



The Solidified Plastic Component.

In the daily use of items made of metal—and often, around me, of that rust-proof metal that allows for longer service life and offers the properties associated with metals and alloys (specifically resistance to pressure or torsion—or, to put it another way, solidity, at least as far as I can observe)—a very simple thought occurred to me (which you might deem naive): many of these metal alloys, or metals rendered rust-proof through chemistry, could easily be replaced by other materials for the same purposes and with virtually the same utility—often, I believe, with even greater practical utility—and, from what I gather, at a much lower cost! Specifically, they could be replaced by some of the plastic materials that modern chemistry enables us to create!

Indeed, given that we can now easily engineer very hard thermoplastics—producing materials like polycarbonates that are incredibly strong, rust-proof, and virtually impervious to water—and given that we can (or so I understand) readily make plastic materials that are nearly fireproof and highly heat-resistant, we have—easily and cheaply—a plastic component that could be molded for many applications usually reserved for "stainless metal"...

One could design components for door and window fittings. Interior and exterior cladding components—such as vehicle bodywork or fuselage sections—or even structural elements like armor plating and furniture (as is already common), and perhaps even machinery parts, such as engine components, drive shafts, or gears.

Also, a wide range of household tools—hammers, shovels, screwdrivers, kitchen mills, and many others.

And perhaps even structural or framing elements for construction?

The primary immediate benefit would likely be a reduction in production and assembly costs. Naturally, the chemical composition of such hard, durable plastic elements would need to be designed first; this would likely yield a range of formulas, allowing for the creation of materials ideally suited to specific applications.

An entrepreneur looking to cut production costs might well consider reclaiming plastic waste—melting and reprocessing it for this purpose. We are well aware of the vast quantities of plastic waste scattered across the globe or sitting in landfills. It was actually while discussing my project—using nets to capture plastic waste at river mouths—with friends that the idea struck me: we could easily derive new uses from this existing mass of composite plastic waste through minor modifications—specifically heating, adding chemical solutions, and employing processes such as the thermosetting of polycarbonate compositions (which could also be engineered to be fire-retardant).

This same approach could—perhaps for different purposes—be applied to various other materials, such as vitrified ceramics and, most notably, wood; after all, it is well understood that wood can relatively easily be made extremely hard and resistant to heat, fire, and wear. Today, there are stylish watches made of wood, featuring a lacquer finish that protects them from moisture and corrosion...

And if I mention here the processing of plastic materials—specifically to make them fire-resistant and exceptionally hard and durable through thermodynamic methods, notably in the form of "polycarbonates"—it is to reiterate a key point: plastic waste and scrap can be found all over the



world. While not biodegradable in their raw state, once recovered and reprocessed—simply by melting them down and applying chemical treatments—they could provide a vast supply of potential industrial components or even manufactured tools of genuine commercial value.

This was my idea—admittedly very simple, and perhaps you might even consider it naive. It turns out that plastics—in the form of waste or scrap—are now deemed dangerous to our natural balance and the environment by scientists and environmental advocates alike. In my view, one could easily develop a business model based on reusing them for this purpose—one that would serve the cause of the environment while also delivering social and economic value.

Thank you for your kind attention to these few words.

Sincerely,

Timothee Bordenave

Bio-note:



Born in 1984 in Paris, France, Timothee Bordenave is a French author of fiction and essays, and a poet. He has published many books, about 25 to date, and his literary works have been translated in large parts to about 20 languages... He is also a visual artist, whose photographs and paintings have been shown in France and in various international locations.

After a Literary Baccalaureate, and then Law and Information Sciences studies, he used to work directing libraries in Paris, and nowadays he is a full time creative.