

Lead-Users vs. Emergent Nature Consumers for Marketing Co-Creation: Are They Really Different?

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Abstract This research extends Hoffman et al (2010)'s work on the relationship between two key targets for co-creation: Emergent-Nature Consumers (ENC) and Lead-Users (LU). These authors have shown that an ENC - who can innovate in any domain, could be more effective than a LU- who innovates in one specific-domain, for the development of new product concepts. We show that these two innovating users have common conceptual roots and that ENC character trait corresponds to an extension of LU characteristics to all product domains. We also show that the ENC trait is an antecedent of specific-domain lead-usership. It finally appears that ENC and LU characteristics are crucial determinants for engagement in co-creation activities.

1 Introduction

Marketing co-creation is a topic of high relevance for both academia and business practice. Business managers and marketers increasingly try to identify and to assess possibilities to integrate cutting-edge or tech savvy

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customers in their innovation process to avoid future risks of market failure (Von Hippel, 2011). Furthermore, from an academic perspective, the increasing interest in the field of co-creation has received considerable attention in the venue of Vargo and Lusch (2008)'s Service-Dominant Logic.

Marketing literature suggests exploiting the innovating potential of two types of consumers: Lead-Users (LU) and Emergent-Nature Consumers (ENC). The advantages of the first are widely recognized: They are ahead of the market trends and expect high benefits from a solution to their advanced needs in one specific domain (Von Hippel, 1986). The assets of ENCs for marketing have been highlighted more recently by Hoffman et al (2010): "these consumers are really helpful in developing product concepts, particularly in the consumer goods industry; moreover, they seem able to develop any product concepts that mainstream consumers found significantly more appealing and useful than concepts developed by lead-users". This result leads to focus on ENCs to the detriment of LUs despite the recommendations of much previous research (e.g. Franke et al, 2006; Lilien et al, 2002). The Emergent nature construct is conceptualized as a character trait applicable to all product or service categories.

If we want to shed light on this issue, we need to re-examine and compare the conceptual foundations of these two constructs. The choice of the right target for a marketing co-creation strategy remains a tricky one: Should it aim at the specialists of a single product category (i.e. LUs), or should it rather aim at more general consumers (i.e. ENCs)? What are their respective competences and willingness to get engaged?

Hence, this article aims to assess the degree of convergence and discrimination between these two concepts to increase our knowledge of the relationship between them at both theoretical and managerial levels.

2 Co-creating with innovative consumers

2.1 Lead-user: product focused vs. general trait

Lead-usership is generally appraised for a given product/service market. However, according to (Churchill et al, 2009, p. 9), identifying LUs in one product category leads to the inclusion of several different markets:

1. LUs in the target application and market,
2. LUs in similar applications in advanced analog markets and those
3. with respect to important attributes of problems faced by users in the target market.

In the same vein, Von Hippel et al (2011) propose an overall understanding of the LU when they study the innovations developed by users in the household sector. In their research, the LU is no longer studied within a specific product or service, but is aggregated on a set of connected markets related to the household sector. For their part, Jeppesen and Laursen (2009) took this further, proposing a global LU concept: They completely disregard the product category and measure the individual perception of lead-usership with regard to the whole products/services range. Extending these findings to our research, we could assume a global LU who transcends product or service category. This global LU would be a consumer, who is dissatisfied by a great number of products and services available on markets, but unlike other discontented individuals, the global LU¹ regularly invents or experiments with all sorts of original solutions to solve the various problems encountered; these solutions anticipate future trends in these markets.

2.2 Emergent-nature consumers vs. lead-users

Hoffman et al (2010) define the Emergent nature consumers as individuals who have a “unique capability to imagine or envision how concepts might be further developed so that they will be successful in the main-

¹ We use the term “global LU” (i.e. lead-user in any product/service category) in opposition to the traditional LU construct (i.e. lead-user in one product/service category or domain-specific) that we interchangeably call “specialized LU” or “specific LU”.

stream marketplace". Their ideas are innovative and capable of resolving all kinds of problems while also anticipating future market trends.

In comparison, specialized LUs' ideas are original but they anticipate needs for a single market. By extension, ideas of "global LUs" are also probably original but anticipate needs for any market. This large spectrum requires a particular aptitude for original ideas and for feeling emerging needs before others do; this aptitude reflects personality traits like originality, imagination, creativity and anticipation that are shared by ENC's.

