

Invention vs. Innovation in New Product Development: On the Shoulders of Giants

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In episode three of the PBS documentary, *Triumph of the Nerds*, Steve Jobs gives a quote he attributes to Picasso, "Good artists copy. Great artists steal" (Cringley, 1996, Timestamp 26:20). Cringley apparently thought Job's quote was important enough to title the episode after it. I think it gets to the very heart of the discussion of invention vs. innovation in new product development.

While the two terms are often used interchangeably, HuffPost writer Tom Grasty argues that they are not the same, and presents the distinction between them this way, "In its purest sense, invention can be defined as the creation of a product or introduction of a process for the first time. Innovation, on the other hand, occurs if someone *improves on* or *makes a significant contribution* to an existing product, process or service". Grasty spends the rest of the article arguing that it is innovation, rather than invention, that is key to business success, citing both Apple's iPod and IBM's PC as cases in point. The iPod did not invent anything new, he points out, since portable music players had been around for more than two decades in the form of Sony's Walkman, and both mp3 players and streaming music services existed prior to the iPod. What Apple did was combine all these things together and create a music delivery ecosystem that made them easy to use. This, according to Grasty, makes the iPod a defining example of innovation. Likewise with the IBM PC, whose design team was under explicit instructions not to invent anything new, but rather to find a way in eighteen months to take off-the-shelf components and assemble them into a product that would be user-friendly, powerful and inexpensive (2017).

The problem with Grasty's article is that while it provides several examples of product innovation and makes a strong case for the importance of innovation in product development, it does not provide any examples of invention, despite the central claim that the two are not the same. He concludes with a final thought that restates this claim, "While they tend to be lumped together, "invention" and "innovation" are not the same thing. There are distinctions between them, and those distinctions are important. So how do you know if you are inventing or innovating? Consider this analogy: If invention is a pebble tossed in the pond, innovation is the rippling effect that pebble causes. Someone has to toss the pebble. That's the inventor. Someone has to recognize the ripple will eventually become a wave. That's the entrepreneur" (Grasty, 2017). I fail to see any distinction in this analogy, since someone had to recognize that pebbles could be tossed and that objects such as pebbles could be tossed into ponds.

In a post to her blog, Brain Pickings, titled "How Einstein Thought: Why 'Combinatory Play' Is the Secret of Genius", Maria Popova states that "creativity is combinatorial: alive and awake to the world, we amass a collection of cross-disciplinary building blocks - knowledge, memories, bits of information, sparks of inspiration, and other existing ideas - that we then combine and recombine, mostly unconsciously, into something 'new'" (2013). The word "new" here is in quotes intentionally, since each new thing invented by this combinatorial process emerges from the novel, innovative combination of things that existed before. Invention and innovation are thus inextricably linked, and the lines between them blurred beyond clear distinction.

I think Steve Jobs had the same idea in mind in his quote about great artists stealing. Greatness in this case comes from taking things you find around you and, by coming to know

them intimately, making them your own and presenting them to the world in novel form, which now belongs to you by virtue of the transformation. Creativity is an ongoing conversation with the world framed by the ideas of those who came before, as Isaac Newton famously stated when he said "If I have seen further it is by standing on the shoulders of Giants" (Popova, 2016), with both invention and innovation moments in Einstein's combinatory playground.

References

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