INSIGHTS NOW
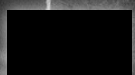
Inspire. Innovate. Win.

The Implicit/Explicit Test™

Applying neuromarketing for better product marketing, development and innovation

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Neuromarketing is an exciting branch of marketing and consumer research. It expands the researcher's toolbox, enabling deeper insights to help developers, marketers and innovators make more informed decisions. Based in the science of human behavior, this applied field offers a new lens for insights professionals to frame business decisions into questions about the whys of human behavior. This newness has created new opportunities for insights advancement but has also led to considerable confusion and misconceptions about how and when to apply these new tools for insights.

This eBook explains the basics of the tools, their limitations, when to use them—and clarify common points of confusion and misconceptions. In addition, we will introduce a methodology called the Implicit/Explicit Test™ which addresses many of the shortcomings and complexities associated with neuromarketing tools. Along with defining this methodology, we will provide examples for its varied applications across the spectrum of insights needs relevant to product developers, marketers and innovators.

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Behavioral Frameworks

Good research starts with asking the right questions. Innovators are interested in questions about the behavioral landscape where there is white space for new products. Product marketers are interested in questions about how to nudge and disrupt consumers to try new products through the promise of a brand. Product developers are interested in how to build products with qualities that signal the promise of the brand, such that consumers will desire to repeat the product experience. Neuromarketing methods have relevance across the whole spectrum of these applications.

Behavioral frameworks distill the science of human behavior to help insights professionals ask the right questions and know which neuromarketing techniques can be applied to deliver answers through insights. There are two behavioral frameworks, Modes of Thinking™ and Behavior Pyramid™, which are the most pertinent to these topics and best introduce The Implicit/Explicit Test™.

Modes of Thinking™ Framework

People as consumers, shoppers and research participants use different modes of thinking depending on the context of a moment where brands, products, product ideas and/or concepts are encountered and appraised. Brain science has found humans to preferentially prioritize one of three modes of thinking.

Implicit (System 1) is irrational, fast thinking that conserves mental energy. This includes thinking that is nonconscious, reserved to the ordinary, habitual encounters with products, and when decisions are mundane or not important. This involves nonconscious reactions and responses based on past sensory memories that are accessed through associations made in the moment between sensory cues and context of environment for those past memories. This mode of thinking leads to motivations for product or choice-related actions based on established habits and emotions experienced in the moment.

Explicit (System 2) is rational, cognitive, taxing thinking. This includes thinking that is conscious, when encountering the unordinary, when habits have been disrupted, or when decisions are difficult and important. This mode of thinking leads to motivations to take action based on rational weighing of infor-
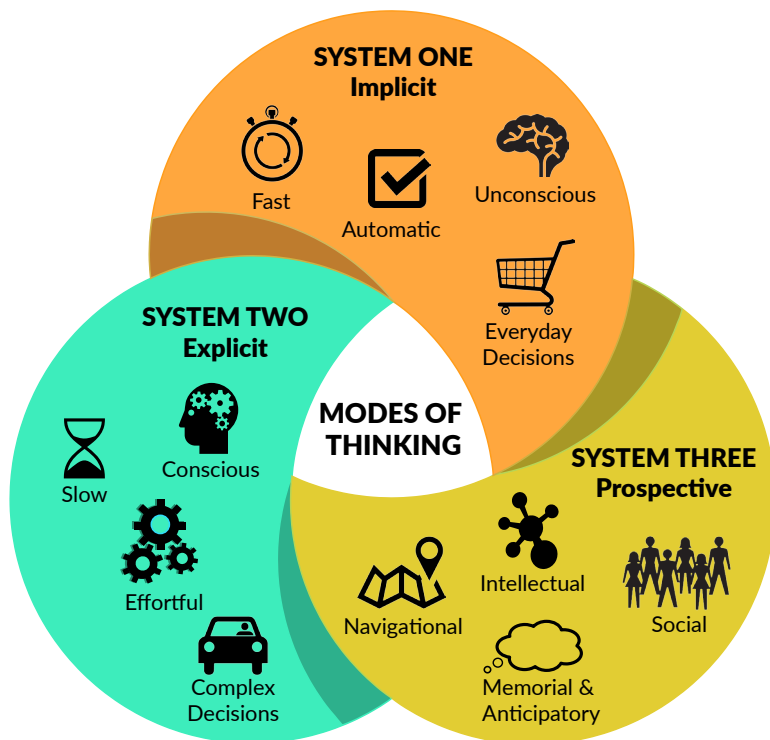
mation about the choice sets or alternatives, emotional memories and outcomes, and to come to a conclusion about a point of view.

Prospective (System 3 or a Variant of System 2) is projective, creative thinking about anticipated future states. This includes thinking about the outcomes from what-if scenarios; functional, social, sensorial or psychological benefits or consequences from actions; argumentative; or the imagination of a future state. This mode of thinking leads to motivations to take action based on anticipatory emotions such as fear, hope, intrigue, desire and disgust.

