

shedding light in the dim and dusty corners of NPD with semiotics: understanding signs

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introduction

When talking about innovation, it is usual to talk about how industry finds new ideas and figures out how to make money from them through the production of goods or services.¹ This perspective on innovation helps to frame and optimize the processes that are used for NPD, giving business a clear understanding of its role (translating new ideas and inventions into stuff that people will pay for) and what success looks like (profits and growth for the producer).

However, there are limitations to defining innovation solely through its economic value to the producer. Industry is increasingly being challenged to comprehend the value and worth that products will produce for users and consumers. (For example, see [What does your most important customer want? Alcan Pharmaceutical Packaging case study](#)).

Illka Tuomo, in his book *Networks of Innovation: Change and Meaning in the Age of the Internet*, argues: “One way to see the limits of the conventional view is simply to turn it around. Instead of a heroic inventor we can focus on a heroic user. The traditional view assumed that invention happens when a new concrete artefact or mental insight is created. The alternative view starts from a different assumption. Innovation happens when social practice changes. If new technology is not used by anyone, it may be a promising idea, but strictly speaking, it is not technology... By defining innovation as something that generates and facilitates change in social practice, we put the user in a central place in the process of innovation. In a very fundamental sense, it is the user who invents the product.”

It's easy to recognize that a product's lifecycle *really* begins when it moves off the shelf and into practice. Actually harnessing concepts of social practice and cultural value as you create those products is another challenge all together.

traditional “voice of the customer”

Most user and customer-centric design processes focus on bringing the product development team into closer contact with “real people” in the “real world”. For example, visiting a family home and observing them load their dishwasher after dinner, or watching a nurse to understand how the monitoring device that is being developed fits into her larger tasks and objectives. Inspiration, eg for new food packaging, can come from people eating on the Underground, or in order to determine people's emotional attachment to their mobile phone a good idea is to get people to construct collages to express their feelings. Many companies now even have product development teams dramatize scenes and scenarios to help them better empathize with what others may be experiencing.

It is common belief that by just digging deep enough, it is possible to extract these behaviors, attitudes, needs, and desires from people and that it will ensure the resulting products create value.

These techniques are powerful and effective. As a practitioners and leaders of teams doing just what's described, the authors have observed dozens, if not hundreds, of products inspired and made better through this type of research integrated into the innovation process.

But, they have also seen the failures. Products that “test well” but sit stagnant on the shelves, de-listed within months, people who choose the lesser product for their needs because it “looks cool”, the disruptive technology that takes everybody by surprise by its rapid uptake despite major functional and usability gaps.

These situations arise not because the initial research was wrong, per se, or because people “lie” to researchers about what they really want and need, but because sometimes so much time is spent looking **inside** consumers, that one often forgets to study what's **around** consumers, driving those needs, desires, and beliefs in the first place.

reading the signs: introducing semiotics

Semiotics is one of the most effective methods the authors have found to understand the cultural meaning of products. It is a technique that is now firmly embedded in many organization's design and innovation processes along with all those more traditional customer-centric approaches.

Consumer ideas, beliefs, attitudes and perceptions come from the surrounding culture. By studying the *artefacts* of that culture (like media, advertising, objects, conversation, and art), rather than the *consumers* of that culture, semioticians offer a different perspective on how products acquire value and worth in "the real world".

Semiotics represents a range of studies in art, literature, anthropology and the mass media rather than an independent academic discipline. Those involved in semiotics include linguists, philosophers, psychologists, sociologists, anthropologists, literary, aesthetic and media theorists, psychoanalysts educationalists, and designers.ⁱⁱ

Semiotics literally means "science of signs" and starts from the fundamental assumption that everything in the surroundings acts as a sign or symbol for other things. For example, when looking at a chair, people don't just see a place to sit down, they also make assumptions about the identity of those who use it, the practices they would use it to support, and value or worth that the chair represents. Some of those associations are historic, others contemporary. People also recognize whether or not this means the chair is "for them" or not.



figure 1: is a chair just a chair?

Who owns these chairs? What function do they serve? How much are they worth? Which one do *you* want?

While semiotics sounds quite abstract – the results are incredibly concrete. Semiotics helps to find "sweet spots" in the cultural landscape to focus research and innovation around. Semiotics can then demonstrate how to communicate that cultural relevance and value to people through the use of form, color, material, finish, typography, word selection, retail placement, etc. Finally, semiotics helps to explain why people perceive, adopt, and adapt particular products in the way they do. And, because it's a desk-based technique rather than a field-based method, semiotics is also very fast and cost-effective, often delivering value within a week or two of analysis.

