also be aware that all ellipses in the translated texts are the authors' rather than mine.

Granted that the purpose of the collection is to acquaint the Anglophonic reader with the principal aspects of Oulipian poetics, most of the texts herein deal with literary theory. Another consideration conditioning this choice derives from the Oulipo's own insistence on rigorous form: if their theory does lead to practical demonstrations, the texts of this sort resist translation in a way that the theoretical texts do not. Think, for example, of the problems posed by the translation of Harry Mathews's "Liminal Poem" from the original English into any other language. Still, texts like "Prose and Anticombinatorics," "The Relation X Takes Y for Z," "A Story as You Like It," and "The Theater Tree: A Combinatory Play" should furnish the reader with some idea of the sort of text that might result when a given aspect of Oulipian theory is applied.

Finally, and most important, in spite of any eventual infelicities that might otherwise be remarked, I hope the present collection will preserve for the reader that which has consistently nourished my own reading of the Oulipo: the pleasure of the text.

Harry Mathews

. . . . . .

Liminal Poem

to Martin Gardner

O
to
see
man's
stern
poetic
thought
publicly
espousing
recklessly
imaginative
mathematical
inventiveness,
openmindedness
unconditionally
superfecundating
nonantagonistical
hypersophisticated
interdenominational
interpenetrabilities.
Harry Burchell Mathews
Jacques Denis Roubaud
Albert Marie Schmidt
Paul Lucien Fournel
Jacques Duchateau
Luc Etienne Perin
Marcel M Benabou
Michele Metail
Italo Calvino
Jean Lescure
Noel Arnaud
P Braffort
A Blavier
J Queval
C Berge
Perec
Bens
FLL
RQ

François Le Lionnais

. . . . . .

Lipo
First Manifesto

Let's open a dictionary to the words "Potential Literature." We find absolutely nothing. Annoying lacuna. What follows is intended, if not to impose a definition, at least to propose a few remarks, simple hors d'oeuvres meant to assuage the impatience of the starving multitudes until the arrival of the main dish, which will be prepared by people more worthy than myself.

Do you remember the polemic that accompanied the invention of language? Mystification, puerile fantasy, degeneration of the race and decline of the State, treason against Nature, attack on affectivity, criminal neglect of inspiration; language was accused of everything (without, of course, using language) at that time.

And the creation of writing, and grammar—do you think that that happened without a fight? The truth is that the Quarrel of the Ancients and the Moderns is permanent. It began with Zinjanthropus (a million seven hundred and fifty thousand years ago) and will end only with humanity—or perhaps the mutants who succeed us will take up the cause. A Quarrel, by the way, very badly named. Those who are called the Ancients are often the stuffy old descendants of those who in their own day were Moderns; and the latter, if they came back among us, would in many cases take sides with the innovators and renounce their all too faithful imitators.

Potential literature only represents a new rising of the sap in this debate.[1]

Every literary work begins with an inspiration (at least that's what its author suggests) which must accommodate itself as well as possible to a series of constraints and procedures that fit inside each other like Chinese boxes. Constraints of vocabulary and grammar, constraints of the novel

(division into chapters, etc.) or of classical tragedy (rule of the three unities), constraints of general versification, constraints of fixed forms (as in the case of the rondeau or the sonnet), etc.

Must one adhere to the old tricks of the trade and obstinately refuse to imagine new possibilities? The partisans of the status quo don't hesitate to answer in the affirmative. Their conviction rests less on reasoned reflection than on force of habit and the impressive series of masterpieces (and also, alas, pieces less masterly) which has been obtained according to the present rules and regulations. The opponents of the invention of language must have argued thus, sensitive as they were to the beauty of shrieks, the expressiveness of sighs, and sidelong glances (and we are certainly not asking lovers to renounce all of this).

Should humanity lie back and be satisfied to watch new thoughts make ancient verses? We don't believe that it should. That which certain writers have introduced with talent (even with genius) in their work, some only occasionally (the forging of new words), others with predilection (counterrhymes), others with insistence but in only one direction (Lettrism),[2] the Ouvroir de Littérature Potentielle (Oulipo) intends to do systematically and scientifically, if need be through recourse to machines that process information.

In the research which the Oulipo proposes to undertake, one may distinguish two principal tendencies, oriented respectively toward Analysis and Synthesis. The analytic tendency investigates works from the past in order to find possibilities that often exceed those their authors had anticipated. This, for example, is the case of the cento, which might be reinvigorated, it seems to me, by a few considerations taken from Markov's chain theory.[3]

The synthetic tendency is more ambitious: it constitutes the essential vocation of the Oulipo. It's a question of developing new possibilities unknown to our predecessors. This is the case, for example, of the *Cent Mille Milliards de poèmes* or the Boolian haikus.[4]

Mathematics—particularly the abstract structures of contemporary mathematics—proposes thousands of possibilities for exploration, both algebraically (recourse to new laws of composition) and topologically (considerations of textual contiguity, openness and closure). We're also thinking of anaglyphic poems, texts that are transformable by projection, etc. Other forays may be imagined, notably into the area of special vocabulary (crows, foxes, dolphins; Algol computer language, etc.).[5] It would take a long article to enumerate the possibilities now foreseen (and in certain cases already sketched out).

It's not easy to discern beforehand, examining only the seed, the taste

of a new fruit. Let's take the case of alphabetical constraint. In literature it can result in the acrostic, which has produced truly staggering works (still, Villon and, well before him, the psalmist and author of the *Lamentations* attributed to Jeremiah . . .); in painting it resulted in Herbin, and a good thing too; in music the fugue on the name B.A.C.H.—there we have a respectable piece of work. How could the inventors of the alphabet have imagined all of that?[6]

To conclude, Anoulipism is devoted to discovery, Synthoulipism to invention. From the one to the other there exist many subtle channels.