All three of these modes of thinking may be used to make one decision. For example, a shopper may be motivated to pick up product off a shelf set based on implicit thinking where an image, shape or color signals a benefit they are seeking. Once the shopper picks up the package, they may consider the content on the front or back panel to imagine how the product might be used at how (prospective thinking). Finally, the shopper might compare the price of the product with other products on the shelf to rationally consider which product to purchase (explicit thinking). Whereas the initial implicit reaction is fast and nonconscious, the explicit and prospective thinking which leads to choice may be slow, creative, and rational. Both implicit and prospective thinking lead to emotional impact.

The marketer, innovator or product developer all can leverage and utilize insights derived from understanding how these modes of thinking lead to trial, as well as in understanding consumer modes of thinking when the chosen product is prepared, served to family members and consumed.
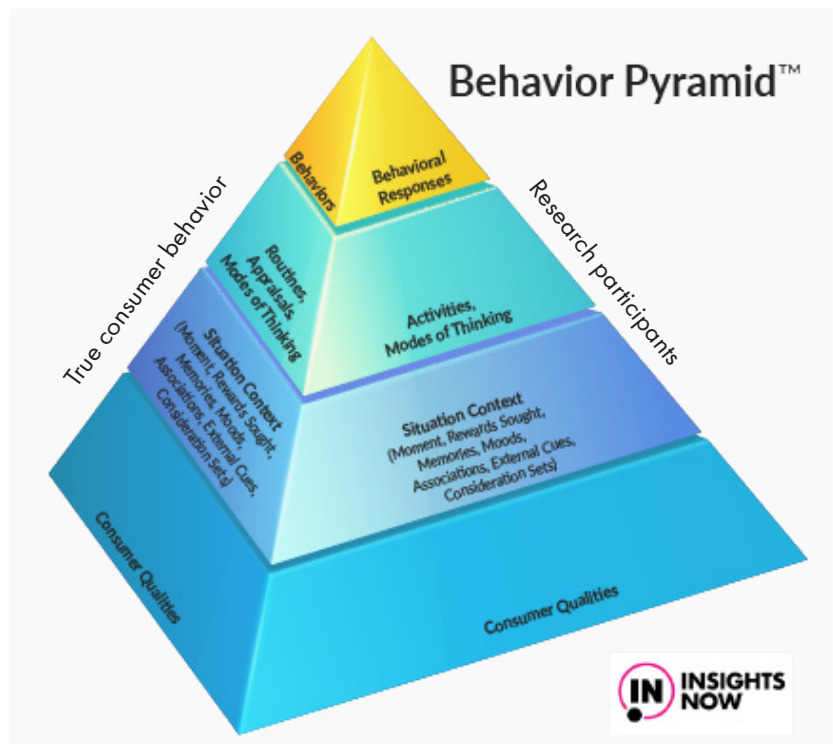

Modes of Thinking™

Behavior Pyramid™ Framework

Whereas the Modes of Thinking framework provides a way to understand the cognitive processes used by people as consumers, shoppers or research participants, the Behavior Pyramid™ provides a schematic lens to understand what information is processed. This includes extrinsic and intrinsic qualities about people, their environment, and stimuli they perceive in the context of a moment of experience or anticipated experience.

The Behavior Pyramid is organized bottom to top from things that change the slowest to things that change the fastest. The base is defined by those elements which change very slowly such as a person's age or life stage which are not easy for marketers to change, but which can be targeted. The next layer up are attitudes, which change more quickly and as marketers we have the opportunity to change. Next up are the contexts people are in, which change quite rapidly, and at the very top are emotions and resulting behaviors which are in very fast and rapid flux.

The Behavior Pyramid has two sides. The left side represents factors contributing to true consumer or shopper behavior. The right side represents the factors contributing to the response behavior of research participants.

The bottom most level is the same on all sides because it is comprised of defining, foundational attributes of people which change very slowly or not at all (e.g., demographics, life stage, psychographic qualities such as a personality, or bio-physical qualities such as genotypes). Once you move up, into context, activities and respective behavioral reactions, the sides change. The key to good behavioral research is to align the participant side with the other side to fit the research question. For example, shopper research needs to place participants into the context that most closely aligns with the true shopper experience. Likewise, the research activities asked of participants need to align (most closely follow) true shopper activities. Finally, the responses from research activities by participants needs to align (predict) true shopper response (e.g. choices) behaviors.

Modes of Thinking fit near the top of the pyramid. Many testing or activities place participants into an explicit mode of thinking. For example, in the context of a focus group a participant may claim they make food choices that are healthy alternatives. However, in the context of a quick serve restaurant when choosing between a salad and other less than healthy menu options (e.g. a double cheeseburger), the same person may choose the unhealthy alternative. In this "instance, there is a misalignment between the response behavior of the research participant and real-life behavior of a shopper. The participant is motivated to act differently in the focus group as a result of a different sets of factors (stimuli) associated with an explicit, rather than implicit, mode of thinking.

