Should We Measure UX Differently?

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Abstract. The design of User Experience today is built upon a choice architecture that is meant to acquire and retain customers and hence increase revenue on the one hand and save cost for businesses through efficiency and speed, on the other. The impact of this can be seen in the form of an ever expanding, instant gratification led experience economy that constantly fuels consumerism. Since there is no plan(et) B, if we are to survive as the human race, this planet has to be saved by switching to a less consumerist and more sustainable lifestyle. Just as User Experience design is contributing to the increasing consumerism today, a change in the evaluation criteria and definition of what is 'good' and 'successful' UX can transform the impact of User Experience design by ensuring that the goal of UX Design is a balance between what is good for the human race and what is good for commerce.

Keywords: UX Design Index, Sustainable UX Design, Future of UX.

1. Introduction

The field of User Experience has increasingly been in the spotlight as technology infiltrates and disrupts our lives at an exponential pace. Making the technology 'experience' easy, intuitive, efficient and persuasive is the focus of mainstream User Experience. User Experience Design is being looked at as a business differentiator that will lead to an increase in sales and delighted customers and allow a brand to stay ahead of its competition. The 'user' seems to play a marginal role in the entire process. The fact that she plays any role at all is simply because even a little understanding of the user would help create an experience that would help increase sales of the product/service. UX therefore is really a sales/marketing activity using a profit centred design philosophy that is a key contributor to our current consumerist lifestyles and pushing the world closer to an unsustainable future.

However, as Management thinker Peter Drucker **is** often quoted as saying that "you can't manage what you can't measure." Drucker means that you can't know whether or not you are successful unless success is defined and tracked. Hence, one of the critical aspects to review is what gets measured and tracked as good and successful UX design today. Are those criteria suitable for envisioning alternate modes of practicing User Experience or do they need to change?

Most leading practitioners/practices and their methods, used in the field of User Experience today, (cf. Norman, Cooper, Ideo, HFI) define and design User

Experience in terms of what the business wants the ‘system’ to be, how the ‘user’s’ needs can be aligned to best suit what the business wants and finally how to make the design as familiar and easy to use by integrating elements from the user’s context, as far as possible.

In recent years, User Experience has also focused on understanding the emotional state of the user and building trust based on emotions. This has meant a tighter alignment with marketing objectives such as conversion (to buy something or renew current subscriptions/usage etc.). None of these methods and practices take into consideration whether what the business needs to be designed has a negative impact on the ecosystem of the very ‘users’ who are being targeted as the consumers of the designed experience (E.g. will the current design method lead to wastage of resources and hasten the destruction of the planet?). The primary focus on business needs as drivers of design also leads to specific sections of the population (lower income groups) being excluded because the ‘return on investment’ for including them as potential users is not attractive.

The challenge for alternate approaches to the way UX is practiced now, has been, the fact that the predominant underlying economic structure of our lives, that of capitalism and its recent avatar, neo liberalism, makes it impossible to model the creation of ‘experiences’ without following the diktat of the ‘market’. And, the market is always focused on maximizing profit rather than on issues of social impact, marginalized/ excluded ‘users’ and alternative futures. It has, therefore, largely been a theoretical exercise to reimagine UX and create an alternate model of practice so far. However, at this point in time, the winds of economic change are blowing.

Several authors like Jeremy Rifkin and Paul Mason contend that information technology is making a shift inevitable and this shift could completely reshape our familiar notions of work, production and value; and destroy market and private ownership based economic structures. They points out that we do actually have the ‘chance to create a more socially just and sustainable global economy’.

Hence at this point in time, it is a very appropriate moment, to re-examine the potential contribution of UX to advancing alternate economies. The new economic system that is being ushered in by these new trends such as parallel currencies, the sharing economy, peer to peer lending, Big Data, Internet of Things, 3D printing and characterized by collaborative commons, abundance (rather than scarcity as the underlying economic philosophy) and prosumers (producers cum consumers) demands exploration of a different UX ‘ideology’ that will help reframe UX practice from what is currently mainstream.