A word at the end for the benefit of those particularly grave people who condemn without consideration and without appeal all work wherein is manifested any propensity for pleasantry.

When they are the work of poets, entertainments, pranks, and hoaxes still fall within the domain of poetry. Potential literature remains thus the most serious thing in the world. Q.E.D.

François Le Lionnais

. . . . . .

Second Manifesto

I am working for people who are primarily intelligent,
rather than serious. P. Féval

Poetry is a simple art where everything resides in the execution. Such is the fundamental rule that governs both the critical and the creative activities of the Oulipo. From this point of view, the Second Manifesto does not intend to modify the principles that presided over the creation of our Association (these principles having been sketched out in the First Manifesto), but rather to amplify and strengthen them. It must however be remarked that, with increasing ardor (mixed with some anxiety), we have envisioned in the last few years a new orientation in our research. It consists in the following:

The overwhelming majority of Oulipian works thus far produced inscribe themselves in a SYNTACTIC structurElist perspective (I beg the reader not to confuse this word—created expressly for this Manifesto—with structurAlist, a term that many of us consider with circumspection).

Indeed, the creative effort in these works is principally brought to bear on the formal aspects of literature: alphabetical, consonantal, vocalic, syllabic, phonetic, graphic, prosodic, rhymic, rhythmic, and numerical constraints, structures, or programs. On the other hand, *semantic* aspects were not dealt with, meaning having been left to the discretion of each author and excluded from our structural preoccupations.

It seemed desirable to take a step forward, to try to broach the question of semantics and to try to tame concepts, ideas, images, feelings, and emotions. The task is arduous, bold, and (precisely because of this) worthy of consideration.[1] If Jean Lescure's history of the Oulipo portrayed us as we are (and as we were), the ambition described above portrays us as we should be.

The activity of the Oulipo and the mission it has entrusted to itself raise the problem of the efficacy and the viability of artificial (and, more generally, artistic) literary structures.

The efficacy of a structure—that is, the extent to which it helps a writer—depends primarily on the degree of difficulty imposed by rules that are more or less constraining.

Most writers and readers feel (or pretend to feel) that extremely constraining structures such as the acrostic, spoonerisms, the lipogram, the palindrome, or the holorhyme (to cite only these five) are mere examples of acrobatics and deserve nothing more than a wry grin, since they could never help to engender truly valid works of art. Never? Indeed. People are a little too quick to sneer at acrobatics. Breaking a record in one of these extremely constraining structures can in itself serve to justify the work; the emotion that derives from its semantic aspect constitutes a value which should certainly not be overlooked, but which remains nonetheless secondary.

At the other extreme there's the refusal of all constraint, shriek-literature or eructative literature. This tendency has its gems, and the members of the Oulipo are by no means the least fervent of its admirers . . . during those moments, of course, not devoted to their priestly duties.

Between these two poles exists a whole range of more or less constraining structures which have been the object of numerous experiments since the invention of language. The Oulipo holds very strongly to the conviction that one might envision many, many more of these.

Even when a writer accords the principal importance to the message he intends to deliver (that is, what a text and its translation have in common), he cannot be wholly insensitive to the structures he uses, and it is not at random that he chooses one form rather than another: the (wonderful) thirteen-foot verse rather than the alexandrine, the mingling or separation of genres, etc. Only mildly constraining, these traditional structures offer him a fairly broad choice. That which remains to be seen is whether the Oulipo can create new structures, hardly more and hardly less constraining than traditional ones, and how to go about it. On ancient (or new) thoughts, the poet would be able to make new verses.

But can an artificial structure be viable? Does it have the slightest chance to take root in the cultural tissue of a society and to produce leaf, flower, and fruit? Enthusiastic modernists are convinced of it; diehard traditionalists are persuaded of the contrary. And there we have it, arisen from its ashes: a modern form of the old Quarrel of the Ancients and the Moderns.

One may compare this problem—*mutatis mutandis*—to that of the laboratory synthesis of living matter. That no one has ever succeeded in doing this doesn't prove a priori that it's impossible. The remarkable success of present biochemical syntheses allows room for hope, but nonetheless fails to indicate convincingly that we will be able to fabricate living beings in the very near future. Further discussion of this point would seem otiose. The Oulipo has preferred to put its shoulder to the wheel, recognizing furthermore that the elaboration of artificial literary structures would seem to be infinitely less complicated and less difficult than the creation of life.

Such, in essence, is our project. And perhaps I may be permitted to allude to an apparently (but only *apparently*) modest foundation: the Institute for Literary Prosthesis.

Who has not felt, in reading a text—whatever its quality—the need to improve it through a little judicious retouching? No work is invulnerable to this. The whole of world literature ought to become the object of numerous and discerningly conceived prostheses. Let me offer two examples, both bilingual.

An anecdote embellishes the first. Alexandre Dumas *père* was paying assiduous but vain court to a very beautiful woman who was, alas, both married and virtuous. When she asked him to write a word in her album, he wrote—felicitously enriching Shakespeare—"Tibi or not to be."

