*Tools and Technologies for Emotion Awareness in Computer-Mediated Collaboration and Learning*, ARV 2013, Position paper, Claire Polo, PhD student at Lyon 2 University, France:

**"Emotions as argumentative resources: lessons from the study of Mexican students interactions while debating on drinking water management"**

**<u>Interest on the topic</u>**

The place of emotions in argumentation has been reflected upon in many different ways beginning with the ancient rhetoriticians and is still being discussed. Recent studies based on authentic argumentative discourse focus on the complex functions of emotions in argumentation (e.g. Plantin, Doury & Traverso, 2000; Micheli, 2010; Plantin, 2011). From this descriptive perspective, I aim to better understand classroom interactions between students aged 12-14 when they debate about drinking water management. My corpus comes from Mexican, French and US schools where each debate took place among students in their own classroom and language.

My goal was to follow how the students cooperate in emotionally "painting" the different alternatives in discussion in order to support their view. In the study presented here, I have analyzed classroom interactions from a private Mexican school. The results are based on examples from the last 10 minutes of the 110-minute "scientific café" held on November 25th, 2011, run by two students aged 15-16 for 15 students aged 13-14. It corresponds to the final debate on the main question of the café, just after the students have chosen in small groups one option out of 6, that they are now all discussing: "*A tu parecer, el acceso al agua potable para una persona en el futuro dependerá sobre todo de : A) de su ingreso económico B) de su resistencia física a vivir con agua de menor calidad C) de los esfuerzos hechos ahora mismo para ahorrar agua y preservarla D) de su lugar de origen en el planeta E) de la capacidad de la naturaleza a adaptarse a nuestras necesidades de consumo de agua F) de los avances científicos*"[1].

**<u>Main results</u>**

**1. Thymical characterization of the debate:  "a matter of life or death"**

The basic emotional tone the participants agree on, despite phasic (brief) perturbations occurring during the debate, is rather grave. The debate is emotionally framed as intense and negative through the use of the cultural stereotype on the preference of life over death (Plantin, 2011). The students build such thymical states using two different tools.

Many lexical markers frame the issue as a matter of life or death, like:
*25: Gaspar: lo que va a importar va a ser el dinero en comprar el agua para vivir*[2]
*64: Emilia: igual que: por decir los niños que están moriendo de hambre en África\\*[3]

Describing the situation with a strong focus on the lack of water contributes to this thymical framing of the debate. In this mechanism, death is not directly referred to, but there is an appeal to inference: the need for water is at the beginning of a causal chain ending up with a serious risk of death. The lack of water is described as having no water at all or not knowing how to get some:
*8: Alejandro: (...) la demás gente **que no tiene agua** (...)*[4]
*51: Arturo: (...) tú **no vas a tener** (...)*[5]
*66: Adriana: (...) cómo van a **tener agua** después/ (...)*[6]
Gaspar's sentence makes this inference explicit, at turn 25:

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1    "In your opinion, in the future, whether a person has access to drinking water will depend on...? A) on the person's economic income B) on how physically able the person is to live with lower water quality C) on efforts made now, to save water and to preserve it D) on where on the globe the person is born E) on nature's capacity to adapt to our consumption of water F) on scientific advances"
2    "what will matter will be the money to buy water to live".
3    "same as: let's say the children who are starving in Africa\\"
4    "other people **who do not have water**"
5    "you are **not going to have** (some)"
6    "how are they going to **have water** after/"

25: *(...) mucha gente puede morir por la falt- por la falta de agua (...)*[7]

## 2. Two different emotional positions supporting two competing argumentative conclusions

During this discussion, the students tend to polarize the debate by opposing two of the available options presented earlier: A and C. The rival option is discredited by an alternative description of the situation that orients the discourse towards the chosen argumentative conclusion. Through these two different schematizations (Grize, 1997) two different argumentatively orientated emotional positions emerge.

Three relevant differences in the two emotional positions play important argumentative roles: 1) the distance to the issue: Am I concerned? Is it occurring here and now?; 2) the possibility to control the evolution of the situation and the cause(s) or person(s) responsible for it and 3) the norms used to present the options as more or less emotionally pleasant.

Emilia, defending option A, describes the places concerned by a lack of water as far away from her:

*64: en esos lugares donde se van a quedar sin agua*[8]

whereas Raúl, pro-C, thinks it is the concern of daily life, in every home:

*68: todo empieza desde la casa\ todo\*[9]

Similarly, the students who defend option C work to define the problem as something that can be controlled while the pro-A students counter-argue by insisting on how uncertain these efforts are:

*Oana, 6, pro-A: dices que la ahorras pero y los que no la ahorran que pasa*[10]

Control and causality are strongly related, as well as to the norms the students appeal to. You must have pity on the people touched by a natural disaster, but you don't feel sorry for someone who is responsible for his own problems. When Emilia, pro-A, says

*64: no aprovechan bien el agua y por eso mismo es que ya: ya es escasa\*[11],

she is describing the people without water not as victims but as people who deserve what is happening to them because they are not capable of managing their own resources.

### To be discussed for the goals of the workshop

In this case study, at turn 17, a negative emotional tone is explicitly given to option A and repeated at turn 62 when Oana changes her mind, stops supporting A and becomes pro-C:

*sí podría ser **triste** (...) los ricos tendrán el agua que quieran y los pobres no\ (...)* [12]

The students defending option A do not claim that this is not a good argument and they tacitly agree with the procedural norm that emotions can be argued by trying to give option A a less negative emotional tone. Thus, students adapt and respond to the rival side's emotional framing when they argue.

But, how do they understand such an implicit process of arguing emotions and can they use it consciously to design their own strategy? To what extent are the students aware of their own activity of emotional framing? Describing this emotional framing is a long a posteriori process requiring a set of complex methodological tools. Can such an analysis of emotions be reached by the participants themselves, while they are debating or could it be partially automated? Could such analyses contribute to real-time understanding and display of learners' emotions during interaction?

Even if it were possible to reach these goals, would it be worth leading the students to more emotion awareness in this context? Would it help them develop stronger arguments? Maybe some of the efficiency of using emotions to argue relies on the fact that it works implicitly and therefore respects the interaction ritual necessary to keep on debating (Goffman, 1967).

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7  "a lot of people can die because of a la- a lack of water"
8  "in those places where they are going to be without water"
9  "everything starts from home\ everything\"
10 "you say you save it but those who don't save it what happens"
11 "they don't exploit the water well and that's why it is already: already scarce\"
12 "yes, that could be sad (...) that the rich have all the water they want and not the poor \

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