2. Measurement of Impact – How does User Experience measure itself today?

In mainstream UX practice today, when it comes to measurement criteria for good User Experience , the priority is to measure, at the granular level of 'tasks' (a 'task' for example, would be whether the user is able to book a ticket on an airlines site) how fast and efficiently the user is able to achieve success. The most commonly used metrics are (and have been for the last 3 decades) success rate (whether users can perform the task at all), time a task requires, error rate, users' subjective satisfaction, efficiency and learnability.

There have been some attempts to broaden the scope of what is important to measure differently for User Experience versus Usability / HCI. [Pavliscak, 2014]. In this categorisation of UX metrics (and others such as Google's HEART framework [Rodden, 2012] largely marketing oriented measures have been added under 'engagement' and 'conversion', thereby viewing the difference between User Experience and Usability/HCI as simply that of integrating the business/sales perspective to user centered design. An example would be, measuring not just time spent on a task on a website but also the attention paid by the user to the brand's content on the site. This is measured by tracking how long a user stays on the website and also time spent on various sections of the site. And, finally, how the design helped the user take steps towards buying a product or signing up for a newsletter, etc.

A review of current design indices and design awards further clarifies the focus of user centred experience design today and what is defined as 'good' or 'successful' UX. The focus is clearly on an ever expanding, instant gratification led experience economy that constantly fuels consumerism.

2.1. Design Indices

The best known design indices are the McKinsey Design Index and the DMI Design Value Index. Both take similar routes to measure value of Design and that is by evaluating the financial performance of organisations who have 'invested' in design. The conclusion both arrive at is also similar and hence reinforces the message that investing in design leads to better market performance.

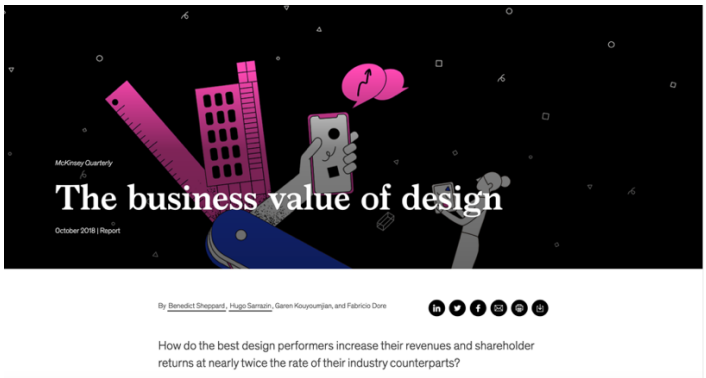


Fig. 1. McKinsey Design Index

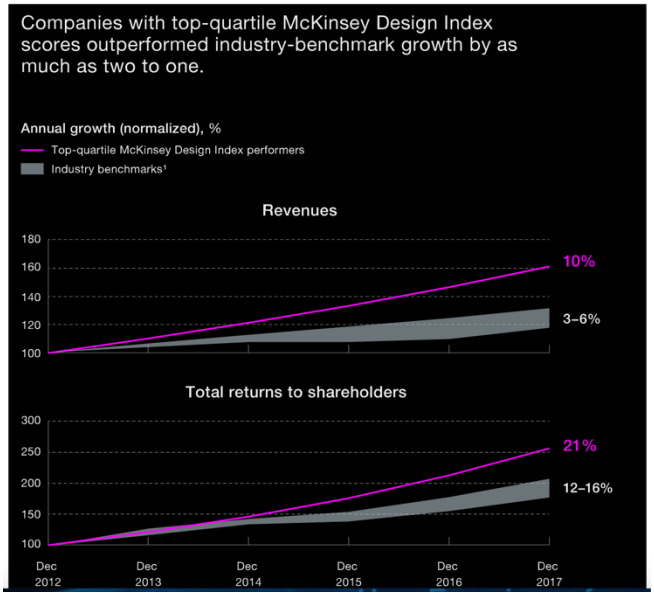
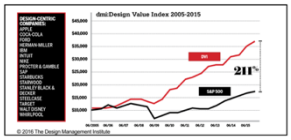


