Interpretability lattice of clonoids

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Clonoids are sets of operations $A^n \to B$ closed under renaming variables, adding dummy variables and identifying variables; clonoids are essentially clones without the ability to compose operations. Although clonoids lack composition, they do exhibit interesting properties. To begin with, clonoids ordered by the homorphism (quasi)order form a lattice. Moreover, just like clones describe the complexity of the Constraint Satisfaction Problem (CSP), clonoids describe the complexity of the Promise Constraint Satisfaction Problem (PCSP)

We will explain how clonoids characterize the complexity of PCSP (a result by Jakub Opršal that builds upon [1] and [2]), explain how the meet and join in the lattice of clonoids look like and introduce some interesting members of this lattice.

References

[1] Per Austrin, Johan Håstad, and Venkatesan Guruswami, *(2 + epsilon)-SAT is NP-hard*, Proceedings of the 2014 IEEE 55th Annual Symposium on Foundations of Computer Science (Washington, DC, USA), FOCS '14, IEEE Computer Society, 2014, pp. 1–10.

[2] Libor Barto, Jakub Opršal, and Michael Pinsker, *The wonderland of reflections*, Israel Journal of Mathematics, to appear.