The reason versus the emotion and the perfect Wave. Report of a witness.

Eduardo Marone
FUNPAR-IOITCLAC, CEM-UFPR, CURITIBA, Brazil (edmarone@gmail.com)

Social networks based popular movements are a new phenomenon promoting societal changes, usually with legitimate claims, although moved more by beliefs and emotions than reason. Geoscientists, as citizens, will have to know how to explain what makes justified beliefs justified when the decisions will affect the environment or the social system (1), including the understanding of the mechanisms that move societies.

Mendoza, Argentina, at the piedmont of the Andes, is a semi-arid region (less than 250 mm of rain per year). Agriculture represents one important activity (consuming around 80% of the water). A little more than 10% is for human consumption, around 4% for recreational/environmental use, 1% for Industry and 1% in the oil and mining industry (2). All this water came from the melting of the Andes ice and snow, resources depleted due to climate changes.

Mendoza has a very advanced and environmentally friendly Mining Code but seen as too restrictive from others. It limits projects in glacier areas and the use of chemicals to extract minerals like gold and others. At the end of 2019, the new Government decided to modify the Mining Code keeping near glacier limitations but allowing the controlled use of chemicals for the mining.

The perfect social wave appeared when the new law was being approved by the local Congress. Protestors closed roads, claiming the water would be contaminated, that agriculture would suffer from pollution, and other panicking scenarios, all supported by the extended feeling that the corruption is a central problem that will not help in establishing the proper controls, and fed by the lobby of the agricultural industry.

As the scarcity of water is an endemic problem in the region, the fear, as a psychological virus, did spread through the social networks, moving concerned citizens to win the battle and forcing the Governor to cancel the new law.

Scientists, data, the offer of external audits, tried to convince, by the reason, that responsible mining is possible and, if the water is a problem, the initial point to improve is its use in agriculture (were a loss of almost 50% occur by inefficient irrigation practices), but emotion and fear won the battle.

These dilemmas are not easy to deal with and, giving the complexity of the world around us, a
systemic Geoethical approach should be the right one to confront the ethical dilemmas in the Geoscientists' spheres of action. The IAPG White Paper on Responsible Mining is a fundamental tool to be used by geoscientists/citizens to cope with the dilemmas that appears when the emotions overshadow the reason and, probably, we have to follow the suggestions made by Begon (4).

- (1) Marone E. and Marone L. 2019. Ethical dilemmas of the citizen Geoscientist doing science, technology, and profession. EGU2019