Fig. 2. McKinsey Design Index



The dmi:Design Value Index

DMI and Motiv Strategies, funded by Microsoft, began analyzing the performance of US companies committed to design as an integral part of their business strategy. Completed in 2013 the dmi:Design Value Index tracked the value of publicly held companies that met specific design management criteria, and monitored the impact of their investments in design on stock value over a ten-year period, relative to the overall S&P Index.

2015 results show that over the last 10 years design-led companies have maintained significant stock market advantage, outperforming the S&P by an extraordinary 211%.

Fig. 3. DMI Design Index

The Mckinsey Design Index consists of four themes – Analytical Leadership, Cross Functional Talent, Continuous Iteration and User Experience, themes that seek to create a robust business driven process that incorporates components of the mainstream UX design process to ensure that the products, services and customer touchpoints are in synch with business and user goals.

Fig. 4. What Constitutes the McKinsey Design Index

The DMI Design Value Index differs from the McKinsey Index in terms of its entire focus being on evaluating how robustly the investment in design, integration of design within the entire organisational structure and leadership commitment to design can be demonstrated over time, by an organisation.

Design Value Index Selection Criteria

What constitutes good design can be viewed as highly subjective; therefore the selection criteria developed for inclusion in our index focus on the following:

1) The organization must be publicly traded in the US for 10+ years.
Only public companies were eligible for selection to ensure access to financial data surrounding share prices and stock performance. The 10-year time-frame was established to select for companies that have maintained a consistent, long-term focus on design.

2) The scale of the design organization and deployment is an integrated function.
The strategic use of design is employed in the organization, both within business units and as a centrally managed function with a high degree of influence with its senior leadership team. The use of design can have outsized influences on a company's bottom line that multiply as it is assimilated into the organization and its culture.

3) Growth in design-related investments and influence have increased overtime.
Design has been well resourced through talent acquisition, appropriate facilities, competitive technologies, and the application of design research as a tool, among other investments. Design cannot be expected to thrive when proper resourcing is neglected.

4) Design is embedded within the organizational structure.
It is well understood where and how design fits within the organization. While there are several precedents set for successful operating models that can be used, the common theme is that design is clearly built into the structure and processes of the organization.

5) Design leadership is present at senior and divisional levels.
Design is given a seat at the table with an experienced executive or executive-level head of design who can interface with senior leadership. Typically, this head of design has 15 to 20 years of experience managing design-related functions that drive the company forward with design goals.

6) There is a senior-level commitment to design's use as an innovation resource and integrative force.
An organization's commitment to design shows up in many ways, including the level of interaction the design executives and function have with other parts of the organization, and in how the CEO and other leadership team members represent the importance of design in their day-to-day work and public relations efforts.

Fig. 4. What Constitutes the DMI Design Value Index

Hence both these indices look at design as a value add for business and apply relevant criteria to measure that value addition and demonstrate the correlation in terms of focus on design leading to better market performance and return to shareholders.

2.2. Design Awards

A look at three popular design awards yielded an interesting dichotomy between what is stated as the objective of the awards and the actual criteria based on which designs gets evaluated. Take the Webby awards, for example, which states on their site (for 2017- https://www.monkeysfightingrobots.co/the-2017-webby-awards-vote-for-the-best-of-the-internet/) , that *'In a year marked by so much discord and divisiveness, the Webby Awards is honored to recognized the work and efforts of our nominees as they explore new ways to use the internet to inform our world and bring people together.'* However, an examination of the actual criteria for the web design category, reveals a much narrower focus, as described in the paragraph after next.

