Can Micro World Simulations Assess and Stimulate Ethical Competence?*

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Abstract

Micro worlds can be constructed to assess and promote the ethical competence of users. However, the theoretical basis has to be on psychological problem solving and decision making processes. In this paper we discuss the conditions necessary for a micro world as a method to measure and train ethical competence. Two things in particular are interesting to investigate: 1) To determine which parameters to measure, that indicate autonomous decision making, and 2) to establish a model for interpreting the proceedings and the subject’s interaction with the simulation as a representation of the psychological problem solving and decision making process.

1 Introduction

Organizations often have policies and guidelines concerning decisions where ethical judgment is required. The reason for setting up such regulations is because ethical problems are generally characterized by conflicting values or principles and therefore very hard to deal with. But what happens when such rules are not directly applicable on the moral problem in question? The result is often that the individual dealing with the issue is left to her or his own judgments – judgments that might be limited by reluctance to act against norms as well as against the individual’s own personal moral. More commonly, the individual might not even be aware of there being ethical issues in a case, or simply avoiding to see them because of the uncertainty and the call for responsibility that they create. In this paper it is discussed how the ability to recognize and deal with ethical issues can be improved. We will also elaborate the suggestion to use micro worlds as a means to assess and stimulate ethical competence. The questions to be asked are 1) what type of interaction behaviour in a micro world could serve as a representation of ethical competence and 2) can we parameterize and measure this behaviour?

To begin with we would like to give an example of a case where regulations have failed to adapt to unpredicted circumstances; an example showing the urge of promoting ethical competence throughout whole organizations.

Recently in Sweden there was a widely debated court case after a man had shot and killed one teenager and severely injured another. The background for the shooting was that a juvenile gang for some time had been harrassing the man’s family, especially his slightly mentally handicapped son. Both the police and the social welfare board had long known about problems with the gang. Prior to the drama the police had received five reports about

harrassment from the family, without finding it necessary to deal with the problem. The welfare board knew very well about prior criminal activity of the gang leader, without taking measures to help him. On this particular night the gang had been visiting the family’s farm, threatening to kill the son. The tragic killing was the result from this escalation of conflict and the court eventually ruled that the father’s shooting had been an unconscious act of panic which therefore acquitted him from any crime. The gang of teenagers were convicted for invasion of privacy and other harassment related crimes.

From an ethical perspective the aftermath of the tragic event is the issue of most peculiarity. Both the police and the social welfare board made internal investigations and found that they had not done anything wrong in their handling of the preceding conflict. This raises important questions about how these authorities understand their task. Is it to blindly follow the rules and regulations of how to handle issues in the society or is it to prevent tragic consequences from conflicts between individuals in the society? In our opinion it is shocking that such an obvious failure still can be considered as an acceptable consequence of proper handling. Not until several months later, after the trials, an independent investigation was made that found reasons to criticize the welfare board of how the problem with the juvenile gang was handled (The Local, 2008). The public debate after the trial has mostly been revolving around whether it is right or not to acquit someone who has taken the law into his own hands, dismissing the negligence of the upholders of the law. The fear of potential vigilantes is critically related to the preservation of the image of infallibility of authorities, which is overshadowing the fact that the authorities did not handle the case well. It seems like in a country like Sweden, where the autonomy of individuals is suppressed for the sake of the collective, questions about responsibility can paradoxically only be directed towards those individuals who can be forced into a role of bad seeds. This means that as long as regulations are followed, the individual representing an organization will not have to take personal responsibility of unfortunate consequences, thus promoting the generally well functioning society based on heteronomy. However, when regulations do not fit the ethical problem at hand, and the individual is left with the options to bonsai a problem into a familiar pattern or to figure out a better way of solving the issue, then it is necessary to have enough ethical competence to avoid arbitrariness. To approach this we focus on the recognition of different ways to think when making decisions.

