

INSIGHT

Blending our thoughts to create something new holds great promise for value creation.

by **Gerald Zaltman**

Co-Creation: Harvesting the Unconscious to Create Value for Business and Society

PROGRESS IN THE BEHAVIOURAL SCIENCES is occurring rapidly, making this an exciting time for those of us interested in the inner workings of the human brain. Two particular challenges lie ahead, both of which are substantive. The first is to better understand how mind, brain, body and society operate as a single unit. For instance, how does what occurs in the brain affect social relationships and society in general? A second and related challenge is to better understand how specific aspects of mind and behaviour are bound together. For example, how are memory and the development of insights related?

In this article I will focus on this latter challenge by attempting to connect the dots between thought processes that are normally treated independently. In doing so I will show that the connecting thread among the dots involves the ‘making of meaning’, and that the needle for weaving the connecting thread is the concept of *co-creation*.

The Emergence of New Thoughts

Most mind/brain activities unfold below our level of awareness and have thus been referred to as ‘automatic’. Many decisions, for

instance, are made at speeds that permit conscious awareness only after the fact. This contributes to the illusion that consciousness directs most of our thoughts and actions rather than resulting from them.

Consider an example: you are sound asleep and are suddenly awakened by a loud noise – perhaps an alarm or a child’s voice. But just before you wake up, you experience a dream wherein this same noise somehow serves as the concluding element of the dream; it is the more or less logical endpoint of the dream story. Of course, it is technically impossible for the dream’s cause to be its endpoint. It turns out that the different elements involved in the experience of a dream and in the registering of an external noise travel at varied speeds and arrive in reverse order in the part of the brain that allows us to recall a dream. Hence, we have the illusion that the noise is the endpoint of the story. This is but one example of how the unconscious mind is a spawning ground for ideas and the stories we assemble with them.

Have you ever wondered what happens when you have a thought? One answer is that you have ‘an activated set of connected neurons’. However, an isolated thought has little meaning, just as a dictionary doesn’t tell a story. Sometimes, when neural clusters are co-activated and associated, there will be a blending among some of them that yields yet another meaningful cluster, creating a new thought. I call this process *co-creation*.

Co-creation refers to the emergence of new thoughts as previously independent thoughts encounter one another and produce a new meaning or new thought. A new blending of neurons, i.e., a new neural circuit, arises from the meeting. That is, a new space or domain is created which consists of selected elements from each of the two (or more) previously independent domains plus – and this is very important – the new idea(s) that emerges from the blending of the two spaces.

For example, a person searching for a *rugged* vehicle might encounter an ad featuring a truck’s suspension system. The concept of ‘rugged’ (a product benefit) interacts with information involving the suspension system (a product attribute) to create a new idea: that of off-road *driving freedom* while the notion of rugged and suspension system are retained as part of the altered schema. The newly-created idea of ‘driving freedom’ is the product of the unconscious blending of two previously non-intersecting domains: the existing idea of *rugged* and the information acquired about the vehicle’s suspension system. Note that it is not necessary to mention ‘off-road driving freedom’ in the ad to have it come to mind. In fact, the thought is likely to be more powerful if it is the consumer who, through co-creation, generates the idea rather than having it explicitly stated in an advertisement.

The Role of Reconstructive Memory

The encoding, storage and retrieval of information in memory are central to how we form conscious representations of everyday life.

Memory – particularly episodic memory – is not a fixed event like a traditional photograph, even though, like a standard photograph, it may fade, be lost or even insufficiently developed. Instead, we engage memory as if our mind had its own version of Photoshop.


Every act of remembering involves a reconstruction of information, leading to distortion. Technically, a different set of neurons is involved each time we recall a particular event, and thus each ‘memory event’ is context-sensitive, yielding a repetition of a mental or physical event that is similar but not identical to previous acts. Differences in recall from one time to another may be trivial: practically speaking, each recollection is the same as the one before it. However, sometimes the differences may be of great consequence, even if the person remembering is unaware of the changes or their magnitude.

