For Love or for Money
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Published by The Ohio State University Press

Mortimer, Armine Kotin.
For Love or for Money: Balzac's Rhetorical Realism.
The Ohio State University Press, 2011.
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Chemistry and Composition

La recherche de l’Absolu

Love and money are very much at play in La recherche de l’Absolu, a novel whose foundation in science carries forward the interplay of materiality and spirituality found in Ursule Mirouët. Like that novel, there are pairs of semiotic terms. The objectives and processes of chemical science can be said to group into two large classes: composition and analysis. Of these, composition cannot be more central to Balzac, while analysis necessarily involves anyone who would read him with understanding. It is fitting that in the last novel of La Comédie humaine, the last of the Études philosophiques, composition preoccupies its maniacal hero, Balthazar Claës. This man whose name contains Balzac’s is as obsessed with finding a chemical composition that has not existed before as was his creator in search of the written composition, a connection Balzac does not fail to provide for us: “La puissance de vision qui fait le poète, et la puissance de déduction qui fait le savant, sont fondées sur des affinités invisibles, intangibles et impondérables que le vulgaire range dans la classe des phénomènes moraux, mais qui sont des effets physiques” [The power of vision that defines the poet and the power of deduction that defines the scientist are founded on invisible, intangible, and imponderable affinities, which the common people set in the category of moral phenomena, but which are physical effects] (10: 723).¹ Jacques Neefs also notes how

1. Compare this pairing of creation with composition in La peau de chagrin, where the special effect of the antiquarian shop on Raphaël de Valentin is described in these chemical
analysis serves composition: “cette prose narrative doit conquérir une incomparable puissance ‘analytique,’ pour que ce qui est rendu visible reçoive un nom, entre dans un ordre concevable, répertorié, pour que les lois de cette ‘nature sociale’ puissent être élaborées” [this narrative prose must master an incomparable ‘analytical’ power so that what is made visible can receive a name, can enter into a conceivable order and be inventoried, and so that the laws of this ‘social nature’ can be formulated] (“Figurez-vous . . .” 42).

Balzac grounds his composition in science throughout this novel. The defense of writers, composed “dans l’intérêt des écrivains” [in the interest of writers], takes scientific form immediately, in the first sentence. Barel-Moisan and Déruelle comment that this opening is often taken for a Balzacian manifesto (306), and Andrea Del Lungo connects it to Balzac’s desire for “une prise de parole qui soit un véritable acte de génèse du monde représenté” [a speech-taking that constitutes a veritable genesis of the represented world] (32). Intending to describe the Claës house in Douai as a necessary, didactic preparation for the information that will follow, and anticipating impatient readers’ possible objections, the narrator fustigates such “personnes ignorantes et voraces qui voudraient des émotions sans en subir les principes générateurs, la fleur sans la graine, l’enfant sans la gestation. L’Art serait-il donc tenu d’être plus fort que ne l’est la Nature?” [ignorant and voracious people who would like to feel emotions without subjecting themselves to their generating principles—the flower without the seed, the child without gestation. Should Art be expected to be stronger than Nature?] (10: 657). What was to begin like many a Balzac novel with the description of the house to explain its inhabitants turns instead to justifying art as a science, on a par with nature and capable of growing a story the way nature grows flowers and babies, from seeds.

And the novel contains several of those “personnes ignorantes et voraces” who do not allow art or nature to take their time—anti-scientific characters who see only smoke where there is composition. It seems that the scientist who composes will be misunderstood, as Balzac shows us first in Joséphine Claës’s ignorance about what her husband is doing in the laboratory (10: 694) and later in the reaction by the Douai citizens to Claës’s scientific work. One such is Pierquin, the notary, motivated by money. His first warning that the family fortune has dissipated comes in these anti-science terms: “Toute

