

*Acquiring The Capacity for Endurance*

In *The Periodic Table*, chemistry is not just a list of reactions within the dusty jacket of an obscure textbook. Nor is it an interminable number of solvents waiting to be carefully allotted into glassware of all sizes. Primo Levi's chemistry, described in reverential tones using almost obsequious diction, discards all of its negative connotations and becomes a living, breathing force to marvel at. It is laden with political, philosophical, and emotional importance. Consequently, it gives Levi's narrator a unique purview of the world by conveying meaning to his life, revealing nature's secrets, and influencing his outlook on human relationships. Most importantly, in Levi's chapter on "Iron," chemistry becomes a life-giving and life-saving force. The life that Levi breathes into chemistry in the book is thus a humble recompense for the sustenance it provided for him. Levi's thorough dependence on chemistry as a means of emotional and material survival courses through the book—this reliance on chemistry for survival is vital for the capacity for endurance that Levi eventually acquires amidst the laboratories and mountains of his youth.

One way that chemistry represents a means of survival in "Iron" is its depiction as both a physical and metaphorical fortification against the looming war. The tangible safeguard took the form of the insular walls of the chemistry institute and its intangible counterpart was a kind of mysterious, almost enchanted immunity from world events. His metaphor about the "night of Europe" (37) gives a sense of foreboding about the events that threatened Europe's future. The institute symbolizes a kind of "limbo" where the personified night "did not penetrate those thick walls" (37). Levi manipulates time and

space to create this aura of mysterious immunity that pervades his descriptions of these early college years. He describes a setting more appropriate for the guesswork of alchemy than the precision of chemistry, including an “enormous, dark, smoky hall,” (38) a “dense, hoary mist of ammonium chloride[that] stagnated permanently in the lab” (39), and “smoke-filled labs” (42). His memory of this time period seems shrouded in a fog, as if this magical, innocent enchantment with chemistry was of another era or lifetime.

Levi's cohort Sandro is also secluded from time; he scoffs at watches' attempts to reproach him. In fact, Levi mentions that his adventures in the mountains with Sandro helped him to escape the real world where space and time oppressed them; amongst the natural chemistry of rock formations and sloping mountains, Levi can forget briefly that he is a Jewish youth in the Fascist Italy of the 1930's. As Levi explains, “They were an island; an elsewhere” (45) where “time itself had frozen” (47). However, Levi often intimates that this era of innocent exploration with Sandro was soon to end.

In addition to serving as physical and psychological armor, chemistry is named a surrogate mother of sorts. Levi describes chemistry as “Mother-Matter” (38), which emphasizes both its life-giving and life-sustaining attributes. Chemistry represents a kind of duality: Levi's metaphors characterizes chemistry as at once nurturing and stern. The personified chemistry raises him as though he were its child. Levi describes with humor how chemistry employs a kind of natural selection of chemists to choose who to adopt amongst its pupils, using their ability to survive acidic compounds and explosions as the sole criteria. As Levi wrestles with chemistry, it attempts to build his character. Levi is chemistry's wide-eyed pupil, explaining that, “Matter is our teacher, and perhaps also, for

lack of something better, our political school..." (42). Thus, chemistry was at their disposal when no other appropriate guardian and educator was available.

Chemistry utilizes tough love to instill Levi with maturity. Levi employs military diction, perhaps to contrast his battle with the concurrent one in the political realm, to describe the struggle of "two unequal opponents" (38). His descriptions are rich with figurative language, giving life to the chemistry he is so impassioned about. He develops tactical metaphors to describe his quantitative analysis as "a war of movement rather than of position" where "nothing could escape" (38). He evaluates his enemies, personifying iron and copper as "easy and direct, incapable of concealment" (38) and bismuth and cadmium, which were "deceptive and elusive" (38). With simile, he represents the unarmed chemists battling with the sly, enigmatic matter, which is, "as solemn and subtle as the Sphinx" (39). Despite this hostile symbolism, Levi is a better person for the battle. After his exertions with chemistry, he is wiser and more mature. Moreover, his training as a chemist allows him to resist the forces of Mussolini's fascism or Auschwitz later.

This struggle continues in his adventures in the mountains, as well. He endures Sbarüa, "a prism of granite that towers about a hundred meters above a modest hill" even though he was "terrified" (46). He climbs up ice-covered ridges, eats bear meat, and suffers from sleepless nights amidst the blinding wind. With Sandro's help, this where he truly acquires the fortitude he overcome life's obstacles:

We got down in two hours, helped badly by the rope, which was frozen; it become a malignant, rigid tangle that snagged on each projection and rang across the rock face like the cable of a funicular ...the wind never stopped blowing ...we rose with our limbs benumbed and our eyes glittering from lack of sleep, hunger,

and hardness of bed. And we found our shoes so frozen that they rang like bells... (47-48).

There were many occasions when Levi had to dolefully drag himself up the mountains, or when what the alpine guide claimed was easy turned out to be far from it. Regardless, he and Sandro prevailed across these trials, demonstrating their fortitude and will to survive.