In the second example, I may be excused for calling on personal memories. More than a half-century ago, filled with wonder by the poems of John Keats, I was dawdling in the Jardin des Plantes. Stopping in front of the monkey cage, I couldn't help but cry (causing thus not a little astonishment to passers-by): "Un singe de beauté est un jouet pour l'hiver!"[2]

Wasn't Lautréamont approaching this ideal when he wrote: *Plagiarism is necessary. Progress implies it. It embraces an author's words, uses his expressions, rejects false ideas, and replaces them with true ideas.*

And this brings me to the question of plagiarism. Occasionally, we discover that a structure we believed to be entirely new had in fact already been discovered or invented in the past, sometimes even in a distant past. We make it a point of honor to recognize such a state of things in qualifying the text in question as "plagiarism by anticipation." Thus justice is done, and each is rewarded according to his merit.

One may ask what would happen if the Oulipo suddenly ceased to exist. In the short run, people might regret it. In the long run, everything would return to normal, humanity eventually discovering, after much groping and fumbling about, that which the Oulipo has endeavored to promote consciously. There would result however in the fate of civilization a certain delay which we feel it our duty to attenuate.

Marcel Bénabou

Rule and Constraint

Constraint, as everyone knows, often has a bad press. All those who esteem the highest value in literature to be sincerity, emotion, realism, or authenticity mistrust it as a strange and dangerous whim.

Why bridle one's imagination, why browbeat one's liberty through the voluntary imposition of constraints, or by placing obstacles in one's own path? Even the most kindly disposed critics pretend to see in the use of constraint nothing more than a game, rarely innocent but fundamentally vain. The only merit that they might accord to it is that it provides, for a few linguistic acrobats, for a few verbal jugglers, the circus in which they may display their virtuosity. All the while regretting, of course, that so much ingenuity, work, and eagerness had not been placed in the service of a more "serious" literary ambition. *Difficiles nugae,* as was generally said even in the last century of anagrams, palindromes, and lipograms, in order to stigmatize them, these venerable exercises whose antiquity and persistence in the corpus of European literary traditions ought to have preserved them from sarcasm and banter. And even today, there are undoubtedly certain learned dons in whose eyes neither the Alexandrian poets, nor the Grands Rhétoriqueurs, nor the poets of the German Baroque, nor the Russian formalists will ever find grace. In the name, of course, of the sacrosanct liberty of the artist, which nothing must shackle; in the name of the imprescriptible rights of inspiration.

Certain types of constraint, however, seem to have escaped from this discredit. For four centuries, we have been very comfortable, apparently, with the laws of prosody—with the fact, for instance, that an alexandrine has twelve syllables, that a sonnet has fourteen lines, whose rhymes are disposed according to a very precise order. And we do not hesitate to admire in Malherbe or Valéry the scrupulous respect of a demanding canon. In fact, it is rather difficult, except for proponents of "automatic writing," to imagine a poetics that does not rely on rigorous rules and, more generally, a literary production that does not involve the use of cer-

tain techniques. Even the most rabid critics of formalism are forced to admit that there are formal demands which a work cannot elude. Responding to those who were trying to confound inspiration, liberty, chance, and the dictates of the unconscious,[1] the terms that Raymond Queneau employed in 1938 are well known: ". . . inspiration which consists in blind obedience to every impulse is in reality a sort of slavery. The classical playwright who writes his tragedy observing a certain number of familiar rules is freer than the poet who writes that which comes into his head and who is the slave of other rules of which he is ignorant" (*Le Voyage en Grèce,* p. 94).

Now it is actually in the passage from the *rule* to the *constraint* that the stumbling block appears: people accept the rule, they tolerate technique, but they refuse constraint. Precisely because it seems like an unnecessary rule, a superfluous redoubling of the exigencies of technique, and consequently no longer belongs—so the argument goes—to the admitted norm but rather to the process, and thus is exaggerative and excessive. It is as if there were a hermetic boundary between two domains: the one wherein the observance of rules is a natural fact, and the one wherein the excess of rules is perceived as shameful artifice.

It is precisely this boundary, wholly arbitrary, that must be challenged in the name of a better knowledge of the functional modes of language and writing. One must first admit that language may be treated as an object in itself, considered in its materiality, and thus freed from its subservience to its significatory obligation. It will then be clear that language is a complex system, in which various elements are at work, whose combinations produce words, sentences, paragraphs, or chapters. Obviously, nothing prevents us from studying the behavior, in every possible circumstance, of each of these elements. On the contrary: it is only in this manner that experimental research into the possibilities of language can proceed. And the role that may be assigned to constraint immediately becomes apparent: to the extent that constraint goes beyond rules which seem natural only to those people who have barely questioned language, it forces the system out of its routine functioning, thereby compelling it to reveal its hidden resources.

Constraint is thus a commodious way of passing from language to writing. If one grants that all writing—in the sense both of the act of writing and of the product of that act—has its autonomy, its coherence, it must be admitted that writing under constraint is superior to other forms insofar as it freely furnishes its own code.

All these obstacles that one creates for oneself—playing, for example, on the nature, the order, the length, or the number of letters, syllables, or words—all these interdictions that one postulates reveal their true func-

tion: their final goal is not a mere exhibition of virtuosity but rather an exploration of virtualities.

The work of Georges Perec furnishes an exemplary demonstration of everything that concerns so-called "literal" constraints. As a matter of fact, in Perec one notes a sort of fascination for the letter. Conscious that, to quote J. Roubaud's beautiful expression, "each page is a bed where letters lie," Perec produced several of his texts through diligent work on letters: on their presence, their absence, their repetition, their order of occurrence in words, or even their form. Thus, the exclusion of a vowel engenders an extraordinarily rich novel whose functioning is entirely governed, down to the last detail, by the consequences of this *disappearance*.[2] The inverse constraint, which consists in using *only* the vowel *e*, presides at the birth of exceedingly strange festivities at the bishop's palace in Exeter, involving the derangement of senses and sexes (*Les Revenentes*). And it is on still another literal constraint that are based the vertiginous variations which fill the two collections *La Clôture* and *Alphabets*, that of the heterogram: each verse employs the same set of different letters, whose permutations produce the poem. Not without humor, Perec sees in this play of constraints the beginning of a new poetic art, capable of replacing the rhetorical vestiges still in use in most modern and contemporary poetic production.

