

Preface

The last few years I taught introductory chemistry, I read Primo Levi's *The Periodic Table* with the hundred or so students in my class. I've done it also with a class of a thousand – yes, we teach such gigantic courses in the US. And Levi's books are required reading as well in courses on biography, on memory, on the Holocaust at my university, Cornell University in New York State.

Why do I have my students read Primo Levi? Because even in this great university their lives are fragmented and compartmentalized. They study chemistry, survive through the next problem set in mathematics, step into a history course. And Levi's life was not fragmented. Chemistry was an essential part of his existence, hardly separated from survival or philosophy. Some of that may have been chance (the role chemistry played in his survival in the concentration camp, which you see and hear retold, in an exemplary manner, in this play), but it was also an inner choice. I want my students to feel this. Not because I want them necessarily to be chemists. But I feel a need to put before them a vision of a man, who might not have been one of the heroic figures of chemistry, but one for whom the world was one.

It would be natural that I, a chemist who is also a writer, and one who is Jewish as well, and a survivor of World War II, should encounter and be interested in the work and person of Primo Levi. But there is more to our bond – in so many things I've written I've found a resonance in Levi. For instance, the contrast of creation and discovery is something that has fascinated me. The twentieth century in chemistry was that of synthesis, of the making of molecules. Creation is different from discovery. It brings chemistry close to the arts. And, lest

we get too high on that, it brings us close to engineering. The recognition of the centrality of synthesis was well understood by Levi, thus the instant sympathy and admiration between the chemist and the builder Faussone in the *The Monkey's Wrench, La Chiave a Stella*. This is doubly interesting as Levi was by training an industrial and analytical chemist, and many of the achievements of *The Periodic Table* are discovery stories.

I wrote a book, *The Same and Not the Same*, in which there is conveyed a vaguely Jungian view of chemistry, each of the molecular science's facts precariously balanced along many axes or polarities. Pure/impure is one, as is natural/unnatural, harm/benefit, creation and discovery, to reveal/to conceal, equilibrium/extreme. And identity or difference, the greatest of polarities.

Sure enough Primo Levi expresses that tension beautifully, in the context of a chapter in *The Periodic Table* where he tires of chemistry «Where are theorems of chemistry?» he says, and turns to physics. Where he has to do some chemistry. He needed sodium to dry an organic solvent, but he used potassium, another alkali metal, right under sodium in the periodic table instead. He writes of what the experience meant to him:

[...] I thought of another moral [...] and I believe that every militant chemist can confirm it: that one must distrust the almost-the-same (sodium is almost the same as potassium, but with sodium nothing would have happened), the practically identical, the approximate, the or-even, all surrogates, and all patchwork. The differences can be small, but they can lead to radically different consequences, like a railroad's switch points; the chemist's trade consists in good part in being aware of these differences, knowing them close up, and foreseeing their effects. And not only the chemist's trade.

Now that is great writing, a deep human insight. I like it that it begins in chemistry.

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