ETHICS IN SOFTWARE ENGINEERING ESSAY

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Topic: Discussion about ethics in software engineering

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This essay examines the relationship code ethics and software ethics in software engineering. As stated that ethics in software engineering has been argued since software and engineering concept borned. However, since the field of software engineering has become enormous, topic of ethics has gained very important place in the field. As Moor described, computer ethics is the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology [1]. On the other han done of describtion about software engineering is “a distinct discipline under which engineering licenses can be issued” [2]. Intelligibly, researchers are concerned that ethics is strong consideration in software engineering.

This essay argues that in general, ethics of coding is important factor for developing, althought this is not evident in all situations, nor with all types of project. Further, it is argued that the main mechanism for this ethic assessment is complex process through which we can obtain complete assessment of an organization’s policies. Through this process we get not only a full image regarding the ethic explicitly available to midwives are derived from practices such as moral philosophy and software engineering, whose ethical frameworks are reductionist in their exclusion of context and relationship [3].

It is fact that chasing repeated codes in a project is not as easy as than it looks. Fort his reason, cheating is increasing among IT sector. The research has shown that over the last decade, several large studies have found alarmingly high levels of cheating, with between 88% to 92% of students reporting to have engaged in some form of academic misconduct. Of further concern is that many of the students in these studies admitted to cheating on more than on occasion [4]. Moreover, according to another research, cheating is a complex issue. When exploring student cheating behaviour in tertiary institutions, there are many aspects to consider. It is not suprising, therefore, that a search of the literatüre has shown a lack of any simple definitions. Typically, cheating is described in terms of a series of practices, which cover a range of ares that can be defined as illegal, unethical, immoral or against

Açıklamalı [HİU1]: In first paragraph, the writer indicates that he will use Aristotelian Argument in his essay. In order to that he introduces to essay issue. At the end of his introduction, the idea is to present his readers with his main point and then dig into it. The claim consist of facts.

Açıklamalı [HİU2]: In the second introduction paragraph, writer present his case by explaining the issue in detail. The author expresses the what is the main point of essay and what is the idea behind it. It considered as Aristotelian present case paragraph. Also, the author present a clear statement of his issue.

Açıklamalı [HİU3]: In here, the claim includes casuality. Because, the author gives a reason in his first sentence then he explains what he trys to say.

the regulations of the course or institution. The difficulty of clearly defining cheating is exacerbated by differences across institution and also across disiplines of study [5]. On the other hand, reaching your goal is might be as same as before completed works. So, why do not want to take a look at previous codes. As a result of them, ethics in coding is complex and wide topic.

Another consideration to ethics in software engineering is that licences. Licences are neccessary to keep your right during the developing also after developing. As Runeson pointed out, Licence models for OSS is a complex area, with different licence models emerging to balance the needs for corporations to keep some code open (commodity), while protecting other code, which is their competitive advantage and innovation base. For their map data, Open Street Map uses a specialized open data licence, Open Data Commons' Open Database License (ODbL), which is an attribution and share-alike license for data and databases9 , while some documents use the Creative Commons (CC) framework10. The image databases we have found use different kinds of "for research only" licences, sometimes based on CC [6]. Nevertheless, in order to prevent licence rules users and developers can use open source resources. Open source software is characterized by several differences to traditional software development and distribution, including the free redistribution, the inclusion of the source code, the possibility for modifications and derived works, which must be allowed to be distributed under the same terms as the original software, and some others [18]. One example for a licence that fits these criteria is the wellknown GNU General Public Licence (GPL). The guiding principle for open source software development is that by sharing source code, developers cooperate under a model of rigorous peer-review and take advantage of "parallel debugging" that leads to innovation and rapid advancement in developing and evolving software products [7].

Açıklamalı [HİU4]: In here, the claim consists of policy. The author invokes to change behavior to solve a problem. The author try to change a fact with his policy.

