

To Compose a Life: *The Periodic Table's* Musical Translation

Two classes at Bryn Mawr College marked my first encounters with Primo Levi and Nicholas Patruno: the Emily Balch College Seminar titled “The Periodic Table” (Fall 2005), reading Levi’s book of the same title, and “Primo Levi, Holocaust, and Aftermath” (Spring 2006), studying the writings of Levi in relationship to the Holocaust. Both Levi and Patruno had an impact. Patruno, the professor for both classes, was a speaker of truth who saw to the heart of people’s actions past their words, and a continuer of the chain of remembrance. He was someone who, despite his knowledge of the depths of humanity’s darkness, held onto joy. The classes pushed my ability to think, analyze, and recognize the patterns and threads of connection, skills that later formed the foundation of my methods of composition. In 2020, I learned of Patruno’s passing. His death, combined with the events of the presidential election and the echoes of Brown Shirt tactics of the 1920s, brought me back to Primo Levi. With the blessing of Edwina Patruno and Roberta Ricci, Professor and Chair on the Andrew W. Mellon Foundation Chair in the Humanities, I commenced composing *The Periodic Table*: a composition for solo piano bringing to life Primo Levi’s book and guided by Patruno’s analysis of the work in *Understanding Primo Levi*.

The world premiere was performed by Charles Abramovic at Bryn Mawr College on April 11, 2024. Roberta Ricci gave an introduction on the concept of “intersectionality” concerning Patruno’s scholarship on twentieth-century literature, especially on Levi, and on his own life as a first-generation immigrant and low-income student. Afterwards, a group of her students (Emily Short, Zeyu Xie, Lillian Belzer, Lake Sanchez) in the seminar *ITAL 320 Novel, History, and the Making of Modern Italy: Alessandro Manzoni and the Romantic Movement*, dedicated to the modern novel and nationalism that swept over Europe during the nineteenth century, read excerpts of *The Periodic Table* as well as of Levi’s poem, *If This Is a Man*. I conceived the event not to just have my new piece performed in my alma mater, but to share the words and stories of both men — Levi and Patruno. The following day, Friday April 12th, I was invited as a guest in Ricci’s class *ITAL 201 Problematiche di oggi: conversare insieme* to engage in a meaningful discussion about the relevance of Levi in patriarchal, contemporary Italy, touching upon issues of identity and gender,

historical memory and politics, and marginalization and racism. During our discussion in class, we also immersed ourselves in the process behind the music's composition. The students were superb!

In preparation for the composition of this new piece, I began the reading of *The Complete Works of Primo Levi* (2015), a collection of his entirety translated to English, as well as Ian Thomson's *Primo Levi: A Life* (2002), while paying attention to the themes and influences that reoccurred in Levi's writing and life: the measured but deeply felt style of writing and the meticulous and scientifically precise language. I then returned to *The Periodic Table* (1984) and *Understanding Primo Levi* (1995) for ideas on the tenor, structure, motivic potential, and extramusical references of literature, Italian regions, mythology, and family history for the individual chapters. On one hand, I identified the most impactful chapters of the book, which thus were longer in length; on the other, I discerned whether the plot or the emotional content of each chapter were the priority. In the first scenario, motives would be organized to correspond to the events in the chapters; in the second, structure would not relate to the plot itself. From these notes and Patruno's comments on the book in the classroom, I created a comprehensive structural chart which covers tonal and temporal centers, length, rough structure, connections to other movements, and motivic themes. Spanning roughly 75 minutes, each of the 21 element-named chapters corresponds to a movement that are divided in three large sections of youth, wartime, and post-war. There are two musical interludes, one between the first two sections and one at the beginnings of the post-war section that each consist of two of Levi's earliest stories.

Three aspects form the basis of Levi's identity as well as the main musical themes: chemistry, writing, and the long-lasting effects of fascism and antisemitism. Fascism was an ever-growing presence in his youth, coloring his schooling and relationships with others. Chemistry was a passion that started in his youth which provided the tools to make a living, survive the Holocaust, and reflect on the world around him. Writing was his ability to be a storyteller and a listener — someone with whom others wanted to share their stories. This trait emerges later in Levi's life, yet it has an equally strong influence on his character. The final facet, as a survivor of the Holocaust, was one that influenced the previous two identities. In post-war Italy, Levi struggled to make sense of what he had endured with a compulsion to bear witness. Within his youth,

my music is filled with enthusiasm and passion as each theme is laid out, then evolves with Levi's maturing and rising influences of fascism. The wartime section is confrontational and dissonant with the prevalent march theme of fascism gaining increasing dominance, against Levi's fighting to be heard. The post-war section is the most varied as Levi ruminates upon the multiplicities of life, work, and humanity. The final movement, *Carbon*, connects the threads weaving through the book in a scientific celebration of life.

