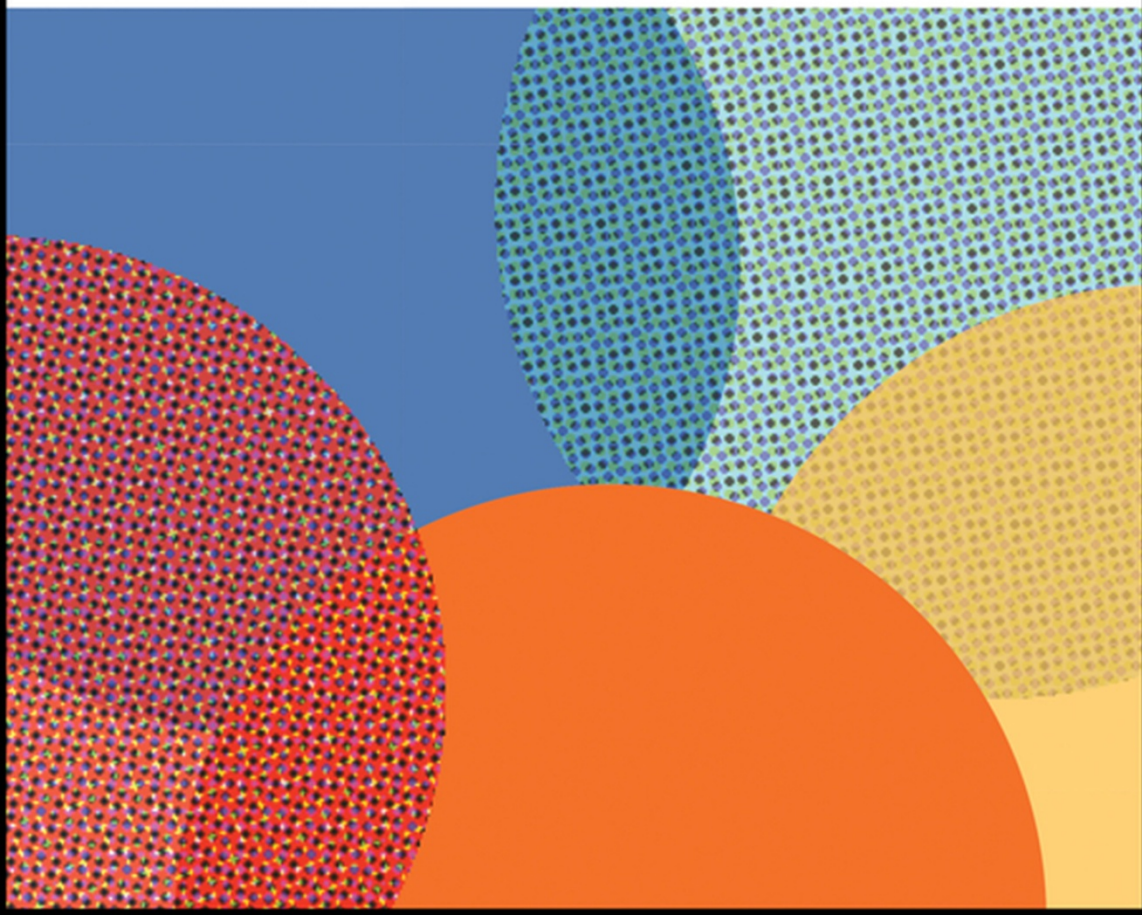


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Cecilia Y. Saint-Denis

# Consumer and Sensory Evaluation Techniques

How to Sense Successful Products





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How to Sense Successful Products

*Cecilia Y. Saint-Denis*  
*Westfield, New Jersey*

**WILEY**

This edition first published 2018  
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John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

*Editorial Office*

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*Library of Congress Cataloging-in-Publication Data*

Names: Saint-Denis, Cecilia Y., 1972– author.

Title: Consumer and sensory evaluation techniques : how to sense successful products /  
by Cecilia Y. Saint-Denis.

Description: Hoboken, NJ : John Wiley & Sons, 2018. |

Includes bibliographical references and index. |

Identifiers: LCCN 2017041389 (print) | LCCN 2017052695 (ebook) |

ISBN 9781119405603 (pdf) | ISBN 9781119405573 (epub) | ISBN 9781119405542 (pbk.)

Subjects: LCSH: Sensory evaluation. | New products–Evaluation. | Marketing research.