“Semblable en ses caprices à la chimie moderne qui résume la création par un gaz, l’âme ne compose-t-elle pas de terribles poisons par la rapide concentration de ses jouissances, de ses forces ou de ses idées?” [Doesn’t the soul, comparable in its capriciousness to modern chemistry which understands creation as a gas, compose terrible poisons by the rapid concentration of its pleasures, its strengths, or its ideas?] (10: 74).
votre fortune, moins la maison et le mobilier, s’est dissipée en gaz et en char-
bon” [All your fortune, minus the house and the furniture, has vanished into
gas and carbon] (10: 696). He also calls the scientific equipment and chemi-
cals that Claës buys in Paris “brimborions” [baubles]. Everyone is mutter-
ing about Balthazar’s actions: what can he be seeking to compose, if not
gold or the philosopher’s stone? Pierquin cites a judge who deplores “qu’un
homme de votre sorte cherchât la pierre philosophale” [that a man of your
kind would search for the philosopher’s stone] (10: 707). Not one of the
Douaisiens admires the perseverance of the scientific genius: “on le calom-
niait en le flétrissant du nom d’alchimiste, en lui jetant au nez ce mot:—Il
veut faire de l’or!” [they slandered him, branding him with the name alche-
mist, flinging these words in his face: “He wants to make gold!”] (10: 830).
And children gesture to their bottoms to imply that that is where Balthazar
makes his gold. It is this very scene, which ends in the children’s attacking
him with stones and mud, that precipitates Claës’s apoplexy and the conse-
quent aphasia, making it impossible for him to communicate his discovery of
the absolute.

One of the few comical moments in the novel opposes Lemulquinier,
Balthazar’s assistant, to the faithful servant Martha: when Lemulquinier com-
plains there is no butter for lack of money, she spouts: “Comment, vieux
monstre, si vous faites de l’or dans votre cuisine de démon, pourquoi ne vous
faites-vous pas un peu de beurre? . . . Si vous voulez des douceurs, vous avez
vos fourneaux là-haut où vous fricassez des perles, qu’on ne parle que de ça
au marché. Faites-vous-y des poulets rôtis” [What, you old monster, if you
can make gold in your devil of a kitchen, why don’t you make yourselves
a little butter? . . . If you’re wanting goodies, you’ve got your furnaces up
there where you fricassee pearls, like that’s all they talk about at the mar-
ket. Go ahead and make yourselves some roast chickens] (10: 782). Vulgar
and ignorant people—the notary, servants, merchants, children, judges, and
ordinary townspeople—constitute the underside of these “hautes régions de
la Science” [high regions of Science] (10: 696), this high-minded composi-
tion. Raising up the specter of uncomprehending readers, Balzac’s text erects
its scientific system to ward off those who would prevent his search and his
“research” for the ideal form.

The initial subject of the second paragraph, two pages long, is a kind
of architectural archeology whose model, as an explanation of principles, is
zoology. The tone is reminiscent of the paean to Cuvier in the famous para-
graph of La peau de chagrin where the zoologist is admired for his ability to
reconstruct whole organisms out of mere fossils. Similarly, “la plupart des
observateurs peuvent reconstruire les nations ou les individus dans toute la
vérité de leurs habitudes, d’après les restes de leurs monuments publics ou par l’examen de leurs reliques domestiques” [most observers can reconstruct nations or individuals in all the reality of their customs, based on the remains of their public monuments or by the examination of their domestic relics] (10: 657). The great observer that is Balzac’s omniscient narrator will do exactly that, following the design of cause to effect that lies at the root of the entire structure:

La cause fait deviner un effet, comme chaque effet permet de remonter à une cause. . . . De là vient sans doute le prodigieux intérêt qu’inspire une description architecturale quand la fantaisie de l’écrivain n’en dénature point les éléments; chacun ne peut-il pas la rattacher au passé par de sévères déductions; et . . . lui raconter ce qui fut, n’est-ce pas presque toujours lui dire ce qui sera? (10: 658)

[From a cause one can guess at an effect, just as each effect allows one to go back to a cause. . . . No doubt the prodigious interest that an architectural description inspires, when the writer’s fancy does not distort the elements, comes from this; isn’t it true that anyone can connect it to the past by means of severe deductions; and . . . isn’t telling what existed almost always to tell what will exist?]

The writer Balzac here justifies his overall realistic strategy as well as the structure of this novel: in particular, he is claiming that he does not denature the elements of the description, the simple bodies or elements (in the chemical sense) of his writing out of which he composes the entity that constructs the past and announces the future, the novel. Thus Joséphine Claës fearfully predicts future disaster based on the past (e.g., 10: 693–94), and the narrator stresses the ineluctable chain of events contained in supreme moments of crisis: “Ce moment terrible ne contenait-il pas virtuellement son avenir, et le passé ne s’y résumait-il pas tout entier?” [Didn’t this terrible moment to all intents and purposes contain her future, and wasn’t the past entirely summed up in it?] (10: 698). The reader who follows the writer’s severe deductions will be guaranteed a faithful knowledge of past, present, and future.

