

## "WE MUST TALK!"

### *ETHICAL DISCOURSES AS GOOD PRACTICE IN INFORMATICS AND MEDIA EDUCATION*

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#### **Abstract**

Modern pluralistic societies depend on free discourses to achieve mutual understanding even in controversial questions like those in professional ethics. Dialogs in ›Good will‹ depend on competencies in analysis of arguments, understanding of formal logic, identification of hidden assumptions, values, and interests a.o.. These competencies should be taught as part of IT- and Media-education. In this paper some elements of a discursive method for the resolution of ethical conflicts are demonstrated and successful experiences with the teaching of such an approach is reported in the context of the German *Gesellschaft für Informatik*.

#### **Keywords**

Teaching and Learning, Discourse Ethics, Critical Thinking

#### **1. Introduction**

Classical logic has a long tradition of *monologic reasoning*. We start with some observed facts and axioms, apply some rules of deduction and present a “proven” truth – all in a monolog. Religions based on script behave in a similar pattern by deducing moral judgements from given (presumably divine) starting points like ›Ten Commandments‹ or some book of law, finding a path to acceptable behavior.

In pluralistic societies such a monologic attitude faces limits very soon. Different opinions oppose each other even if they are logically sound in their deduction. This may be a result of different perceptions of facts as well as different starting points from different value choices, or traditions of interpretation. It may be also a question of discursive power, where logical deductions may be ignored or dampened by dogmatic views or the desire to dominate.

In a long development law systems rely, in some contrast to a religious deduction, on a discursive, dialectical process of proponent and opponent leading to some more or less conclusive verdict. Again these verdicts depend on the correct application of

logic, a common interpretation of facts as observations, or shorter on acceptable arguments. Legal processes depend on the formalization of arguments, their exchange and judgment as deduction from written law, facts, and interpretations. Of course, this happens in a context of cultural, moral and legal values, inherent to every society, but also more and more formalized in intercultural, global processes and agreements – think of international law, especially of international law of war in some ethical verdicts.

In a pluralistic society we all have to observe the law – transcending existing laws is an exceptional situation. That is an unusual challenge in everyday professional demands of moral judgements, and is therefore beyond the presented remarks on ethics educations for professionals in IT and digital media. While the legal framework is more or less fixed and therefore usually beyond ethical controversies, there is still an enormous body of moral dilemmas. In democratic societies that depends on a plurality of moral value systems and ethical standpoints as well as an different and opposing interests of its members. We must find ways to clarify elements of controversy, discuss it, and prepare it for democratic moral judgements based on (probably) diverging ethical valuation. To accept, defend and develop such processes we should educate our society not only in the deepening of inherited and learned methods of moral evaluation (religion, culture, law, traditions...) but also in performing a wider process of dialogic argumentation between different and sometimes opposing values and judgements.

## 2. Hypothesis

The (German) Gesellschaft für Informatik developed *Ethical Guidelines for computer scientists* in 1994, revised 2004. Basically these are very general hints for good professional practice. GI has more than 20000 members, and the guidelines were welcomed by a vast majority of society members in an open survey. Though the focus of our experience is in engineering ethics in informatics, or computer science, with the extension of computer networks to general digital media, the borderline between information ethics and ethics of media is more and more blurred, demanding ›good practice‹ in both fields, as well as the overlapping working and educational areas. As these guidelines are very general by its nature we thought from the start about *teaching*, and perhaps even more important, *learning* acceptable ethical behavior in the fields of information ethics. This includes and relies on talking about risks and technical feasibility, but also economy, politics, legal and moral aspects. Typically engineering professions avoid a discussion of the latter, but the digitalization of our environments and our everyday life can no longer be separated from the decisions that may look to be “only technical.”

As a starting point we analyzed the ›self-assessment‹-approaches that are successfully used by ACM among others in the last decades. These practices were and are unusual in the German scientific context. But we soon became aware that it was very helpful to study case studies not alone but in groups of students. We propose this discursive training as a valid and fruitful approach to learn how to approach ethical questions and to come to some mutual understanding on problems, the arguments, and the (sometimes hidden) values to reach some common understanding and develop a

culture of mutual agreements – even if basic differences become more and more visible in such a process.

Clarification of facts and arguments is not only the base of scientific analysis, it is also a necessary starting point for some honest approach to mutual understanding. This can be learned and it can be taught. Clear arguments and facts are the solid bases of discourse between different opinions. This discursive process may become the base for some common judgement – a necessary ingredient of any democratic decision process.

In the technical tradition of IT-Systems and their applications, where the notion of the “one best way” is still deeply rooted, training and education in finding a common base and a mostly “acceptable way” opens sometimes new ways of thinking. We assume that to be an absolutely necessary part of a responsible technical education.

