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# EMOTIONS, VALUES AND KNOWLEDGE IN STUDENTS' ARGUMENTATION ABOUT FARM ANIMAL WELFARE

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## *Abstract:*

*The question of farm animal welfare has sparked strong debate in society and in scientific, technical and professional domains. In the field of education, teaching and learning about farm animal welfare (FAW) as a socially acute question (Legardez & Simonneaux, 2006), is particularly problematic in agricultural schools which train future breeders. This presentation focuses on one step of a protocol involving 44 students aged 16 to 18 years in order to encourage the development of informed decisions and actions on FAW. The students had to resolve individually and then collectively a dilemma which concerned a cattle farmer. The discourses were audio-recorded and were analyzed in order to study the influence of the articulation between emotions, values and knowledge-representations in the students' argumentation on the construction of their position. The results highlight the fine interdependence between these different components of the discourse and the elaboration of strategies by the students to reduce the emotional discomfort linked to the ethical problems encountered.*

*Keywords: argumentation, socially acute questions, animal welfare*

## EDUCATIONAL STAKES ABOUT FARM ANIMAL WELFARE

Teaching and learning about farm animal welfare represent a central stake in future breeders' training in French agricultural college. The main aim is to prepare future citizens to make informed decisions and actions for the transformation of society towards greater sustainability. The multidimensional and complex notion of FAW is a socially acute question in the sense of Legardez and Simonneaux (2006). Teaching socially acute questions is frequently based on the introduction of contextualized and authentic problems related to everyday life or future professional life of learners which necessarily involves emotions, values and cognition (Ratcliffe, 1997, Zeidler & Sadler, 2007). System of values and emotions articulated with scientific, social and technical knowledge guide students' arguments to resolve problems (Borcos & Jiménez-Aleixandre, 2016). This oral presentation will focus on the study of the fine imbrication of emotions, values and systems of knowledge-representations (Beitone and Legardez, 1995) in students' argumentation on a dilemma linked to farm animal welfare.

## METHOD

### **Argumentation on an ethical and professional dilemma**

This presentation is based on one step of a broader protocol realised with three vocational colleges in a thesis work. At the beginning of the protocol, with no specific teaching about farm

animal welfare during this school year, we asked 44 students aged 16-18 to resolve an ethical and professional dilemma which is a problem which has no fully satisfactory solution. The dilemma concerns a breeder who has to change his cowshed and take into account - or not - the interests of his cattle. In particular, he has to decide whether it is necessary to dehorn his cattle. Dehorning is a mutilating and painful intervention for cattle which consists in cutting or preventing the growth of horns. A written document was provided to the students and described the breeding situation. Three proposals were made to the students and they could build new ones. As a first step, students took an individual position on the written document. Secondly, in groups of three or four, students tried to find a common solution to the dilemma. The students' discourses were audio-recorded. We focus on this second step in this presentation.

### **Analysis Framework**

We mobilised several frameworks of qualitative analysis in order to study the articulation between the cognitive, emotional and ethical dimensions in the students' arguments. The emotional tone of discourses was analysed with the two axes defined by Plantin (2011). The axis of emotional pleasure was used to identify the pleasant or unpleasant tone of the discourse. The axis of emotional intensity was mobilized to study the variations of emotional intensity (weak emotions and strong emotions). The ethical dimension of students' discourses was analysed with the value judgments expressed. We made the hypothesis, following Galatanu (2003), that preferences (or valuations) and exclusions (or devaluations), signified by students, are indicators of value judgments and allow indirect access to values underlying the discourses. For this purpose, we have identified the valuation and devaluation indicators mobilised by students to define what is preferable and avoidable to do. Finally, for the cognitive dimension, we analysed with a classical content analysis the knowledge-representations systems (Beitone and Legardez, 1994) expressed by the students. Knowledge-representations systems are composed of academic knowledge learned in prior situations, believes, opinions, mental representations and sometimes real social representations.

## **RESULTS**

When the students had resolved the ethical and professional dilemma, the arguments that take into account the interests of bovine were difficult to express to the peers. Several strategies were mobilised to reduce the emotional discomfort identified in discourses. We briefly present here two strategies, the strategy of cognitive rationalization and the emotional strategy.

### **Cognitive rationalization strategy to reduce emotional discomfort**

Students, in our study, often mobilise knowledge-representations based on erroneous scientific knowledge to support their arguments. These knowledge-representations mainly concern the degree of bovine sentience and in particular their capacity to feel pain. The pain felt by cattle during dehorning is a source of emotional discomfort in the students' discourses who often express empathy toward cattle. But at the same time, refusing to carry out the dehorning implies for the learners to disagree with the norms of the professional environment which generates other conflicts. In order to establish a compromise that does not cause excessive emotional disagreement, some students consider that the pain experienced by calves during dehorning is low or absent because intervention is quick or because the horns do not (or little) grow. Calf reification then allows students to construct a consistency position with the values and the practices prevailing in farm environment and that is ethically acceptable because justified by a scientific knowledge that the students consider valid.

## Emotional Strategy

When students express positions that take into account the bovine interests, the emotional intensity of discourses increases and an emotional disagreement toward the practice of dehorning is signified. If all the students of the group do not agree to take into account the pain of the cattle in their position then the opponents can choose, on the one hand, to diminish the emotional intensity of the discourse by disempowering the breeder of choices to be made (only one solution is possible and it is a fatality). In the short discourse sample presented here, ALE disagrees with dehorning without anesthesia while DAN and PIE take the opposite position.

*“ALE: female calves [in solution two] they are not anesthetized whereas on [solution] three it is anesthetized*

*PIE: but it lasts thirty seconds dehorning*

*DAN: yes*

*ALE: yeah at least they feel better it is*

*PIE: if you don't have the possibility*

*ALE: and you do solution two [realisation of dehorning]”*

The conflict of values, which opposes on the one hand PIE and DAN and, on the other hand, ALE cannot constitute a resource to develop an argumentation. PIE and DAN impose the economic situation of the farm as a fatality which implies inevitably to dehorn the cattle.

Opponents choose in other situations to increase the emotional intensity of the discourse by putting at risks the breeder's and students' life in their argument. The hierarchy between the value of humans' life and the value of bovine's life makes the opposition more difficult to be expressed for empathic students toward cattle. The arguments are lacking to justify high risks taking for the breeder's life.

## DISCUSSION AND CONCLUSION

Several studies have focused on the different factors guiding students' negotiation and resolution of socioscientific issues. Sadler and Zeidler (2004), Polo (2014), Borcos and Jiménez-Aleixandre (2016) highlighted the interdependence between cognition, emotion and values in decision-making process. Our results confirm those of previous research. Moreover, we have shown that cognitive dimension of argumentation is frequently used by the students allow them to act in an area of emotional comfort. Knowledge-representations based on erroneous scientific knowledge are mobilised in order to find ethically acceptable solutions. They constitute, in a didactic approach, obstacles to learning in a bachelardian conception of the obstacle, *"to overcome an obstacle is not to overcome a difficulty but to renounce costly to a satisfying functioning for the subject who asks only to retain it"* (Astolfi, 1997: 194). Moreover, the relationship of students with bovine life is an implicit which plays an important role in the construction of positions in our study. Indeed, as long as the hierarchy between the bovine life and human life cannot be discussed explicitly and the ethical dimension cannot be explained then the taking into account of the interests of cattle remains difficult to express. This research opens teaching perspectives. Emotions and values represent learning objects which are as important as knowledge in solving dilemmas on a socially acute question.

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