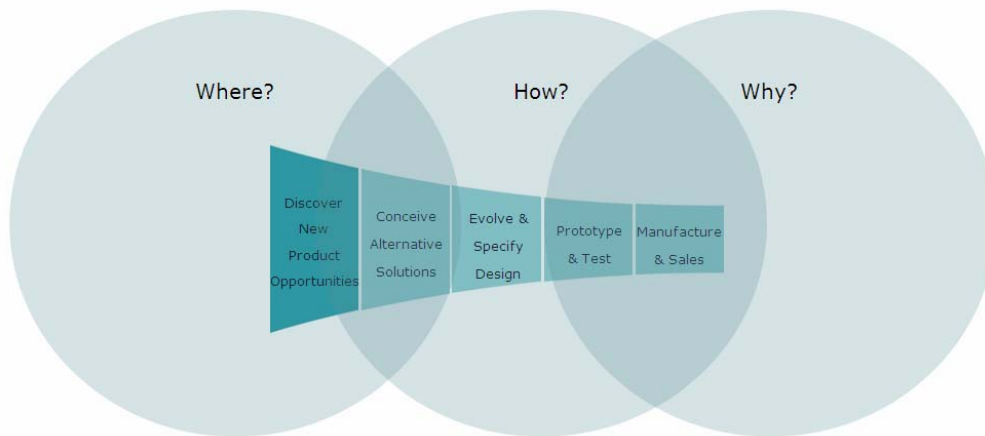


figure 2: roles of semiotics in the NPD process

where to focus innovation

In the earliest stages of new product development, semiotics helps by identifying **discourses**. The easiest way to think about discourses is as types of cultural conversation. Discourses represent what people are and have been talking about and how they talk about them. These discourses can also be mapped by whether they are currently dominant in culture, emerging, receding, or lapsed.

Unlike some ways of mapping and segmenting the market, discourses reflect the fact that people manage and project multiple identities in their lives, in different contexts, so they may be participating in a number of cultural conversations at one time, even simultaneously holding beliefs and attitudes that may appear contradictory on the surface.

By thoroughly understanding the cultural landscape for a particular category or area of interest, semiotics helps to link that to the company's brand and existing cultural meaning – showing new spaces which can be comfortably reached, and those that which will be difficult and potentially damaging to the brand.

how to communicate

If discourses help to understand who a company is talking to and what it is saying with its products and services, **codes** define the grammar and language with which it says it.

It is possible to break down the visual language of an object into its component parts: form, function, interaction, color, material, finish, etc. Certain combinations of these aspects become encoded as signs and symbols for cultural meaning within specific contexts.

A particular chair might be expected to be seen in a great-aunt's sitting room, and the other in the lounge of a high-flying city businessman, but they both use a set of common codes for "comfort" through their relative width, angle of the arms, use of padding, and angle of the back to seat.

Knowing the codes in a particular industry category and knowing the codes that can be legitimately "borrowed" from related or analogous categories focuses product development efforts before pen ever hits the paper and creates a common vocabulary for everybody on the team to communicate with.

why people respond

Many organizations embark on a new NPD or redesign initiative, agreeing on their strategy at the start, and agreeing on the path to get there, and yet, when they see the final result – doubts set in. Is it just natural human aversion to change? Or, are the lukewarm reactions of colleagues when a new design is unveiled a sign of something gone seriously wrong?

It is easy to take the new design out to market testing and gauge consumers' reactions. It is much harder to figure out what to do with the data when why people are reacting in that way is unknown.

Rather than feeling bounced around on the whims and winds of public opinion, semiotics anchors products to deep cultural values. It interprets those reactions, relates them back to the discourses and codes in play, and paints a clear picture of why a product is either too safe or too challenging, boring or irrelevant, mainstream or niche. Often, it turns out to be a simple fix – swap the balance of colors, change a material finish, tighten or loosen an angle, and suddenly the picture snaps back into focus and the original vision becomes clear.

conclusions

Semiotics doesn't require a radical rethink of any NPD processes, but it does act as a torch – beaconing towards interesting new opportunities, illuminating the path for an interdisciplinary team, and shedding light in otherwise dim and dusty corners of industry understanding. It's simple really, if meaningful products are desired, why not start where people create meaning: through their shared understanding and communication?

related Pure Insight resources

- [User-centered design: key tools and techniques part I, from ethnography to inclusive design](#)
- [User-centered design: key tools and techniques part II, conceptual and participatory design](#)
- [Using customers to identify successful new products: an interview with James Euchner of Pitney Bowes](#)
- [Using virtual customer environments to improve design of new products and services](#)
- [User experience researchers: an interview with Nicolas Nova](#)
- [What does your most important customer want? Alcan Pharmaceutical Packaging case study](#)

about PDD

PDD is a product and service innovation consultancy based in London. It has been in business for almost 30 years, and is one of the first UK design firms to integrate social scientists into its team. Although it employs the usual range of anthropologists, psychologists, and ergonomists, it also had the good fortune to hire a semiotician a couple of years ago.

Julie Jenson Bennett, head of human sciences

Julie leads PDD's interdisciplinary team of social scientists and designers focused on connecting business strategy and product development to the physical, cognitive, emotional, and cultural needs of user and customers. Prior to joining PDD in 2005, Julie spent twelve years at Intel Corporation, focused on the human implications of information technology, e-commerce, digital-TV, interactive toys, and organizational change initiatives.

Miles Hawley, creative director

Overseeing PDD's design capability, Miles has 17 years experience with a diverse portfolio of blue chip client projects including landmark product and packaging solutions in the fields of telecommunications, toy design, pharmaceutical devices, FMCG and consumer durables. Miles lectures at Central St Martins and Salford University, and is closely involved in the Royal School of Art student awards.

ⁱ The classic definition of innovation is “the successful exploitation of new ideas” via Myers and Marquis’ 1969 publication, [Successful Industrial Innovations](#). The 2005 “Cox Review of Creativity in Business” for the HM Treasury expands that to: “Innovation is the successful exploitation of new ideas. It is the process that carries them through to new products, new services, new ways of running the business or even new ways of doing business.”

ⁱⁱ Daniel Chandler from the University of Wales, Aberystwyth, has published [Semiotics: The Basics](#) and maintains a Web-based resource called “Semiotics for Beginners”.