Theoretical intersections: cognitive poetics, cultural evolution and distant reading in literary studies

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Since Franco Moretti coined the widely successful term "distant reading" (Moretti, 2000) quantitative/computational text analysis methods have gained a wide circulation in literary studies. We can even speak of a *distant reading school*, nowadays. The diffusion of distant reading approaches has obviously raised a lively debate (mostly in the North American context), and has attracted various criticisms, both from "traditional literary scholars" and self-critical adopters that can be subsumed into a threefold typology:

- Theoretical/Ideological: the intentional and qualitative nature of literary domain is in principle irreducible to quantitative and computational methods; literature is not data (Marche, 2012) and literary criticism is not data analytics (Fish, 2012);

- Methodological: the (statistical/computational) models and methods adopted for literary analysis are wrong, inaccurate, and ultimately inadequate (Da, 2019);

- Pragmatical: the limits in the representativeness of the textual data set used in the analysis and the problems in defining the adequacy of its selection criteria (Bode, 2018).

Each of these kinds of criticisms would need a deep discussion and are strictly interconnected. I think that one of the main reasons underlying these variably critical positions is the fact that distant reading actually lacks sound and coherent rationales from the point of view of the theory: in fact, we can say that distant reading is the first methodology in literary studies that does not come with a theory of literature embedded in it, as it was for all of its predecessors. Consequently, all distant reading studies derive their theoretical frameworks and terms from theories in literary domain that generally relies on the fundamental idea that **literary texts can be explained only by the way of interpretation or if we prefer of hermeneutics**.

The problem is that any literary interpretation based on quantitative, immanent and purely formalist approach is subject to the theoretical criticism that was expressed by Stanley Fish in his harsh and seemingly ultimate criticism to stylistics in "What Is Stylistics, and Why are They Saying Such Terrible Things About It?" (Fish, 1980). The point for Fish was not to criticize the methods *per se*, but the possibility to extract meaningful literary interpretations directly from the simple linguistic facts, the idea of an "algorithmic interpretation" (Fish's words!), since interpretation always starts form a contextual and situated point of view that predefines the very objects of its actuation.

Many important scholars active in the field do believe that there is the possibility to reconcile hermeneutical oriented theories of literature with computational/quantitative methods. Just to make a couple of examples of these consilience theses, we can cite Andrew Piper (Piper, 2018) and

Michael Gavin (Gavin, 2018). The very problem with these reconciliation stances is that very often in their analysis the hermeneutical critical arguments are to a great extent independent form the results of the computational analysis. On the contrary, I think that distant reading should not be considered a methodological innovation to be applied to our pre-existing theories of literary texts (in all their rhizomatic variants): it is necessary to find a suitable theory or framework where these methods can yield to interesting results. This, in my view, requires a change in the level of description of literary facts, and the move from (or renounce to) **interpretation** to (embrace) **explanation** as the real aim of the scholarly inquiry.

One possible direction to be explored, as some scholars like Ted Underwood suggest (English and Underwood, 2016; Underwood, 2017), is that distant reading should fall inside the tradition of sociology of literature or of history of ideas a la *Nouvelles Histoire*. I think that an even better theoretical framework is the **cognitive/evolutionistic approach** to poetics, narratology and literary studies: it historically advocates the introduction of a scientific methodology in the study of literature, looking for methodological and theoretical insights into the cognitive science and the evolutionary psychology. What is more interesting is that the debate around the acceptability and applicability of the cognitive approaches in literary studies has led many scholars to propose a renounce to the classical interpretative stance of single or small sets of works (Caracciolo, 2016: 193).

The other scientific field where computational literary studies can find a suitable theoretical framework **cultural evolution**. This field of study, that as of now has very little application in literary studies (but see Morin et al., 2019; Morin et al., 2019), aims at providing a naturalist and empirical explanation of the nature and evolution of culture, adopting widely mathematical/statistical and computational modeling. One of the theoretical underpinnings of cultural evolution is the adoption of the **population thinking** framework (Claidière et al., 2014).

Literature is part of the cultural sphere, so it can be considered a population of individual items (the texts) whose members are defined by set of measurable features. The description of the population at a given state (synchronic) and its evolution (diachronic) is feasible by the way of statistical and data driven analysis.

To come to a conclusion, I think that in order to take full advantage of the most advanced methods and analytical techniques encompassed by the label distant reading, we need to find a proper theoretical framework that give sense to the hypothesis experiments, data sets and explanations we can generate. The attempt to justify and anchor this approach in the context of the traditional literary theories and methodologies has proven a limitation that undermines the interesting analytical results, and it is easily amenable to the 'so what' criticism, or to ideological attacks. Maybe it is time to change the framework, and to abandon the classical hermeneutical literary studies environment.

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