The UX design award instituted by the International Design Centre, Berlin (http://www.ux-design-awards.com/en/awards/about/) describes its purpose and the criteria for evaluation as follows: '*The UX Design Awards are a singular competition for user experience – a key added value in connected life and work .The Awards communicate opportunities: How accomplished experience design and innovative technologies add value and make a positive impact in peoples' s lives. The UX Design Awards recognize excellent experience qualities in products, services, environments and future-oriented concepts in all areas of life'.* But, once again, between the description of the award and the actual criteria used for evaluation, falls a shadow.

A Sampling of the Stated Reward Criteria for the Above Mentioned Awards.

- Navigation is around speed and ease of use: *where you want to go quickly and offers easy access to the breadth and depth of the site's content, thereby, learning time should be minimal, errors must be easy to correct*
- Optimizing the use of technology through design: *is the use of technology on the site. Good functionality means the site works well. It loads quickly, has live links, and any new technology used is functional and relevant for the intended audience, Does the technology work? Does the innovation alter the way technology is developed and utilized in the future?*
- Improving bottom line through customer retention: *is effective experience design enabling brands to develop propositions that add human value, driving their market success, one has probably had a good overall experience if (s)he comes back regularly, places a bookmark, signs up for a newsletter, participates, emails the site to a friend, or is intrigued enough to stay for a while*
- Providing aesthetically engaging experience: *is communicating a visual experience that may even take one's breath away*
- Using the award as a marker of success to attract more customers in the global marketplace *A distinction for excellent user experience enhances the recognition of skills, products and services on the global market*

Yet another well-known design award – the Red Dot Design Award also states the following as the evaluation criteria. https://www.red-dot.org/pd/about/

The **Red Dot Award**: Product **Design awards** the best products of the year.

...

The judging criteria include amongst others:

- Degree of innovation.
- Functionality.
- Formal quality.
- Ergonomics.
- Durability.
- Symbolic and emotional content.
- Product periphery.
- Self-explanatory quality.

Fig. 5. Award Criteria for Red Dot Design Awards

If the criteria for determining UX design that is worth rewarding (via indices and awards) is still **only** about speed, efficiency, learnability, market success, customer acquisition and retention on one hand and aesthetic delight on the other, then the processes leading to successful UX design will also focus on designing based only on these criteria. The cycle of market led design will then continue instead of evaluating a

more holistic set of criteria that could help shift the desired outcome of UX design from just being about creating convenience and wealth to also playing a role in enhancing capabilities of its human users and thereby empowering users to make more informed decisions about their lives, the experiences they chose and have clarity about the impact those decisions will have on the future of the world.

But is there another set of criteria with which to evaluate UX? Let us for a moment look at an entirely different area, that of measuring human development and welfare in development economics, for parallels to our search for more holistic measurement criteria**.**

3. Is there an Alternative Way to Evaluate UX Holistically?

This journey of measuring humanity's progress 'only' in terms of financial and growth numbers instead of 'also' in terms of growth numbers till a reform movement of sorts shifts the narrative to a more humane perspective has been seen in the field of development economics. Just as in mainstream UX design today, there was a time not long ago when GDP was the celebrity measure for tracking the progress of the human race in development/welfare economics.

"We are stealing the future, selling it in the present, and calling it GDP." — Paul Hawke

4. The Transformation in Measuring Human Development

The concept and measurement of human welfare has undergone a massive change, from the origins of economic "utility" theory to Amartya Sen's human capabilities approach. Present measures of social welfare used in the fields of economics and development, include not just national income but a variety of composite measures such as the Human Development Index, Better Life Index, Happiness Index, etc.