It is useful to note in passing, nonetheless, that the petition of bankruptcy of traditional rhetoric had been filed, in less temperate terms, by a contemporary poet: "Rhetoric, why should I recall your name? You are no longer anything but a colonnaded word, the name of a palace which I detest, from which my blood has forever banished itself" (F. Ponge, *Méthodes*, pp. 182–83).

In progressing from the letter to the word, the techniques of Raymond Roussel inevitably come to mind, and his way of exploiting to the limit the evocative power of the word he chooses: sometimes it is the dislocation of an utterance; sometimes the bringing together of a given pair of words that creates an object (imaginary), described with the utmost precision, an event (wholly as imaginary) recounted in minute detail. The unforgettable *rails en mou de veau*, which so impressed the first readers of *Impressions d'Afrique*, is only the most striking example of this aptitude of language in creating myths. Roussel, like Mallarmé, elaborates from the sole lexicon his own universe; and from the arbitrary choice he imposes upon himself, he brings into being a second nature.

This paradoxical effect of constraint, which, rather than stifling the imagination, serves to awaken it, can actually be explained very readily. The choice of a linguistic constraint allows one to skirt, or to ignore, all these other constraints which do not belong to language and which escape

from our emprise. Michel Leiris seized this point perfectly, regarding the method used by Raymond Roussel, of whom he said: "His voluntary subjugation to a complicated and difficult rule was accompanied, as a corollary, by a distraction regarding all the rest, leading to a raising of the censure, the latter being far better skirted by this means than by a process such as automatic writing. . . . Juggling apparently gratuitous elements, in which he himself trusted, he created true myths, insofar as they are all very authentically symbolical" (*Brisées*, pp. 59–60).

Thus, it is not only the virtualities of language that are revealed by constraint, but also the virtualities of him who accepts to submit himself to constraint.

Curious reversal: here, we are far from the wise praise of classicism toward which these few remarks seemed at first to be directed. In fact, one must examine how things really come about.

Rules, so cherished by the classics, were principally used as a means of channeling eventual overflowings of a poorly controlled verbal flood. Valéry could thus, in his lecture on poetics at the Collège de France on 10 December 1937, say of the rules of traditional prosody that they are "like waves," and that "vague ideas, intuitions, impulsions comb therein."

Linguistic constraints, for their part, granted their arbitrary exigencies, directly create a sort of "great vacuum" into which are sucked and retained whole quantities of elements which, without this violent aspiration, would otherwise remain concealed.

It is thus the paradox of writing under constraint that it possesses a double virtue of liberation, which may one day permit us to supplant the very notion of inspiration. We recall, once again, the fundamental remarks of R. Queneau on this theme: ". . . it must be noted that the poet is never inspired, if by that one means that inspiration is a function of humor, of temperature, of political circumstances, of subjective chance, or of the subconscious. The poet is never inspired, because he is the master of that which appears to others as inspiration. He does not wait for inspiration to fall out of the heavens on him like roasted ortolans. He knows how to hunt, and lives by the incontestable proverb, 'God helps them that help themselves.' He is never inspired because he is unceasingly inspired, because the powers of poetry are always at his disposition, subjected to his will, submissive to his own activity . . ." (*Le Voyage en Grèce*, p. 126).

Since its creation in 1960, the Oulipo has endeavored to explore, to inventory, to analyze the intimate processes and resources of the language of words, of letters. This exploration is naturally based on the use of constraint, either through the use of ancient constraints pushed to the far limit of their possibilities, or through systematic research in new constraints. Recourse to the axiomatic method, the importance of mathemat-

Table of Elementary Linguistic and Literary Operations

OPERATIONS / LINGUISTIC OBJECT	DISPLACEMENT	SUBSTITUTION	ADDITION	SUBTRACTION	MULTIPLICATION (repetition)	DIVISION	DEDUCTION	CONTRACTION
LETTER	anagram palindrome pig Latin metathesis	paragram (printer's error) cryptography	prosthesis epenthesis paragoge	abbreviation aphaeresis syncope elision lipogram belle absente constraint of the prisoner	tautogram		acrostic acronym signet chronogram	crasis
PHONEME	phonetic palindrome spoonerism Rrose Sélavy (Desnos) glossary (Leiris)	à-peu-près alphabetical drama	stuttering	lipophoneme	alliteration rhyme homoeuteleuton			
SYLLABLE	syllabic palindrome spoonerism		javanese stuttering gemination echolalia	haplography liposyllable (Precious [con]straint) shortening	stuttering alliteration rhyme	diaeresis	acronym	
WORD	Mathews's Algorithm permutations (Lescure) word palindrome inversion	metonymy S + 7 homosyntaxism L.S.D. translation antonymic translation	redundance pleonasm	liponym La Rien que la Toute la (Le Lionnais)	epanalepsis pleonasm anaphora defective rhyme	"de-portmanteau word" etymology tmesis	haikuization	portmanteau word
SYNTAGM	reversion inversion anastrophe	perverbs (Mathews) proverbs aphorism homophony untraceable locutions	interpolation encasement	ellipsis brachylogia zeugma	reduplication	Roussellian procedure (phonic dislocation) hendiadys	proverbs on rhymes edges of poem	syntagmatic amalgam (Doukipudonktan)
SENTENCE	Mathews's Algorithm	homophony holorhyme	tireur à la ligne larding	coupeur à la ligne	leitmotif refrain	dislocation	citation tireur à la ligne collage	
PARAGRAPH	Mathews's Algorithm		tireur à la ligne	censure			plagiarism anthology	résumé

ical concepts, the utilization of combinatorics are the principal paths of this research.