As such, most traditional research methods place participants into explicit modes of thinking to complete activities such as filling out lengthy, complex questionnaires about their opinions, attitudes, affects (likes and dislikes), or evaluative assessments based on information used to make rational choices or to express their reasoning behind their choices. Choice exercises often require participants to complete complex mental tasks like making choices or to rank among a set of alternatives.

Behavioral psychologists are clear that most consumer or shopper decisions are implicit.

The most applicable neuromarketing techniques are those that align the left side (i.e. true shopper or consumer behavior) with the right side (participant behavior) of the Behavior Pyramid. They do this by recruiting participants that are representative of consumer or shopper populations of interest, by placing participants into the same contexts of experience, and by engaging participants in activities that mirror the routines, appraisals and Modes of Thinking™ of consumers or shoppers. These neuromarketing techniques lead to behavioral responses that are closest to true shopper or consumer behaviors.

Defining Implicit Testing

Neuromarketing offers a wide range of research techniques. Implicit tests are designed to understand human response behaviors when people are using a System 1 (implicit) mode of thinking. This includes participant alignments in response behavior to real life shopping or consumer behavior that is habitual and ordinary. This also includes situations where implicit alignment is necessary to understand how products are truly perceived and evaluated in the context of typical consuming/shopping moments. Implicit tests uncover what qualities of products, brands, packaging and other information become accessible to people in the context of a moment when priming exposes sensory memories. When thinking implicitly, participants align with the behaviors of consumers and shoppers through mental processes that are nonconscious and cannot be articulated through explicit methods.

Behavioral scientists say that 95% of all mental processes are implicit, conserving our mentally taxing explicit thinking to address the 5% of the time for something new or unexpected where we must consider what to do when we have been disrupted. In this way, implicit tests are very good at measuring gut reactions to stimuli such as whole products or elements of products such as a claim

...implicit tests are very good at measuring gut reactions to stimuli such as whole products or elements of products such as a claim or ingredient on a label.

or ingredient on a label. For instance, it is common to have negative implicit biases toward a topic—such as a GMO ingredient—where when given time to think about it you may rationalize that the science proves to you that it is okay. Or conversely, you have a positive implicit assessment of GMO ingredients, even though you may say that you would not use them when given time to think about and formulate an answer.

Implicit tests are also good at comparing and contrasting elements that are disruptive (i.e., triggering explicit thinking). This is best illustrated in marketing claims research.

Putting a claim on a pack that is disruptive at a glance allows you to capture consumer attention. Disruptive content can also break habits by changing the moment—changing the external cues and/or the goals for what is or is not important in a consuming or shopping moment. Implicit tests are good at uncovering how to disrupt habits through advertising content or by changing the routines of consumers and/or shoppers such that they are open to considering alternatives via new content provided—requiring rational, explicit thinking to change behaviors.

Types of Implicit Tests

Implicit measures tend to be bucketed into two broad categories of techniques. The first is a category of active prime-target response techniques. This includes measures which require focusing the person on a specific topic or experience (prime), presenting some type of stimulus (target) and then requesting a response from the person. These are typically reported as percentages of the population and or speed in time to respond to one or more targets presented within a survey in the context of one or more primes. The second is a broad class of techniques passively capturing neuro-physiological measurements. These techniques are enabled by instruments which capture direct or indirect neuro and/or physiological measures from people when presented with a target. These passive techniques do not require an active response from the person.

Prime-target response techniques can be easily integrated into surveys to large numbers of participants in the context of more natural consumption or shopping experiences or to smaller numbers of participants in more controlled laboratory conditions. The instrument requirement of neuro-physiological response techniques tends to limit research to those who own the instrument required, or small numbers of participants and, in some cases, to laboratory conditions.

Prime-Target Response Techniques

Prime-target response techniques take advantage of human priming—an implicit cognitive process that forms sensory memories and makes those memories accessible to make ordinary, habitual decisions.

Priming includes past exposures and experiences with products or brands in environmental conditions that are recalled through cues perceived in moments that are associated with these memories; eliciting emotions tagged to those memories that lead people to approach or avoid products, brands and situations.

The person is given some type of prime (i.e. an image, product, story, context), which makes the brain focus on or recall specific memories. These memories are now more rapidly accessible than memories not associated with the prime. The person is then given a task to complete, where they are shown one or more targets (i.e. feature, attribute, product) and are asked to respond through very simple dichotomous responses (e.g. yes/no, pick one of two). The prime-target response is often timed as the faster the participant reacts, the more implicitly associated the target(s) are in the context of the prime.

Prime-Target Implicit Tests: Fast Direct, Implicit Association Test (IAT), Indirect Priming, and Affect Misattribution Procedure (AMP).

There are many different types of prime-target response implicit tests. Read on for a description of those most prevalent in neuromarketing research: Fast Direct, Implicit Association Test (IAT), Indirect Priming, and Affect Misattribution Procedure (AMP).

Fast Direct:

The most basic design is to provide some type of priming experience (i.e. taste a product, review a concept), then evaluate a series of targets (i.e. product attributes or benefits), answering yes or no that the target is something they experienced.

