A.3 Relationship of Micropublications to the SWAN Model

It may be helpful to outline some of the principal differences and correspondences between the micropublications ontology (mp), and SWAN [1].

- Hypotheses and Micropublications
  - A swan:Hypothesis corresponds most closely to an mp:Micropublication together with the Claim it argues.
- Claims and Statements
  - A swan:Claim roughly corresponds to an mp:Statement.
- Evidence
  - SWAN models evidence for Claims in the form of literature citations, while Micropublications also model Data and Methods.
  - Micropublications support both literature citations-as-support (document level) as well as direct Claim / Statement citations (statement level).
- Statement Consistency
  - In SWAN, a knowledgebase curator asserts inconsistency, between Claims globally, at a single point.
  - In Micropublications, inconsistency is modeled as challenge, and may be asserted by anyone. There may or may not be a global curator, as needed.
- Statement Similarity
  - SWAN implemented the notion of statement similarity using “canonical statements”.
Micropublications models statement similarity using similarity groups and uses the holotype of such a group as a surrogate claim to represent the common meaning. Micropublications similarity groups may be asserted as Micropublications themselves.

- Multi-polarity
  - SWAN does not model multipolar argumentation. The concept of inconsistency is vague, relatively subjective, and global.
  - Micropublications models multipolar argumentation, using challenge relationships. It is therefore compatible with bipolar argumentation frameworks. Furthermore, its challenge and supports relationships are explicitly published with attribution and authority, enabling multiple viewpoints to coexist and be selected/deselected.

- Abstraction and Annotation
  - SWAN and Micropublications both support Comments.
  - Micropublications supports translation of Claims into more or less any useful formal language capable of representing them in the required domain.
  - Micropublications re-formalizations of Claims in other micropublications are also micropublications.

- Layering
  - SWAN does not have formal mechanisms to support layering.
  - Micropublications explicitly support layering. A Micropublications may be constructed about another Micropublications, and this may be layered as deeply as one wishes.

- Grounding
  - The Micropublications model is theoretically grounded in Argumentation Theory. SWAN is not.

REFERENCES