survival of the fittest, and more subtle, at least in all ordinary and reasonably practical matters, than any that you or I are likely to think up in our armchair of an afternoon – the most favorite alternative method.'

When Austin visited us in Gothenburg in the autumn of 1959, shortly before he died, he gave the young dissertation writing philosophers a piece of advice on the way: Don't stick to English words and expressions all the time, as we do in Oxford, have a go at your own language! When I landed in Khartoum as a university lecturer a couple of years later, I followed his advice halfway. I got interested in the moral concepts I found there, and when I discovered that this was unchartered land, I embarked upon a project on Sudanese ethics. My scanty knowledge of Arabic had the advantage that I couldn't build unreflectively on my own tacit experience. I was forced to search for examples of such things as *karāma* (dignity), *sharaf* (honour) och *ihtirām al-nafs* (self-respect). It is agreement on the cases which fall under the concept and agreement on the cases which clearly fall outside, coupled with agreement on what is unclear, which gives the concepts their stability.

One of the most interesting discoveries in 20th century philosophy was that ordinary everyday concepts are different from *closed concepts* (Weitz 1977) like *1, 2, 3, rectangle, rhombus* etc. which can be defined once and for all by listing the necessary and sufficient conditions for the correct application of the designations. The moral concepts of honour and dignity are excellent examples of a kind of concept which has been referred to by such terms as *open concepts* (Weitz 1977), *porous concepts* (Waismann 1952), and *essentially contested concepts* (Gallie 1956). I should like to add a new expression to the list: *multifaceted concepts*. Maria Johansson, who coined the expression 'multifaceted picture' in her doctoral dissertation (Johansson, 2012), instances such things as *love* and *intuition*: 'By looking at such phenomena in the actor's work as intuition one won't get a general knowledge of intuition but different descriptions of it. In that way one will get a multifaceted picture of the phenomenon called intuition.'

3 Applied ethics

New developments in the field of applied ethics in the 1970s, spearheaded by the transformation of medical ethics, initiated a most welcome change in the history of ethics. Medical ethics has been part of the physicians' professional knowledge at least since the days of the Hippocratic oath (fifth century BC). But advances in technology like new types of medical ventilators made it necessary to reassess the established norms. The discussion of the Quinlan case was a milestone (Van 1985). The 21 year old girl Karen Ann Quinlan collapsed, was taken to hospital and fell into a persistent vegetative state. She was kept alive on a ventilator for years, her parents wanted to have her disconnected from the machine, the doctors disagreed. Cases like this led to a broad discussion of medical ethics, including the traditional precepts of the Hippocratic oath, ending with a revolution on the conceptual level – a redefinition of what we mean by 'death' (the brain-death criteria).

Under such circumstances it turned out to be fruitful to approach old issues in new ways. The liaison between practising medical personnel and specialists in conceptual analysis like analytic philosophers and lawyers became a model for other specialized areas of ethics like engineering ethics, business ethics, sports ethics, and so on.

The expression 'applied ethics' invites us to look at such areas as medical ethics and engineering ethics as applications of ethical theories, and this has, in fact, become part of main stream thinking in the last few decades. It is assumed that the ethical practices we find around us must be provided with a theoretical foundation of some kind. In this vein, it has been proposed that in order to avoid *ad hoc* thinking in ethics ethical problem solving must be based on «theories» like Kantian ethics or utilitarianism or a combination of them (Macklin 1988). The philosophically most interesting part of the proposal is the word 'must'. Why do you think that that is necessarily so? If it is only because considerations of people's dignity and self-respect play an essential role in ethics, along with considerations of the likely outcomes of various alternatives, then my answer is simply that such considerations are part of any ethics worth the name. You do not have to appeal to Kant or J.S. Mill or other philosophers here, particularly not the watered-down versions of Kantianism and utilitarianism which belong to the stock-in-trade of courses in ethics (Nordenstam 2001).

Capricious thinking is not the only alternative to the theoretical approach to ethics. What about a practical approach to ethics? The professionalization of medical ethics and so on has led to an increased interest in examples. The central part of Stephen Toulmin's paper 'How Medicine Saved the Life of Ethics' (Toulmin 1982) is entitled 'The Importance of Cases'. Toulmin, the philosopher of science, was one of the pioneers in the field of bioethics. When he wrote that paper, he had been a member of a national ethics committee in U.S.A. for some years. In his experience, it was always possible to find common solutions to the ethical problems which the committee was asked to handle, irrespective of the widely different ethical perspectives and principles represented by the members of the committee. My own experience as a member of an ethical committee for medical research points in the same direction. It is not always possible to reach total agreement, but when you place yourself on the level of individual cases, it is surprisingly often possible to find solutions which are satisfactory for all the parties concerned. In the concrete cases, it is not the general philosophies of life who speak their universal language but lived experience itself, the sum total of all the cases you have gone through or know of in other ways. This is where practical knowledge comes in.