Response time is captured (typically in milliseconds), with the faster response times associated with implicit reactions and slower response times associated with explicit reactions.

Fast direct suffers from three major hurdles:

- Determining what qualifies as fast enough to be an implicit response.
- Factoring in the context effect—response time will change depending on the person's context (before they had their coffee in the morning or after).
- Determining the amount of content they need to take in before they can make a response (i.e. the length of the word or sentence they read).

What qualifies as an implicit response?

The issue of what qualifies as an implicit response is a significant hurdle which has a large impact on the research interpretation and ability to predict behavior.

- One approach is to set a specific cut-off time (e.g. 8 milliseconds). This assumes that all brains process information at the same speed and that the muscles of different people operate at similar speeds. Using this assumption forces you to make broader generalizations with research results such as "more likely to be implicit" or "less likely to be implicit." Using the approach to predict percentages of populations who will react a certain way is not advised.
- A second approach is to calculate a baseline for each person and use that baseline to weight the time data such that an overall cut-off for a tested population can be set. This approach allows for more clear estimates of population behavior, yet calculating a group cut-off time forces the conclusions to be specific to each piece of research with limited ability to consider subsets of the population.
- At InsightsNow we address this by running a person specific calibration such that a unique cut-off time is calculated for each person. This allows for the greatest extensibility of the research and allows for a fair comparison of any subset of people.

Overcoming the context effect

The second concern relates to context effects which , while less pronounced than the overall time issue, remains a significant factor. To address this issue, the most common practice is to run a baseline or calibration each time a person starts a piece of research. This ensures that the measures can take into account their context. Similarly, the research instrument must look for and remove outliers (for instance when a person is distracted by a text they receive or some activity which takes their attention away from the question being asked).

Content consumption issues

The third issue is content consumption. This is especially challenging when working with targets which are words a person is reading.

There are two basic approaches being used to address this issue:

- Show, within the baseline, various controls and use this as part of the weighting.
- The second is to create a separate weighting factor per target. For instance to address this, InsightsNow built a character length adjustment model based on thousands of responses to various character lengths of word strings.

Implicit Association Test (IAT)

This is operationally quite similar to fast direct, however while people are focused on assessing the prime, the actual assessment the researcher cares about is between pairs of targets—which targets are more associated with each other in the context of the prime.

A prime is an experience (i.e. eating a chocolate dessert) or the context of a moment (e.g. at home watching TV). The participant's activity is to choose between one of the alternative targets (i.e. "sweet" vs. "like", "sweet" vs. "dislike", "sour" vs. "like", "sour" vs. "dislike") to understand which targets are most implicitly associated for the chocolate dessert experience. An IAT is based on what cognitive psychologists call cognitive dissonance. Cognitive dissonances disrupt easy and fast implicit thinking, forcing the participant to take longer to respond. If "sweet" or "liked" in combination are responded to the fastest, then they are more associated to each other. These targets are most easily associated with Target Combinations are then presented ("sweet" vs. "like", "sour" vs. "dislike") and the difference in speed which occurs when choosing between the targets determines if the targets are associated from past experiences associated with the prime.

Indirect Priming

These techniques use two primes—an initial prime that is the indirect prime of interest, and a second direct prime that is a proxi to aid in the assessment of how the indirect impacts response to one of more targets. For example, in assessing a product (the indirect prime), you can ask participant to select an image (direct prime) that is associated as a metaphor for how the product experience made the participant feel. Then the technique asks the participant to respond to select targets such as statements of different feelings that might describe the selected image.

This technique works really well because cognitive scientists have found indirect primes (e.g. images) to be influenced by the direct prime (e.g. product experience) when they are introduced in close proximity to one another. We have found this technique to be applicable when the indirect prime cannot be re-introduced (e.g. have the product experience again); whereas, the direct prime (e.g. image) can respond (e.g. yes/no) to multiple targets (e.g. statements of feeling).

Indirect Primes can be used to understand semantic associations in meaning between the indirect prime (e.g. a complex statement) and target words (e.g. definitions). They can be applied as in the above example as a way to evaluate product experiences. They can also be applied to understand affect, the associations in approach or avoidance, or the degree of affinity between an indirect prime (e.g. brand) and targets (e.g. statements of trust or distrust) through a direct prime (e.g. brand meaning).

Affect Misattribution Procedure (AMP)

This is one of the few semantic or visual assessments where the speed of the response does not matter, but rather the frequency with which an association is made. In this approach a prime is shown, then removed, an ambiguous image is shown and removed then the person is asked to rate the ambiguous image on a target (i.e. paired directionally: pleasant or unpleasant, or independently: pleasant yes or no). This entire sequence is repeated in fast succession, showing all primes and all targets multiple times. Implicit associations emerge after multiple trials (>15 per prime and target) where scoring is applied to indicate the probability with which the prime is associated with each target.

Neuro-Physiological Techniques

There is no "silver bullet" method to conduct implicit testing. They all have their values. Neurophysiological methods are excellent in situations where you want people to focus on the task at hand and do not want the research task (i.e. collection of information) to inhibit the participant's experience or mental processing in reacting.