However, ethical judgements reach beyond discursive processes. Obviously there are differences between the ability to judge and actions. While we can train the former, the latter is the everyday experience of professional life in the broad context of society.

### 3. Methods

We started by analyzing the ›self-assessment‹ approaches that are successfully used by ACM among others in the last decades, because these practices were and are uncommon in the German scientific context. But we soon became aware that it was very helpful to study case studies not alone but in groups of students. We observed a very basic phenomenon: In the beginning nearly all participants did not detect any contradictions at all that may lead to different positions. “This is obvious” was a quite common attitude for an opening sentence. After a first round of reflection it soon became clear that the same case leads to quite different versions of “obvious”. Contradictory positions were developed and very often this resulted in a lengthy and fruitful discussions.

We understood that this search for discovering dissent demands a basic training in understanding and developing arguments, in solid knowledge of logical proof and refutation (not completely new to computer scientists), in the acceptance of different levels of technical, juridical and general knowledge, and in the acceptance of different basic values. This, of course, are basic elements of „Critical Thinking”, a training that is popular in the Anglo-Saxon education but still to be adapted because it is not well-known in the German scientific and educational communities.

Though Critical Thinking has its main roots in Anglo-Saxon pragmatism of *John Dewey* or *Charles S. Peirce* among others, there is also some foundation in the German tradition of *Kritische Theorie* or *Frankfurter Schule*. More modern German thinkers of discourse ethic concepts are Jürgen Habermas, Karl-Otto Apel, but also Helmut Fleischer, and others. However, there is a long-time contrast between the continental European philosophical tradition, deeply rooted in a monologic, centralized tradition and the Anglo-Saxon attitude of discourse and co-existence of different opinions. It may be interesting to interpret Hegel’s dialectic as an

intermediary between monologic and dialogic argumentation, but this is beyond the scope of this paper.

Clearly, we follow a bottom up discourse on ethical dispute. Simply said, any top down approach deriving ethical solutions from quasi-axiomatic assumptions are in our experience no longer accepted in controversy cases. An open society as we demand it as basement for modern democratic societies must be open to discourse and contradiction but also to a ›good will‹ looking for mutual solutions.

#### 4. Results

Recognizing methods of Critical Thinking as starting points we identified three steps appropriate to find acceptable mutual solutions to ethical problems and to build a base for decisions and transfer that to action:

- Analyze in a common discussion arguments used, arguments hidden, and false arguments. Identify value judgements, especially if they oppose others.
- Identify and refute logical errors. Show missing links in argumentation.
- Decide in reasonable limits what may be acceptable for the majority. Show respect to minority opinions.

The decision process should be aware that a scientific rigor is not always appropriate, as decisions and actions may be indicated even if there may be a lack of time or other resources. Boundaries of rationality may be unavoidable even in ethical dilemmas.

Meanwhile we acquired a solid body of experiences and knowledge about teaching in a discursive format.

As teaching and learning aids we published a book ›Gewissensbisse‹ on ethical questions of informatics, followed by a regular ›Gewissensbits‹ column in the bimonthly scientific journal *Informatik-Spektrum* published by Springer-Verlag (now for over 5 years), and a regular weblog (In German: <http://gewissensbits.gi.de>). A second book may follow soon. The spectrum of cases is IT-related but quite broad. Among them are:

- Automatic grading of student's papers
- Observation during breaks and playtime
- Biometric pass
- Data Mining
- Data storage
- Data protection
- Digital Assistants
- Drone surveillance
- Fingerprints for identification
- gamification
- IT for secret services
- Access to health data
- Ghostwriting of scientific papers
- Open Data

- Plagiarism in science and education
- Software identification of plagiarism
- Killer robots
- Social media and privacy
- Speech recognition and privacy
- Mobbing in social media
- Quality of biometrical patterns

This list is not exhaustive.

## 5. Conclusions

Clearly, we follow a bottom up discourse on ethical dispute. Simply said, any top down approach deriving ethical solutions from quasi-axiomatic assumptions are in our experience no longer acceptable in controversial cases. Nevertheless any opinion should be a statement with a clear logical foundations based on facts and values, where the arguments are built in a logically sound way. Ethical judgement and decisions should be laid open for discourse. In case of well-formed contradictories opponents should look for ways of mutual agreement. This of course depends on a certain ›good will‹ on all sides. An open society as we imagine as basement for modern democratic societies must be open to discourse and contradiction but also to ›good will‹ looking for mutual solutions. In a professional environment law will form the uncircumventable limit of decisions. Obviously good engineering and media practice in a multi-valued society (and world) demands seeking consensus, while keeping chosen values to an acceptable level. ›Good will‹ is the base for mutual understanding – it is a basic element of ›Good practice‹.

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