In this paper I investigate Husserl's central notion of the 'life-world' and its complex relations with science. I attempt to show four things: 1) Husserl's life-world amounts to a sophisticated description of Sellars' manifest image of man-in-the-world, which however absolutizes the latter's categorial structure and mislocates the role of science within it. 2) A dialectical understanding of the relation between life-world and science could succeed in escaping the above kinds of problems, albeit only at the cost of blurring the boundaries between phenomenology and non-phenomenological philosophical standpoints. 3) Lifeworld phenomenology after Husserl (in Merleau-Ponty and Heidegger) does not offer a convincing response to our criticism of the Husserlian life-world. I argue that it could give such a response only if Merleau-Ponty or Heidegger could develop a non-instrumentalist account of scientific explanation. Yet, I attempt to show that both Merleau-Ponty and Heidegger, despite their resolute rejection of Husserlian transcendental phenomenology, both steadfastly adhere to Husserl's instrumentalist conception of science and scientific explanation. 4) Finally, I provide a rough sketch of a non-phenomenological and non-representationalist conception of life-world and science, as I consider it a more promising way of making sense of their structure and relations.