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► **To cite this version:**

Sandra Burri Gram-Hansen, Henrik Schärfe, Jens Vilhelm Dinesen. Towards a Context Oriented Approach to Ethical Evaluation of Interactive Technologies. Pedro Campos; Nicholas Graham; Joaquim Jorge; Nuno Nunes; Philippe Palanque; Marco Winckler. 13th International Conference on Human-Computer Interaction (INTERACT), Sep 2011, Lisbon, Portugal. Springer, Lecture Notes in Computer Science, LNCS-6949 (Part IV), pp.628-631, 2011, Human-Computer Interaction – INTERACT 2011. <10.1007/978-3-642-23768-3\_99>. <hal-01596939>

**HAL Id: hal-01596939**

**<https://hal.inria.fr/hal-01596939>**

Submitted on 28 Sep 2017

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# Towards a Context Oriented Approach to Ethical Evaluation of Interactive Technologies

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**Abstract.** This paper explores and develops the notion of applying the ethical perspective of Danish philosopher and theologian K.E. Løgstrup, when designing and developing interactive technologies. The ethical reflections presented in this paper are currently considered in the development of Persuasive Learning Designs within the EU funded PLOT project, thus enabling this paper to support the argumentation with a practical example of integrating ethical considerations into the different stages of a design process.

**Keywords:** Ethics, Persuasive Design, Løgstrup, PLOT, e-Learning, Learning Objects

## 1 Introduction

This paper explores and develops the notion of applying the ethical perspective of Danish philosopher and theologian K.E. Løgstrup, when designing and developing interactive technologies. The paper builds on previous research, in which the relevance of Løgstrup's ontological approach to ethics has been established[1], and provides a practical example of participatory design where this particular approach to ethics appears to offer valuable philosophical insight and considerations.

Previous research has raised the argument that the often applied utilitarian and deontological evaluation methods are insufficient when evaluating interactive computer technologies, as they fail to include reflections regarding the social reality of the users and the context in which the technology is applied and fail to acknowledge the mutual ethical responsibility between the designer and the user. This is problematic as designers are not necessarily able to foresee all possible use scenarios and should as such not be held solely responsible for unethical consequences of applying a technology[2, 3] In order to meet these shortcomings, Gram-Hansen suggests that the ontological perspectives and reflections presented by K.E. Løgstrup may be a beneficial supplement to ethical evaluations of interactive computer systems[1].

Løgstrup finds, that ethics, rather than being based on reason, is founded in what he calls *sovereign expressions of life*, which includes benevolence, open speech, trust, love and compassion – in other words human features that are generally considered ethically praiseworthy. He furthermore argues that we are born into ethics as a result of the dependency which exists between humans. As soon as humans interact, they

influence each other's lives, and it is by interaction that ethics and ethical responsibility emerges. Furthermore, Løgstrup stresses that the perception of ethics is based on the contextual reality of the individual, i.e. ethics is considered an intuitive result of human nature, rather than moral rule based on reason, and the distinction between ethical and unethical actions are dependent on the specific situation and the social reality of the people involved in the interaction.

Considering Løgstrup's ethics when evaluating interactive technologies is not unproblematic. Firstly because Løgstrup argues that the perception of the ethical action is based on the intuition and social reality of the person performing an action – making it impossible for others to evaluate the action. And secondly because the notions of ethics which are presented by Løgstrup, originate from reflections concerning humans who are physically located at the same place thus sharing a common understanding for the characteristics which define the specific context. The ability to interact through technology has ended the necessity of interacting parties actually meeting, and when the interaction takes place between the designer and the user, they will most often not be found at the same place. As a result, the ethical perspective presented by Løgstrup cannot stand alone in the evaluation of interactive technologies, but should be applied as a third perspective in collaboration with utilitarianism and deontology. Løgstrup's contribution serves as a context oriented perspective, providing reflections and discussions which are as essential in interaction through technologies as they are for physical interaction between humans. In particular, Løgstrup offers valuable viewpoints concerning key concepts such as trust, credibility and interaction.