Chemistry also helps sustain Levi through these politically and personally challenging times by being a source of hope and meaning. As Levi declares, “One must, after all, put their hopes in someone or something” (39). At the watershed moment when all of his Christian friends shun him and he is isolated by the pervasive racial laws, Levi is in great need of this source of hope. He grapples with insecurities, silently asking, “What do you think of me? What am I for you?” (40) It is clear that he puts his hopes in chemistry; chemistry gives meaning to life and serves as the “antidote to fascism” (42). Levi’s description of chemistry as a way to understand the universe stands in stark contrast to Sandro’s view that chemistry is a way to earn one’s bread. Thus, Levi tries to explain the significance of chemistry by employing powerful rhetoric to convey his vehemence. He utilizes anadiplosis, for instance, to give a logical progression to his thesis that humans can only obtain their nobility by dominating nature: “The nobility of Man... lay in making himself the *conqueror* of matter... That *conquering* matter is to *understand* it... *understanding* matter is necessary to understanding the universe and ourselves” (41, emphasis added). He offsets this intense panegyric with a bit of humor, facetiously pointing out that the periodic table was so much like poetry that it even rhymed. The climactic point of this tirade is marked by Levi’s use of hypophora, which builds his listeners’ curiosity and interest:

And finally and fundamentally, an honest and open boy, did he not smell the stench of Fascist truths which tainted the sky? Did he not perceive it as ignominy that a thinking man should be asked to believe without thinking? Was he not filled with disgust at all of the dogmas, all the unproved affirmations, all the imperatives? He did feel it; so how could he not feel a new dignity and majesty in our study... (42).

In the first question, Levi makes a clear use of alliteration and assonance to lay emphasis on the direness of the situation, with phrases such as “finally and fundamentally,” “honest and open,” “smell the stench,” and “truths which tainted” (42). His indignant tone and olfactory imagery of the stench of Fascism here are poignant. The final question has an intricate interplay of asyndeton, anaphora, and parallel syntax, making his argument clear, concise, and forceful. His exalted language about chemistry is indicative of his view that chemistry can save them from the fetters of fascism.

Sandro acquires a whole new outlook on his studies after Levi imbues him with a new sense of meaning. This is a turning point for Sandro, because, as Levi explains, “Something was ripening in him” (42). Soon thereafter, Sandro “...Overnight became a furious reader: he digested and remembered everything, and everything in him spontaneously fell into place as a way of life; together with this, he began to study, and his average shot up from C to A” (42). In return, Sandro plays a significant role in Levi’s sense of hopefulness by allowing him a chance of escape. After all, it is Sandro who mimics the pope’s decree, announcing, “Nuntio vobis gaudium magnum. Habemos

ferrum.” “I announce to you great joy. We have iron” (39). Just as the pope imbues them with hope, so does Sandro become “the thing with feathers that perches in the soul, and sings the tune without the words, and never stops at all” (Dickenson).

Sandro, who conversed fluently in the language of the earth, can be characterized as an element himself. As Levi explains, “Sandro seemed to be made of iron” (43). Moreover, Sandro’s ancestors worked with iron and Levi explains that his fellow climber met with iron as with an old friend. His personality is simple and direct, as iron Levi describes iron, and he says only the core of things. Likewise, iron is at the core of the alloys they quantitatively analyze in the laboratory. Sandro saves Levi the way he saves his dog, the unfortunate “small yellow mongrel with a downcast expression” (43). The dog, who was traumatized by his unfortunate encounter with a cat’s claws, was offered a chance of escape and a renewed sense of accomplishment. Levi was likewise disheartened by the ostracism of his peers, and the ameliorating properties of hope on him were embodied by the dog up in the mountains, whose “muzzle pointed skywards ... moaning softly as though he were dreaming” (43-44).

Additionally, chemistry builds Levi’s endurance and courage, which would prepare him and save him during the more troubling times later in his life. Sandro introduces him to a new teacher of matter: the countryside. As Levi explains, Sandro “aroused a new communion with the earth and sky, into which flowed my need for freedom, the plenitude of my strength, and a hunger to understand the things he had pushed me toward” (45). The imagery of the dark, smoky laboratories contrasts sharply with the vibrant *Urstoff*, a German word Levi employs meaning primal substance. Indeed, Levi describes how they, “...plunged boldly into of the fog and came out... in

gleaming sunlight” (46). Levi’s descriptions are rife with animate language, where the “feverish season” (43) allowed them to become intimately acquainted with “the red vein of iron in the rock” (43). In addition to visual imagery, Levi makes use of various forms of sensory imagery. For example, he uses onomatopoeia while combining both olfactory and auditory imagery in his description of the “buzz of enormous bluebottle flies attracted by our sweat” (46). He also employs tactile imagery to fully do justice to the new adventure they were experiencing, explaining with a bit of hyperbole that they were, “scraping the skin of our fingertips on rocks never before touched by human hands” (45). The external challenge of scaling mountains aptly represents Levi’s battle with his own internal conflicts, including the racial laws, the loneliness, and the “tissue of lies and emptiness” (42) of Fascism that pervade his life. Moreover, these adventures prepare him for the “iron future, drawing closer” (45). This capacity for endurance in the wake of the war, Levi says, “Helped me later on” (48).

Levi’s recollections seem haunted by the specter of the Holocaust, even though the events themselves are nearly relegated to a footnote. Thus, even its sunniest moments, the story is oddly grave. In referring to his days at the chemistry institute, memories that appear isolated in time and space from his present state of mind, Levi consequently employs ominous diction. Throughout, he is filled with a kind of distant foreboding of the eminent war, an “iron future, drawing closer month by month” (45). This staid air is amplified by the juxtaposition of scientific events with their political and personal counterparts. The lens of chemistry that Levi utilizes to view the latter two sets of experience greatly enhances our ability to recognize how chemistry builds his fortitude to endure the trials of the future. Thus, otherwise innocent references to iron and matter take

on new substance. In their new form, they are Levi's tools for survival. Thus, he fawns over matter, his beloved mother, teacher, political school, sphinx, and unmatched enemy. Thus, we may well ask: how did Levi manage to survive the Holocaust when so many others did not? It may be difficult to ascertain the answer, but we may be sure that the answer lies somewhere in his encounters, at once nurturing and uncompromising, with matter.