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Appendix 1

Proposal of an interactive tool to increase search capability of published work

One major current limitation is that we do not have yet perfect information search capability. Such engine would allow us to find the papers that are most important for the ideas that we want to explore at any given moment and help in strengthening any given argument we want to defend or statement we want to make. In its absence, we are currently immersed in a world of too much publication in which we cannot easily sort all the literature out. A potential fix would be in the form of a ‘personally customizable interactive visual search engine’. To implement it, the first thing we need is a much broader but preset number of descriptors (‘keywords’) in which authors can fit their work in a way that users can maximize the chances of finding their work. In field-based ecology, I am sure that colleagues would appreciate mandatory descriptors such as: size of the study area, number of sites studied, number of species studied, geographic positioning of the center of the study area, type of sampling method (more categories), types of ecosystem, place based research versus broad field implication, data availability, list of species, etc. The preset mandatory list could be built and revised via expertise consensus (e.g. internet based questionnaires to be filled by authors to have their papers published). Authors would also have the opportunity to reclassify past publications according to current classification schemes. The motivation to revisit the classification scheme of a previously published paper would be based in increasing the visibility (e.g. continuous citation) of their work. The keywords could be then structured in hierarchical forms (e.g. tree decision) that are customized by users (from order to thresholds, e.g. cutoffs in terms of number of sites and species, etc.) and then represented by visual tools (the prezi style of presentation could be adapted to have this functionality: <http://prezi.com/>) leading to lists of papers within combinations of criteria. Within criteria, papers can be then simply listed or organized further by visual networks of papers that allow us to understand how they are connected (common authorship, common citations, etc). This system can be actually implemented with the current technology we have today. Interestingly, this system could also be used to predict what kinds of criteria better

predicts the success of papers (e.g. citation, centrality in paper networks, etc; regression tree models could be used here to achieve such predictability).