According to Hoffman et al (2010), the major difference between ENC's and specialized LUs (i.e. traditional LU construct) is the expertise, arguing that the first "not have to be experts in the product category". However, Von Hippel (2011) takes the opposite position when he specifies that the value of the products created by LUs is not in their product engineering. ENC's and specialized LUs share several common traits: They are innovators in the given product or service category, but they are not necessarily experts in that category. In addition, open-mindedness, creativity and rationality (characteristics of ENC's), create a favorable context for lead-usership in any product category. Henceforth, if ENC is a character trait, it is coherent to think that it is an antecedent of the specific LU characteristics: Having this trait would thus increase the probability of being a LU in a given product category. If this was not the case, it would be difficult to explain the fairly high correlations (0.39 and 0.48) obtained by Hoffman et al (2010), between the ENC trait and the fact of being a LU in a very specific product category (i.e. consumer home delivery goods).

2.3 Emergent-nature consumers, lead-users and engagement in co-creation

ENC's are attractive for co-creation because they "imagine or envision how concepts might be further developed so that they will be successful in the mainstream marketplace". In the same way, LUs are natural and efficient targets for co-creation (Thomke and Von Hippel, 2002): "The best prospects are customers that have a strong need for developing custom products quickly and frequently". For example, 3M estimates internally that ideas from groups of LUs are worth \$146 million, equivalent

to 8 times the sum expected from the forecast sales resulting from traditional working groups (Lilien et al, 2002). Other studies show that LUs are more efficient for co-creation than ordinary consumers (e.g. Jeppesen and Laursen, 2009; Magnusson, 2009).

Contrary to what might be supposed, it is not necessarily brand fans who are the most inclined to co-create; identification with the brand is not related to participation in innovative activities (Füller et al, 2008). We might expect that LUs would engage in co-creation collaborative platforms (e.g. Thomke and Von Hippel, 2002), especially since they make great use of online and offline community resources (Bilgram et al, 2008; Franke et al, 2006).

3 Research Methods

In this research, we assess individuals' specific lead-usership in the field of video games. We collected data through a web-based questionnaire survey. We collected 995 completed questionnaires administered in September 2011 on a representative sample of the French population over 16 years of age. The sample was selected according to the quota method (age, region, sex and level of education)². A filter question eliminated consumers who rarely or never play video games; this amounted to 45.8% of the original population. Our final sample comprised 456 individuals.

The measures are all one-dimensional, five-point Likert scales. English scales were translated and adapted to French through back-translation. Specific lead-usership was measured with a four-item scale adapted to video games from Béji-Bécheur and Goletty (2007) ($\alpha = .856$). To assess global lead-usership (Appendix 1), we adapted the same scale by simple transposition to a context of overall consumption of products/services: We replaced each item of the scale referring to video game with products and services, following the same procedure as Jeppesen and Laursen (2009) ($\alpha = .817$). To measure emergent nature, the eight-item scale developed and validated by Hoffman et al (2010) was used ($\alpha = .836$). Consumer engagement in co-creation is seen as "co-production of contents between

² The sample was taken from an open-access panel managed by a European market research company.

Table 1 Convergent and discriminant validity of the different measures of the concepts

Average Variance Explained	Emergent-nature 0.65	Global LU 0.53	Specific LU 0.62
Squared Correlations			
Emergent-nature			
Global LU	0.95		
Specific LU	0.27	0.41	

company and customers” (Gambetti and Graffigna, 2010). It is measured with four items ($\alpha = .810$).

4 Results

First, we assess the convergent and discriminant validity of the measures with the Fornell and Larcker (1981)’s criteria³ (Table 1). All the AVE coefficients are above 0.50, so that the convergent validity among these three measures is established. On the one hand, we observe that the measure of ENC trait shows discriminant validity with the measure of specific LU in video games ($r^2 = 0.27 < 0.65$ and 0.62). We obtain a similar result when comparing between specific LU in video games and “global LU” ($r^2 = 0.41 < 0.53$ and 0.62). On the other hand, our measure of “global LU” does not allow us to discriminate this concept from that of ENC ($r^2 = 0.95 > 0.53$ and 0.65): the two constructs are highly correlated.

Consequently, the constructs ENC and global LU relate to the same concept. Symmetrically, our results also show that the ENC is conceptually different from the specific LU, thus confirming the results reported by Hoffman et al (2010).

Based on our previous analysis of concepts, we assume that the ENC (or global LU) is an antecedent to the specific LU. In other words, the more an individual possesses the ENC (or global LU) traits, the more he/she will tend to be a specific LU in a given product category. We constructed two series of structural models on this basis; the first retains ENC as a predictor of specific LU and the second global LU (Fig. 1).