Contrarily, people in field of software engineering try to preclude plagiarism with new methods. They also try to stick with ethic values in their work. A research shows that, each plagiarism detection service reports a percentage of similarity between a submitted paper and other sources indexed by the service. Fig. 2 presents the raw data from the experimental submissions reported here [8]. Also some tools has been

Açıklamalı [HİU5]: In here, the claim consist of value. According to the author, they accepted plagiarism and they want to prevent it so, they represent acceptance. The claim includes terms of valuable.

developed to prevent plagiarism. Detection of cut and paste plagiarism is time consuming when done by hand, and can be greatly aided by automated software tools. This paper reports on the design of a software tool called SNITCH that implements a fast and accurate plagiarism detection algorithm using the Google Web API. Issues related to plagiarism detection software are discussed and empirical results of a performance and accuracy study are presented [9]. Lastly, as we see ethic in software engineering has been improving.

The impact of ethic in software engineering has been very closely studied for a long time. There is general acceptance that debilitative ethic of project negatively impacts developers or programs situation and that it does so via an interference mechanism in which task-irrelevant thoughts undermine a computers ability to recall previously learned material. However, this essay also shows that various side of ethics in software engineering. Ethic appears to have its greatest impact in open wide projects. As well, not all projects have equally preferable. Some projects have needs higher ethic than other projects, and while their human including capability are reduced, the needy for ethic also reduce. While the question of ethic qualification has been studied for many years, will it still an important issue to consider as its presence does mean that a ethic qualification is not fairly assessed during an project [10].

Açıklamalı [HİU6]: In here, the claim is a factual statement. The author says this topic has been studied for a long time and it means assert that something is true. Also, it indicates that something exist.

[1] Moor, J.H., “What is Computer Ethics?” , *Article in Metaphilosophy ,* Vol 16, No 4, pp. 266, October 1985, 0026-1068

[2] Gotternbarn, D., “How the New Software EngineeringCode of Ethics Affects You”, *Software Engineering Ethics Research Institute, IEEE Software,* 0740-7459/99, pp. 58, November/December 1999

[3] Thompson, F.E, “The Ethical Nature Of The Mother-Midwife Relationship: A Feminist Perspective”, *The Department of Nursing Faculty of Sciences The University of Southern Queensland,* MNSt (LaTrobe), BA (UQ), DipAppSc (NrEd) (QUT), RN, EM., March 2001

[4] Sheard, J., Dick, M., “Influence on Cheating Practise of Graduate Students in IT Courses: What are the Factors?”, *School of Computer Science and Software Engineering, Monash University, Melbourne, Victoria, Australia 3145,* ITiCSE'03, June 30-July 2, 2003, pp. 45, May 2014

[5] Markham, S., Sheard, J., Dick, M., “Investigating Differences in Cheating Behaviours of IT Undergraduate and Graduate Students: The maturity and motivation factors”, *Higher Education Research & Development,* Vol. 22, No, 1, pp. 91, 2003

[6] Runeson, P. (Accepted/In press). “Open Collaborative Data -- using OSS principles to share data in SW engineering”. *In Proceedings of the International Conference on Software Engineering: New Ideas and Emerging Research track IEEE Computer Society.* 2019

[7] Koch, S., Schneider, G., “Results from Software Engineering Research into Open Source Development Projects Using Public Data”, Diskussionspapiere zum Tätigkeitsfeld Informationsverarbeitung und Informationswirtschaft, Hans R. Hansen und Wolfgang H. Janko (Hrsg.), Nr. 22, Wirtschaftsuniversität Wien, 2000.

[8] C. Kaner and R. L. Fiedler, "A Cautionary Note on Checking Software Engineering Papers for Plagiarism," in *IEEE Transactions on Education*, vol. 51, no. 2, pp. 184, May 2008.

[9] Sebastian Niezgoda and Thomas P. Way. 2006. SNITCH: a software tool for detecting cut and paste plagiarism. SIGCSE Bull. 38, 1 (March 2006), 51–55. DOI:https://doi.org/10.1145/1124706.1121359

[10] Gotternbarn, D., “How the New Software EngineeringCode of Ethics Affects You”, *Software Engineering Ethics Research Institute, IEEE Software,* 0740-7459/99, pp. 58, November/December 1999