In 1990, the United Nations Development Program (UNDP) transformed the landscape of development theory, measurement, and policy with the publication of its first annual Human Development Report (HDR) and the introduction of the Human Development Index. HDR 1990 presented the concept of "human development" as progress towards greater human well- being and provided country-level data for a wide range of well-being indicators. The UNDP's establishment of the HDR expanded both the availability of measurement and comparison tools used by governments, NGOs, and researchers, and our common understanding of development itself.

The Humanist Revolution in economics was ushered in by Amartya Sen and Martha Nussbaum, who are together credited with the origination of the "capabilities" approach to human well-being based on Rawlsian philosophy [Pattanaik 1994]. Sen and Nussbaum, like Aristotle privileged the 'being' and 'doing' of human beings, instead of what they 'have'. Moving the discussion away from utility and towards "capabilities" allowed Sen and Nussbaum to distinguish means (like money) from ends (like well-being or freedom) [Crocker 1992].

Sen searched for measures to adequately represent people's well-being and deprivation and found that neither income and command over commodities, nor happiness and fulfillment of desires constituted good enough indicators of human well-being or lack of it. Sen's argument in terms of analysing quality of life / poverty was that true well-being resulted from the power and control people have over what they can be and do. Hence he posited that focusing on human functionings and capabilities would provide a construct for assessing in a more reasonable manner (than just what he/she possesses materially) to assess an individual's advantages and disadvantages.

4.1. New Measures of Well Being

Amartya Sen's capabilities approach offers this broad based perspective of development where everything revolves around people's well-being. This humanist approach to measuring welfare led to several new / alternative (to the popular GNP, GDP measures) emerging that reflected a broader conception of wellbeing.

Alternative national indicators of welfare and well-being

Indicator	Explanation	Coverage
Index of Sustainable Economic Welfare (ISEW) & Genuine Progress Indicator (GPI) Type: GDP modification Unit: dollar	Personal consumption expenditures weighted by income distribution, with volunteer and household work added and environmental and social costs subtracted.	• 17 countries, several states and regions • 1950 - various years
Genuine savings Type: Income accounts modification Unit: dollar	Level of saving after depreciation of produced capital, investments in human capital, depletion of minerals, energy, and forests, and damages from local and global air pollutants are accounted for.	• 140 countries • 1970 - 2008
Inclusive Wealth Index Type: Capital accounts modification Unit: dollar	Asset wealth including built, human, and natural resources.	• 20 countries • 1990-2008
Australian Unity Well-Being Index Type: Survey based index Unit: Index	Annual survey of various aspects of well-being and quality of life.	• Australia • 2001-present
Gallup-Healthways Well-Being Index Type: Survey based index Unit: Index	Annual survey in taking into account five elements: purpose (employment, etc), social, financial, community and physical (health).	• 50 states of the USA, expanded to 135 countries in 2013. • 2008-present
Gross National Happiness Type: Survey based index Unit: Index	Detailed in-person survey around nine domains: psychological well-being, standard of living, governance, health, education, community vitality, cultural diversity, time use, and ecological diversity.	• Bhutan • 2010
Human Development Index Type: Composite index Unit: Index	Index of GDP per person, spending on health and education, and life expectancy.	• 177 countries • 1980 - present
Happy Planet Index Type: Composite index Unit: Index	A calculation based on subjective well being multimplied by life expectancy divided by ecological footprint.	• 153 countries • 3 years
OECD Better Life Index Type: Composite index Unit: Index	Includes housing, income, jobs, community education, environment, civic engagement, health, life satisfaction, saftey, and work-life balance.	• 36 OECD countries • 1 year

theconversation.com Source: Author

Fig. 6. Popular Indices Measuring Welfare and Well Being

4.2. Have New Indices Brought New Insights?

It is important to note that with the use of new measures of well-being, it has come to light that not all countries that have high economic output have high level of well-being

(examples – USA and UK). On the other hand, countries that score high on economic output AND creativity AND innovation also score high on happiness and subjective well-being (example – Nordic countries).