Classification: LCC TA418.5 (ebook) | LCC TA418.5 .S35 2018 (print) | DDC 658.5/752–dc23

LC record available at <https://lcn.loc.gov/2017041389>

Cover Design: Wiley

Cover Image: © Jacqueline N. Denham

Set in 10/12pt Warnock by SPi Global, Pondicherry, India

*“Even the biggest most competent companies fail. The trick is to create an organizational culture that accepts failure so that you can fail small ... rather than failing big.”*

*“True innovation requires learning from the complexities of each failure – a skill that most companies fail to hone.”*

Samuel West, Museum of Failure,  
Helsingborg, Sweden





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## Preface

On a Sunday morning, the doorbell rings. UPS just threw on my porch a box that contains the precious item I ordered online less than 24h ago. It is the latest technological tool that everybody wants. Its reviews, which I read thoroughly, are outstanding, five stars across the board. I hurry to the door, grab the box and open it frantically. Now I have it! Let's see how it works and what new avenues it will open in my daily life. At the same time, my son, a 4-year old toddler, grabs the cardboard protecting the device and turns it into a spaceship, which will keep him entertained for a couple hours.

At first sight, the new device is appealing, with a tasteful and modern design, luxury colour and lines, smooth and pleasant texture to the touch. When I get to the instructions, they seem less intuitive than expected. As the new generation shopper that I am, I want to be able to operate immediately. I do not conceptualize it but the on/off bottom seems a little cheap. It might be the noise it makes or just the material itself. I persevere for a few hours. Ultimately, this tool doesn't revolutionize my life. Some of its functionalities are redundant with my previous device. It's not worth the effort. I might use it but it will eventually die as quickly as it emerged.

Meanwhile, my son has made the most out of the cardboard, which, after being a spaceship became an artistic and colourful fort and a car track. But its appeal has died as well, leaving space for new outbursts of imagination.

Nowadays, consumers crave for unique, authentic, customized products. Consumers actively search and seek everywhere rather than passively responding to advertising. In that context, big consumer packaged-goods companies struggle to sell their products. The market is inundated with a never-ending variety of offers making it more challenging to be visible and leaving very little room for innovation. For small, as well as for giant companies, the motto seems to be 'innovate or die'. However, launching a real breakthrough innovation has become a hard-to-achieve and hard-to-predict holy grail.

For years, in the pre-social media, pre-Amazon era, demand for innovation was lower. Big companies could get distributed much more easily than smaller ones, and consumers were used to seeing the same products on the market.

Today, consumers are more informed, more aware and have wider access to very small brands and sellers. Through cooperative websites, anybody can create and sell from one side of the world to the other. This causes challenges to brick and mortar traditional stores and major market share points lost by larger brands.

For decades, decisions on innovative products were based primarily on the intuition of a few creators; or on the intimate conviction of a few top managers. Today, the path to innovation has become way riskier. Developing new products, testing them, weighing market response, predicting failure or success has become critical for managers to ensure success and prevent yearly losses. It has become vital for big brands to invest in robust R&D teams and to consolidate their experience to be able to launch great new products and survive.

The challenge is of course to foster creators and creative teams, but first and foremost to be very solid in supporting the creative process to ensure its success. Until today, teams in charge of evaluation methods as to how new products fit into consumers' life have been very pragmatic and worked mostly on an empirical basis. There are no real common manuals on how to systematically approach consumers all along the creative development. Within each company and among the scientific community with the expertise in this domain, knowledge is passed along via word of mouth through a network of connoisseurs. Everybody moves along following their instinct on how best to test and predict. Given the stakes, it is time to issue systematic approaches. This is precisely what this manual is about. Of course, any method and approach will never be carved into stone, as for the following of the creative process, one needs to remain very flexible and open-minded. Each product category, each invention or creation needs to be approached as a unique case. However, a methodological background is necessary to ensure robustness in the process and to circumvent basic pitfalls.

This manual will therefore dive into the global (Chapter 1) and specific (Chapters 2 and 3) aspects of sensory and consumer test designs: how do we test, when, where and with whom. All of it depends on the objectives we want to pursue and the methods we consider. The testing strategies must be developed (Chapter 4) based on where we are in the development process going from a small-scale to a large-scale approach. Very practical elements will be covered such as tools to be incorporated, as well as deliverables and budget. Chapter 5 goes beyond intrinsic product quality with a more holistic picture of real-life market factors. Chapter 6 concludes with considerations to decide whether to outsource studies.