With *The Periodic Table* — being the text in which “the author establishes his identity” as a “reaction to his education and preparation for life in the light of his life's events” (Patruno 57) — I wanted Levi's sense of self to permeate my music. To establish Levi's musical motive, I overlayed the twelve notes of the chromatic scale to the 26 letters of the alphabet and spelled out Primo Levi's name. Based on the tonal center of C, the derived nine notes guide the development of tonal centers from movement to movement and how individual movements modulate. Levi's name is used in its entirety or by singular name (Figure A) or last name (Figure B) to be played horizontally to create a motive, first seen at the end of the first chapter, *Argon* (Figure C), and vertically (Figure D) to create chords at the beginning of the piece. Chapter 12, *Chromium* (Figure E), when the narrator rediscovers his identity in postwar times, is created solely from the notes of his own name. Throughout, echoes and fragments of other musical works are heard, coming from the incorporation of the books Levi and other characters read, folk songs of different areas, poetic structures, and personal connections outside the book. Thomas Mann's *The Magic Mountain* (1924), which references Strauss' *Der Linderbaum* from *Winterreise* (1828) features prominently in Levi's second chapter, *Zinc*. Two fragments from *Der Linderbaum* are then used in *Zinc* to establish Levi's relationship with his classmate, Rita, and provide a melodic shape within the fascism theme. In *Nickel*, the movement comes to life through reshaped musical quotations from Levi's many references. Levi initially refers to the “messenger, the Mercury who guides souls” (Levi 62), leading to Holst (Figure F), the “schematic representations of Hell” (Levi 64), leading to Mussorgsky's *Night at Bald Mountain* (1867) (Figure G), and the legend of Antaeus (Figure H) guided incorporation of the Phrygian mode. *Arsenic*, featuring a sage character from Piedmont, is written

in a poetic ballad structure based on traditional Occitan folk music of the area.

Wanting to pay homage to each element, atomic numbers became the basis of the tempo, number of measures, and occasionally even the small-scale structure of the individual movements through factors and multiples. Returning to the chapter *Zinc*, with atomic number of 30, I factored it to 2, 3, 5, and 15. The center of the chapter is “the element Zinc as the metaphor for examining the Fascist position regarding the Jewish race” (Patruno 60) and thus the music oscillates between the fascist and Levi theme. To enforce this tension, the time signature alternates between 2/4 and 3/4. There are three main sections: 45 measures of the fascist theme, 45 measures of oscillation between fascism and Levi’s motive, and an ending 31 measures of Levi’s theme, the odd number representing Levi’s being “the grain of salt or mustard” (Levi 35). The middle section is further divided into shifting groups of 2, 3, and 5 measures.

In each movement, I faced the decision of whether the plot or the emotional content of the chapter had precedence in forming the structure. In the case of *Nickel*, the chapter where Levi was introduced as a listener and storyteller, plot was imperative to capture the stories told by the narrator. Written as a rondo with an introduction and coda, the introduction is the Mercurial call to the mine (Figure F). The main rondo alternates the recurring theme of the devilish setting (Figure G) against the individual episodes of the stories (Figure H). The coda reflects backwards to Chapter 4, in reference to iron, and forwards to the next chapter where Levi shares the first stories he wrote. In the case of *Nitrogen*, a lighthearted chapter of his early years of marriage, the emotional content took precedence. I borrowed the shape of a Viennese Waltz: the slow Romantic introduction plays the part of the lecherous factory owner, while the free-flowing body of the movement gives the lighthearted mood of taking a vacation. As this chapter evokes Levi’s view that “everything in life [...] is recycled” (Patruno 70), no musical material is original but reconfigured from previously written motives (Figure S).

