Special issue on
Collective representations of quality
Preface

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Abstract

Collective representations of the quality of artifacts are produced by human societies in a variety of contexts. These representations of quality emerge from a broad range of social interactions, from the uncoordinated behaviour of large collectives of individuals, to the interaction between individuals and organizations, to complex socio-technical processes such as those enabled by online peer production systems. This special issue brings together contributions from sociology, social psychology and social simulation to shed light on the nature of these representations and the social processes that produce them.

Keywords: quality; evaluation; peer influence; peer production.

Humans collectively develop shared representations of the quality of artifacts in a variety of contexts: scientific communities produce collective evaluations of what counts as good research in their field; teenagers evaluate music, fashion, and collectively identify what is "cool" and what is not; families develop shared opinions about what is good and bad, which they transmit to their offspring. Communities of practice define quality standards recognized by their members when assessing the quality of artifacts in their field of interest. Collaborative ranking systems and online review systems allow large collectives of Web users to compile evaluations and recommendations of artefacts in an entirely decentralized way.

As these few examples illustrate, building shared representations of quality is a feature of many forms of social interaction and "quality" in these representations may be only vaguely related to objective features of what is being evaluated: these representations are often in constant evolution and the process behind their production is

intrinsically social. Competing evaluations of the quality of the same artifacts may co-exist and evolve as a function of the different communities or groups of individuals who sustain them over time.

The present symposium[1] aims to shed light on the intertwined subjective and social aspects of quality. On the whole, the contributions in this symposium depict quality as a multi-dimensional, multi-individual and multi-relational concept. Quality is considered a multi-dimensional notion, as it can rarely be described by and reduced to a single value on a unique dimension. It is also a multi-individual notion, as it is seldom the case that quality corresponds to a consensus, that is, identical opinions regarding a given property of some artefact, its global quality or even, at a higher level, about how various dimensions should be combined to yield a given quality assessment. And it is multi-relational, as quality judgments are often directed by multiple interactions among individuals and shaped by their opinions. The contributions in this symposium explore the notion of collective representations of quality from different disciplinary angles, spanning sociology, social psychology, and social simulation.

Observing that different individuals put different emphases on different quality aspects of an artefact, EDMONDS presents the foundations of a multi-dimensional and multi-individual account of quality. In his proposal, while inter-personal differences in quality judgments may first be due to diverse individual evaluations of an item in its respective dimensions, they may also be due more broadly to distinct individual aggregation recipes. EDMONDS likens these various recipes to distinct quality "filters". In practical terms, this implies that any quality-assessment procedure should exploit the relationship between user preferences and the intrinsic characteristics of artefacts, rather than assuming the existence of either an objective quality or a single objective method to compute an overall quality assessment relevant to all individuals.

In some way, this approach to quality could be considered as "pre-social", in that quality is not yet described as the outcome of a social process and one does not need to put emphasis on the role of inter-personal interactions to define and build these filters. Yet, this characterization of the notion of quality provides a common ground for discussing the inherently social conditions of quality, which are in turn addressed by the other three papers. In this respect, BENTLEY *et al.* describe some of the conditions under which social interaction may influence quality assessment, while NOWAK *et al.* go further by suggesting that quality judgments are themselves a condition for these interactions; BOERO, finally, describes the conditions under which a social consensus on quality may be desired and enforced.

BENTLEY *et al.* introduce a typology of the possible situations in which artefacts are selected according to their perceived quality. Their typology is based on two tenets: the ability to discern the quality of artefacts and the possibility of being influenced

by others. In a nutshell, their model describes the interplay between individual and socially-mediated quality judgments. By exposing some of the conditions under which imitation can affect the individual formation of quality judgments — thereby linking the notion of quality to imitative processes — their model is also able to propose several types of stylized predictions regarding the expected popularity of artefacts as a function of the social configuration of their evaluators. In the extreme situation where agents can see the behaviour of others while themselves being unable to discriminate the quality of items, or where the quality of items is not essential to them, BENTLEY *et al.* expect that agents will tend to copying behaviour, resulting in a form of random cultural selection.

By reviewing psychological evidence illustrating the relativistic nature of many quality assessments, NOWAK *et al.* suggest that this type of accidental cultural selection could be common, if not customary. They adopt a somewhat radical stance in considering quality as a social construct fulfilling a social need. Quality, they submit, stems fundamentally from multi-relational goals, while the underlying multi-dimensional evaluations of quality remain largely arbitrary. Although social interactions are usually seen as a means to discuss and reach a consensus on the multi-dimensional aspects of an artefact's quality, NOWAK *et al.* propose on the contrary that well-formed multi-dimensional opinions are actually the means of successful interactions. Being recognised as an expert in identifying the features of quality would consequently be one of the main motivations for discussing quality.

BOERO slightly shifts the notion of quality as a social process by questioning how a group may organize itself to target and reach quality standards that are understood among group members. He specifically shows how such standards are being enforced within a community of manufacturers organized as a quality-targeted consortium conceptually affiliated with the "slow food movement". Relying on an agent-based model hypothesizing processes of quality enforcement and pairwise social relationships, he shows how collective quality-assessment processes are affected by individual incentives, organized action or institutional policies, and what are the effects of social-network properties on the preservation of a collective quality standard.

The variety of modes in which collective quality representations may be described and constructed suggests that a meta-discussion of quality may be needed, in the sense that the design of quality algorithms (or recipes to compile quality representations from judgments or quality-signaling behaviours of multiple individuals) still remains an open question. In other words, just as artefacts do not generally have an objective quality when assessed by multiple individuals, there does not seem to exist an objective algorithm of quality either, i.e. an objective method for aggregating multi-dimensional, multi-individual and/or multi-relational assessments to deliver operational quality rankings.

Claiming, for instance, that the most popular songs, books or movies are not the most interesting ones hints at the possible existence of conflicting quality aggregation algorithms. However, with a few exceptions, the rules that govern collective quality assessment techniques and rating systems, which are becoming more and more ubiq-

uitous, are not being put in question. Although the results from a Google search or Shanghai university rankings may appear to be the outcome of an objective algorithm combining underlying quality-related criteria in a logical, or at least consensual, way, their foundations may actually be social constructs.

The intrinsically social process behind the construction of shared representations of quality may therefore have to be extended to the process itself. This preliminary conclusion has immediate implications for the design of social ranking systems: we can build more multi-dimensional, more multi-individual and perhaps more multi-relational ranking systems for quality by allowing the very definition of their rules to be social — ideally leading to what could be described as "Open Quality" algorithms.