Here we cover the common neurophysiological techniques of biometrics, brain scans and facial expressions, and their relative value.

Neuro-Physiological Techniques: Biometrics, Brain Scans and Facial Expressions

Biometrics

This uses Autonomic Nervous System measures such as skin conductance, heart rate, breathing and other biological feedbacks. Biometrics primarily rely on a measure of biometric activity such as electrodermal activity (EDA) which detects changes in electrical skin conductance. This focuses on measuring the sympathetic nervous system arousal, which would indicate heightened alertness to either the prime or the target. Biometrics measure arousal—but they do not measure valence, therefore they can identify how large of an implicit reaction was created, but are not able to provide an understanding of if that would impact behavior positively or negatively (no ability to understand if it will nudge or disrupt a person).
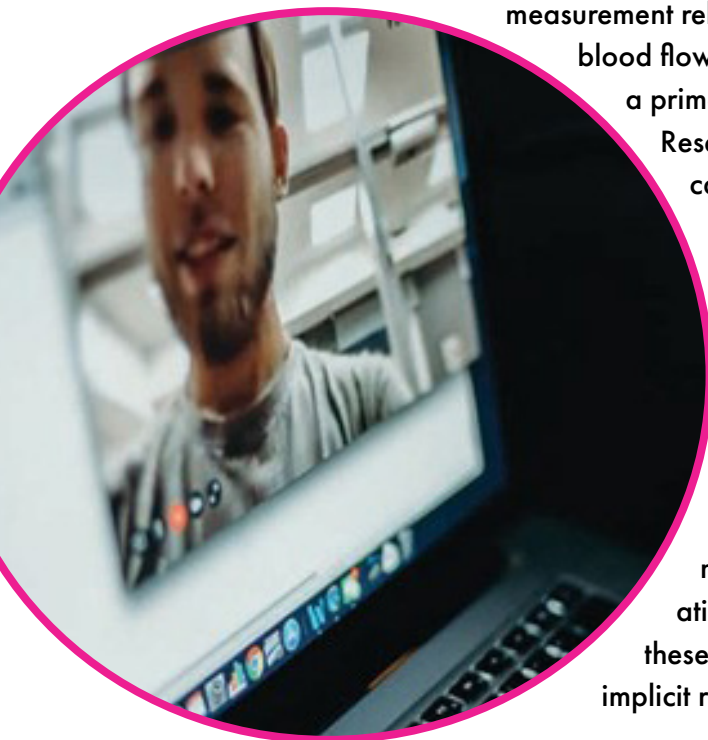
Brain scans

Brain scans include Central Nervous System testing like EEG, fMRI, PET and so forth. Brain scan approaches range from measuring general brain activity to measuring very specific regions of the brain.

The more specific focused measures provide information about where and how the mental processing is occurring. These measures allow for the assessment of both the implicit as well as the explicit and cognitive aspects of the experience the person is having. These are valued do to their potential to be highly specific in nature, yet are a struggle when the equipment creates a distraction.

Facial expressions

Facial expression measurements include EMG, facial coding, optical imaging and eye movements. Facial measurement relies on the ability to monitor the expressions a person makes (and blood flow with Transdermal Optical Imaging) while they are experiencing a prime or target. The movements of the facial muscles are measured. Research in this space is fast evolving as models are being built to categorize a specific sequence or combination or speed of muscle movements to indicate if a person is feeling a specific emotion or having more of an approach or avoid reaction.

Measuring facial moments has some limitations where there is any type of stimulus that involves the face itself—smelling, tasting, or makeup, as it obscures or changes the way the face moves. These are valuable as they allow the now highly ubiquitous and common camera to monitor many types of values—thus making them more likely to be usable with a wide range of situations and participants. When used in combination with biometrics these methods are providing the ability to see when a person has an implicit reaction when they look at a specific object.

The Implicit/Explicit Test™

The difficulty in conducting implicit tests is that there is no way to ensure that participants are using an implicit mode of thinking. Many prime-target response methods capture how fast participants respond as a measure of how much implicit thinking is being used to process the given prime(s) and target(s). However, the measure of "how much" is limited to measures of central tendency (i.e. mean response time) which cannot be used to understand questions about how many, how frequently, and what proportion of participants are using one mode of thinking or another.

The Implicit/Explicit Test™ is a broad methodology that goes beyond measuring response time to identify what mode of thinking a given participant is applying at the point of response.

There is huge value in this broad methodology:

1. Incorporate in the analyses to deepen insights

2. Drive survey logic to gather more information to broaden insights

3. Create automation in the design of metrics for custom syndicated solutions

4. Provide a new class of Behavioral Key Performance Indices (KPIs) for more accurate business decisions

5. Create new industry standards for supply chain alignment against consumer perceptions and behavioral reactions

What is the Implicit/Explicit Test?