The Oulipo of course does not seek to impose any thesis; it merely seeks to formulate problems and eventually to offer solutions that allow any and everybody to construct, letter by letter, word by word, a text. To create a structure—Oulipian act *par excellence*—is thus to propose an as yet undiscovered mode of organization for linguistic objects.

The accompanying table offers a systematic and analytic classification of elementary linguistic and literary operations; it is complementary to the table elaborated by R. Queneau in 1974, which appears in *Atlas de littérature potentielle* (pp. 74–77) under the title, "Classification of the Works of the Oulipo."

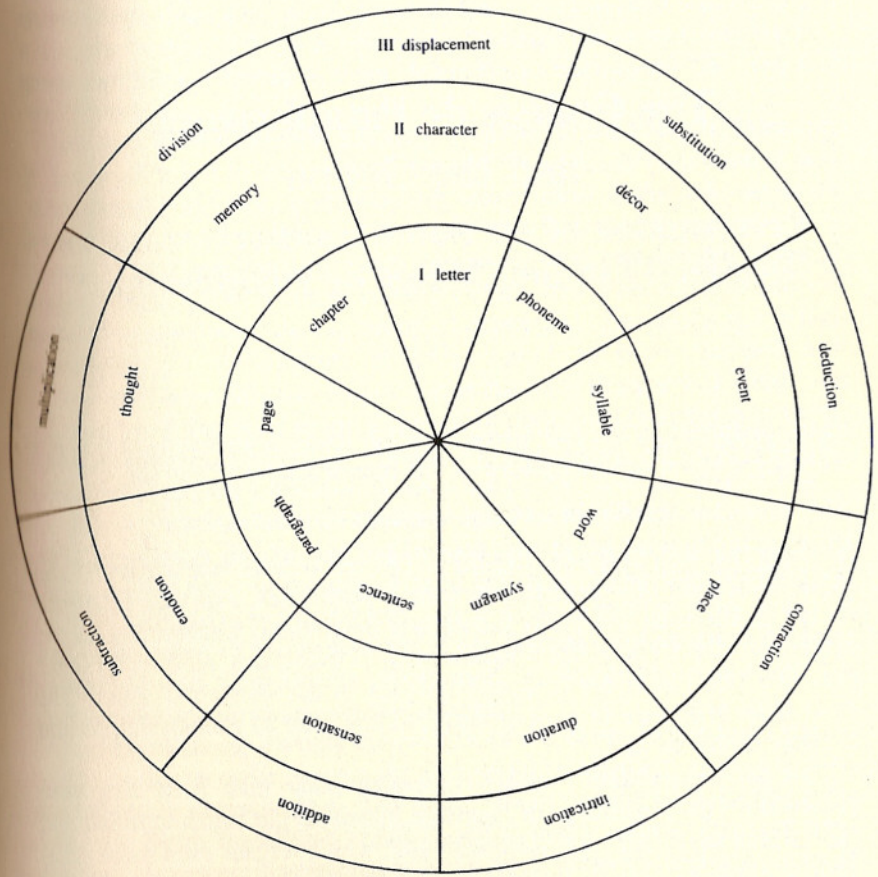
The intent of my table is to try to assign a place within a given ensemble to as many linguistic manipulations as possible, with neither generic distinction nor hierarchy. Therein are included Oulipian and pre-Oulipian constraints, as well as popular verbal games and figures of classical rhetoric.

In order to elaborate this table, the various linguistic objects susceptible of manipulation first had to be isolated, from the simple to the complex: the letter (or typographic sign), the sound, the syllable, the word, the group of words (or syntagm), the sentence, the paragraph. The table stops at the paragraph, but nothing would prevent us, of course, from working on the page, the chapter, the book, even the library. . . .

Next, the various operations to which the linguistic objects may be submitted had to be identified. For the time being, eight have been isolated: displacement, substitution, addition, subtraction, multiplication, division, deduction, contraction. But it is certain that other means of identifying and naming these sorts of operations are possible. Thus, for example, in his general theory of rhythm, J. Roubaud postulated the following categories: concatenation, imbrication, encasement, encroachment, permutation, effacement, parenthesage.

Granted that the table seeks to account for the thousand and one means of arranging language, there can be no question of giving a concrete illustration for each line here. Definitions and examples may be easily found in consulting, on the one hand, *Atlas de littérature potentielle*, and, on the other, B. Dupriez's dictionary, *Gradus: Les procédés littéraires* (Paris: Union Générale d'Editions, 1984).

General Table: The Three Circles of Lipo[3]



I: Circle of linguistic objects
II: Circle of semantic objects
III: Circle of operations

guists have already timidly suggested), when these computers begin to reveal the constants of a writer in all sorts of areas, and he will thus himself be made to draw the map of his virtualities . . . (and here we return to Jarry's definition of pataphysics). More abstractly, won't we be tempted by a Topology of Commonplaces, in which one would succeed in abstracting commonplaces from the structures of commonplaces—and then a "squared" topology of these places, and so forth until one attains, in a rigorous analysis of this *regressus* itself, the absolute, the Absolute "whose armature," according to Jarry, "is made of clichés"?