4 Practical knowledge

Thirty years ago Stephen Toulmin could write about how medicine saved the life of ethics. Perhaps in twenty or thirty years from now one will be able to reflect upon how the field of ethics was revitalized by research into practical knowledge.

The development of practical knowledge as a research area in its own right began at about the same time as the growth of new forms of applied ethics. It started in the 1970s with Bo Göranson's studies of the effects of computerization on the existing professional skills in the field of forestry and some related projects (Göranson et al. 1979; Göranson 1984, 1993). It continued in the 1980s with Donald Schön's studies of the reflective practitioner (Schön 1983, 1987), the creation of the genre-mixing Dialogue Seminar in Stockholm, and the establishment of the research subject Skill and Technology at the Royal Institute of Technology KTH in Stockholm. Under Bo Göranson's dynamic leadership skill and technology soon established itself as a vigorous centre for research into practical knowledge. In the mid-1990s, Ruth H. Olsen began the preparations for a centre of practical knowledge in Bodø, Norway, which received its first students at the master level in 2000 (Nergård et al. 2005) and is now the leading centre for research and teaching in the field of practical knowledge. The centre for practical knowledge at Södertörn University was established at the same time by the third of the founders of the new subject, Ingela Josefson, who has also played a key role in the development of the Bodø centre right from the beginning. (Olsen and Josefson have collaborated since 1993.) Göranson left his chair at the Royal Institute of Technology in 2008. After that, there has only been a limited amount of teaching in skill and technology at KTH, whilst Göranson himself continues on a part-time basis in the small department of skill and technology at Linnéus University in the south of Sweden, led by two of his former students.

The approaches to practical knowledge at KTH, Linnéus University, Södertörn University and the university in Bodø, now called University of Nordland, have one thing in common – they are all concerned with the study and development of the existing practical knowledge in a great variety of fields, from health care and social welfare, education, engineering, the police and the armed forces to art and theatre, music, dance and so on. But they are also clearly different (I continue writing in the present tense

although the centre at KTH now belongs to history), reflecting the different backgrounds and interests of the founders of the new discipline.

Bo Göranson began his academic career with an unusual combination of subjects, mathematics and theatre studies. When I met him for the first time in a seminar in the department of industrial economy and organization at KTH forty years ago, I was rather surprised to find a researcher in that department referring to Shakespeare's *The Tempest* and Strindberg's *Miss Julie* in his argumentation. That broad span has continued to put its imprint on his activities up to now. With one foot in the world of formalized rules and the other in the world of theatre, music and art, he was one of the first to pay attention to the limitations of computerization. The tension between the exact language of formal disciplines and the existing knowledge in various professions has been the leitmotif of his approach.

The study of practical knowledge in Bodø and Södertörn has had a different focus. In the last decades of the twentieth century nursing education in Norway and the other Scandinavian countries underwent a deep-going transformation which has been referred to as academization. The previously overwhelmingly practical training of nurses was replaced by an overwhelmingly theoretical education. The same kind of change took place at the same time in many other parts of the educational systems in Scandinavia. This is the background for a letter from the school of nursing in Bodø (where Ruth H. Olsen was stationed at the time) asking for permission to develop a new subject called practical knowledge at master's level. When that was launched a few years later, in 2000, the emphasis was, as one could expect, on the professions in such sectors as health care, social welfare and education. The same applies to practical knowledge at Södertörn University. The first professor in the new field was Ingela Josefson, a trained linguist who turned to working life studies in the 1980s, including a study of the physician's practical knowledge (Josefson 1998). From the beginning, the centre of gravity in Bodø and Södertörn has been on the interpersonal professions.

Computerization and academization was the background for the growth of practical knowledge as a research area in its own right. It was also a timely reaction against the narrow conception of knowledge which has dominated the Western cultural tradition for more than 2,000 years. In the academic world, theoretical knowledge has

always been ranked more highly than practical skills and experience. Some philosophers drew attention to this neglected area in the middle of the last century. Gilbert Ryle read a paper entitled 'Knowing How and Knowing That' in a meeting of the Aristotelian Society in London in 1945 (Ryle 1945-46) and devoted a chapter to the same matter in his influential book *The Concept of Mind* (Ryle 1949). Michael Polanyi wrote books on personal knowledge and the tacit dimension (Polanyi 1958, 1966). Maurice Merleau-Ponty drew attention to the field of embodied knowledge (Merleau-Ponty 1945). Ludwig Wittgenstein's critique of the views on language and knowledge he had propagated in the *Tractatus* period was published after his death and came to play an important role in the discussions of computerization and artificial intelligence from the 1970s onwards (Wittgenstein 1953).

