

The combinatorial innovation perspectives on designing social marketing programs.

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Abstract: Hal Varian's concept of "combinatorial innovation" underlined the ascend of a new period of a tremendous burst of innovation. Now we can quickly and conveniently combine different Internet-based components, which are all bits, to create entirely new products and services, available for everyone. The mushrooming of nudging logic based initiatives all over the world, open the room for a new discussion - to what extent the intended target audiences of nudging initiatives will participate in co-generating of the new policies and campaigns, based on the employment of the combinatorial innovation?

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1. Introduction to innovation theoretical perspectives

Since the concepts of disruptive and sustaining innovations of Christensen (Christensen, 1997) made their way into the models and policies both public and private during the last decade, different new approaches emerged. We do have now reliable benchmarks in analyzing the innovation field, in understanding the global trends or the national ones, financed by NGO's, IO's or national agencies. Understanding how innovation might become dominant in certain markets or contexts, it's important, but the focus seems to have moved towards the outcome of innovations, on their impact on growth and the general wealth of the societies.

Christensen and van Bever analyzed different types of innovation, and proposed three main categories (Christensen & van Bever, 2015, pp. 59-102): (1) performance-improving innovations - which replace old products with new and better models; (2) efficiency innovations - support companies to make and sell much mature goods or services to the same customers base but at lower prices (also labeled as called "low-end disruptions"); (3) market-creating innovations - these innovations transform complicated or costly products, and, by this dramatic change, they can create an entirely new class of consumers or even a new market. Based on the information technologies, all these three types of innovation will advance, with a special mention on the last one, due to the magnitude of the evolution envisaged. Social marketing field might be one of the primary beneficiaries of these developments.

In almost all regards, despite the tremendous changes in our societies, we might stick to Drucker's definition of innovation, as "the effort to create purposeful, focused change in an enterprise's economic or social potential" (Drucker, 2002). Scholars are stressing the idea that innovation and value creations started to change dramatically by the imperatives of: (1) value will increasingly be co-created with consumers; (b) no single company has the knowledge, skills, and of course resources needed to co-create value with consumer; (c) the emerging markets are a tremendous source of innovation (Prahalad & Krishnan, 2008, p. 10). This new perspective understood value as being based on "unique, personalized experiences for consumers" because the focus shall be on the centrality of the individual, with one customer experience at a time, while acknowledging that there are no companies big enough to "satisfy the experiences of one consumer at a time" thus the focus will shift from ownership of resources to access to resources. Based on this, three different trends emerge: (1) convergence of ubiquitous connectivity in voice, data, and video; (2) universal access to computing at continually decreasing costs of it; (3) rapid and vibrant experimentation in new platforms for collaboration that span both personal (social) and professional lives creating a new ecosystem facilitating the access to global resources and new co-created experiences ((Prahalad & Krishnan, 2008, p. 253).

The Global Innovation Index (Dutta, Lanvin & Wunsch-Vincent, 2017) provides metrics about the innovation performance of 127 countries, using 81 indicators. Mapping

out innovation evolved, from studies of innovation policy analyzing how nations' policies affect innovation and wealth in their own country, towards studies focusing on factors reflecting the extent to which their approaches (such as economic and trade policies) contribute to and also detract from innovation globally. It's an interesting new perspective, and now we can discuss contributors and detractors in innovation field. The last report (Ezel, Nager, & Atkinson, 2016) assessing 27 factors (eight categories - Adam Smithian, Advanced Asian Tiger, European Union (EU) Continentalist, EU Up and Comer, Innovation Follower, Innovation Mercantilist, Schumpeterian, and Traditional Mercantilist) for a total of 56 countries (comprising 90 percent of the global economy) finds that, "on a per-capita basis, the nations doing the most for global innovation (a combination of more effort on policies that support innovation and less on policies that harm it) are Finland, Sweden, and the United Kingdom. In contrast, India, Indonesia, and Argentina scored the lowest overall". The Worst Innovation Mercantilist Policies of 2015 were Canada, China, India, Indonesia, Nigeria, Russia, Turkey (The Worst Innovation Mercantilist Policies of 2015).