Many pages expose chemistry, the unitary chemistry that regained fashion as of 1816 and continued to hold sway in the 1830s, and key names give this chemistry its letters patent, Lavoisier especially. (For useful explanations of nineteenth-century science, see Thiher’s Fiction Rivals Science.) Balzac removed other names, like Berzélius, from proofs. There are early mentions of famous scientists, though not necessarily chemists, as if to inscribe science
into the novelistic language: Gall (10: 671), Lavater, Swedenborg (10: 673), in addition to Lavoisier (10: 674). Pépita reads books by chemists and a few other scientists for good measure; the weighty list of names reads like a bibliography for Balzac’s science (10: 700). Balthazar knows how to explain nature in chemical terms: the colors of tulips result from “Une combinaison d’hydrogène et d’oxygène [qui] fait surgir par ses dosages différents, dans un même milieu et d’un même principe, ces couleurs qui constituent chacune un résultat différent” [A combination of hydrogen and oxygen [which], through its different dosages, in the same environment and by the same principle, makes these colors appear, each constituting a different result] (10: 710). The most consequential scene, in chemical terms, shows Balthazar vaunting his scientific achievements to Joséphine:


[Don’t you have any idea what I’ve done in the last three years? I’ve taken giant steps! . . . I’ve combined chlorine and nitrogen [an explosive combination!], I’ve decomposed several compounds that were considered elements until now, I’ve found new metals . . . I’ve decomposed tears. Tears contain a little bit of calcium phosphate, some sodium chloride, mucus, and water.]

He has done real science and obtained new results. The key terms here are décomposer and combiner.

Like Raphaël de Valentin in La peau de chagrin, Balthazar Claës receives from an outside agent the gift that becomes the motor driving the story: the magic skin in the earlier novel, information about the absolute from a Polish man in this one. As others have justly noted, Adam Wierzchownia provides chemical explanations about the unity of composition that broadly inform about Balzac’s writing. Thus the concept of a single unitary entity variously diversified underlies both the chemistry that Balzac knew about and his own composition. “[T]outes les productions de la nature devaient avoir un même principe. Les travaux de la chimie moderne ont prouvé la vérité de cette loi, pour la partie la plus considérable des effets naturels” [All of nature’s products were to have the same principle. Work in modern chemistry has proved the truth of this law for the greater proportion of the effects in nature] (10:
While organic chemistry has shown that only four chemical elements—the three gases nitrogen, hydrogen, and oxygen and the non-metallic solid carbon—produce the immense diversity of animal and vegetable nature, fifty-three elements diversely combined form all the products of inorganic nature, “si peu variée, dénuée de mouvement, de sentiment, et à laquelle on peut refuser le don de croissance” [with such little variation, devoid of movement, of feeling, and to which the gift of growth can be refused] (10: 715). To the Polish chemist, and then to the Flemish one, this disparity seems illogical: “Est-il probable que les moyens soient plus nombreux là où il existe moins de résultats? . . . Aussi . . . ces cinquante-trois corps ont un principe commun, modifié jadis par l’action d’une puissance éteinte aujourd’hui, mais que le génie humain doit faire revivre” [Is it probable that the means should be more numerous where fewer results exist? . . . Thus . . . these fifty-three elements have one principle in common, modified in the past by the action of a power that is extinguished today, but that human genius must revive again] (10: 715). What could that “puissance éteinte aujourd’hui” be if not the absolute?

Eh bien, supposez un moment que l’activité de cette puissance soit réveillée, nous aurions une chimie unitaire. Les natures organique et inorganique reposeraient vraisemblablement sur quatre principes, et si nous parvenions à décomposer l’azote, que nous devons considérer comme une négation, nous n’en aurions plus que trois. (10: 715–16)

[Well then, suppose for a moment that the activity of this power were awakened, we would have a unitary system of chemistry. Organic and inorganic nature would likely rest on four principles, and if we managed to decompose nitrogen, which we must consider as a negation, we would have only three left.]

