

## Designing Online Experiences: Beyond the Tyranny of Usability.

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This paper critically examines the widely accepted principles of usability in web design. In particular, it investigates the work of Jakob Nielsen, whose name has become synonymous with 'user-friendliness' as a result of popular applications of his 'ten usability heuristics' and argument that Flash is '99% bad'. It interrogates the assumptions embedded in his research, especially the notion that web consumption is predominantly a utilitarian activity.

In an infant discipline such as web design, what are the implications for students and practitioners' creative output when such ideas become its theoretical canon? What are the foreseeable consequences when knowledge in the field is disseminated by industry practitioners, such as Nielsen and other usability experts, to fellow multimedia designers? The paper explores the possible outcomes of the dot.com industry preaching its own practice, particularly when this in turn is fed back into the education of prospective web professionals.

What can be borrowed from other design disciplines that can contribute to a rethinking of online interactions as more than task-driven? For example, in terms of industrial design, a web site can be considered a product; while architecturally, it can be perceived as a virtual space. It has only been recently that the concept of 'experience design' has emerged in web design, which suggests an approach which both contests and extends 'rules' of usability. This seems indicative of broader disciplinary differences between the abovementioned fields and the design of information systems, from which the area of usability has developed. The paper attempts to chart the historical trajectory of ontologies of web design and reconcile these with approaches from other design disciplines as a way of establishing alternatives to the taken-for-granted mantra that 'usability is king'.

## DESIGNING ONLINE EXPERIENCES: BEYOND THE TYRANNY OF USABILITY

### **Abstract**

This paper critically examines the widely accepted principles of usability in web design. In particular, it investigates the work of Jakob Nielsen, whose name has become synonymous with 'user-friendliness' as a result of popular applications of his 'ten usability heuristics' and argument that Flash is '99% bad'. It interrogates the assumptions embedded in his research, especially the notion that web consumption is predominantly a utilitarian activity.

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### **Introduction**

Within the dot.com industry, Dr Jakob Nielsen has attained guru status, having been variously described as 'the world's leading expert on web usability', 'the smartest person on the web', and someone who 'knows more about what makes websites work than anyone else on the planet' (Goto and Cotler 2002: 209).

This paper critically reviews his ideas and work, particularly his representation of web design and usability as oppositional forces. In such a contest, when usability has won the battle with design, the result is 'relentlessly sensible' design. The paper attempts to interrogate the assumptions embedded in the concept of usability as defined by Nielsen's research, especially the notion that web consumption is predominantly a utilitarian activity, and that a simple formulaic approach will produce a 'common sensibility' in the design of online experiences.

The intention is not to criticise usability *per se*: that is, I am not commenting on the usability movement or the musings of other usability experts. Nor am I advocating 'unusability' in web design. However, what I do want to explore is the elevation of Nielsen's ideas to the canon in the new discipline of web design and development to the extent that it does not allow for innovation or other ways of thinking about online experiences. What can be borrowed from other design disciplines that can contribute to a rethinking of online interactions as more than task-driven? The paper attempts to chart the historical trajectory of ontologies of web design and reconcile these with approaches from other design disciplines as a way of establishing alternatives to the taken-for-granted mantra that 'usability is king'.

Finally, Nielsen's ideas are contextualised politically, so that they are understood in relation to the audiences of his work and the conditions under which that work was created. What are the consequences when knowledge in the field of web design is predominantly disseminated by a single/few experts to industry practitioners and used in the education of prospective web professionals? Moreover, what happens when this occurs across disciplinary boundaries, from engineers to designers, but without any actual interdisciplinarity?

### **'I am not a visual designer': usability as the binary opposite of design**

Nielsen refers to 'usability engineering' (1994), which suggests that usability is a quantifiable attribute that can be constructed using specific methods. Moreover, it is indicative of the position from which he critiques design: he defines and interrogates design from a self-proclaimed engineer's perspective.

'In past years, the greatest usability barrier was the preponderance of cool design. Most projects were ruled by usability opponents who preferred complexity over simplicity... Happily, glamour-based design has lost and usability advocates have won the first and hardest victory.' (Nielsen 5 August 2001)

In other words, according to Nielsen, designers are 'usability opponents' who are at war with engineers of usability. Designers prefer complexity, while usability experts embrace simplicity. This relationship is not only mutually exclusive, but hierarchical in that usability is given the higher ground. There is no room for a balanced or even integrated relationship between design and usability, as seen in Nielsen's (25 July 2000) call for the 'end of web design'. If 'usability is king' (Grabham 2003; Goldberg 2003; Goldman 2002) as is often claimed, then the king is a tyrant.