But that's only half of our program, and the less fruitful half at that. As soon as he is broken in to this research and sensitized to this intellection to the *n*th degree, the potentialpotent literator (we certainly do not dare to say the present Members of the Oulipo Subcommittee) will be in a position to play his own fugue on this organ with multiple keyboards, mathematically labyrinthine combinations of register, "mixtures" arising from infinitely subtle and irridescent harmonics. And what music? We have no idea. Do we actually believe in it? The only example we can offer to distantly evoke these intimations of the future is not part of our present deposition: the Transcendent Satrap Queneau's *Cent Mille Milliards de poèmes*. This text's effect is one of mystification (and this word is by no means pejorative for us). And being, like Swift, skeptical prophets, we entertain these prospects pataphysically.

But is there any other canonical way of viewing the future (whether one calls oneself serious in the profane or pataphysical sense of the word), than as a bouquet of Imaginary Solutions—that is, of potentialities?

Raymond Queneau

. . . . . .

Potential Literature

What is potential literature? First, I would say that it is the object of a group founded three years ago by François Le Lionnais. It includes ten members and calls itself the Ouvroir de Littérature Potentielle:

Ouvroir because it intends to work.

Littérature because it is a question of literature.

Potentielle—the word must be taken to mean various things which will be made clear, I hope, in the course of this lecture.

In short: OU. LI. PO.

What is the objective of our work? To propose new "structures" to writers, mathematical in nature, or to invent new artificial or mechanical procedures that will contribute to literary activity: props for inspiration as it were, or rather, in a way, aids for creativity.

What is the Oulipo *not?*

(1) It is not a movement or a literary school. We place ourselves beyond aesthetic value, which does not mean that we despise it.

(2) Nor is it a scientific seminar, a so-called "serious" work group, although a professor of literature and a professor of science at the university are both members. Moreover, it is in all modesty that I submit our work to the present audience.

Finally, (3) We are not concerned with experimental or aleatory literature (as it is practiced, for example, by Max Bense's group in Stuttgart).

I will now say what the Oulipo *is*—or rather what it believes itself to be. Our research is:

(1) *Naive:* I use the work "naive" in its perimathematical sense, as one speaks of the naive theory of sets. We forge ahead without undue refinement. We try to prove motion by walking.

(2) *Craftsmanlike*—but this is not essential. We regret having no access to machines: this is a constant *lamento* during our meetings.

(3) *Amusing:* at least for us. Certain people find our work "sordidly

boring," which ought not to frighten you, because you are not here to amuse yourselves.

I will insist, however, on the qualifier "amusing." Surely, certain of our labors may appear to be mere pleasantries, or simple witticisms, analogous to certain parlor games.

Let us remember that topology and the theory of numbers sprang in part from that which used to be called "mathematical entertainments," "recreational mathematics." I salute in passing the memory of Bachet de Méziriac, author of *Problèmes plaisants et délectables qui se font par les nombres* (1612—not, as Larousse says, 1613), and one of the first members of the French Academy. Let us also remember that the calculation of probabilities was at first nothing other than an anthology of "diversions," as Bourbaki[1] states in the "Notice Historique" of the twenty-first fascicle on Integration. And likewise game theory until von Neumann.

Since we as yet have no Kolmogoroff, I will now present our diversions to you, or, rather, furnish you with some examples of them. We have already determined roughly sixty points of interest. I will therefore limit my choice. First of all, our research on our precursors (for we have had many).

A part of our activity is historical; that is, it consists in tracking down work analogous to our own in the past. It is a huge subject, and I will give only two examples of it.

The first is lipogrammatic—not oulipogrammatic—from λείπω, to lack, and γράμμα, letter. The word λιπογράμματοσ is found in Bailly.

Here is G. Peignot's definition from his *Poétique curieuse* (which appears in his *Amusements philologiques ou Variétés en tous genres* [again, this word "amusement"], 2d ed., 1825; 3rd ed., 1842): "Lipogrammatics is the art of writing in prose or in verse, imposing on oneself the rule of excluding a letter of the alphabet."

One may exclude several, but we will limit ourselves to the case of $n = 1$. One deprives oneself, then, of the use of one letter.

Naturally, the text must be long enough to render the exercise difficult.

G. Peignot himself composed twenty-six quatrains in alexandrines: in the first, he excluded the letter A, in the second, the letter B, etc.

Nestor of Laranda, in the third or fourth century, wrote a lipogrammatic *Iliad:* the letter A is absent from the first canto, etc. Fulgence, in the sixth century, in his *De aetatibus mundi et hominis,* did the same "in a singularly puerile pursuit," as the old Larousse says, an opinion we do not share. One might be led to believe that only anthologists and small-minded people have written lipogrammatic texts. Far from it. Like his mentor Lasus of Hermione, Pindar wrote an ode without the S, and Lope de Vega wrote five stories, one without the A, the others without E, I, O, and U, respectively.[2]

Are these "puerile" literary acrobatics, as the old Larousse would have it, or "bagatelles," as Peignot says? After all, wouldn't it be comparable to the activity of a logician who tries to avoid certain logical signs, and who experiences great satisfaction when he has eliminated them all in favor of Sheffer's stroke?[3]

If we examine the question from a slightly more modern point of view, we may attempt to measure the "lipogrammatic difficulty" of a text by multiplying the frequency of the omitted letter by the number of words in the text under consideration.

The lipogrammatic difficulty is obviously zero if one uses all the letters of the alphabet. The frequency of W being 0.02 (in English), writing a text of 100 words without using the letter W would thus be of difficulty 2. The frequency of E being 0.13, writing a text of 100 words without using the letter E would be of difficulty 13.