And three is the magical number of antiquity and medieval alchemy, but what exactly is its import?

Wierzchownia describes an experiment with watercress which results in the hypothesis of “un élément commun aux corps contenus dans le cresson, et à ceux qui lui ont servi de milieu” [a component common to the compounds contained in watercress and to those that served as environment to it] (10: 716); this unitary element is “un principe commun errant dans l’atmosphère telle que la fait le soleil” [a common principle wandering in the atmosphere as the sun has created it] (10: 717). By deductions, severe or otherwise, Wierzchownia identifies this principle as the absolute:
Une substance commune à toutes les créations, modifiée par une force unique, telle est la position nette et claire du problème offert par l’Absolu. . . . Là vous rencontrerez le mystérieux Ternaire, devant lequel s’est, de tout temps, agenouillée l’Humanité: la matière première, le moyen, le résultat. Vous trouverez ce terrible nombre Trois en toute chose humaine. . . . La matière doit être un principe commun aux trois gaz et au carbone. Le moyen doit être le principe commun à l’électricité négative et à l’électricité positive. Marchez à la découverte des preuves qui établiront ces deux vérités, vous aurez la raison suprême de tous les effets de la nature. (10: 717)

[A substance common to all creations, modified by a single force: such is the distinct and clear statement of the problem offered by the Absolute. . . . There you will find the mysterious Ternary, before which Humanity has forever kneeled: the primary substance, the means, the result. You will find this terrible number Three in all human things. . . . The primary substance must be a principle common to the three gases and carbon. The means must be the principle common to negative and positive electricity. Strive to discover the proofs that will establish these two truths, and you will have the supreme reason for all the effects of nature.]

Observable effects and principles need only the middle term, the means.

In the second half of the novel, after the interruption of Balthazar’s research following Joséphine Claës’s death, he is drawn once again into science because “La Science avait donc marché” [Science had advanced, then] (10: 770). Chemistry has indeed progressed. Here, in case the reader is inclined to side with the vulgar and to mistrust Balthazar’s aims and claims, we are told about other scientists who have progressed toward the very goal he had sought: “Les gens adonnés à la haute science pensaient comme lui, que la lumière, la chaleur, l’électricité, le galvanisme et le magnétisme étaient les différents effets d’une même cause, que la différence qui existait entre les corps jusque-là réputés simples devait être produite par les divers dosages d’un principe inconnu” [People who were devoted to the high sciences thought as he did, that light, heat, electricity, galvanism, and magnetism were the different results of the same cause, that the difference which existed between the elements that were considered simple until then must be produced by the various dosages of an unknown principle] (10: 770). With Marguerite, Balthazar’s daughter, we enter the laboratory for the first time and see precisely described machinery designed to focus the sun’s rays, and we hear Balthazar vaunting his novel experiment: “J’ai les moyens de soumettre les métaux, dans un vide parfait, aux feux solaires concentrés et à des courants
Why these extensive explanations? Balzac “does science” not only for our sake—so we can follow the story, believe Balthazar a man of genius, credit the reality of the creation, and intimately comprehend the man of passion—but also for his own sake: Balzac’s absolute would grasp the secret that underlies the unity of his own composition. Unity of composition is for Balzac the premise as well as the end point of his philosophy. Balthazar’s famous cry “je répète la nature!” [I am repeating nature!] (10: 720) repeats Balzac’s assertion that his art equals nature, like the good artist Pierre Grassou could not be; he makes diamonds out of basic elements. (Frenhofer, in *Le chef-d’œuvre inconnu*, similarly demands that art “express” nature, rather than copying it.) The mysterious ternary governs the global structure of *La Comédie humaine*; primal matter is found in the *Études analytiques*, the means are the laws of human life expounded in the *Études philosophiques*, and the results are the far more numerous products in the *Études de mœurs*. Beyond this rather obvious application of unitary chemistry to Balzac’s composition, we can also think of a given novel as containing a primal matter, the drama or story which for Balzac clearly exists somewhere in reality (often in the form of stories he has heard from his family or friends), and a means, the created characters and the structures and language by which they come into existence, and the result: the fully developed novel we read in its myriad details. Since it is of enduring interest to understand how words written on a page create in the reader’s mind characters and events that the reader accepts as if they were real, readers also follow the inverse route from result to primal matter, and that of course is the route of analysis or decomposition. Archeology, whether architectural or not, does not merely justify Balzac’s descriptions, it is the model for the flow of knowledge from a primary substance to a result and back again.