Throughout the music, melodic and motivic themes develop in a reflection of Levi’s own growth, particularly in the chemistry motive. It is introduced in *Hydrogen*, the second chapter, in a play off a Bach prelude, written with the right hand having an active moving line of 6/8 and the left hand providing nothing but basic

accompaniment representing Levi's first, untrained, efforts in the realm of chemistry (Figures I, J). The theme reappears in Chapter 5, *Potassium*, returning in 9/8 and with a more interactive left hand as Levi is advancing in his university studies (Figure K). It returns in Chapter 9, *Phosphorus*, in a more fragmented form (Figure L), as it reflects both at *Hydrogen* as well as at *Zinc* with Levi's first job, in an environment that is a precursor to his work within the Lager and his love of a former classmate, Giulia. Not until Chapter 17, *Tin*, does the work theme come back in its entirety but now both hands working in tandem, as Levi reaches his maturity as a chemist (Figure M). Chemistry's final iteration is within the following chapter, *Uranium*, where it reflects to a closer variation of *Hydrogen* in 7/4, as Levi returns to the lab and "undertakes this analysis with the same enthusiasm he had as a youth" (Patruno 73) (Figure N). The final chapter, *Carbon*, ties the book and the music together. Referencing first *Cerium* (Figure O) as an introduction of pounding chords (Figure P), "to carbon, the element of life, my first literary dream was turned, insistently dreamed in an hour and a place when my life was not worth much" (Levi 225), Levi then traces the story of *Carbon*. First in a hell which brings back the propulsion of *Nickel* where hell was originally mentioned (Figure Q), the atom of carbon is freed into a gaseous state evoking *Argon* (Figure R), then trapped in a leaf and working with the *Nitrogen* of photosynthesis (Figures S, T). After the full iteration of the cycle, *Carbon* repeats its journey another three times, spending time in the music of each of the elements, though never in the exact same form. To this end, Levi writes "this cell belongs to a brain, and it is my brain, the brain of *me* who is writing" (Levi 232), and the music returns to *Chromium*, "the chapter of rebirth" (Patruno 68) where, after Auschwitz, the narrator found himself again.

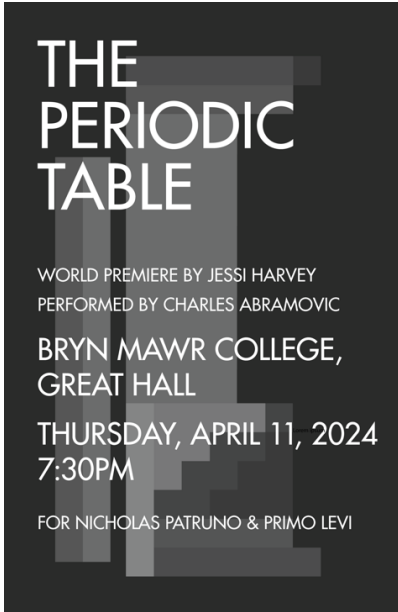
The Periodic Table will not be a one-time concert but an annual event and life-time practice. These events will honor the legacy of, and to continue forward, the teaching and scholarship of Nicholas Patruno, and the writings of Primo Levi to hold the memories of the past. I strive to continue through music to fight against apathy and cultural amnesia in the presence of injustice for the millions who were, and still are, unable to hold their memories and bear witness.

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WORKS CITED

Patruno, Nick. *Understanding Primo Levi*. U of South Carolina P, 1995.

Levi, Primo. *The Periodic Table*. Translated by Raymond Rosenthal, Schocken Books, 1984.



TO COMPOSE A LIFE

THE PERIODIC TABLE FIGURES

A. "Primo" notes



B. "Levi" notes



C. Argon, m.137, "Primo" first iteration



D. Argon, m.12, "Levi" chord (bass clef)



E. Chromium, m.93-94, "Primo Levi"



F. Nickel, m.5, Holst reference



G. Nickel, m.18-21, Main Theme, Mussorgsky reference (bass clef)



H. Nickel, m.25-28, Episode 1, Antaeus reference



I. Hydrogen, m.1-2, "Chemistry" theme 1



J. Hydrogen, m.26-29, "Chemistry" theme 2



K. Potassium, m.14-18, "Chemistry" theme 2 variation



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L. *Phosphorus*, m.9-10, "Chemistry" theme 1 fragment M. *Tin*, m.3-6, "Chemistry" theme 1 and 2 variation

N. *Uranium* m.26-27, "Chemistry" theme 1 callback

P. *Carbon*, m.1-3, *Cerium* reference

Q. *Carbon*, m.34-35, *Nickel* reference

R. *Carbon*, m.56-57, *Argon* reference

S. *Nitrogen*, m.12-13

T. *Carbon*, m.107-109, *Nitrogen* reference