To write a typed page of 300 words without E would already be of difficulty 39. But to write a text of difficulty 10,413?

This is, nonetheless, the result achieved by Ernest Vincent Wright, who, in 1939, published a novel of 267 pages entitled *Gadsby,* in which he used the E not at all (see J. R. Pierce, *Symbols, Signals and Noise,* p. 48, who cites other examples of lipogrammatic texts).

We have not been able to procure this work, but the passage cited by Pierce does not give a massive impression of artificiality: "It is a story about a small town. It is not a gossipy yarn; nor is it a dry, monotonous account, full of such customary 'fill-ins' as 'romantic moonlight casting murky shadows down a long, winding country road.' Nor will it say anything about tinklings lulling distant folds, robins caroling at twilight nor any 'warm glow of lamplight' from a cabin window, no."

Obviously, he could not have said *yes*.

In Cantor's day, there were surely some geometricians who deemed puerile Cantor's curve, filling a two-dimensional continuum or its triadic ensemble.[4] Like Bourbaki, who in his early career devoted himself to teratopology, perhaps linguists would profit from a more attentive study of these examples of potential literature . . . prepotential literature. It is interesting to see just where the possibilities (potentialities) of a language may lead.

Another domain of literature that is particularly Oulipian is fixed-form poetry, which must be scrupulously distinguished from limited-form poetry such as the epigram and the epitaph—Boileau fails to make this distinction in the second canto of his *Art poétique,* a small error that does not at all diminish one of the greatest masterpieces of the French language.

In limited-form poetry, like the madrigal, to cite another example, only the number of verses and the nature of the subject are predetermined.

Fixed-form poetry obeys strict rules concerning the length of its verses, the order, alternation, or repetition of rhymes, of words, or even of entire verses.

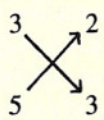
The most familiar are the triolet, the virelay, the rondel, the villanelle, etc. Almost all of them have fallen out of use—out of poetic use—with the exception of the sonnet, the only one still practiced in our day. Why has the sonnet alone survived? This is perhaps a problem for literary sociology or, rather, a problem for mathematics and linguistics, the sonnet furnishing an optimal solution to the poet's demand for a well-defined form that responds to conscious or unconscious aesthetic exigencies.

The structure of the triolet does not lack for charm:

A
B
A′
A

A″
B′
A
B

Verse A is repeated thrice, verse B twice. Rhyme *a* is repeated five times, rhyme *b* thrice.



The triolet, which is very appropriately named, goes back to the Middle Ages. The Parnassians tried to revive it; a triolet by Alphonse Daudet is frequently cited. Among contemporary poets, even those interested in fixed forms, I am not aware of anyone who has attempted to restore the triolet to its place of honor.

Naturally, I did not come here to eulogize fixed-form poetry; this is far from my intentions and from Oulipian preoccupations. Now, therefore, I must present something slightly more potential than the triolet and even the sonnet—whose rules everyone professes to know. In fact, few sonnets are regular. The sonnet, "whose invention is less scholarly than pleasant," as du Bellay said (just as Bachet de Méziriac's problems are "pleasant and delectable"), comprises *two* rules, the first concerning the alternation of rhymes:

F M M F	M F F M
F M M F	M F F M

or

M′ M′ F′	F′ F′ M′
M″ F′ M″	F″ M′ F″

The other rule demands that no word be repeated. But a sonnet is not necessarily written in alexandrines. (Parenthetically, allow me to note here a simple intervention of arithmetic. The poet, however refractory toward mathematics he may be, is nonetheless obliged to count up to twelve in order to compose an alexandrine.) Yes, the sonnet is not necessarily alexandrine; it may be monosyllabic. In this case, one of us has discovered that it may be called Asiatic, because, until further notice, it reads from top to bottom like Chinese.

The *sestina* seems to me to be particularly potential, It is composed of six stanzas of six lines each and a half-stanza of three lines; I will not insist on the latter: that would be dealt with in a master's course on potential literature.

The sestina, preferably, is written in alexandrines.

The first stanza is composed of six lines with, for example, the following rhyme scheme:

Feuillages	1
Soleil	2
Volages	3
Rivages	4
Vermeil	5
Sommeil[5]	6

I have taken the example cited by Théodore de Banville, in his *Petit Traité de poésie française*. The rhymes may seem mediocre, but the use which is made of them is not. Each of the five other stanzas is constructed using the same rhymes, and each time one proceeds to the same permutation.

The second is:

Sommeil	6
Feuillages	1
Vermeil	5
Soleil	2
Rivages	4
Volages	3

and so forth; the seventh stanza would duplicate the order of the first. For, as everyone has realized, it is a case of an element of the sixth degree of the symmetrical group of the same degree, and therefore of order 720.

The sestina goes back, it seems, to Arnaut Daniel (1180?–1210). Petrarch (1304–74) used it. It was put back into service by Ferdinand de Gramont (1815–97); after having translated Petrarch (in 1842), he published some sestinas in *Chant du Passé* in 1854, a collection noted already by Théodore de Banville as being extremely rare, and in *Olim* in 1882.

This Ferdinand de Gramont is not wholly unknown in literary history; he collaborated on the early works of Balzac, notably on *Don Gigadas* (1840), and it was he who composed the coats of arms for the noble characters in the *Comédie humaine;* this armorial was published by Ferdinand Lotte last year at Garnier.