2 Autonomous and Heteronomous Thinking

Autonomous thinking as an ability lays the foundation for all activity that can be distinguished as being human. Autonomy is the ability to imagine and to make independent and deliberate decisions. In every unfamiliar situation that we are facing, we have the option to exploit this noble ability to make clever decisions based on perceivable facts. But then again we rarely do this, since heteronomous thinking is the other precondition for human behaviour – the ability to learn from the past and to internalize known facts about the world. Autonomous thinking, as a pure form of deliberation, finds literary origins already in the Socratic argumentation technique to establish uncertainty about the constraints for a problem. In spite of being the basis for critical thinking, people still avoid to think autonomously. It is a natural and understandable attitude. An ambition to consider about every relevant aspect of a problem in a systematic, holistic and self-critical way takes a lot of effort and is both stressful and paralyzing. Even in laboratory experiments it has been proven that the heteronomous approach serves well in almost any situation. Moral heuristics; heteronomous guidelines; help us make reasonable decisions without deeper weighing of benefits and detriments (see Sunstein 2005). However, there is sometimes a need for better founded
decisions – in situations that do not allow us to rely neither on authorities nor past experiences. These could be regarding problems where stakes are high and stakeholders are many and hard to distinguish or they could be situations for which there are yet no precedents. Ethics is often such a domain where the right thing to do is not apparent. The implications from decisions or choices are not easily predictable and even the matter of fact that there actually is a choice is sometimes disguised.

We base our research on a particular definition of autonomy as an attitude urging a holistic, systematic and self-critical approach towards problem solving. Holistic in the way that every relevant stakeholder and every relevant interest of stakeholders are taken into account, systematic in the way that these and all other details of the problem are approached in a controlled and deliberate way and self-critical in the way that the analyst/decision maker/problem owner is always aware of the subjectivity of the interpretations – allowing him or her at any time to reject an idea as well as to accept every improvement of it. The driving force for this at the same time exhaustive and exhausting attitude is a feeling of responsibility towards the affected stakeholders.

Recent psychological studies about negotiations have showed, that an analytic perspective taking attitude works better than an empathic to reach a solution that is optimal for both competing parties. Galinsky et al. concludes that "understanding the interests and motives of opponents in competitive decision-making interactions appears to be more valuable than connecting with them emotionally" (Galinsky et al. 2008). The studies revealed a significant improvement in both individual and collective gains, which supports a focus on analyzing interests and urges when judging ethical competence. Ethical competence, which to us is not the same as high morality. We try, to the extent possible, to disregard an individual's morality when judging this, which may appear controversial, but as Sunstein wisely points out: “There is nothing obtuse, or monstrous, about refusing to apply a generalization in contexts in which its rationale is absent“ (Sunstein 2005, p 531). Morality is immanent in every human being and will affect decisions no matter how hard we try to disregard them. We should just try to avoid being blinded and blocked by it. A simple example will clarify the necessity for an approach where moral standards alone cannot help the understanding of the situation.

Cheating is by definition regarded as immoral. Most people have an instinctive repulsion towards the cheating of other people and can judge without further consideration whether cheating has occurred or not. It is however interesting to remark that the absolute definition of what characterizes an act of cheating is changing over time. Not long ago it was considered as cheating to use a calculator at a math exam. And bringing books and notes to an exam is still sometimes cheating while other times it is encouraged. The motive for banning certain behaviour is of course to allow for an equal measurement of students' abilities. It is therefore desirable to rule out any factors that distort the comparability of acquired knowledge. The reason for changing policies is most often due to shifts of perspective. Exams have long been regarded as a situation where the teacher is testing the skills of students as opposed to students testing their own capability to perform a certain task. This image is changing as by-heart-knowledge is losing its position as the most valuable knowledge. Today, most pedagogics aim at training the ability to solve problems and to elaborate ideas with the aid of available information. In the current information society it is a more rational and useful approach.