³ The measures must have an AVE (average variance explained) above 0.50 and share more variance with their indicators (AVE) than with the measures of other concepts.

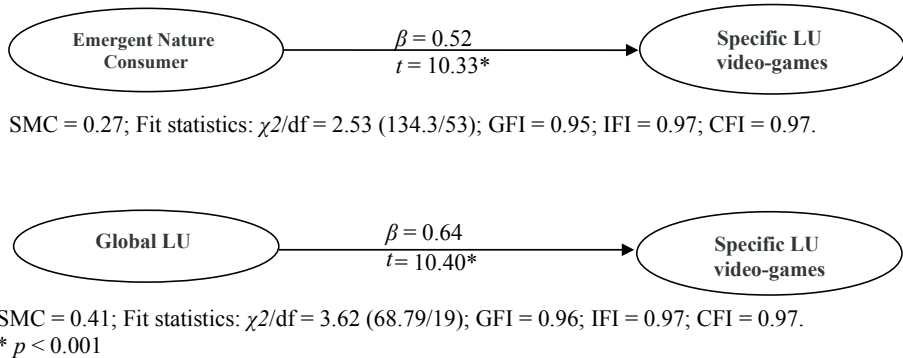


Fig. 1 Relations between the ENC (global LU) and the specific LU in video games

Table 2 The relationships of ENC, global LU and specific LU with marketing co-creation

	Structural Models Predictor variable	Dependent variables Engagement in co-creation
Emergent-Nature Consumer	Structural Coefficients	$\beta = 0.50$; $t = 9.23^*$ SMC = 0.25
	Fit statistics	$\chi^2/df = 1.63$ (86.52/53); GFI = 0.96; IFI = 0.99; CFI = 0.99
Global LU	Structural Coefficients	$\beta = 0.57$; $t = 8.97^*$ SMC = 0.32
	Fit indices	$\chi^2/df = 1.93$ (36.79/19); GFI = 0.98; IFI = 0.98; CFI = 0.98
Specific LU (video-games)	Structural Coefficients	$\beta = 0.51$; $t = 8.91^*$ SMC = 0.26
	Fit indices	$\chi^2/df = 1.78$ (33.89/19); GFI = 0.98; IFI = 0.99; CFI = 0.99

* $p < 0.001$

Figure 1 shows that the structural coefficients are both significant: the ENC and the global LU characteristics are two antecedents to the specific LU in a given product category – here, video games. We also observe that the beta between global LU or ENC and specific LU are high and comparable: this result confirms the similarity between the two concepts (ie. global LU and ENC).

We created a series of structural models based on single relationships between one of the three predictor variables (ENC, global LU and specific LU) and the dependent variable - engagement in co-creation.

Table 2 shows that the more an individual has an ENC (or global LU or specific LU) character, the readier he/she will be to get engaged in marketing co-creation whatever the product category.

5 Discussion and Implications

From a theoretical perspective, an important result is that a great number of the essential characteristics of ENC merge with those of “global LU”. These two constructs translate similar traits: When confronted with a given material problem, such individuals do not remain passive. They have a predisposition to be a lead-user in any product or service category. An interesting analogy could be made with the debate between opinion leaders and market mavens. The latter may have broader expertise over several product categories even if overlaps are limited: only 13% are opinion leaders in four or more product categories (King and Summers, 1970). In counterpart, market maven is characterized by general marketplace expertise, and correlates with opinion leadership ($r = 0.22$) (Feick and Price, 1987). Similarly, we show that ENC and global LU are both characterized by a general ideation expertise, but specific LU has a more product focused expertise. The correlation between the global and specific LU is moderate ($r = 0.27$).

We can certainly observe that at the time of writing, few if any academic articles dealing with the concept of ENC have been published since that of Hoffman et al (2010), whereas the literature on specific LU's has been prolific. We nevertheless think that the ENC remains of interest for two reasons. Firstly, the ENC poses the question of identifying specific traits in consumers that find it easy to imagine original products. Finally, according to Hoffman et al (2010), ENCs develop more attractive concepts than specific LUs do. This result seems somewhat counter-intuitive. Replications are thus necessary: It would be interesting to repeat the experiment on other products and services, not only for the ideation phase, but also for the prototype development phases. Such replications would allow us to answer another important underlying question: Should marketing co-creation try to seek out individuals with particular personality traits (e.g. creativity, rational thinking, etc.), that is, ENC or global LU, or should it rather seek individuals who know more about the relevant

Appendix 1: Items for measuring Specific-domain Lead-usership - video games

1. I had expectations on the use of “video games” long before others
2. I have had ideas on how to improve the use of “video games” that have since been taken up by others
3. Today, “video games” on the market eventually meet needs that I have had for a long time
4. My ideas about “video games” are innovative compared to current practices

product category (specific LU)? In other words, is a contingent approach (individual competences in a particular product category) to marketing co-creation more, equally or less efficient than a trait-based approach?