The Implicit/Explicit Test is a patented approach to implicit testing that begins with a calibration of the cut-off time for a fast, implicit reaction for each person. This calibration forces the use of System 1 thinking and then calculates their cut-off time where they switch back to System 2 thinking. This cut-off accounts for variation in individuals, the context of a survey, or a particular device in a given moment. This calibration is made at the beginning of each engagement with a research participant so that it can be used in real-time within a given piece of research.

This person-specific cut-off allow us to break down any specific reaction into the percentage of those who have a fast implicit reaction, versus a slow explicit (or prospective) reaction. This provides a valuable measure of of how large of a percentage of the population will react a certain way.

The "power" of a technique is in its application. We have found the degree to which clear priming is managed as well as how detailed you make the task affects the degree to what conclusions you can make. Secondarily, calibrating every single person is critical. When generalizations are being made across a group of people rather than calibrating at an individual level, the researcher loses the "power" of calculating percentages of the population who will react or behave in a certain way. In this regard any implicit work done without individual calibration loses its ability to look at population metrics, and therefore becomes only valuable in comparing the stimulus or products themselves. In this regard they lose their ability to draw dramatically differently conclusions than when using scaled responses.

To date, we have discovered that The Implicit/Explicit Test fits well into a fast-direct or indirect priming methodology. In theory, there should be cases where the Implicit Association Test could be designed as an Implicit/Explicit Test. Below are some examples for application.

Fast-Direct Implicit/Explicit Test

In the case of fast-direct, the calibration of cut-off time for implicit mode of thinking for the participant enables the dichotomous response (e.g. Yes/No) to the target to be bucketed into four distinct behavioral reactions (Implicit Yes, Implicit No, Explicit Yes, and Explicit No).

This is useful for drilling down to see specific population differences. Simultaneously we also weight the four quadrants and calculate a score on a 100 point scale to allow for easy generalizations across wide groups of people and products or stimulus and studies.

Ingredient Clean Label Score™

	No	**Yes**
Slower	*Explicit Response* Unfamiliar Ingredient or Use Risk Low	Unfamiliar Ingredient or Use Risk High
Faster	*Implicit Response* Familiar Ingredient or Use Risk Low	Familiar Ingredient or Use Risk High

Time to Respond

Avoidance

Ingredient Clean Label Score™

One case is to measure the avoidance reactions of study participants to ingredients as they might be shown on an ingredient label. In this case, after implicit time calibration, we prime the participant into a moment where they consume a food they have selected as typical for them. Then the target is presented as an ingredient name as might be shown on an ingredient label for the typical food. They are asked to respond "OK" or "Avoid." The four response categories are weighted minus 1 (Implicit Avoid), minus 0.5 (Explicit Avoid),
positive 1 (Implicit OK) and positive 0.5 (Explicit OK). This becomes a 100 point Ingredient Clean Label Score for a group of participants responding to any ingredient. These scores are then be used to statistically test for differences between ingredients or other test criteria such as changes in ingredient perceptions over time or among different primes (types of foods or contexts of use).
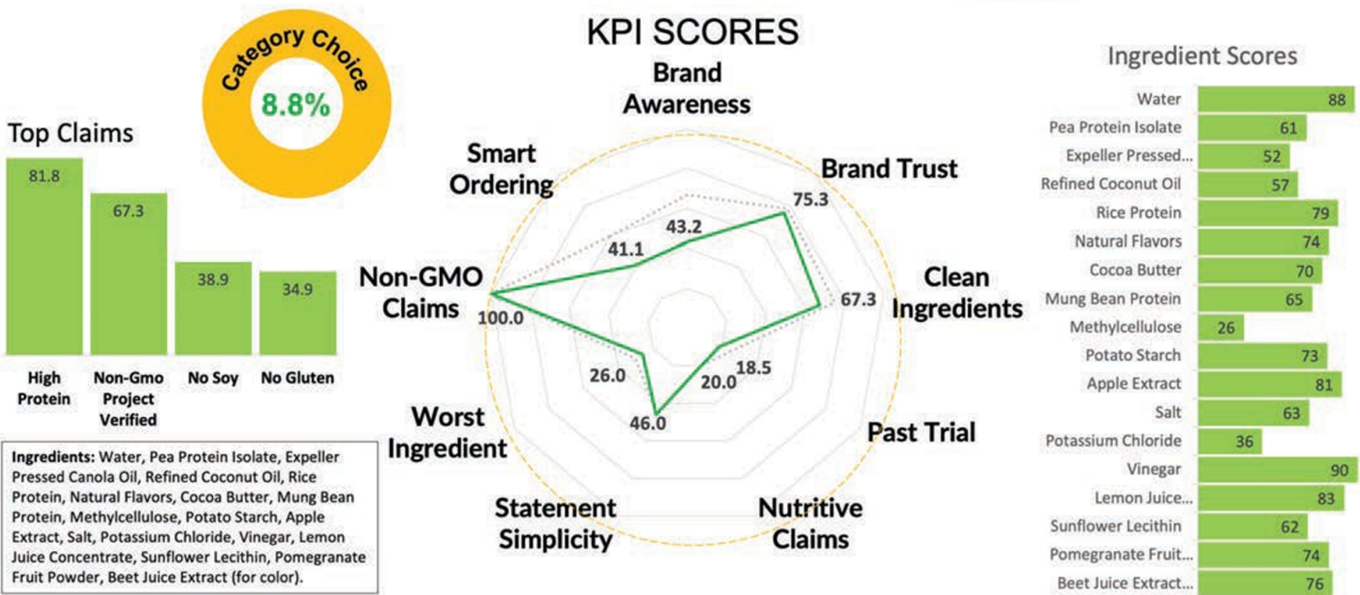