Let us return to the sestina. We have seen that it is based on the successive powers of a permutation.

$$\begin{array}{c} 1\,2\,3\,4\,5\,6 \\ 6\,1\,5\,2\,4\,3 \\ 3\,6\,4\,1\,2\,5 \\ 5\,3\,2\,6\,1\,4 \\ 4\,5\,1\,3\,6\,2 \\ 2\,4\,6\,5\,3\,1 \\ \hline 1\,2\,3\,4\,5\,6 \end{array}$$

It will also be remarked that:

$$E = \begin{pmatrix} 134 & 256 \\ 134 & 256 \end{pmatrix} \quad A^3 = \begin{pmatrix} 134 & 256 \\ 526 & 314 \end{pmatrix}$$

$$A = \begin{pmatrix} 134 & 256 \\ 652 & 143 \end{pmatrix} \quad A^4 = \begin{pmatrix} 134 & 256 \\ 413 & 562 \end{pmatrix}$$

$$A^2 = \begin{pmatrix} 134 & 256 \\ 341 & 625 \end{pmatrix} \quad A^5 = \begin{pmatrix} 134 & 256 \\ 265 & 431 \end{pmatrix}$$

Thus, there are two systems of imprimitivity. It is thus an imprimitive subgroup of the symmetrical group. There are 36 possible permutations with two imprimitive groups, of which 6 are of the 2nd degree (that is, there could only be two stanzas), 18 of the 4th degree, and 12 of the 6th degree.

There were thus 12 possible types of sestinas. Why did Count de Gramont adopt this one? Perhaps, it is again a case of the optimal solution. Did the Count de Gramont have a particular taste for mathematics? I do not know,[6] and we shall undoubtedly never know, as the archives of the Gramont family disappeared during the Second World War. You see that one could also create *octinas*.

For example:

$$\begin{array}{cc} 1347 & 2568 \\ 8652 & 1743 \\ 3471 & 8256 \\ 6528 & 3174 \\ 4713 & 6825 \\ 5286 & 4317 \\ 7134 & 5682 \\ 2865 & 7431 \\ \hline 1347 & 2568 \end{array}$$

but is this in fact the optimal permutation?

You see the immensity of the field of work offered to us. Group theory can thus furnish an indefinite series of fixed-form poetic structures.

I cannot leave the domain of fixed-form poetry without speaking of the *pantoum*. Of Malaysian origin, it appears in a note to the *Orientales* (1828). It was cultivated—as they say—by Charles Asselineau, Théodore de Banville, and Siefert.

It is composed of an *ad libitum* number of quatrains, in the following manner (the letters denoting entire lines and the same letter with or without prime indicating the same rhyme):

$$\begin{array}{c} A \\ B \\ A' \\ B' \\ \hline B \\ C \\ B' \\ C' \\ \hline C \\ D \\ C' \\ D' \\ \cdot\ \cdot\ \cdot \end{array}$$

Y
Z
Y′
Z′

Z
A″
Z″
A

Finally, for the pantoum to be perfect, "from beginning to end of the poem, two meanings must be pursued in parallel," the first in the first two lines of each stanza, the second in the last two. That is, the A at the end of the poem must change its semantic domain. There, again, is an indication of numerous potentialities.

We shall now move on to the work of the Oulipo. I shall choose three examples of it, the third of which oversteps the domain of potential literature to enter that of quantitative linguistics—which is, after all, why we are here.

I shall choose three examples from among forty-odd possible ones; I can only allude in passing here to the anterhyme, the antirhyme, the intersective novel, tangency between sonnets, etc., and will limit my discussion to:

(1) redundancy in Mallarmé
(2) the S + 7 Method (of Jean Lescure)
(3) isomorphisms (whose general theory was elaborated by François Le Lionnais).

1. Redundancy in Mallarmé

Take a sonnet by Mallarmé:

Le vierge, le vivace et le bel aujourd'hui
Va-t-il nous déchirer avec un coup d'aile ivre
Ce lac dur que hante sous le givre
Le transparent glacier des vols qui n'ont pas fui!

Un cygne d'autrefois se souvient que c'est lui
Magnifique, mais qui sans espoir se délivre
Pour n'avoir pas chanté la région où vivre
Quand du stérile hiver a resplendi l'ennui.

Tout son col secouera cette blanche agonie
Par l'espace infligée à l'oiseau qui le nie,
Mais non l'horreur du sol où le plumage est pris.

Fantôme qu'à ce lieu son pur éclat assigne,
Il s'immobilise au songe froid de mépris
Que vêt parmi l'exil inutile le Cygne.[7]

I shall proceed to a haikuization of this sonnet; that is, I will erase it, preserving only the rhyming sections; or, rather, to use mathematical language, I shall consider a restriction of this poem to its rhyming sections. (I shall permit myself to add subjective punctuation):

Aujourd'hui
Ivre,
le givre
pas fui!

Lui
se délivre . . .
où vivre?
L'ennui . . .

Agonie
le nie,
pris,

assigne
mépris
le Cygne.

What is the point of this? *Primo,* I obtain a new poem which, upon my word, is not bad, and one should never complain if one finds beautiful poems. *Secundo,* one has the impression that there is almost as much in the restriction as in the entire poem; that is why I spoke of redundancy. *Tertio:* without going to the far limits of sacrilege, one can at least say that this restriction sheds light on the original poem; it is not wholly without exegetical value and may contribute to interpretation.

The example is perhaps clearer with:

Ses purs ongles très haut dédiant leur onyx
L'Angoisse, ce minuit, soutient, lampadophore
Maint rêve vespéral brûlé par le Phénix
Que ne recueille pas de cinéraire amphore.

Sur les crédences, au salon vide: nul ptyx,
Aboli bibelot d'inanité sonore
(Car le Maître est allé puiser dans des pleurs au Styx
Avec ce seul objet dont le Néant s'honore).