2. The emergence of the new models

Many countries started to use Big Data to map the individual and social behaviour of their citizens better, thus tailoring more efficient their available resources to address the most urgent needs. Data for Development (D4D) it's this kind of initiative, a collaborative effort of dozens of organizations from around the world reporting the results from their analysis of cell phone data.

Understanding of human mobility patterns during an epidemic outbreak might be one of the keys to cease the epidemic. New types of continuous behaviour-sensing technologies available now to the population across the world are becoming a real "nervous system", an extended one, based on which health forums and digital data commons are opening up new opportunities for the medical care services. This information flow, together with the individual electronic medical records, databases of genomic information, or 24/7 access to the medical expertise might dramatically improve our understanding of the dynamics of human health. Moreover, based on this knowledge, we will have new opportunities and improved methods for encouraging healthy behaviour.

Different national projects shed light on alternative uses of the power of Big Data on the fabric of the social structures and people's lives. An interesting development it is China's proposals for a so-called "social credit system", an endeavour aimed to "assess citizens' behaviour over a totality of commercial and social activities, creating an uber-scoring system. When completed (by 2020 shall be mandatory) the model could encompass everything from a person's chat-room comments to their performance at work, while the score could be used to determine eligibility for jobs, mortgages, and social services" (Schiller, 2016). While the planning document was drafted and published on June 14th, 2014 (State Council Notice concerning Issuance of the Planning Outline for the Construction of a Social Credit System 2014-2020, GF No. (2014)21) the take-off was in 2016-2017, with a focus of the project on the "sincerity construction" in different areas: (a)

accelerating the construction of government affairs sincerity; (b) genuinely move the construction of commercial sincerity forward; (c) comprehensively advance the construction of social sincerity; (d) construction of judicial credibility; (e) strengthen the construction of sincerity education and a sincerity culture (Creemers, 2014). This “construction of credibility” will allow authorities to oversee and softly regulate the peoples’ life across more than 30 different areas, from energy saving or content consumption to advertising and job seeking, opening up the possibility of punishing bad behaviour (by restricting access to social housing or visas for travelling abroad).

The system is planned and overseen by the State Council. By using the social media logic, the state would make it possible for other people to regulate the “bad” or “undesired” behaviour while it will draft, promote and maintain the desired behaviour for the whole populace in all sequences of private life, because “all the individuals in the society are encouraged to report dishonest behaviors, and any violation of the rules should be recorded in the person’s credit record”. On June 2016 The State Council issued new guidelines to establish a better social credit system, proposing that “people with good credit history can enjoy certain services that are more time efficient” with “public resources and services will also be first offered to market entities or individuals with good credit” (State Council releases guidelines on establishing personal credit system, 2016). In a more detailed approach one had to notice that punitive measures will be taken against those individuals with small credit, targeting mainly three categories of behaviors: (a) those that endanger people’s health and

safety; (b) damaging (severely) market order and social order; (c) negligence to one’s obligations. Due to concerns about the potential for conflicts of interest of leading participants in the monitoring activities (The People’s Bank of China granted eight licences to companies such as Tencent and Alibaba, the biggest internet conglomerates in China, to Ping An Insurance, one of China’s largest insurers) the process was delayed, because many of the companies implementing this system also operate their e-commerce and online financing platforms and are reluctant to share data with competing platforms for a supra-ordinate goal (Hornby, 2017).