From a managerial perspective, our results reinforce the interest of focusing on LUs or ENC for co-creation, rather than aiming at ordinary consumers. Indeed, the more an individual is ENC, global LU or specific LU, the more he/she is willing to engage in co-creation activities.

Our results confirm the existence of a solid correlation between the ENC traits and the specialized LU characteristics and show that the first are an antecedent of the second. These two points are of interest for research institutes and marketing managers since according to a recent research, co-production was found to be negatively related to willingness to pay (Bilstein et al, 2012; Hogleve, 2013). Thus, it could be relevant to constitute a wide consumer panel with ENCs (or global LUs). Such a panel can be built at a lower cost, for these consumers are more inclined to participate in panels than ordinary consumers: As we have shown, they are prepared to get engaged in marketing co-creation. In a second phase, if necessary, it is easy to filter this panel according to the category of product or service in order to select only specialized LUs who are competent for co-creation in the required domain.

References

- Béji-Bécheur A, Goletty M (2007) Lead user et leader d’opinion: Deux cibles majeures au service de l’innovation. *Décisions Marketing* 48(4):21–34
- Bilgram V, Brem A, Voigt KI (2008) User-centric innovations in new product development - systematic identification of lead users harnessing interactive and collaborative online-tools. *International Journal of In-*

- novation Management 12(3):419–458
- Bilstein N, Fahr R, Hogreve J, Sichtmann C (2012) Paying for a higher workload? an experimental investigation of the relationship between customer's co-production and willingness-to-pay. In: Proceedings of the 41st European Marketing Academy Conference (EMAC), Lisbon, Portugal
- Churchill J, Von Hippel E, Sonnack M (2009) Lead-user Project Handbook: A practical guide for lead-user teams. MIT Press, Cambridge, Mass
- Feick LF, Price LL (1987) The market maven: A diffuser of marketplace information. *Journal of Marketing* 51(1):83–97
- Fornell C, Larcker DF (1981) Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18(1):39–50
- Franke N, Von Hippel E, Schreier M (2006) Finding commercially attractive user innovations: A test of lead-user theory. *Journal of Product Innovation Management* 23(4):301–315
- Füller J, Matzler K, Hoppe M (2008) Brand community members as a source of innovation. *Journal of Product Innovation Management* 25(6):608–619
- Gambetti RC, Graffigna G (2010) The concept of engagement: A systematic analysis of the ongoing marketing debate. *International Journal of Market Research* 52(6):801–826
- Hoffman DL, Kopalle PK, Novak TP (2010) The "right" consumers for better concepts: Identifying consumers high in emergent nature to develop new product concepts. *Journal of Marketing Research* 47(5):854–865
- Hogreve J (2013) I don't work for free! the influence of customer's co-production on willingness to pay. In: Proceedings of the Customer Empowerment Workshop
- Jeppesen LB, Laursen K (2009) The role of lead users in knowledge sharing. *Research Policy* 38(10):1582–1589
- King CW, Summers JO (1970) Overlap of opinion leadership across consumer product categories. *Journal of Marketing Research* 7(1):43–50
- Lilien GL, Morrison PD, Searls K, Sonnack M, Von Hippel E (2002) Performance assessment of the lead user idea-generation process for new product development. *Management Science* 48(8):1042–1059

- Magnusson P (2009) Exploring the contributions of involving ordinary users in ideation of technology-based services. *Journal of product innovation management* 26(5):578–593
- Thomke S, Von Hippel E (2002) Customers as innovators: A new way to create value. *Harvard Business Review* 80(4):74–81
- Vargo SL, Lusch RF (2008) Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science* 36(1):1–10, DOI 10.1007/s11747-007-0069-6
- Von Hippel E (1986) Lead users: A source of novel product concepts. *Management Science* 32(7):791–805
- Von Hippel E (2011) The user innovation revolution. *MIT Sloan Management Review* September 1–7
- Von Hippel E, Ogawa S, De Jong JPJ (2011) The age of the consumer-innovator. *MIT Sloan Management Review* 53(1):27–35