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# Human Values in Computing: Is the Objectification of the Subjectivity a Prior Step?

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## **Abstract**

In this paper, we present a methodology to assist the problem of understanding the subjectivity involved in behavioral issues. We hope that it may inspire people involved with values in computing, and in other activities, to realize typical concerns that a group engaged in a project may have.

## **Author Keywords**

Axiology, Human values, Virtues, Ethics in Computing

## **ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

## **Introduction**

In this paper, we synthesize our studies and insights on how human values may be objectified. A challenge that have consumed our attention and energy on the last years. As a contribution, we present the highlights of the methodology we have developed to map human values observed in actual working teams. We believe this methodology reaches a reasonably independency of moral judgments, as suggested on the position paper [1].

Our approach comes from a different stance and school of thought other than Computing, as we have tackled the theme by studying leadership development in organizations. We think that both endeavors share questions emerging from a common basic point: how to objectively cope with behavioral issues?

To allow a "systematical discovery and representation of the values in a project, their potential conflict and relations" [1], we developed an ideographic methodology aiming at the challenge of leadership development supported by an epistemological tool. Something that could inspire participants of the workshop, to develop their own "structure before negotiating what values may be right or wrong". And we prefer to say: before negotiating what values should be prioritized or emphasized in a specific project.

### **The need of Objectivity**

Computing, Business Administration and other technical contexts require objectivity in the intercommunication between collaborators aiming at providing measurable, repeatable and (if possible) efficient outputs, independently of when and who is playing the different roles of a production chain.

### **The domain of Subjectivity**

Values, by the other hand, are controversial. As Clawson and Vinson note, "The basic problem confronting the study of values from a philosophical perspective relates to the axiological question of whether or not values are subjective or objective" [2]. But it seems that there is no doubt about the subjective character of the valuation, the necessary judgment required in the decision-making process. "As even

those value philosophers of the objective persuasion acknowledge", say authors.

It seems to us that for the dynamics of *decision-making* processes, a person does not hold a fixed particular set of values, picked up in a universe of possibilities of human values, applicable to any situation of life. We consider that each person decides by an individual and dynamic balance of human values that stem from three different sources: The Moral, Political and Cultural spheres. In addition, the personal balance that each one of us does to decide, is strongly influenced by contextual factors and by time.

Many researchers still promote a continuous controversy about the importance of this three fields as source of inspiration for human behavior. Such as Cook [3], who observed that the existence of a universal moral criteria, defended by many philosophers or the certainty of a cultural bias as sustained by anthropologists, have not yet reached a final conclusion. Also, Bobbio [4] explores the need of a balance between Moral and Politics as influencer of our behaviors.

It seems that human values maybe are not the solid ground that Computing activities demand for behavioral considerations. Computing requires more objectivity, but maybe virtues could help us to shed light on a team's, or individual's, values. The same premise we took to leadership development.

### **The bridge between them**

Kuhn and Hawkins [5] introduced the term "paradigm shift" as the possible change needed to better

comprehension of different approaches of reality done by groups of researchers. Following their thoughts, Burrell and Morgan [6], showed a framework to understand objective and subjective perspectives of some social researchers they had studied. The authors consider the ontological and epistemological approach to both the objective and subjective paradigms, and the existential dilemma of human nature. They recognize the necessity of two different methodologies to deal with objective (the nomothetic ones) and subjective perspectives (the ideographic ones) for the study of social issues.

### **Our approach: The Delphos method**

We named our ideographic methodology developed to objectify the intersubjectivity of a group, the Delphos method. A three-step approach to make more objective the subjective evaluation that people involved in a team carry out. Doing so, we can statistically process data gathered from individuals in a group, creating what we can call the intersubjectivity image of the group. An object that people can see as the team opinion, either in leadership development or in software design activities. This object may express the main ethical concerns of a team involved in a specific project. Following, we briefly describe each of the three steps.

**Step 1.** Virtues, not Values. The use of virtues as the reference to communicate values is a first step in the objectifying direction. Virtues are observed behavior directly associated with values. Values are inside one's mind. Virtues can be testified and more or less consensually assured to exist. We cannot see others' values, but virtues are embodied in others' actions. We hardly can identify our virtues as a visible behavior, but

it is usual to identify them in others. Values guide future actions. Virtues are the valuable actions.

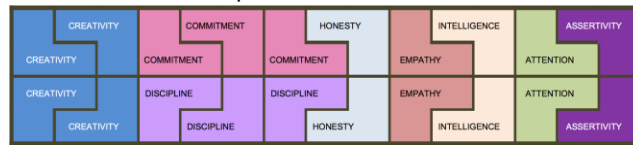
**Step 2.** Virtues have been historically studied, managed and expressed by words. But nowadays, the facilities of multimedia bring the possibility of using video files as a live example of what we are talking about in terms of behavior. For example, a scene of international cinema can accurately express not just the character's behavior, but also the context (pragmatics) where it happens. We propose the use of a video-glossary for human virtues in order to bypass the obstacle noted by Wittgenstein [7]. That is, we can choose many different words to express the same language game. We believe virtues are the language games related with values. And virtues and their associated vices, by lack or by excess, are frequently observed on human activities (whether it is in collaboration, managerial decisions or software design) and are based on Moral, Political or Cultural reasons.

**Step 3.** To gather the subjective concerns of a specific team, we ask people to individually and anonymously participate in an interactive questionnaire, selecting from our video-glossary what they consider the most relevant virtues to behavioral questions. These questions are formulated to maximize the success of a project or strategy. By selecting a few, among a universe of virtues to answer a question, participants externalize with some objective basis their subjectivity and culture.

With these three steps we build an epistemological tool. A tool that creates an "intermediary object" to assist communication among team members, and others from the production chain. We named this intermediary

object the "Team's DNA". As noted by Boujut [8], intermediary objects are valuable epistemic tools to aid collaborators' communication.

The Team's DNA makes explicit, objectively and with some fidelity, to everybody in the group, their main subjective concerns about behavioral issues. Reflecting therefore relevant values for their context at that time. Figure 1 illustrates the resulting DNA diagram for a practical use case of the Delphos method. It shows a list of human virtues deemed important for a working team in an IT startup firm.



**Figure 1.** DNA of a working team in a IT startup.

### Final remarks

In our epistemic approach, an intermediary object expresses the average concerns of a team on behavioral issues. It stimulates dialogues about moral and enhance communication on ethical values throughout conception, design and implementation of a project.

We propose that a video-glossary of good behaviors, such as the one we made for leadership development, may facilitate expressing subjectivity of values of interest from technical communities. In a way, expressing these communities' professional culture. Lastly, the use of an interactive survey enables handling virtues systematically, making possible to process data statistically.

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