The research subject practical knowledge has a long prehistory. Systematic research into the vast area denoted by the term practical knowledge has a short history. There are clear differences between the Stockholm group and the Bodø/Södertörn environments, not least on the methodological level. Bo Göranson's early studies of the effects of computerization in selected professions (Göranson 1993) laid the foundation for research in skill and technology at KTH. Interdisciplinary cooperation and exploration of the potential of encounters between art and science became the signum of the Stockholm group (cf. the Dialoger website). In the latest description of *Skill and Technology* at the Royal Institute of Technology which I have been able to find, the methods employed are summed up in three points (KTH website 2008). First, it is pointed out that existing professional knowledge cannot be described in an exact language. 'Instead one has to use a literary language which consists of metaphors, analogies and parables.' The second point is that research into skill and technology in the 1970s and 1980s had some of the characteristics of so-called action research. The third point is that the dominating method today, i.e., in the first decade of the twenty-first century, is the dialogue seminar method.

The so-called dialogue seminar method, which was developed by Maria Hammarén and Bo Göranson in a joint project at the end of the 90s (Hammarén 1999), is a detailed procedure for conducting seminars with the aim of improving the transfer of knowledge in a given group, *in casu* a number of civil engineers in a high-technological

company. The procedure consists of several steps, including joint reading of selected philosophical and scientific classics, individual writing and collective working with the individually produced texts. It may well be that a procedure along those lines can better the flow of knowledge in certain environments, but it seems confusing to refer to it as a method of research. If a certain method of interval training leads to good results in the field of sports, it does not mean that it is a method of research. Why should a method intended to improve the flow of knowledge in certain groups be regarded otherwise? Be that as it may, it is rather estranging to find a procedure of this kind elevated to the status of main method of research into the wide and variegated field of skill and technology. Something of a different calibre is required to handle the cluster of practical knowledge and ethics, which takes us to the alternative approach which has been developed in Bodø in the last twelve years.

The Bodø approach to practical knowledge rests on two pillars: the scientific essay as a form of work and the concentration on reflection on the researcher's own professional experience. The approach builds upon an epistemological insight with far-reaching consequences: Writing of this kind is not just a way of transferring already existing knowledge from one medium to another; it is a way of producing new knowledge. Narratives play a crucial role in the research process. The fresh students at the masters level all have a double qualification – both an academic education in one of the professions and several years of professional experience. They begin by writing down a first version of a story about a problematic experience from their own professional life, which serves as the starting-point for more narratives, field-work, and reflective analysis in the light of the set texts and obligatory courses and so on, ending up with a dissertation which combines features from the great essayistic tradition with the requirements of scientific work. Changes of perspective play a crucial role in the research process, looking at the writer's own professional experience from the inside as well as from the outside.

Together with the other units in the school of professional studies at the University of Nordland, the centre for practical knowledge also offers a programme at the graduate level. The Ph.D. programme in professional practice is characterized by a pluralistic approach, not surprising in a centre where the professors come from so

different areas as philosophy, working life studies, nursing and psychiatry. To illustrate the range of topics addressed, the first three doctoral dissertations dealt with nursing education (Alteren 2010), the police officer's practical knowledge (Hoel 2011) and the relations between helpers and help-seekers (Halvorsen 2011).

5 Philosophy and practical knowledge

The role that philosophy and other well-entrenched disciplines ought to play in research into practical knowledge raises a question to which there are no ready answers. When a new research discipline like this one is incorporated into the academic world, one might expect demands to crop up asking for conformity with established traditions, including adaptation to that which the new subject is a reaction against, viz. the dominance of theoretical knowledge. It is assumed that academic research must be based on theories in some sense of the word. Accordingly, the research subject practical knowledge must be provided with support drawn from such areas as ontology, epistemology and philosophy of science. In that spirit, appeals have been made to fundamentalist readings of philosophers like Husserl, Heidegger, Merleau-Ponty and Wittgenstein.

As an alternative to the traditional yearning for philosophical and theoretical support I want to suggest another way of using philosophy – as a resource for raising and discussing critical questions like the following ones:

- What is meant by the word 'theory' in the given context? A perspective? Some concepts? A set of well-confirmed hypotheses? Some general assumptions?
Concerning what?
- Is it really true that there are suitable theories ready for import from other fields? If so, what exactly do they supply?
- Which assumptions are included in the package when you import a certain theory? From which research tradition does the theory stem? Is that really compatible with what you yourself are after?
- Are there any viable alternatives to import of this kind?

