

Decentralization for Need-responsiveness

Some people (i.e. Castedo) avoid using the term “decentralized”. Nevertheless, within the many potential goals of decentralization, one of those possible goals is labeled “need-responsiveness” in this document.

Terminology

- **Need-responsiveness:** the degree to which an organization, technology, or system responds to the needs of a particular community of humans.
- **Peer-feedback:** peer-review in the broadest sense of expert peers communicating feedback to authors and the research community; not the narrow specific sense of formal peer-review as seen today.
- **Research document:** A document of research that is archived for long-term reference and is citable in a persistent way for referencing from other research documents for the benefit of scholar-readers. Note “citation” in this context is independent of whether academic credit is gained or to what extent a research-author benefits. The beneficial quality emphasized here is the benefit, not to authors, but to scholar-readers, who may want to follow what is cited. A research document also identifies the authors, who often (one hopes) take responsibility for the accuracy of the claims they make.

Needs

Different researchers have different needs. This document does not cover all of them.

Needs motivating software development by Castedo:

Notably absent from this sub-list of needs is the need to advance one's career in academia or making money. There isn't anything wrong with needing money or advancing one's academic career. But not all research is driven by those needs.

- The correction, clarification, and/or improvement of a disseminated research document for the need of accurately and effectively sharing the knowledge of a scholar-author.
- Peer-feedback on a time-scale that:
 - starts around the stage when researchers post a preprint, present a poster, or do a presentation of preliminary results, and
 - ends when authors have declared they no longer want any feedback, which could be many years after the publication of a tentatively last edition.
- A variety of reader needs which are poorly met by PDF files (e.g. responsive page width/layout, font size, accessibility features like screen readers).

- The recording, for the very long-term, of the research activities of a researcher that differ from posting preprints and publishing in a journal.
- Research documents and outputs that differ significantly in style or length from preprints.

Systems that are under-responsive to some of the mentioned needs:

- Journals
- The organizations running the most popular preprint servers.
- The classic LaTeX software ecosystem.