Japan is a pioneer in what is called Society 5.0., a society development’ concept presented extensively at CeBIT 2017 in Germany (the land of Industrie 4.0) but launched in 2016. This concept aims to tackle several challenges faced by the Japanese society, going beyond the over-discussed digitalization of the economy “towards the digitalization across all levels of the Japanese society and the (digital) transformation of society itself” (From Industry 4.0 to Society 5.0: the big societal transformation plan of Japan). This super-smart society will need the full use of the Internet of Things (IoT), AI (Artificial Intelligence), cyber-physical systems, VR/AR (Virtual Reality/Artificial Reality), Big Data (analytics). The idea behind is to advance the digitalization and transformation dimension, done on the level of individual organizations and some disparate parts of society to a full national transformational strategy, encompassing all levels, organizations and even social fabric, supported by dramatic changes in policy and even at philosophy level. Keidanren (Japan Business

Federation) published in 2016 a vision paper - Toward realization of the new economy and society. Reform of the economy and society by the deepening of "Society 5.0" - depicting the way ahead. The primary goal is to "aim at the new economy and society which focuses on individuals", by implementing reforms on (a) individuals (increase the power of people); (b) companies (new values by promoting innovation and globalization); (c) Solving social issues (create a better future). Strategy planned now is to make the best use of (1) creative capability of "disruptive innovation" and "innovation based on social issues", and (2) enhance utilization and importance of the "invisible manufacturing" (software) to support the objectives (Toward realization of the new economy and society. Reform of the economy and society by the deepening of "Society 5.0"). This ambitious advance on using the information technology - the IoT, AI, VR/AR and Big Data into the very fabric of the society, within the relationship intimate development has the potential to disrupt and dramatically change the societies as we know today.

3. Health and the diffusion of the innovation in health industry

In promoting health using social marketing models, the path seems to follow Rogers' approach on the diffusion of innovation, starting with the underlined similarities between diffusion of innovation and persuasion (Rogers, 1983, pp. 10-23), meaning: (a) persuasion and diffusion are seen as a linear and thus unidirectional communication activity (b) persuasion and diffusion are performed as a one-to-many communication type activity; (c) professional and academics

studying persuasion and diffusion are focused on action-centered and issue-centered communication activities; (d) persuasion and diffusion researchers often support the view that is more important to change attitudes rather than behavior, thus being more interested in crafting the individual decision to use and implement a new idea rather than the actual implementation itself, with the distinction between centralized and decentralized diffusion systems.

In this light, innovation is understood as an "idea, practice, or object that is perceived as new by an individual or another unit of adoption" while the information exchange among participants in a communication process in this kind of environment is becoming paramount for the diffusion of innovation. In this extensive communication processes, the information about innovations is often "sought after from near-peers", thus information exchange about a new idea will occur "through a convergence process involving interpersonal networks" (Rogers, 1983, pp. 23-38). That's exactly why the diffusion of innovations is primary a social process in which information possessed and processed at the individual level about a new idea is communicated through the network because the newness of the notion in the content of the respective communication gives to the diffusion process its special character. Rogers conceptualize the diffusion and adoption of innovations in "terms of a framework based on information and uncertainty" because, due to the invention and subsequent adoption of the ideas usually, social change occurs, which might alter the function or even the structure of a social system. Diffusion is understood in this model (Rogers, 1983, p. 38)

as a process by which (a) an innovation (b) is communicated through particular channels (3) over a period (4) among the members of a specific social system. From an analytic perspective, we shall focus on the four elements of the process: innovation, communication channels, time and the social system itself.

For the health system, due to the increased burden on the national budgets and the demographic evolution during the last few decades, a comprehensive approach to map innovation and the diffusion of the innovation in this area was developed. One of the main projects is the Global Diffusion of Healthcare Innovation project, prepared by the Institute of Global Health Innovation (IGHI), Imperial College London, aiming to "to deepen the understanding of the factors that can facilitate the rapid adoption and diffusion of innovations across health systems" (Harris, Bhatti et al., 2016, p. 12).