Beyond Burger Product Scorecard
With Plant-Based Category Baselines

BEYOND BURGER®

Category Choice 8.8%

Top Claims

81.8	67.3	38.9	34.9
High Protein	Non-Gmo Project Verified	No Soy	No Gluten

Ingredients: Water, Pea Protein Isolate, Expeller Pressed Canola Oil, Refined Coconut Oil, Rice Protein, Natural Flavors, Cocoa Butter, Mung Bean Protein, Methylcellulose, Potato Starch, Apple Extract, Salt, Potassium Chloride, Vinegar, Lemon Juice Concentrate, Sunflower Lecithin, Pomegranate Fruit Powder, Beet Juice Extract (for color).

KPI SCORES

- Brand Awareness
- Smart Ordering — 43.2
- Brand Trust — 75.3
- Non-GMO Claims — 100.0 / 41.1
- Clean Ingredients — 67.3
- Worst Ingredient — 26.0 / 46.0
- Past Trial — 18.5
- Statement Simplicity
- Nutritive Claims — 20.0

Ingredient Scores

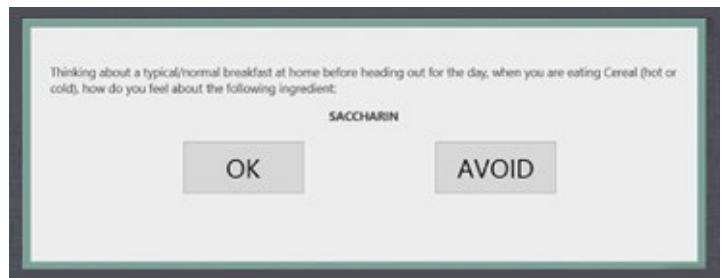| Ingredient	Score
Water	88
Pea Protein Isolate	61
Expeller Pressed…	52
Refined Coconut Oil	57
Rice Protein	79
Natural Flavors	74
Cocoa Butter	70
Mung Bean Protein	65
Methylcellulose	26
Potato Starch	73
Apple Extract	81
Salt	63
Potassium Chloride	36
Vinegar	90
Lemon Juice…	83
Sunflower Lecithin	62
Pomegranate Fruit…	74
Beet Juice Extract…	76

Ingredient Benefit Association Score™

A second case is to set the prime as a benefit of inter-
est (e.g. energizing) and to then present a series of in-
gredients as targets with the response to the question,
"Does the following ingredient provide [benefit]?"
being "Yes" or "No."

Thinking about a typical/normal breakfast at home before heading out for the day, when you are eating Cereal (hot or cold), how do you feel about the following ingredient:
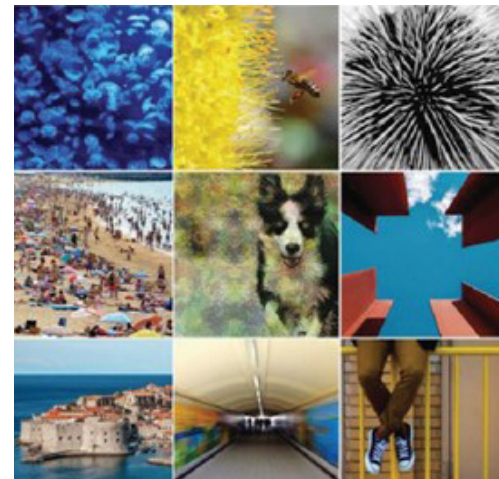
SACCHARIN

OK   AVOID

Like in the case of the Ingredient Clean Label Score,
this Yes/No dichotomous response with a known calibration of the implicit cut-off time enables for response
categories and respective weights (Implicit Yes +1.0, Explicit Yes +0.5, Explicit No -0.5, and Implicit No -1.0).
The Ingredient Benefit Association Score is a 100 point weighted score for each combination of prime (benefit)
and target (ingredient). Statistical comparisons tend to be among targets for the same prime to see which ingre-
dients are more or less associated implicitly with the benefit.

Indirect Priming Implicit/Explicit Test

A good application of the indirect priming method has been to mea-
sure two types of emotions, experiential emotions and anticipation
emotions.