Does an environment that harbors emancipative values lead to more creativity and innovation? According to a World Values Survey report (http://www.worldvaluessurvey.org/wvs/articles/folder_published/article_base_54), the critical cultural components that constitute the process of human empowerment are the presence of emancipative values. Once this process is in place, people are empowered to exercise their freedoms through their action.

Human empowerment built on a foundation of emancipative values builds social capital, leads to increased self-expression and revitalises civil society. Emancipative values also lead to an overall rise in the level of subjective well-being that society experiences by shifting people's narrow focus on a strategy of survival to one of increased human agency.

5. An Alternative Approach to Measuring UX – A Holistic Design Index

Just as the move away from GDP as the only way to measure progress and well-being of the human race has led to new ways of looking at the connections between economic prosperity and various categories of wellbeing and hence given rise to new policies and programs, constructing a new holistic design index that reimagines the potential impact that the design of experience can have on people would throw new light on alternative ways UX can be practiced.

Perhaps a more meaningful approach to measuring (and hence defining) how an 'experience' can make fundamental enhancements to the user's core capability to function with agency is urgently needed.

Based on Amartya Sen and Martha Nussbaum's capability theory, a list of parameters that evaluate whether capabilities of users interacting with digital products and services were enhanced as a result of using those products and services could form the basis of this new design index. Since the success criteria of 'good' User Experience would now have measures around capability enhancement in addition to some of the current measures like speed, efficiency, increased conversion, etc., the very definition and process of UX design would have to transform so that successful and award winning User Experience could incorporate a balance between profit centred design and capability centred design.

5.1. Design Led Empowerment Index

What could a more holistic design index look like? Having reviewed indices that measure human wellbeing in a more holistic manner than simply looking at GDP, per capita income, etc. (Human Development Index, Better Life Index, Happy Planet Index, World Happiness Index, Gross National Happiness, Global Creativity Index,etc.) as part of the first author's ongoing PhD research, the following dimensions have been identified as key factors contributing to overall happiness and wellbeing.

- Material living standards (income, consumption and wealth);
- Health;
- Education;
- Personal activities including work
- Social connections and relationships;
- Environment (present and future conditions);
- Insecurity, of an economic as well as a physical nature.
- Generosity
- Freedom

All these dimensions shape people's well-being, and yet conventional income measures miss many of these. Taking inspiration from these dimensions, we present here a list of parameters that could form the basis of a more holistic design index.

These parameters could be used to evaluate whether a UX design concept/ prototype/fully working product does the following for its users? The design could be scored based on how it fares on each of the items below.

1. Improves Personal Capabilities to think, feel, imagine, reason
2. Connects people and enables community building
3. Enhances Life Satisfaction
4. Provides a sense of flow and delight
5. Reduces Effort and Facilitates Convenience
6. Helps Save or Make Money
7. Enhances Personal and Family Health and safety
8. Enhances Feeling of Purpose
9. Facilitates/enhances ways to live a more sustainable and socially responsible life
10. Is designed to be inclusive

Using an index with parameters such as the list includes would go a long way in shifting the current mainstream UX narrative of designing ONLY for increased efficiency, speed and revenue to ALSO designing for these. Including the additional parameters (from the list given above) as part of an index that measures 'good' UX

design will also mean that current design frameworks and processes will need to transform to meet the new definition of what is 'good' UX. As the Nobel Prize winning economist Joseph E. Stiglitz said, "What you measure affects what you do. If we have the wrong metrics, we will strive for the wrong things."

With an alternative design index that focuses on holistic empowerment of the design's users, the journey to reframe how we practice UX Design will get a head start and we will pay attention to what is needed for design to contribute towards a sustainable and inclusive world.

6. Conclusion

At this point in time, when technology is creating a major fork in the road between what could be a better world for all versus a more divided, automated and unequal world, designers can and should play a critical role in making the choice for humanity. And for that to happen, the measurement and process of design must take a more humanitarian turn just like it did in economics.

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