In researching the diffusion of innovation, the focus was oriented towards finding effective ways to "push" as early as possible innovation into practice, i.e. on the supply side of innovation. Less research was done on the "pull" side for innovation, and this is, at least for the health field, consistently demand-driven (Priem, Li & Carr, 2012; Di Stefano, Gambardella & Verona, 2012). How health organisations and institutional authorities look after innovative solutions, where do they scrutinize for, it's a fundamental issue.

A usual perspective adopted in the health area is to favour a top-down approach to change, while a grassroots innovation, a bottom-up innovation approach is not so common, although might offer a

complementary perspective. In the UK for instance, the National Health Service (NHS) launches in 2013 an interesting initiative - NHS Change Day, encouraging staff to submit "pledges" for change in the (health) system. They have asked 1.3 million people who were engaged with the NHS to do this and, over three months, almost 189.000 pledges were recorded (Harris, Bhatti et al., 2016, p. 13).

The distinction between open innovation and closed innovation is also significant in the mindset of the health professionals and researchers. Traditionally, it was assumed that only professionally qualified workers in the health area would have enough expertise to ignite, develop and implement innovation, the control of creation and management of new ideas being paramount (Bullinger, Rass et al., 2012). Nowadays it is common to turn outside the organization or the health field for new ideas, inspiration, or lower costs of R&D outcomes, relying also on the "different" expertise of other stakeholders - customers, suppliers, collaborators and even competitors (Von Hippel, 2009), with many open innovation platforms helping innovators to engage with a broad range of organizations and stakeholders. In UK for instance, only a small proportion of new ideas comes from other countries, being also restricted to healthcare field, while in Brazil the health industry is sourcing ideas from a wide range of sources (colleagues and patients alike, both locally and country-wide) looking at advanced countries as sources of innovation (Harris, Bhatti et al., 2016, pp. 69-77). India is using conferences and social media as important sources of new ideas for health area while valuing High-income countries and

Middle-income countries for inputs on innovation. Satell underlined the value of open innovation because “it often helps to expand skill domains beyond specialists in a single field” when you need a different approach to solve a major problem, in this context innovation being seen, “at its core, about solving problems” (Satell, 2017), and proposed four different dimensions of analysis: (1) sustaining innovation (getting better at what you’re already doing); (2) breakthrough innovation (exploring unconventional skill domains, using open innovation); (3) disruptive innovation (when the basis of competition changes you have to innovate your business model and not doing what was effective at that very moment); (4) basic research (pathbreaking innovations usually needs to be refined, updated and developed further).

In the same time, we are witnessing an interesting process of reverse innovation in health care, which occurs when “models of care, technologies, procedures and products, come from resource-poor contexts, and are implemented in high-income country health systems” (Harris, Bhatti et al., 2016, p. 15), developments around improved surgical procedures being well known (Abeygunasekera, 2004).

The study “From Innovation to Transformation” (realized in 2011 by Institute of Global Health Innovation) had identified three levels of influence and influencers (Harris, Bhatti et al., 2016, p. 61) of the diffusion of healthcare innovation: (a) healthcare systems - in charge of setting the broad context (shall include the economic, political, legal and regulatory environment, the size and structure of health systems); (b) enablers

of innovation (with projects initiated through corporate or government action); (c) front-line behaviors (actions, beliefs and practices of policymakers, healthcare organizations and professionals delivering healthcare and directly interacting with consumers at the point-of-care).

4. Combinatorial innovation and social marketing campaigns - perspectives on the health area

One of the most straightforward definitions of social marketing was created by Andreasen in 2011, stating that “social marketing is the application of commercial marketing concepts and tools to influence the voluntary behaviour of target audiences to improve their lives or the society of which they are a part (Andreasen, 2011). Due to the development in the evolution of mass-communication theories, followed by the advance of information technologies, social marketing has been moved from its “initial close identification with the marketing of products involved in social change to a broader conception” of influencing and changing social realities (Andreasen, 2002, pp. 4-13). The process encompass three different societal level of intervention to tackle social problems: at the individual level (based on the assumption that it is people who ultimately must behave differently), at the whole community level (for major social changes the entire community has been the to in the focus of interventions through norms, values, interpersonal influence and community institutions), at the social structure level (laws, institutions, technology, public policies). By and large, social marketing is about (a) influencing

behaviours, (b) utilizing a systematic planning process that applies marketing principles and techniques, (c) focusing on priority target audience segments, and (d) delivering a positive benefit for society.

