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LEONARDO THINKS

Opinion: Rómulo de Carvalho and António Gedeão, Scientist-Artist

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The influential teacher and historian of science Rómulo de Carvalho (1906-1997) is well known in his native Portugal both for his contributions to science education and for the poetry he wrote under the pseudonym António Gedeão [1]. Although de Carvalho appears to have thought of his poetry and his scientific activities as entirely separate [2], he is considered the pre-eminent Portuguese example of a scientist-artist. Both his prolific science writing and his poetry show a preference for simplicity, a lack of pretension, and a fascination with the workings of everyday life [3]. In his poem “Colloidal suspension”, Gedeão negotiates a tension between formal, theoretical ways of knowing, and quotidian, empathetic understandings:

Colloidal suspension

I think about being a poet and being dispersed
through the voice of the voiceless.

I think about how little of me is in each verse,
how much of everything and of no one.

A blind man is playing La Violetera,
and seeing him I too go blind.
A wretched woman scrubs and waxes,
and seeing her, I too am a wretched scrubber.

What distant affliction and near joy,
what minimal, fragile, ephemeral nothingness,
does this combusting dredger hoist up from below,
ripping, digging and paving this subterranean street?

Postulates and laws, lemmata and theorems,
all that affirms, announces and admits,
theories, doctrines and systems,
all this eludes the author of these lines.
Both him and me.



trans. C. Aretta [4]

Integrating theory and feeling may have seemed less problematic to de Carvalho than to Gedeão. In a high school physics workbook he writes that students must learn to “understand clearly the *physical significance* of the mathematical expression” and “know how to interpret, physically, the final result of the numerical operations” [5]. The answer to each problem is given directly below the question, emphasizing that the *experience* of understanding, not ‘getting it right’, should be the goal of education.

Acknowledgments

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Endnotes

- [1] Carvalho F.G. Unpublished manuscript. A brief biography of Rómulo de Carvalho.
- [2] de Carvalho R. 2011. Memórias. Lisbon: Fundação Calouste Gulbenkian.
- [3] e.g. de Carvalho R. 1952. História do telefone. Coimbra: Atlântida. --. 1995. A física no dia-a-dia. Lisbon: Relógio D'Água Editores. Gedeão A. 2001. Obra poética. Lisbon: Edições João Sá da Costa.
- [4] Aurette C. and Berry, M. (translators). Unpublished manuscript. ANTÓNIO GEDEÃO, POEMS: A bilingual anthology.
- [5] de Carvalho R. 1959. Problemas de física para o 3º ciclo do ensino liceal. Coimbra: Atlântida, p. 10.

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