- What are the views on the role of philosophy in the world of science behind the wish for furnishing research into practical knowledge with e.g. an epistemological or ontological fundament?
- What do you mean by 'fundament' in that context?
- Why is it necessary to provide the new research subject with some kind of fundament? What views on the nature of scientific research lie behind the view that that is a must?
- What about trying to stand on your own feet? Perhaps the new approach has the potentials of becoming an attractive alternative to the traditional avenues you want to resort to?

6 A practical approach to ethics

Ethics is an essential ingredient in all professional knowledge. When the master students in practical knowledge in Bodø begin the work of writing their first essay, the starting-point is a narrative about difficult problems which they have met themselves in their own professional life. Often it is ethical dilemmas which come to the fore. The initial descriptions are elaborated and supplemented with more stories etc. in the course of the research period, but reflection upon such narratives belongs to the core of research on all levels. In Kari Steinsvik's doctoral dissertation (Steinsvik 2008), for instance, one finds detailed accounts of the professional dilemmas raised by some of the cases in her physiotherapeutic practice and reflection upon the ways in which she actually handled them. A more recent example is Maria Johansson's study of the actor's practical knowledge (Johansson 2012), where the focus is on multifaceted concepts like intuition, courage and trust. The phenomena investigated are elucidated by reflection on of a wealth of situations drawn from her own experience – starting off as a child actor, she can look back at a long career as an actor and director – and from the collected experience of the six actors in her reference group. When approaching the ethics of the acting profession, she found it useful to start from Aristotele's treatment of the virtues in *The Nichomachean Ethics* (Aristotle 2009), a text in which many examples are mentioned but never allowed to grow into elaborate narratives. It is indeed difficult to think of a better starting-point

for critical reflection on the ethical aspects of practical knowledge than Aristotle's classic survey of the field.

With the emphasis on critical reflection on the researcher's own professional experience which is the signum of the Bodø approach, a new arena is opened up for the development of ethical studies. The recruitment of mature students with several years of experience from a broad range of professions, the essayistic working style combined with field-work and other methods from the repertory of qualitative research, the concentration on case-studies and the collected experience of the multidisciplinary staff is indeed a promising combination which bodes well for the future of the study of ethics and practical knowledge.

References

Alteren, J (2010) Følelse er fornuft. Sykepleierutdanningen mellom gjerning og tekst. Universitetet i Nordland, Bodø

Aristotle (2009) The Nichomachean ethics. Oxford University Press, Oxford.
<http://classics.mit.edu/Aristotle/nicomachaen.html>

Austin JL (1956-57)). A plea for excuses. Proceedings of the Aristotelian Society, New Series. 57, 1-30. <http://www.ualberta.ca/~francisp/NewPhil448/AustinPlea56.pdf>

Ayer AJ (1936) Language, truth and logic. Victor Gollancz, London
<http://www.archive.org/details/AlfredAyer>

Gallie WB (1956) Essentially contested concepts. Proceedings of the Aristotelian Society, New Series. 56, 167-198. <http://www.jstor.org/discover/10.2307/4544562?uid=3738744&uid=2&uid=4&sid=21101570635951-->

Göranzon, B, Wågström M, Nordenstam T (1976). *Arbetsformer på Dramaten*. Stockholm: Kungliga Dramatiska Teatern. <http://www.torenordenstam.se/dram/dram.pdf>

Göranzon B (1978) In: Göranzon B (ed) Ideologi och systemutveckling, 2nd edn., Lund, Studentlitteratur.

Göranzon B, Mäkilä K, Nordenstam T (1979) Tools and practices in systems development. In: B Sundin (ed) Is the computer a tool? Almqvist & Wiksell International, Stockholm, pp 56-63
<http://www.torenordenstam.se/computertool/computertool.pdf>

Göranzon B (1984) In: Göranzon B (ed) Datautvecklingens filosofi. Tyst kunskap och ny teknik, Carlsson & Jönsson, Stockholm

Göranzon B (1993). The Practical Intellect. Computers and Skills. Springer-Verlag London, Berlin

Halvorsen GS (2011) Relasjoner mellom hjelper og hjelpesøkende. En studie i forståelsens og anerkjennelsens betingelser og utviklingsmuligheter. Universitetet i Nordland, Bodø

Hammarén M (1999) Ledtråd i förvandling – om att skapa en reflekterande praxis. Dialoger, Stockholm