Whilst acknowledging that Løgstrup's ethical reflections are not exclusively applicable as an evaluation method, this paper will argue that the inclusion of key concepts and notions presented by Løgstrup may be highly beneficial to the design process - particularly if the process includes elements of value sensitive design (VSD) and participatory design. In order to exemplify how Løgstrup's ethical perspectives may be included in a design process, a selection of key concepts and core notions are considered in practice in the development of Persuasive Learning Designs within the EU project PLOT.

## **2 Putting theory to practice in the EU project PLOT**

The EU funded PLOT project (Persuasive Learning Objects and Technologies) was initiated in November 2010 and aims to develop a pedagogical framework for active engagement, based on persuasive design, as well as to demonstrate its value by creating tools and exemplars of adaptable, reusable learning resources. This pedagogical framework will incorporate persuasive design principles, which determine how to design ICT that can change people's behaviour and/or attitudes. The Persuasive Learning Designs on one hand incorporate known and well-tested didactic principles, and on the other hand offer implementation particularly designed to embody persuasive principles such as guided choices, simulations, competitions, and possibilities to share the experience with peers. The impact will be to generate more

effective active e-learning resources and will give teachers the necessary tools to both create new and adapt existing resources to suit their needs. This will improve the quality of e-learning resources available for both teachers and students across[4].

The PLOT partner group consists of designers, developers, experts in learning and in persuasive design, as well as representatives from the four project work cases. As such, the partner group consists of both technical experts and members with little or no technical proficiency. Within the development process, this causes some classical difficulties in relation to common language and common understanding of the work process. Amongst the challenges to be met within PLOT, is the development of Persuasive Learning Designs for each of the four work cases. Each work case represents different learning material and different challenges, and do as a result require individual attention and consideration if the learning designs are to comply with not only learning theory but also with the notion of persuasive technologies and persuasive design.

In order to acquire the necessary contextual information about the four cases, the PLOT partners were asked to participate in an Inspiration Card Workshop which was held during the Euro PLOT consortium meeting on May 10<sup>th</sup> and 11<sup>th</sup> 2011. The aim of the workshop was to create a social context in which the individual case representatives were given the opportunity to explain and elaborate upon their individual challenges in teaching and learning, and for the additional members of the consortium to ask questions and reflect upon the different case scenarios.

The workshop setup was inspired by previous work of Halskov and Dalsgaard [5] and Davis [6], but was executed in a narrower and more focused version by applying technology cards. These cards were primarily examples from the Design With Intent Toolkit, which was developed by Dan Lockton, which focuses entirely on intentional design in technologies. [7]

In practice, the members of the consortium were divided into two groups, which each had case representatives from two cases as well as partners representing design and development teams. Supported by the inspiration cards, each of the cases were explained and discussed. In order to ensure direction within the discussions, the groups were required to complete the workshop by creating a poster for each case which described one of the challenges they were facing, and a suggestion to its solution.

### **3 Workshop results**

The notion of the workshop was to facilitate mutual understanding between the individual partners, which was not only vital to the case oriented development of Persuasive Learning Designs, but could also motivate a reciprocal responsibility between case representatives and project developers, that may be considered the very foundation of future ethical interactions.

During the workshop it became apparent that the approach did impose a greater mutual understanding between the members of the consortium, and that the inspiration cards served as inspiration during discussions as well as a mean to ensure

that the topics discussed were the ones relevant to the development of persuasive learning designs.

More importantly however, the workshop constituted a contextual reality in which we as designers were able to include several of Løgstrup's key concepts in our development process. The workshop initiated interaction between developers and designers in a way which influenced the natural power balance between the participants and created a context in which terminology and professional background was less important compared to the ability to actively engage in discussion and idea development.

As mentioned, this particular approach is easily linked to the notions of VSD and participatory design, which are commonly credited as ways of ensuring the ethicality of the product being developed [8]. However, by adding Løgstrup's approach to ethics to this established methodological perspective, designers and developers who initiate and engage in participatory design processes, are provided with a philosophical foundation for the ethical evaluation, as well as a number of key concepts to consider as the participatory activities are defined. Whether development participation consists of workshops, interviews or agile development methods, interaction, reciprocal responsibility and the perception of power balance are of vital importance, and may in all cases be supported and nuanced by considering the philosophical works of K.E. Løgstrup.

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