Mathematics and the Oulipo
A Literature Review

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The Oulipo is a collective of primarily French writers committed to exploring potential literature. Founded by Raymond Queneau and François Le Lionnais in 1960, the Oulipo analyzes and synthesizes works according to formal constraints. The Oulipo has a long and definite relationship with mathematics, at least partly because several of its earliest members were mathematicians by training. In the past decade, literary scholars such as Christelle Reggiani and Elvira Laskowski-Caujolle have attempted to understand the connection between mathematics and the Oulipo and the extent to which the Oulipo has managed to mathematize literature. Many of these scholars have sought to understand this connection from a historical perspective. This literature review aims to synthesize the research of such scholars in an attempt to come to a better understanding of the connection between mathematics and the Oulipo.

**Bourbaki Influence**

Discussions of mathematics and the Oulipo typically reference the *Bourbaki*: a group of mathematicians who attempted to reground mathematics on a self-contained series of texts, beginning with set theory. The two groups happened to emerge in the same country and at roughly the same time—with the Bourbaki preceding the Oulipo by a few decades—but scholars note that the primary reason for the influence of the former on the latter is that Oulipians were directly exposed to Bourbaki ideas both in their formal education and in their immediate intellectual community. For instance, Véronique Montémont, affiliated with what used to be called the Henri Poincare University in Nancy, France, explains in her 2007 article *Roubaud’s Number on Numbers* that Oulipian Jacques Roubaud began studies just when teachers embracing Bourbaki pedagogy had begun to take positions in French universities (115). This exposure led to what Montémont calls “deep” stylistic influence.

Elvira Laskowski-Caujolle, professor at Santa Barbara City College and Oulipian scholar, similarly identifies the Bourbaki as an influential force on the Oulipo in her article *Roubaud’s Destruction: A Mathematician’s Prose*. Laskowski-Caujolle references David Bellos’ claim that “[The Oulipo’s] operational model was Bourbaki, the group of anonymous French mathematicians who reinvented their entire discipline by starting afresh from first principles (349).” She prefaces this statement with Roubaud’s own admission, in French, that “Oulipo est un hommage à Bourbaki, une imitation de Bourbaki.”

Christelle Reggiani and Caroline Marie, literary scholars affiliated with the Paris-Sorbonne University, also point to the Bourbaki as a clear source of inspiration for the Oulipo. Having written several published papers and presented at conferences on Oulipo and constrained writing, Reggiani is a well-known and respected authority in the field. In her article with Marie, titled *Portrait of the Artist as a*
Mathematician, she draws parallels between the Bourbakian mathematical axiom and the literary constraint, suggesting that both give rise to some notion of structure (102).

But Reggiani and Marie also discuss where Bourbaki and Oulipo begin to part ways, in particular claiming that the former was apologetic and concessionary with regards to the arbitrariness of its chosen axioms whereas the Oulipo seems to embrace and almost revel in its freedom to choose arbitrary constraints (103). Given that axioms lie at the heart of the Bourbaki method—serving as a firm ground on which rigorous proofs can be constructed—the glaring difference in attitudes toward axiomatization between the Bourbaki and the Oulipo suggests that the latter cannot be interpreted solely as a literary offshoot of the former. In this sense, scholars in Reggiani and Marie’s camp recognize that the Oulipo is more of a cousin than a twin sister of Nicolas Bourbaki.

Though scholars might disagree about the way in which Bourbaki influenced Oulipo, there is clearly widespread agreement in the field that this influence is far from imagined. Scholars who hold differing opinions regarding the connection between mathematics and Oulipo nonetheless share the belief that Oulipian writers were influenced at least stylistically by Bourbaki rigor and formalism. Researchers such as Laskowski-Caujolle and Montémont anchor much of their work around this historical proximity, while other scholars such as Regianni and Marie treat the shared ancestry as a concession—a similarity that they grant but whose significance they might argue has been inflated. The common historical context of the Oulipo and the Bourbaki nonetheless serves as one of the few unifying themes in this scholarly subfield.

Mathematical Significance

Scholars may agree that Oulipians use mathematics, but is there a consensus regarding the significance of this use? Reggiani and Marie view the oulipian use of mathematics primarily as a structural device, while Montémont suggests in her article about Roubaud that numbers can serve another purpose. An important but perhaps subtle distinction is that Montémont writes primarily about Roubaud’s use of numbers, as opposed to the more general mathematics. Scholars such as Montémont feel that Roubaud’s writings as an Oulipian and as a constraint-based poet are arguably best understood by appreciating his fondness for numbers as “personal signifiers.” This is of course in clear contrast to the position Reggiani and Marie take. Montémont explains that numbers serve not only an intellectual purpose in Roubaud’s works but also a spiritual one: numbers measure time and can be linked to personal memories and events. For instance, in Roubaud’s Le Grand Incendie de Londres, numbers are used to measure the time between the death of his wife Alix and the birth of his Projet (Montémont 114).
Montémont thus feels that Roubaud’s language and style are mathematical, but unlike the duo she does not believe that the structure of his work is. In this sense, the subfield appears to be rather divided with respect to the significance of the Oulipian use of mathematics. We note a clear branching of scholarly thought.

While there is widespread agreement regarding the fact that the Oulipo makes use of mathematics, there are considerable differences in attitude toward this use. Some scholars, such as Montémont, premise their position on the fact that an intimate connection exists between the Oulipo and mathematics, whereas Reggiani, Marie, and scholars in their camp write from a more skeptical position. The very first sentence of Montémont’s article claims that “the work of Jacques Roubaud is intrinsically linked to mathematics.” This is in stark contrast to Reggiani and Marie’s rather bold claim that the Oulipo, aware of the impossibility of a complete mathematization of literature, has grown increasingly mathematically worded, “as though striving to outdo Bourbaki’s scientific rigor” (103).

**Oulipian Scholarship**

The differences in opinion of Reggiani and Marie and Montémont are reflective of a generally divided scholarly subfield. The existence of a connection between mathematics and the Oulipo is acknowledged by scholars in both camps, but the significance, purpose, and implications of this connection are sources of clear disagreement. Scholars identify almost unanimously Bourbakian influence as one of the most important reasons for Oulipo’s connection to mathematics, but with those in Reggiani and Marie’s camp contending that the influence is merely stylistic. The Oulipo having been recently charged with abandoning its roots in order to cater to a growing popular demand for “Oulipo light”, it will be interesting to see how the scholarly subfield will evolve. With several mathematicians alive and in its ranks, including graph theorist Pierre Rosenstiehl and symplectic geometrist Michèle Audin, today’s Oulipo continues to at least partly honor its mathematical origins.
Sources


