

Shaping the semantics of healthy and sustainable food systems: a participatory meta-framework-based approach. *Extended poster abstract.*

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Abstract

Serious health and nutrition challenges characterise the current global scenario, requiring rapid and long-term viable solutions. Negative health conditions appear strictly connected to present social issues, such as poverty and inequalities, as well as to contemporary environmental threats. Hence, an inextricable convergence between health and sustainability matters strongly emerges, reclaiming an urgent transition to a healthier and more sustainable world. The food system is the principal domain within which this transition must occur due to its pivotal role in determining globally these social, environmental and health-related concerns. Given the intrinsic multidisciplinary and complexity of the study of food systems, a holistic approach, endorsed by the plurality of scholar and practitioner stakeholders, is essential for addressing related challenges.

The development of high-capacity, reliable, and consistent data sharing networks has high potential to speed up and solidify the transformation of food systems worldwide. Furthermore, the design of a shared and coherent semantics will highly enhance this process, facilitating the integration, assessment, and reusability of data across a multiplicity of sectors by diverse stakeholders. Precisely in this perspective, digital ontologies provide common semantic frameworks, linking disparate pieces of information together while ensuring their interoperability. In fact, several food and health ontologies have been developed. However, these resources rarely cover sustainability-related features. Moreover, such ontologies are essentially designed following a think-tank top-down approach, without directly involving related stakeholders.

In order to improve current health and sustainability food-related ontological landscape, here, we present a meta-framework, encompassing the spectrum of fundamental determinants, to consider mandatorily when engaging in this system transformation. In order to encompass essential health and sustainability food system elements, this meta-framework covers three extensive and comprehensive tracks: 1) the “System Backdrop” which highlights the food systems’ degrees of complexity, the possible stakeholder standpoints and positionings within the system, and the related backgrounds; 2) the “System Gears” which, rather, states elements referring to system dynamics and player assets; 3) and the “Transition Issues/Goals Determinants” which shows relevant objectives and matters to be compulsory considered when referring to a food system change. To operationalize this conceptual tool for further suitable applications, we propose a modular meta-framework-based operative procedure. This process engages selected system stakeholders in a collaborative meta-framework usage, for formulating appropriate actions addressing well established transformation requirements. Applying to specific cases of transition towards more sustainable and healthier food systems, this participatory method facilitates the identification, enucleation and condensation of common features, deriving from different stakeholder personal perspectives, into a suitable solution-oriented narrative.

Finally, outlining core food systems health and sustainability components, this framework shows up as an exciting possible conceptual basis for further establishing a healthy sustainable food system(s) representations ontology.

Keywords

Sustainability, health, food system, digital ontologies, participatory design, meta-framework foundations.

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