Harvard’s **Daniel Schacter** and **Donna Addis** have distinguished between the *constructive* and *elaborative* phases of remembering the past and imagining the future. Their evidence suggests considerable overlap in active brain areas for both remembering and imagining when engaged in *elaboration* tasks, i.e. tasks requiring the generation of details. However, noticeable differentiation exists in the initial *construction* task when it is necessary to simply generate either a past or a future event. For instance, when constructing a future event, there is much more activity in the right *frontopolar cortex* (associated with prospective memory), the left *inferior frontal gyrus* (which mediates generative processing) and the right *hippocampus* (related to relational processing of disparate details). As they explain:

“Both past and future event tasks require the retrieval of information from memory, engaging common memory networks. However, only the future task requires that event details gleaned from various past events are flexibly recombined into a novel future event and further, that this event is plausible, given one’s intentions for the future. Thus, additional regions supporting these processes are recruited by the future event task.”

An important question is, what happens during memory’s reconstructive process? What triggers the process and shapes its content? A simple answer is co-creation, or the blending of immediate stimuli with prior knowledge to create an altered re-experience of an earlier event. An important assumption here is that the so-called immediate stimuli – like the information about a truck’s suspension system – is *meaningful* to the individual, that it fits within their knowledge structure. As Schacter and Addis write,

“When we recall an event, we re-experience it, so that the neural activity is not identical to the one that produced the remembered event. Rather, the experience is that of the original *mixed* with an awareness of the current situation. This experience of remembering ‘overwrites’ the memory.”



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This mixing of stored, prior stimuli and new stimuli is central to co-creation. Consider the following example: people viewed a film depicting two moving cars coming into forceful contact with one another. Some were asked, “Please record everything you saw in the *accident*,” while others were asked, “Please record everything you saw in the *crash*.” Many fewer people in the ‘accident group’ compared to the ‘crash group’ reported seeing broken glass: moreover, the differences in the incidence of reporting broken glass occurred regardless of whether or not the version of the film shown actually included broken glass.

People ‘remembered differently’ when the schema for ‘accident’ and that for ‘crash’ were activated because the terms *accident* and *crash* invoke different images – and hence patterns of neural activity – involving force. The different images of force interacted differently with the information encoded upon seeing the film. The greater incidence of recalled broken glass for ‘crash’, for instance, is a new meaning that arises when the viewer unconsciously blends the original information with the more forceful imagery encased in the term ‘crash’. Again, elements of previously-separate sets of neural connections combined to form a new network. In this case, the new network created a scene involving broken glass and the corresponding false feeling of having observed it.

An example of an external cue altering recall through co-creation is provided by research I conducted with **Kathryn Braun-LaTour**, assessing the impact of advertising on beliefs. When people were recruited for the experiment, they were asked on the phone to respond to a simple questionnaire about their attitudes and beliefs concerning a specific health issue. Participants subsequently came to a lab and were divided into a control group, a group that would see an advertisement for Brand A, and a group that would see an advertisement for Brand B. Following an initial distraction task, they were told they were engaging in a memory test. Using a printed version of the same questionnaire, people were asked to provide – to the best of their abilities – the same answers they had given by phone a few days earlier. Then, two to three days after the lab visit, they were contacted by phone *again* and asked the

same questions a third time, although no mention was made of a memory test.

The ‘story’ in advertisement A was intended to produce a thought currently missing among consumers and to reinforce and/or strengthen their existing thoughts. This was achieved as evidenced by their altered memory of their initial answers. The control group showed no statistically-significant changes from their initial answers in the responses they provided in the lab setting or two or three days later by phone.

However, those viewing the two advertisements showed significant differences in recall in the lab setting when asked to report how they had answered initially. The differences were consistent with the intended impact of advertisement A and presumably the competing ad for Brand B, and these differences persisted two to three days later. To be clear, people were not asked anything about the ads themselves, such as their recall of the content or whether they liked them; they were simply asked to repeat what they had said initially concerning their attitudes and beliefs about treating the medical condition, and on the third occasion they were asked again for this information without reference to a memory test.