Before diving into the subject matter, I would like to thank the following people for their inspiration, support and for their challenging and curious minds. Everything goes back to them and how generously they taught me at some point in life. I learned to remain open-minded while they instilled in me the desire to always question, grow and learn.

## Acknowledgements

Gilles Trystram, General Director at AgroParisTech. During my Ph.D. research and years after, I have kept from him the love for research as a means of always questioning apparent certainties and applying rigour.

Douglas Rutledge, Director of Analytical Chemistry Department at AgroParisTech. Thanks to Douglas, biostatistics have become approachable to me and a true means of rationalizing complex realities such as sensoriality and consumers' minds.

Joseph Hossenlopp defines himself as an independent thinker. His support, advice and guidance have forged in me respect for knowledge, an instinct to always seek for the right answers, as set out by the best specialists, unfolding reasoning, in order to build a new enriched opinion.

Agnès Giboreau, Living Lab at the Institut Paul Bocuse. Agnès rapidly became one of my mentors when we first met in the food industry at the time of the sensory and consumer methods genesis, being deployed in the industry. Agnès is one of those pioneers who extended these methods to all new fields such as the auto industry and now the hotel industry. Her rigor and curiosity of mind stand before me as an immense source of inspiration.

Jacques Barthélémy was the head of the Sensory Evaluation Department at Nestlé until he retired. He left us in the dawn of 2016. Jacques was a pioneer of the implementation of sensory and consumer methods in the food industry when just freshly established in the academia. He fought against all the obstacles as he was convinced of its relevance. Many in our generation grew up and were fashioned in his pugnacity.

Mara Applebaum, AVP Product Performance Evaluation at L'Oreal USA. Mara has been a colleague, a manager and a true mentor all along my journey in the industry. I have learned so much thanks to her immense knowledge, her incredible open-mindedness and desire for permanent innovation and experimentation in our field. Thanks to her very American 'can do' attitude, many of us have learned how to transpose academic guidelines into the pragmatic world.

Annie Hillinger, Partner, Heads Up! Research, Inc. Annie has a very rigorous and pragmatic approach to research in the consumer field. Working with her

has been an incredible opportunity to grow and learn from her sense of careful listening, moderation and translation of consumer insight into action and vision for the future.

My former colleagues in the industry. I have had the immense privilege of travelling through food and cosmetic industries. Multiple windows have been opened into infinite fields of application of sensory and consumer methods way beyond the domains where they took off their first steps. All I know, I do owe it to all these people I have met and worked with along my amazing journey.

My family who is my unfailing daily support. My kids, who at times had to endure my professional dedication, have always carried me with their love and recognition. I am grateful to see them grow up with passion, ambitions, aspirations, positive values and critical minds. My husband, who for years encouraged me to share all I have had the privilege of learning and thus gave impetus to this project. My uncle Edgardo Flores-Rivas, former ambassador, who was an unconditional English advisor all along. And finally my friend Jacqueline Denham for designing the beautiful cover.

All these people, for whom I am so grateful, have a common wonderful asset: a unique sensitivity to small sensorial pleasures of life like sharing a sophisticated flavoured home-made meal, while appreciating the subtlest notes enhanced by a rare vintage wine, the sound of a harmonious musical note or the view of a luminous horizon.



## 1

## The Pillars of Good Consumer and Sensory Studies

### 1.1 Leveraging Existing Consumer Insight Prior to Building a Test Plan: What Do We Already Know?

For a long time, three major departments in companies have taken the lead: Research, Marketing and Sales. A new product was developed and a consequent budget was put in place to push it into consumers' homes. Within the past couple of decades, the media universe that surrounds us has changed in such a way that this simple approach does not suffice anymore. Marketing environment has become way too complex. Companies must deal with hundreds of cable channels, satellite networks and online social media. This makes the interaction between companies, their brands and consumers more complicated and risky (Blackshaw 2008). As explained by Kietzmann et al. (2011) a simple negative post or tweet could turn into a boomerang. At the same time, interaction with consumers has reached a more personal level. This has forced most companies to embrace what is called Consumer Insight in their mind-set and develop *ad hoc* teams within their organization (Stone et al. 2004).