For the reader of *La recherche de l’Absolu*, decomposition, crystallization, completion, fire, and other chemical processes become expressive metaphors for Balzac’s writing. This rhetoric of composition determines our “chemical”
analysis, which takes apart the secret of Balzac’s composition to reveal the
erocious irony that simultaneously undermines it.

Fire, flame, burning, ardor, and combustion are everywhere, in proper
and figurative forms, a symbol forged in the furnaces of Balthazar’s chemi-
cal laboratory. Besides the domesticated fire of the parlor, source of small
comfort for Joséphine wringing her hands in the wing chair (e.g., 10: 687)
and witness to her final illness (10: 747), there are several versions of fire and
combustion in the laboratory experiments, including the one with watercress
that Adam Wierzchownia describes (10: 716). Some of these are quickly com-
pared to the fires of hell, especially by the pious Joséphine: “Ah! dit-elle, je
me jetterais dans le feu de l’enfer qui attise tes fourneaux pour entendre ce
mot” [“Ah!” said she, “I would throw myself into the hell fire that stokes
your furnaces to hear that word”] (Balthazar has just promised “nous nous
comprendrons en tout!” [there will be complete understanding between us]
[10: 700–701]); also: “Le Tentateur peut seul avoir cet œil jaune d’où sortait
le feu de Prométhée” [Only the Great Tempter could have that yellow eye
from which Prometheus’s fire escaped] (10: 718).

Figurative uses begin with the flashing Spanish eyes of Joséphine: “deux
yeux noirs qui jetaient des flammes” [two black eyes that cast flames] (10:
668), sometimes in anger: “Je veux briser ton laboratoire et enchainer ta
Science, dit-elle en jetant du feu par les yeux” [I want to smash your labora-
tory and fetter your Science, she said, sparks flying from her eyes] (10: 723).
Balthazar’s eyes are equally sparkling: “Les sentiments profonds qui animent
les grands hommes respiraient . . . dans ces yeux étincelants dont le feu sem-
blait également accru par la chasteté que donne la tyrannie des idées, et par
le foyer intérieur d’une vaste intelligence” [The deep sentiments that animate
great men breathed . . . in these sparkling eyes whose fire seemed increased
equally by the chastity inherent in the tyranny of ideas and by the internal fire
of a vast intelligence] (10: 671). Passion and intelligence, grandeur in science,
genius all take the form of figurative fire: Balthazar embraces Lavoisier’s sci-
tence with ardor—three mentions on one page (10: 674–75), interestingly put
on a par with his love for Joséphine (e.g., 10: 679–80); he receives “dans mon
âme le feu de ce raisonnement” [the flame of this reasoning in my soul] (10:
718) from Adam Wierzchownia; and when explaining his science, “son vis-
age parut alors à sa femme plus étincelant sous le feu du génie qu’il ne l’avait
été sous le feu de l’amour” [his face then appeared to his wife to gleam more
from the fire of genius than it had from the fire of love] (10: 719). The gift of
science came from a man with fire in his eyes too, Adam Wierzchownia (“ses
deux yeux semblables à des langues de feu” [his two eyes similar to tongues
of fire] [10: 714]). When Balthazar is forced to quit his research, the fire
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goes out: “les yeux de Balthazar perdirent leur feu vif, et prirent cette teinte glauque qui attriste ceux des vieillards” [Balthazar’s eyes lost their lively fire, and took on that glaucous tinge that gives a gloomy appearance to those of old men] (10: 729), but fire returns to his eyes when aphasia prevents him from speaking of the discovery he has made entirely in thought, while paralyzed: “il désirait parler et remuait la langue sans pouvoir former de sons; ses yeux flamboyants projetaient des pensées” [he wanted to speak and moved his tongue without being able to form any sounds; his flaming eyes projected thoughts] (10: 834).