The basic point is that co-creation processes – the emergence of new thoughts as existing thoughts meet and blend with newly-encountered stimuli – help to produce altered memories, and the newly-created thoughts or ‘blends’ become part of what is recalled as a previous experience. As a result, people will sometimes ‘remember’ having a thought they have not previously had and might even give it significant weight. They will also mis-remember the weight they assigned to previously-expressed thoughts.

Insight: Flash and Creep

As described thus far, co-creation is central to having insights, which occur when a previously-unseen connection is suddenly revealed. One aspect of insight – the element of time, deserves special attention.

Insight contrasts with a more formal and conscious search process in which we systematically evaluate relevant information to

The Creation of Meaning

Figure One



solve a problem. Often called the 'Aha!' moment, I prefer the term 'click of comprehension'. Insight typically involves seeing previously-obscured relationships between different information domains. The more distant the domains are from one another, the more likely it is that their connection will be missed by routine problem-solving efforts. While the 'problem' in problem solving is usually treated as being explicit, in truth it is often implicit: we may be quite unaware of having it until a solution comes to mind. I propose that many so-called 'unarticulated' consumer needs fall into this category. For instance, the infamous Pet Rock was a successful solution to a problem whose definition, to this day, remains unclear.

The flash-like nature of the click of comprehension should not be confused with its often 'creeping' development. How often does a much better answer than the one you provided to someone suddenly occur to you – long after the question was posed? And how often have you suddenly understood what someone really meant, long after the conversation has ended? We are unaware of the activation, novel integration and consolidation processes that may take minutes, hours, days and even years (in the case of psychotherapy and scientific breakthroughs) to produce a new thought that is suddenly experienced consciously.

The University of Southern California's **Irving Biederman** and NYU's **Edward Vessel's** research is helpful for understanding what happens physically at the moment of co-creation during insight: the surface of certain brain cells have molecular receptors that are targeted by opiates; these cells are differentially distributed in our brain and are most dense in the later stages of recognition, in the *parahippocampal cortex* and rhinal cortex, where visual information engages our memories. A similar arrangement exists with non-visual sensory information. The *parahippocampal cortex* is also involved in making associations which are the foundations for making meaning. Thus it is no surprise that we might feel good when a memory is engaged by a particular fragrance, taste or sight; given the relatively dense presence of brain cells with opiate receptors, the more clear these associations, the more pleasurable the experience, up to a point. Once that point is reached, novelty becomes important.

Fortunately, we are designed to be open to and enjoy new experiences and even to seek them out and store them away in memory, resulting in the accumulation of a large store of knowledge. What is now becoming apparent is that this prior knowledge can enable us to create solutions to problems.

The Generative Role of Metaphor

One of the principal devices for bringing seemingly-unrelated information to bear on a problem involves *metaphor* – a representation of one thing in terms of another that involves connecting a source domain (the metaphor setting) with a target domain (the setting of the basic idea to be clarified or problem to be solved.) Metaphors create an image that can challenge what is blindly accepted, allow new links to develop and generate new ways of thinking. For example, 'Fear is a beast that feeds on attention', or 'His speech was peppered with vitriol'. I use the term broadly to include non-literal or figurative expressions, including analogy.

When different domains are brought together, such as a metaphor and a product or service, two things occur. First, the metaphor serves a clarifying function by helping consumers better understand the product or service. The second and especially-important consequence is that when the metaphor and object being explained interact, they may sometimes create a new idea not inherent in either domain alone. Thus, metaphors have the power to generate or create meanings beyond those unique to the source and target domain. Put simply, metaphors do more than help make a point; they can also shape what and how we think.