The consumer insight objective is to go way beyond figures and statistics that were traditionally analysed by marketers. Consumer insight research gathers skills from multiple backgrounds: marketers, psychologists and ethnographers. The idea behind it is to get into the consumer's mind understanding what they purchase, why, how this fits into their daily routines, when, as an individual, as a group, as a community. Consumer insight is now the binder that provides understanding on who consumes what and why. Consumer insight digs into geography, seasons, gender, ethnic and cultural background, age differences and the role these factors play in the consumption of each product category. The goal is to find the truth on existing and emerging behaviours, experiences, beliefs, wants and needs. Consumer insight is the tool that allows researchers and marketers to make a new product that coincides with consumer's needs by either finding the appropriate market space for something creators have

envisioned or by finding the need gap to be fulfilled that steers and inspires creators with new ideas. Consumer insight serves for both push and pull processes (Walsh 1984). Some distinguish the terms insight and foresight. Insight being the ability to interpret present trends to then predict and prepare the future as the foresight approach.

With that in mind, it is easy to understand why, before engaging in the evaluation of any new product, it is crucial to conduct a full consumer insight research on that category. Oddly enough, in many cases, consumer insight gathers information that everyone already knows. It is just a question of putting it together in a meaningful way that will speak by itself and make sense.

After the Canadian writer Coupland (1991) popularized the expression Generation X to designate the individuals that succeeded baby boomers, all other new sociological designations just flowed out naturally for sociologists to segment the different age groups in our societies. Consumer insight often observes behaviours based on this breakdown (e.g. Kumar and Lim 2008). Whether we want to address, for example, Baby Boomer<sup>1</sup> women skin beauty needs, Gen X<sup>2</sup> men soda drinking drivers, Gen Y<sup>3</sup> (Howe and Strauss 2000) reading habits or Gen Z<sup>4</sup> social media activity, the approach will always be the same. What geographical region are we considering? What is the existing market offer? What are the key benchmarks and the more 'niche' players? Is there a seasonal aspect to be taken into account, and what are the trends, the drivers, the needs and the gaps?

In many cases, companies have a lot of information internally into which they can dig before doing any further research (data mining of existing 'primary research' sources is often called 'secondary research'): intrinsic background knowledge, previous small- or large-scale studies done in that category, marketing and sales data are the first sources to consider. Usage & Attitude (U&A) studies are often conducted every 2–5 years for large categories. Very popular in the 1970–1980s these long and costly studies had been misused in the 1990s. However, they quickly came back as a necessity with the drastic evolution of behaviours in multiple categories and with the expansion of many industries towards new emerging markets. Also, running

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1 Commonly refers to a generation of people born post World War II roughly between 1946 and 1964, now settling into retirement with some level of comforts.

2 Typically covers people born between the mid 1960s and the early 1980s. Relative to the previous generation, Gen X is usually more open to diversity and embrace differences and new technologies.

3 Also referred to as 'Millennials', covers individuals born between the 1980s and the year 2000. Gen Y has been shaped by the technological revolution. They are usually connected and tech-savvy.

4 Generation of children born after the year 2000, also now called 'Centennials'. Today yet to be better analyzed. They are predicted to be constantly connected with high tech communication tools.

those types of studies became easier thanks to online tools. Ultimately, it is always important to confront knowledge and beliefs within the company itself with up-to-date data to avoid *a priori* certainties.

Social media are an immense source of information: blogs, forums, reviews on electronic commerce sites (broad ones like Amazon or Alibaba, or ones more specialized in a certain category), posts on Twitter, YouTube, Pinterest, all the way to public conversations on Facebook or Instagram. Safko (2010) gives a very comprehensive anatomy of modern social media and how they have become an unprecedented and unavoidable window into our society. Depending on the resources the company has, this research, often called 'social listening' can be done internally or externalized to numerous market-research companies who offer the service. Over the past years, several powerful analytic tools and platforms to systematically process the information have been launched on the market, some being free (broadly general such as [www.socialmention.com](http://www.socialmention.com) or targeting one single media like Twitter or Google) and some requiring a monthly fee.

The efficacy of them can be assessed in what they measure and how they represent it versus the needs a company has. Many platforms offer online active dashboards and alerts on pre-set keywords (Table 1.1).