The fire in the furnaces of the laboratory, a fire that should forge new compositions, turns against the household to burn the family fortunes and collections. Smoke is the antithesis of composition here: “Prends, jette dans ton fourneau, fais-en de la fumée” [Take it, throw it in your furnace, make smoke out of it] (10: 721); “le notaire avait calculé que trois ans suffiraient pour mettre le feu aux affaires” [the notary had calculated that three years would suffice for the venture to go up in flames] (10: 772). On her return from Spain, “Marguerite entra dans le parloir pour y faire mettre ses bagages, et frissonna de terreur en en voyant les murailles nues comme si le feu y eût été mis” [Marguerite went into the parlor to have her luggage put there, and shuddered in terror upon seeing the walls as bare as if a fire had burned there] (10: 828); “L’idée de l’Absolu avait passé partout comme un incendie” [The idea of the Absolute had spread everywhere like wildfire] (10: 829). Thanks to Balzac’s writing, the literal fire blends into the figurative fire.

Combustion is the principle of life itself: “quand la vie est bien active, quand les foyers en sont bien ardents, l’homme laisse aller la combustion sans y penser” [when life is very active, when the hearths are quite blazing, the human being lets combustion occur without even thinking about it] (10: 682). Balthazar’s important explanation to Joséphine connects combustion to creation according to a triple ternary schema: “Toute vie implique une combustion” [All life implies a sort of combustion], but mineral is destroyed slowly because “la combustion y est virtuelle, latente ou insensible” [in it, combustion is virtual, latent, or undetectable], whereas vegetable matter refreshing itself continuously by means of combination producing humidity lasts indefinitely (10: 719). But the animal organisms into which nature has injected “le sentiment, l’instinct ou l’intelligence, trois degrés marqués dans le système organique, ces trois organismes veulent une combustion dont l’activité est en raison directe du résultat obtenu” [sentiment, instinct, or intelligence, three degrees marked in the organic system, these three organisms demand a combustion whose activity is directly proportional to the result obtained] (10: 719). This ternary system among animal organisms then
splits into a ternary system unique to humanity: “L’homme, qui représente le plus haut point de l’intelligence et qui nous offre le seul appareil d’où résulte un pouvoir à demi créateur, la pensée! est, parmi les créations zoologiques, celle où la combustion se rencontre dans son degré le plus intense et dont les puissants effets sont en quelque sorte révélés par les phosphates, les sulfates et les carbonates” [The human being, who represents the highest level of intelligence and who offers us the only apparatus which results in a half-creative power—thought!—is, among the zoological creations, the one where combustion can be seen in its most intense degree and whose powerful effects are in some sort revealed by the phosphates, the sulfates, and the carbonates] (10: 719).

The next moment in the building of this ternary structure provides the link to electricity, humanity’s means of creation: “Ces substances ne seraient-elles pas les traces que laisse en lui l’action du fluide électrique, principe de toute fécondation? L’électricité ne se manifesterait-elle pas en lui par des combinaisons plus variées qu’en tout autre animal” [Would not these substances be the traces left in him by the action of electrical fluid, the principle of all fecundation? Would not electricity manifest itself in him in combinations more varied than in any other animal], and humanity absorbs greater portions of the absolute which it assimilates into itself “pour en composer dans une plus parfaite machine, sa force et ses idées!” [to compose, in a more perfect machine, its power and its ideas!] (10: 719–20). Thus all these forms and manifestations of fire come down to electricity, the middle term of the ternary structure, the means, or the Force in another terminology: “la Matière, la Force et le Produit” [Matter, Force, and Product] (10: 718).

The action of fire on matter is of two opposing sorts: decomposition and combination (or completion), the two key terms I mentioned above.2 “J’allais peut-être décomposer l’azote” [I might have decomposed nitrogen] (10: 691), Balthazar protests to Joséphine when, early on, she has the temerity to come to the laboratory and disrupt an experiment. For the modern reader, the moment is rife with irony: nitrogen is an element and cannot be decomposed (although scientists were not sure about this at the time). The irony intensifies to the crisis point when Mme Claës is dying and Claës has to be brought down from the laboratory by force; she gently protests: “Tu allais sans doute décomposer l’azote” [You were no doubt going to decompose nitrogen] (10: 753), provoking this joyous response: “C’est fait. . . . L’azote contient de l’oxygène et une substance de la nature des impondérables qui vraisembla-