Hoel L (2011) Å gjenopprette orden. En studie av politibetjentens praktiske kunnskap – i et fenomenologisk-hermeneutisk perspektiv. Universitetet i Nordland, Bodø

Johansson M (2012) Skådespelarens praktiska kunnskap. Premiss förlag, Stockholm

Josefson I (1985) In: Josefson I (ed) Språk och erfarenhet. Carlssons, Stockholm

Josefson I (1998) Läkarens yrkeskunnande. Studentlitteratur, Lund

Macklin R (1988) Theoretical and applied ethics: a reply to the skeptics. In: Rosenthal DM, Shehade F (eds) Applied Ethics and Ethical Theory. University of Utah Press, Salt Lake City, pp 50-70

Merleau-Ponty M (1945) Phénoménologie de la perception. Gallimard, Paris

Nergård J et al. (2005) Praktisk kunnskap – som erfaring og som forskningsfelt.

<http://www.torenordenstam.se/hbo10/hbo10.pdf>

Nordenstam T (1968) Sudanese Ethics. Almqvist & Wiksell, Stockholm

<http://www.torenordenstam.se/sudaneseethics/sudaneseethics.pdf>

Nordenstam T (1980) Värderingar och paradig vid datasystemutveckling. Exemplet ALLFA-utredningen. Arbetslivscentrum, Stockholm

<http://www.torenordenstam.se/varderingar/varderingar.pdf>

Nordenstam T (2001) Kant and the Utilitarians. In Ethical Perspectives. Journal of the European Ethics Network. 8, 29-36. [http://www.ethical-perspectives.be/viewpic.php?](http://www.ethical-perspectives.be/viewpic.php?LAN=E&TABLE=EP&ID=107--)

[LAN=E&TABLE=EP&ID=107--](http://www.ethical-perspectives.be/viewpic.php?LAN=E&TABLE=EP&ID=107--)

Nordenstam T (2009) The Power of Example. Santérus Academic Press, Stockholm

Nordenstam T (2013) Etik och praktisk kunskap. Dialoger Förlag & Metod AB, Stockholm

Polanyi M (1958) Personal knowledge: towards a post-critical philosophy. University of Chicago Press, Chicago

Polanyi M (1966) The Tacit Dimension. Routledge & Kegan Paul, London

Ryle G (1945-46) Knowing how and knowing that. Proceedings of the Aristotelian Society, New Series, 46: 1-16. <http://www.jstor.org/discover/10.2307/4544405?uid=3738744&uid=2129&uid=2&uid=70&uid=4&sid=21101570738911>

Ryle G (1949) The Concept of Mind, Hutchinson's University Library, London & New York. <http://archive.org/details/conceptofmind032022mbp>

Schön D (1983) The reflective practitioner: how professionals think in action. Temple Smith, London

Schön D (1987) Educating the reflective practitioner. Jossey-Bass, San Francisco

Steinsvik K (2008) Kunnskap om kroppen mellom grep og begrep. Dialoger, Stockholm <http://kth.diva-portal.org/smash/record.jsf?pid=diva2:54442>

Toulmin S (1982) How medicine saved the life of ethics. Perspect Biol Med, 25:736-750

Waismann F (1945) Verifiability, Proceedings of the Aristotelian society, Supplementary Volume XIX, 119-150. <http://www.ditext.com/waismann/verifiability.html>

Van J (1985) Quinlan case redefined life, Death. Chicago Tribune. June 13, 1985. http://articles.chicagotribune.com/1985-06-13/news/8502070415_1_karen-quinlan-life-and-death-brain-death--

Weitz M (1977) The opening mind. A philosophical study of humanistic concepts. University of Chicago Press, Chicago

Wittgenstein L (1953) Philosophische Untersuchungen/Philosophical investigations. Basil Blackwell, Oxford

Websites:

Bo Göranson: http://www.kth.se/polopoly_fs/1.176289!/Menu/general/column-content/attachment/CV-Bosse.pdf

Centre for Practical Knowledge, University of Nordland:

<http://www.uin.no/omuinn/fakulteter/phs/senter/spk/Pages/default.aspx>

Dialoger, Stockholm: <http://www.dialoger.se>

Tore Nordenstam: <http://www.torenordenstam.se>

Skill and Technology, Royal Institute of Technology KTH:

<http://www.kth.se/itm/inst/indek/2.2207/2.2098/yrkeskunnande-och-teknologi-1.9853>

T. Nordenstam

Department of Philosophy, University of Bergen,

Bergen, Norway

e-mail: nordenstam.tore@gmail.com

T. Nordenstam

Hjalmar Brantings vei 63, 4153 Fyllingsdalen, Norway