Both memory and metaphors are representational in nature: a memory represents a past experience in the present while a metaphor represents one thing in terms of another. These representations are 'packets of meaning' or what I think of as 'stories' for past, present or future experiences or events. It appears that the more semantically distant a metaphor source is from the target it is intended to illustrate, the more impactful it is. A less distant metaphor reaching the same threshold will be less impactful

because there will be less co-creation. Connecting a relatively distant source with a target domain appears to engage more brain cells involving opiate receptors. Thus the connection between a more distant metaphor and a product is likely to be even more salient – the ‘click’ will be louder.

Metaphors are central to co-creation in that they engage consumers’ own thinking in such a way that they and the advertiser ‘co-author’ a meaning. Advertising content makes liberal and usually deliberate use of metaphor. While the story that emerges may vary from consumer to consumer, it will ideally be directionally consistent with the advertiser’s intent. For example, one financial institution found that the metaphor of ‘a seeing-eye dog’ was particularly effective in creating the impression that its personnel were warm, sympathetic and reliable. Before seeing the ad, ‘warm, sympathetic and reliable’ were not concepts associated with the institution, but they were afterwards. These effects were less pronounced when using the less-distant metaphor of ‘health care professionals’. Interestingly, among health care professionals, nurses were more effective in conveying these qualities than were physicians.

Additionally, it was determined that the idea of being sympathetic interacted with existing consumer thoughts of security to produce the idea of the institution being cautious managers of risk. Consumer thoughts about working with a forward-looking financial institution also interacted with a claim that the institution provided sound advice. This led to the new idea that this particular company would likely be helpful in achieving personal goals.

Consumption Visions

Elements in our past experiences and those desired in future experiences make up our individual ‘self-stories’. Self-stories are created when the past and future are brought together in the present. The cognitive play that occurs in these creations often takes the form of what my colleague **Jerry Olson** calls ‘consumption visions’.

Consumption visions are imagined fantasies – stories arising from playing with patterns – about the consequences of one or more consumer choice behaviours. According to Olson, these visions, which I suggest are a kind of insight, may come in a *narrative* form, for example, a simple story with a beginning, middle and end occurring in a particular setting, or they may involve *visual imagery* such as someone picturing themselves in their mind’s eye wearing an article of clothing or sitting in a vacation setting.

Consumption visions may involve imagining *different selves* made possible by various goods and services or they may involve the forecasting of different emotional reactions to the experience afforded or occasioned by a future choice; for example, whether I will feel guilty or pampered by indulging in a snack food. Finally, a consumption vision may involve personal goals and values in which the role of a product is examined in terms of how it contributes to life goals and values. Imagining various ‘green’ choices would be an example.

Consumption visions are co-created in that they emerge when a brand story blends with a consumer story. A brand story concerns what a brand does and how it differs from other brands. It will involve a combination of its attributes and the consequences experienced when the brand is used. A consumer story consists of the psychological and social consequences of using a product, the emotions that are satisfied by those consequences, and how one’s identity will be reinforced. On this last point, there may be multiple identities or selves and even multiple levels of self.

The consumption vision will retain elements of the brand story arising from past knowledge of the brand, new promises it makes and elements of what the consumer has experienced in the past and hopes to experience in the future. When these brand and consumer stories meet – i.e., when they are enjoined during cognitive play – a vision emerges about a future consumption possibility. The nature of these visions may determine whether or not a consumption experience will take place in the future. Equally important, the initial vision and the expectations it sets in motion may materially affect the actual consumption experience when it does occur.

In closing

Co-creation – the blending of thoughts to create something new – is critical for creating value. The thoughts or information being brought together may involve previously-unrelated past experiences or knowledge schemas, or they may involve the blending of a past experience with newly-encountered stimuli. In either case, we have an insight – an awareness of the new thought or set of thoughts, and this process is greatly facilitated by the use of metaphor.

The topics of the unconscious mind discussed herein are not new. However, the way in which they are interwoven is not fully appreciated. A better understanding of them can deepen our knowledge about consumer behaviour and improve research methods and marketing practice. It is my hope that one day, organizations will be able to effectively harvest the unconscious to create value for both business and society. **R**



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