

A many-valued logic intended to model silence

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Silence is a diverse and intangible concept that we learn to interpret within the context where it appears. Here we show that there are various knowledge areas that have studied such phenomenon. We argue that “silence” is a manifestation of intentional communication.

The seventh thesis of the Tractatus of Wittgenstein focuses on linguistic silence: “Whereof one cannot speak, thereof one must be silent”.

Priest argues that a 4-valued logic models quite well the four possibilities in the context of Buddhist meta-physics. Priest did a remarkable work by studying in great detail buddhist texts, from the Pali Canon to the MMK by Nāgārjuna, and being able to model their way of reasoning in terms of modern non-classical logics. A main issue is to represent the notion of ineffability. The fifth value e is then the value of ineffable. Ineffability is our final notion of silence. Hence, we can use 4-valued logic to represent silence.

We claim that some well known many-valued logics can be used to interpret the notion of “silence”. So, we introduce a new 5-valued paraconsistent logic that we name MS. This logic is genuine and paracomplete, and has the new value that is called s attempting to model the notion of “silence”.

MS is a conservative extension of FDEe, a logic proposed by Priest. If one drops the “implication” connective from MS, one obtains FDEe. If, on the other hand, one drops the ineffability value from MS one obtains a well known 4-valued logic introduced by Avron. We present some properties of this new logic.

Bibliography

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