Knowing about and agreeing to such a simple case as above, makes it sound hollow to promote ethical guidelines as a way to deal with the growing complexity of human relations and the importance of ethical competence. Also, when creating ethical guidelines there is a
risk of having the regulations complexity overshadowing the problem complexity. If most of the autonomous effort of a decision maker is spent on categorizing a problem into a case covered by the regulations, then there is a greater risk of disguising the uniqueness of the problem than if no rules were present at all. This particular objection towards ethical guidelines is somewhat sustained by the results of Galinsky et al. (2008), where the most striking finding, although neglected by the authors, is that people in fact do focus on what they are told to focus on and thus seem to neglect other important aspects. The test subjects who were told to focus on the other person’s emotions focussed on those, and the test subjects who were to focus on interests did so. That is what is building the conclusion in the paper. The important and desirable feature in autonomous thinking is that it gives an individual the chance to choose whether to use heuristics or whether to make an independent analysis of a situation. Ethical awareness alone is not enough. There has to be a way of handling the problems that are encountered.

3 Theoretical Framework

To make the notion of micro worlds useful in the discussion about ethical competence, it is necessary to define a theoretical framework. This requires also a purposeful definition of morality. We base our research on the discourse of morality as rules, leaning mainly on the work of Piaget (1932) and Kohlberg (1984, 1985) but also of Foucault (1987), with more recent counterparts and analogies in earlier work of Kavathatzopoulos et al. Also, Claes Gustavsson (1997) is making an interesting observation. He notices that we are constantly involved in an interplay of moralising. In every situation we judge our fellow citizens by their actions and decisions and they in turn judge us. According to Gustavsson, this is what constitutes a society. Foucault uses the notion of power, or control, to reach to the conclusion that morality is utterly just a way for a society to reach a stable state. This is two perspectives on the same phenomenon. Where Gustavsson takes the perspective of the individual Foucault is observing from outside. The conclusions are however the same, that moralising – the active counterpart of morality – is the core of a functional society.

The reasons why ethical competence is desirable are because moralising and its resulting moral suppression fosters us to follow norms and through that makes us inalert in critical situations where autonomy is necessary and also because every choice that we make is potentially being surveilled by our surroundings. Foucault compares the structure of control created by morality to a panopticon where, in the ideal case, everybody has the possibility to observe everybody else. Thus control becomes built into our consciousness as morality.

Piaget studied children of different ages to derive conclusions about mechanisms of the moral development of an individual. The main contribution from Piaget to our own work is the definition of autonomy based on a concept of moral maturity as an insight about rules; that they are created by fallible humans and therefore possible to alter and improve if necessary.

Kohlberg on the other hand was a pioneer in the classification of ethical competence. In his tests the respondents’ were to give explanations for why they considered one option better than another in a situation with ethical implications. Through judging and classifying their answers he defined evolutionary stages of moral development. The advantage with this method of Kohlberg’s is that it focusses on the argumentation for a certain choice more than the righteousness of it, but the one crucial disadvantage is that he relied on certain principles to benchmark the respondents’ explanations. Thus his own opinions about right and wrong were reflecting the judgment of the answers. To avoid this type of subjectivity we wish to
avoid classification and bring the measuring of ethical competence away from judging the normative contents of an individual’s choices, towards a focus on the process of ethical decision making.

For this to become possible, the most critical task is to validate dynamic micro worlds as a method to measure and train ethical competence. We need to show that what we assess in the studies are in fact a reliable representation of the ethical skills of the subject. Two things in particular are interesting to study: 1) We want to determine which parameters to measure, that indicate autonomous decision making, and 2) we want to establish a model for interpreting the proceedings and the subject’s interaction with the simulation as a representation of the character of decision making. The request on the simulator is to give information about the process behind how decisions are made, in this case: how rules are created. From that the symptoms that differ between heteronomy and autonomy, can be derived. In the paper we problemize one implementation of this psychological approach towards ethical decision making, to suggest how the tool can be used for stimulating ethical competence.