2. On decomposition and its relation to creation, see Uhden.
blemement est le principe de la . . .” [I’ve done it. . . . Nitrogen contains oxygen and an imponderable-like matter that likely is the principle of . . . ] (10: 754), falling silent only because the family is horrified. Modern chemists too. Yet, as we learned during the chemical explanation by the Polish man, Balzac needed to decompose nitrogen to arrive at the mysterious ternary so central to his composition. Decomposition appears then as a necessary action preceding composition, and we can compare it to the conception Balzac so often opposed to the execution of an idea, as for instance in the preface to Le Cabinet des Antiques. Decomposition would be a kind of pre-analysis of the primal substance by the writer, of the sort occasionally visible in Balzac’s letters and some prefaces, which guide the reader’s later decomposition or analysis. It is left to Joséphine to say “Décomposer n’est pas créer” [To decompose is not to create] (10: 720) and to the man of knowledge to reassert his optimistic intent: “Si je trouve la force coercitive, je pourrai créer” [If I can find the coercive force, I will be able to create] (10: 720). Again, we hear Balzac speaking about his art.

The electric force will allow combination or its important result, completion. The first bit of science we hear about, before the explication nécessaire that takes us back to the previous life of Balthazar and the history of his involvement with chemistry, is this sentence that pops into his speech like a log surfacing out of some deep preoccupation: “Pourquoi ne se combineraient-ils pas dans un temps donné?” [Why wouldn’t they combine after a given time?] (10: 674). Joséphine can only wonder if he has gone crazy. This is the first strand of a thread concerning combination of which the most striking culmination is the diamond produced during the absence of the scientists (10: 823–24). “Je fais les métaux, je fais les diamants, je répète la nature!” [I am making metals, I am making diamonds, I am repeating nature!] Balthazar exults (10: 720)—the last a cry that surely Balzac uttered more than once. Balthazar thinks he has come close to making a diamond: “cristalliser le carbone” [crystallizing carbon] (10: 700) is the process, and later he seeks only “un dissolvant du carbone” [a solvent for carbon] to manufacture diamonds aplenty (10: 781). Facts of science prepare the diamond that does actually get made, in a page-long explanation involving a capsule containing a combination of carbon and sulfur and wires from a Volta cell; carbon is the electropositive pole, crystallization will begin at the negative pole, “et, dans le cas de décomposition, le carbone s’y portera cristallisé” [and, in the case of decomposition, the carbon will form there crystallized] (10: 805), and so on. But when the diamond is found after Balthazar’s return from exile, the scientific term crystallization must give
way to the most unscientific term “miracle” (10: 823) or to chance: “Oui, la puissance effrayante due au mouvement de la matière enflammée qui sans doute a fait les métaux, les diamants . . . s’est manifestée là pendant un moment, par hasard” [Yes, the frightful power proper to the movement of enflamed matter that doubtless made the metals, the diamonds . . . showed itself there for a moment, by chance] (10: 824). Balzac, contradicting his own pretentions, did admit that chance was the greatest of novelists.

Marriage is incidentally a means of achieving completion: “il sentit le besoin de se marier pour compléter l’existence heureuse dont toutes les religions l’avaient ressaisi” [he felt the need to marry to complete the happy existence which all religions had called on him to achieve] (10: 675). Men are essentially incomplete unless married, and before becoming an enraged chemist, Balthazar considers conjugal love “une œuvre magnifique” [a magnificent work] (10: 679), which suggests alchemical processes and from which he wishes to banish anything imperfect. That is the attitude of the seeker of the absolute as well, to be completed by attaining the object of the search. In the archeology or genealogy that governs the house of Claës, the necessary completeness of the collection of art works is not to be discounted among the images of combination and completion: “Une génération s’était mise à la piste de beaux tableaux; puis la nécessité de compléter la collection commencée avait rendu le goût de la peinture héréditaire” [One generation had set itself on the trail of fine paintings; then the necessity of completing the collection that had been started made the taste for paintings hereditary] (10: 683); it took three centuries to complete the collection. Marguerite astonishingly recreates the house—in the plural sense of the fortune, the collection, and the basis of the family—in a few years, made to seem even shorter by the small number of pages devoted to it. The completion of the house is thus parallel to the chemical process of completion.

In a strategy that I find characteristic of La Comédie humaine, Balzac gives us this panoply of chemical terms as figures of his mimesis. Balthazar incarnates the aspiration to the Promethean theme of acquiring for humanity the fires proper to the gods: no less does Balzac by writing.