In intervention approaches, most programs rely upon consistent information campaigns (McKenzie-Mohr, 2011, loc 226), based on one of two perspectives regarding behavior changing: (a) attitude-behavior approach (if we increase public knowledge about an issue and promote attitudes supportive of the desired activity these will change the targeted behavior) and (b) the economic self-interest approach (individuals always systematically evaluate choices, and act in accordance with their economic self-interest).

When planning for a change in population's behaviour, the standard approach in the industry is based on the economies of scale logic, which will assume that the cost for reaching a person with a certain message is far less than, for instance, counselling or a mandatory annual health check visit to the doctor. On the other hand, some results of the past communication campaigns with the 5 percentage points of the average health campaigns effects on behaviour in certain communities, with slightly better results for nutrition campaign for fruit and vegetable consumption, or fat intake are not a solid ground either (Snyder, 2007).

Nudges are small interventions designed to "orient" people in particular directions but, at the same time, giving them the full liberty to go their way (Thaler & Sunstein, 2008). In this understanding, the reminder or a warning might be a nudge integrating all

suggested options in a choice architecture. In behavioural science the standard distinctions are made between System 1 - fast, intuitive, automatic, and System 2 - slow, deliberative, rational (Kahneman, 2011). The "libertarian paternalism" concept is used in relationship with nudges, being understood as an attempt to use choice architecture logic to influence choosers in making decisions that will promote their welfare, as judged by themselves and not by choice architects, avoiding coercion or material incentives pointing mainly on means, not on people's ends. On the other hand, based on the research of behavioural economics, a growing field of behavioural public choice analysis underline the issue of official error, because the officials might, for instance, lack necessary information, have their interests are at stake or experience behavioural biases (optimistic biases, ambiguity, availability bias, confirmation bias and so on).

Hal Varian, Google's chief economist back in 2009, coined the term "combinatorial innovation" to describe the reality of combining Internet components - software, protocols, languages, and capabilities "in ways that create entirely new innovations". The big difference from previous eras is that "component parts are all bits. That means you never run out of them. You can reproduce them, you can duplicate them, you can spread them around the world, and you can have thousands and tens of thousands of innovators combining or recombining the same component parts to create new innovation" at the same time, in various locations (Hal Varian). In today's world the scarce resource it's attention, and the ability to capture someone's attention at the right time would be the most valuable asset.

Using the Christensen concept' of disruptive innovation when analysing social marketing field, we have noticed that the basis of the competition slightly changed during the last decade, due to technological shifts influencing the individual content consumption. So, if we are trying only to find more efficient ways to deliver messages towards the intended target audiences, based on the assumption that they need more information, we will fail. We have to innovate the social marketing business model to succeed.

Social marketing has to acknowledge this new reality - the customers/consumers want to co-create the new service or want to be part of the design of the influence process to change a new behaviour or attitude.

In today's logic, what we are doing in social marketing is to single out the problem, find out the best mix of intervention matrix - legislation + persuasive actions - and implement it, assuming that the targeted individuals, communities will gladly participate because this will be in their best interest, or, moreover, in the communities' interest. They have to be part of creating the content, as well as in designing new public policies or legislation pieces to help change the behaviours. Following the logic of combinatorial innovation, acknowledging that the resource base will expand to an ecosystem of individuals, companies and institutions, we have to take advantage of this new reality and not to build up an "expertise owner" approach.

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