4 The Game

The work described in this paper revolves around a micro world simulator, in which the researcher defines virtual stakeholders and to them assigns interests and urges as well as principles to obey. Within definable limits, the stakeholders will try to maximize their satisfaction. Interests and urges are subjective desires of a stakeholder while principles are regarding groups of stakeholders, e.g. equal distribution of wealth, equal access to certain assets etc. A stakeholder obeying a principle will regard other stakeholders considered by it when making decisions. The task of the test subject is to consider the needs of all stakeholders and in order to affect their behaviors she or he is encouraged to legislate whenever identifying sites of conflict. For this, the user follows a rule creation wizard that asks questions about all aspects of the rule, e.g. which stakeholders or assets or interests to consider and how. Every interaction with the system is being recorded in order to trace clues about the thought process behind each of these created rules.

5 Stimulating Ethical Competence

In most of present test and training systems for ethical competence, dilemmas are extreme and the ethical implications in available options are stronger and pushier than in real life. These two limitations, that are effects of how testing is performed, tend to lead to unrealistic choice situations. Also the options presented to the subject are almost always limited in number. If not two, like in the classical definition of dilemmas, they are fixed and given in advance, implying either the righteousness or immorality in certain actions. Their intended purpose seems to be more moralising than educating, which makes the translation of learning back to real life situations not very apparent. Thus there seems to be motives for a more fluid simulation environment, where decisions lead to new problems based on the effect of the previous. From earlier studies of Kavathatzopoulos (2003) we also know that for learning to occur, it is important to create scenarios that are realistic and highly relevant to the test subject, as well as to stress the control that the test subject does exercise in a situation. The ethicality of each decision is not of particular interest, but rather the manner in which the problems are approached and how the confrontation with the consequences is handled. Recall the definition of autonomy as the ability to systematically organize and critically consider available facts. To know whether we are training ethical competence or just letting the users
play a game, we need to be able to measure progress in this ability. Therefore we need to have a clear idea of how to assess it.

6 Assessing Ethical Competence

When judging an individual’s ethical competence it is tempting to compare and relate it to an ideal behavior; a code of conduct or a philosophy of morality. We want to avoid this by letting the subject deal with the consequences of decisions. The actual judgment of morality is left to the individual facing the ethical problem. We are interested only in studying the process of decision making, where ethical competence can be regarded as the ability to process available information in an optimal way. This motivates a focus on autonomy as defined above. We believe autonomy to be the necessary attitude to achieve complete ethical competence: Not as the ability to always act according to guidelines; not as the ability to act in a manner that is consistent with the most number of philosophies; but as the ability to use the right ethical problem-solving and decision-making method in handling moral problems.

To determine symptoms of autonomy, a clear distinction needs to be made from heteronomy. Heteronomy is, as concluded above, not necessarily bad. On the contrary it is very useful in most situations. We do not wish to prevent people from acting heteronomously but when heteronomous patterns are not enough to solve a problem, then there is a need for autonomous analysis. The classification of autonomy can be done either by discerning symptoms of autonomy directly or to do the exact opposite. Some patterns of heteronomy might be easier to pinpoint and classify due to their nature of regularity and predictability. So how can we distinguish symptoms of autonomy in the context of a dynamic micro world simulation?

Working according to the theoretical framework presented above gives a few clues. For dramaturgical reasons we shall start from the end. We recall that an autonomous process gives the decision maker grounds for reasoning about decisions and allows for the passing of arguments for choices made. Although abstract, this requirement will give important indications about the thought process behind the decision. The way a rule is created provokes the test subject, i.e. the decision maker, to include or exclude stakeholders, interests, assets or principles. Those of the stakeholders in the simulation who are not benefitted from the rule will react. To the user the obvious reaction is a protest which should be seen as a warning, since the more important effect is tacit. All stakeholders act to maximize their satisfaction and rules that are regarded as unfair; that do not fit their needs; will cause frustration and make the actions of these stakeholders more desperate. The priorities of interests shift dynamically according to the environment and can even cause the stakeholders to disregard rules to a certain extent. Through the rule formulation the subject, i.e. the decision maker, has a chance to become aware of possible neglections. In any case the shape of rules, i.e. which assets, interests, stakeholders, and principles are considered, will give clues about what the focus of the user is. The focus, pattern and amount of investigations that the subject makes will reveal to which extent she or he is thinking autonomously. E.g. investigations about stakeholders’ interests before and after a decision will give clues about if the user is focussing on improving conditions for these and how certain she or he is about the correctness of a decision. The self-doubt that comes with responsibility taking is an inevitable effect from autonomy.
Also there are several other parameters that can possibly help us to reveal autonomy through the interaction with the micro world. To avoid becoming overly speculative we will just present these ideas very briefly.