Experience emotions are those in response to a product experi-
ence, such as product assessments in home use (HUT) or at a central
location (CLT). This includes emotions such as satisfaction, dissatis-
faction, disappointment, enjoyment, liking, pleasant or unpleasant
surprise, disgust, and desire. The method includes an indirect prime
(product experience), a direct prime (selected images from a pallet
of images), and a series of targets (emotions words). The participant
experiences the product then selects an image that most closely is associated with the product experience. The
selection of the image to represent their feelings of the experience is a projective technique widely used in psy-
chology to assess emotions as it allows for the capture of complex emotions which happen faster than a person
can answer. Having a projective image as the direct prime allows for the recall of which emotions are implicit.
Once the image is selected, the participant then is asked to respond to a series of targets (words with emotional
meanings) with the response "Yes" or "No" to being associated with "Does the following describe how you
feel about the image?"

This method is used to statistically compare among one of more products for one of more emotions and is used
to identify the emotional profiles that are used to describe a given product experience. Further, the selected
images may be used to define marketing imagery most associated with a product experience.

Solutions Based on The Implicit/Explicit Test

The Implicit/Explicit Test deepens and broadens insights into the behaviors and reactions of people to products and messages. It helps marketers, product developers and innovators make faster, better decisions. In addition, to those described above for ingredient and product testing, applications have been use to understand messages and claims, identifying those which will nudge current behaviors and habits as well as those that will disrupt. They have also been found to compare and contrast among ideas, concepts, flavors, fragrances, recipes and brands. A summary of some of these applications is below.

App Solution	Implicit/ Explicit Test™ Method	Context	Question	Response
Ingredient / Brand Perception Profiles	Fast Direct Fast Direct Fast Direct	Occasion / Situation None or Occasion	In {context} for {product category} if you saw the following ingredient would you be ok or would you avoid it? Does the following ingredient provide [benefit]?	OK/Avoid Yes /No Yes /No
Messaging and Claims Selection	Fast Direct Fast Direct Indirect Priming Indirect Priming	None or Occasion None or Occasion Current State None or Occasion	is this message [diagnostic] Image selection followed by "does the following describe how you feel about the image" mage selection followed by "does the following describe how you feel about the image"	Yes /No Yes /No Yes /No Yes /No
Concept Valuation	Fast Direct Indirect Priming	Future State (system 3)	Image selection followed by "does the following describe how you feel about the image"	Yes /No Yes /No
Packaging Valuation	Fast Direct Fast Direct	Shopping		Yes /No Yes /No
Flavor / Recipe / Idea Screening	None Fast Direct	Product Use Situation Product Use Situation	Are you willing to give up your favorite [flavor / concept] to try the following?	Yes /No
Brand Perception Profile	Fast Direct Fast Direct			Yes /No Yes /No
Product Testing	Fast Direct	Product Use Situation	Does the following describe how you feel about the image?	Yes /No

In addition to study insights, we have used the Implicit/Explicit Test scores to drive survey logic that gathers more information by probing into what explicit rationalization participants give to their implicit reactions. This has deepened insights into the discovery of why consumers react so negatively to certain brands or ingredients and to explore sources of information they recall associated with specific primes. Due to the ability to transform individual responses to a 100 point score, we have warehoused databases of information about the reactions among target segments of consumers to ingredients to track and monitor changes in their reactions over time. This has led to the creation of Behavioral KPIs that business decision makers can use to customize syndicated data for their specific business need.

These new Behavioral KPIs based on the Implicit/Explicit Test are creating new languages and metrics for whole supply chains to align—helping food and supplements retailers, brand owners and ingredient suppliers understand how to apply ingredient innovation earlier into the innovation process to more faster build products perceived to be cleaner, healthier and aligned with the promise of positioning in the marketplace.

Want to jump start your research with new techniques for deeper consumer insights?

Let's connect:
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About Authors:

Dr. David Lundahl, CEO & Founder, InsightsNow
Dr. Dave Lundahl is passionate about fostering innovation to create a cleaner, healthier, happier world. He is an entrepreneur—founding companies that follow this passion by providing consumer insights for faster and more successful innovation. Dave has held many industry leadership positions, written for various publications, and is sought for speaking engagements on topics that align with his passions. He served as a professor working in food product innovation at Oregon State University before starting InsightsNow in 2003. Dave holds a Master of Science degree in Statistics and a Doctorate in Food Science & Technology.

Greg Stucky, CRO, InsightsNow
Greg Stucky has focused his career on the development of new methods, techniques and services for research innovations. His deep experience in the application of consumer behavior to product innovation has garnered industry attention and awards, with work featured in Harvard Business Review, The LA Times, ESOMAR World, and other industry publications. Greg has pioneered cue signals research, an approach where identifying product cues which motivate specific behaviors helps develop successful new products and brands. At InsightsNow, he is responsible for the growth of new business initiatives. Greg holds a master's degree in food science and technology from Oregon State University.

About InsightsNow
US based, award-winning, behavioral research and strategy firm InsightsNow partners with brands across industries providing a strategic mindset to marketing, branding, and product development. Founded in 2003, InsightsNow offers custom, collaborative solutions and proprietary behavioral frameworks, providing expert guidance to uncover the right answers, improving success in market.