**Table 1.1** Typical monitored parameters on social media.

Measure	Description
Audience volume	Number of posts, comments, tweets, reviews per unit of time for defined key words on designated media
Audience categories	Definition of who is speaking: gender, age, professional or not, and so on. This is usually assessed through clear identification or languages hints
Audience influence	Passive observers or stronger influencers <sup>a</sup> . Level of influence is now often measured not only by popularity and number of connections of individuals, but also by their forwarding activity with specific algorithms as shown in Romero et al. (2011)
Competitors	Usually assessment of a number of brands mentioned per unit of time in designated media
Sentiments	Positive, negative or neutral connotation of the conversations. This is usually assessed through language systematic analysis by appropriate software or by linguists (Chamlertwat et al. 2012)

<sup>a</sup> Understanding the level of influence certain individuals, groups or formal bloggers (professionals or not) may have becomes a tool that goes beyond consumer insight objectives (Agarwal et al. 2008). Online word of mouth has become extremely powerful. Therefore, it is vital for companies to track it down to head off anything that could be negative or damaging and to empower happy consumers to share to an infinite audience (Blackshaw 2008; Berger 2016), very often now through the influence of an expert authority or a celebrity endorsement.

Online social media are a tremendous resource to understand consumers. However, depending on the subject or target audience, in some cases, information found through them may not be representative enough. Millennials and centennials are undeniably present for most categories. However, if the target audience is Gen X or Boomers, information found may be more partial. Furthermore, depending on socio-economic categories being considered, regions or countries, prevalence of internet and phones may not always ensure total representativeness if research is only done via online social media. Lastly, one must keep in mind that even though people tend to be more and more vocal online, whether they are happy or unhappy with a product or service, human nature does not change much and comments found may more often be on negative experiences (Blackshaw 2008). In such cases, more traditional ‘offline’ consumer insight research may be considered such as focus groups or ethnographies (Gunter et al. 2002). An extensive methodological description of these is provided in Sections 3.1 and 3.3 of this manual.

There are also many online free resources that allow to investigate market facts and trends such as:

- Google’s Marketer’s Almanac
- US Census: American FactFinder, County Business Patterns (CBP), Business Dynamics Statistics
- Claritas MyBestSegments by Nielsen

Lastly, another type of secondary research can be done on additional external sources of information such as Pew Research Center (Pewresearch.org) or Mintel (Mintel.com) with their Global New Product Database (GNPD), as well as their Household Market-Research, which has become one of the industry gold standards to access information on new product trends. Although Mintel is very well known, there is an infinity of analytical online panels, tools and programs that offer information, some being broader, some being more specialized: IRI, Symphony Marketing, Ipsos, Dunnhumby. A few platforms that provide consumer insight by tracking new trends and products can be mentioned (non-exhaustive list): TrendWatching (trendwatching.com), Euromonitor International (euromonitor.com) or Trend Hunter (trendhunter.com). They usually require monthly fees to be accessible, or offer reports that can be purchased. Of course, there is also a plethora of market-research companies<sup>5</sup> that either have information or can develop

---

<sup>5</sup> Several directories can be accessed online:

directory.esomar.org  
 greenbook.org  
 marketresearchdirectory.org  
 quirks.com  
 ama.org

*ad hoc* studies. It is interesting to consider organizations such as Esomar (esomar.com) which is a global community of researchers and industries on the market-research field. Their publications and seminars are an invaluable up-to-date source on market data and methodology. Organizations such as Esomar usually require an annual membership.

## 1.2 Pillars of a Test Design

This sub-chapter details the four crucial puzzle pieces (Figure 1.1) that need to be defined to build a test design.

### 1.2.1 What Are We Testing?

Figure 1.2 shows the four pillars of a test design: product, target, location and timing that will be further developed in details.

#### 1.2.1.1 Circumscribe the Test Product

Before moving forward in defining a test design, it is very important to restrict what is the to-be-tested product. Do we want to test the container, the content (sometimes called the ‘juice’ in the food or cosmetic industry) or both? One must keep in mind that every single component of a packaged good is going to impact the way the product is perceived overall. Sometimes, a tiny detail can overshadow everything else and determine the overall acceptance, rejection or banality impression. For example, if we are considering testing a yoghurt, when the objective is to test a new recipe, one may consider using bulk and serving it in neutral white or black bowls. It is important to never underestimate how certain components can sway the consumer’s perception. Let us imagine that the new yoghurt recipe has a slight beige tone and is presented in a snow-white bowl under regular day light. The beige colour may infer in the consumer’s mind a creamier, heavier recipe (see research from Harrar et al. (2011), which



**Figure 1.1** The four puzzle pieces of a test design.