- Can the time it takes for a subject to reach a decision serve as a representation for thoughtfulness and systematization?

- We believe that there is a correlation between the number of questions asked and the eagerness to make sure that decisions are taken and see the effects of it will serve as an indication of ambitions to reach an exhaustive knowledge about the situation?

- Can the focus for questions give clues about 1) whether the subject is considering risks and opportunities, or about 2) the subjects ambition to reach a better understanding of the stakeholders and the situation?

- Can the coherence between questions indicate how systematically the subject is approaching a situation?

- Can the structure of decisions, in connection with preceding investigations, give information about the holism in the subject’s conception of the situation?

These are all very interesting questions to investigate further, but for this paper we will just satisfy with the suggestion how research of ethical competence can be advanced. The most obvious risk with using a dynamic method for evaluation is that it makes it difficult to compare results from different test subjects. Not one simulation run will ever be the same. Since such a non-linearity does not allow for direct comparison it presupposes a rigid foundation for analysis, a clear idea about what parameters to focus on and wellfounded theories about how these parameters are to be compared. To conclude we wish to inspire such research on non-linear comparison by giving a hypothetical example. Consider the diagrams in Figure 1, where we have aligned and scaled the time factor so that the moment of a decision for each subject is located at the vertical line. Which pattern of investigations indicates the desirable systematic approach?

![Investigations example](image)

**Figure 1**
The criteria that we have set up for autonomy indicates that a decision should be based on a systematic, holistic investigation. From the above view alone we can not tell whether any investigations were carried out systematically or whether they cover all stakeholders, but even from such a simple projection we could at least conclude that Subject A is making investigations on a regular basis, Subject B is making a lot of investigations before the decision and also after a while when the decision is likely to have had effect and finally Subject C is making a decision based on only a few investigations, and immediately trying to determine the effects of it. From this crude projection only we would suggest that Subject B is the one showing most tendency towards autonomous analysis. However, we can not tell what the reasons for the other subjects’ behaviour is. For that we would need to compare several different aspects of their interaction, as well as the shape of the rules created.

7 Concluding Remarks

The original aim for the paper was to suggest what type of interaction behaviour in micro worlds could serve as representation of ethical competence and how that behaviour could be parameterized and measured. Although some work has already been done, we have to admit that we are still in the beginning. Further research is needed and will be focussed on empirically deciding the patterns of behaviour that give clues about ethical competence. There is also an urgent need to verify the theories about assessment by comparing with current tools for ethical competence measurement. In a world that is becoming increasingly globalized and is changing faster for every day we can see several reasons for why ethical competence as a psychological problem solving method is necessary. We can also see how micro worlds could be useful in the stimulation and assessment of this ethical competence but there are still many challenges before we can make assured conclusions about how this works in detail. However, throughout the length of this paper we have managed to sketch a suggestion for how to proceed further with ethical research in micro worlds.

8 References


Galinsky A.D., Maddux W.W., Gilin D. and White J.B. (2008), Why it pays to get inside the head of your opponent, Psychological Science, 19, 378-384.


\footnote{Bonsai is a tree that has been dwarfed by pruning and training to fit a flower pot. To here use bonsai as a verb illustrates somewhat the absurdness in reducing a problem to fit a regulation.}

\footnote{What we call heteronomy is sometimes referred to as System I thinking: "intuitive; it is rapid, automatic, and effortless" (Sunstein 2005, p. 533) and autonomy is analogically referred to as System II thinking: "reflective; it is slower, self-aware, calculative, and deductive" (ibid.).}