Symmetric Quality Grading

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In this paper I introduce a grading scale for solving problems using path semantical quality.

Many problems in the real world are in principle solvable physically and mentally, but blocked from being solved due to inefficient economic mechanisms. For example, to lose weight or reduce social loneliness, can be relatively easily solved if people helped each other more, because the primary reason is lack of self-trust and corresponding reflective trust in others.

In order to satisfy the axioms of Instrumental Rationality[1], one must increase self-trust and reflective trust in other potential partners for cooperation, specially when one can not trust one's own mind to be disciplined enough to carry through plans. The importance of efficient economic mechanisms to build rational motivation and reliance can not be understated in modern society.

It turns out that the problem of self-trust and reflective trust has the logical structure of a partial equivalence relation[2]. For this, one can use Path Semantical Quality[3], e.g. with the Prop library[4].

This means that there are two notions of obtaining rational reliance, using Avatar Witness Theory[5], one called a "Loop Witness" and another called a "Product Witness":

Loop Witness	a ~~ a	Direct self-reliance
Product Witness	a ~~ b	Indirect self-reliance obtained by symmetric quality

The primary economic mechanism is to match people against each other using symmetric quality, such that indirect self-reliance can be achieved by people helping each other.

To help reasoning about this process, I introduce a grading scale for symmetric quality:

A - finished X
B - close to finished X
C - main X process
D - starting X process
E - familiarity with X through symmetric quality
F - stuck in X problem

Here, `X` is the problem that needs to be solved, for example "weight loss".

It is important that this process is not seen as a on/off state where one is either in state F or state A.

For example, the hardest phase for many people can be to move from F to E.
The reason is that `¬(a ~~ a)` implies `¬(a ~~ b)` for any `b`, such that when one is stuck in F, a person can develop severe psychological blockage and anxiety[6].

A bias of `¬(a ~~ a)` is known as Seshatism[7], which can also be used as a tool in stage E to learn that the pain of being stuck with the problem has also the same logical structure as other powerful transformative ways of thinking about existence. This can help people moving through E.

The grading scale is designed to both provide a tool for matching people with each other and to provide a formal model to reason about this method of problem solving, using symmetric quality.

References:

[1] "Instrumental Rationality"
Stanford Encyclopedia of Philosophy
https://plato.stanford.edu/entries/rationality-instrumental/

[2] "Partial equivalence relation"
Wikipedia
https://en.wikipedia.org/wiki/Partial_equivalence_relation

[3] "Path Semantical Quality"
Sven Nilsen, 2021
https://github.com/advancedresearch/path_semantics/blob/master/papers-wip2/path-semantical-quality.pdf

[4] "Prop - Propositional logic with types in Rust"
AdvancedResearch
https://github.com/advancedresearch/prop

[5] "Avatar Witness Theory"
AdvancedResearch – Summary page on Avatar Extensions
https://advancedresearch.github.io/avatar-extensions/summary.html#avatar-witness-theory

[6] "Rumination (psychology)"
Wikipedia
https://en.wikipedia.org/wiki/Rumination_(psychology)

[7] "Seshatism"
Sven Nilsen, 2021-2022
https://github.com/advancedresearch/path_semantics/blob/master/papers-wip2/seshatism.pdf