It is this privileging of usability to the extent that there is little need for design that I refer to as a tyranny. For Nielsen (29 October 2000), where the work of designers dominate, 'usability disease' ensues, implying that the superiority of usability has been abused through excessive or over-indulgent design. An otherwise healthy web site has been infected with design:

'Websites must tone down their individual appearance and distinct design in all ways...' (Nielsen 23 July 2000)

The simplicity with which Nielsen characterises usability issues is also applied in his reductive definition of web design as that which makes web sites attractive or visually outstanding. To demonstrate that he practices the simplicity that he preaches, Nielsen's own web site, [www.useit.com](http://www.useit.com), has practically no graphics. He justifies this by asserting that in order for web pages to download within 10 seconds on a dialup modem, they need to be no more than 30Kb thereby ruling out the inclusion of most graphics. Nielsen advocates a removal of anything that makes a site differentiable, but is not useful. He recommends making a site memorable through its usability, but not visually.

This 'practice of simplicity' pervades Nielsen's work, from the ways in which he proposes to measure usability through ten usability heuristics through to his over-simplification of design to merely 'making things pretty'. In what has been described as his 'relentlessly sensible' approach, creating good online experiences is distilled into ten rules, one of which is aesthetic and minimalist design. Complexity is sacrificed to the extreme pragmatism of usability, such that everything is easy, both for the designer and the user. As in the book title of another usability expert, Steve Krug (2000), 'don't make me think!': where the intention of usability is to make

the achievement of online tasks easy and efficient for users, the design process is depicted as having little use and requiring minimal thought.

### **Usability as ease-of-use**

‘Usability is a quality attribute that assesses how easy user interfaces are to use. The word “usability” also refers to methods for improving ease-of-use during the design process.’ (Nielsen 25 August 2003)

This notion of usability as ease-of-use contains a number of assumptions, the main one being that web interactions are essentially utilitarian activities. If the design of online experiences is seen only in utilitarian terms, then Nielsen’s ideas pertain only to particular types of web experiences, not all. Nielsen himself implies this by referring to big name sites such as Amazon.com as case studies.

‘On the Internet, it’s survival of the easiest: if customers can’t find a product, they can’t buy it.’ (Nielsen and Norman 14 February 2000)

Therefore, ease of use is the key issue where e-commerce is concerned. However, Nielsen does note that it is more than Amazon.com’s usability which makes it a successful web site, namely incentives to return and get discounts. There are also other genres of sites, such as online games, which are not constructed for purely utilitarian purposes in the sense that finding out how to use the controls is part of the objective: making usability a challenge is a deliberate aspect of the design.

The need for speed in online interactions, as proposed in one of Nielsen’s ten usability heuristics, often accompanies ease of use in recommendations about usability. That is, it is argued that ease of use and expediency go hand-in-hand in enabling the user to achieve their online goals as quickly and smoothly as possible. Again, this immediately restricts the types of web sites and interactions which relate to Nielsen’s arguments about usability. For example, browsing connotes an activity which allows the user to work at their own pace, to muse upon their findings before making a decision. Therefore, Nielsen’s assertion that web sites must have ‘zero learning time or die’ (Nielsen 25 July 2000) does not seem relevant to an online situation which involves browsing, learning and reflecting in a way which is not hurried or pressing. This is supported by Soloway and Prior (1996) who assert that, whether a design is good or bad, users will persist, particularly if they have a goal in mind. Nielsen and Tognazzini do acknowledge that the web browser is inappropriate for the easy and speedy qualities which constitute good usability:

‘At the risk of repeating an old saw, when you only have a hammer, everything looks like a nail... Our hammer has been the Web browser... The browser is a useful tool. It needs to cease being the only tool, and it could use some improvement.’ (Tognazzini and Nielsen 26 March 2001)

Tognazzini and Nielsen are referring to the web browser and the difficulties of it being the only tool through which users can engage with the web. Indeed, if ease of use and speed of interaction are the only considerations, then the notion of browsing is not only ill-suited but a complete misnomer. However, it also could be argued that usability is the hammer by which web sites are designed and viewed: assuming that all users need ease and speed in every possible online context shows an ignorance of users and the diverse ways in which the web is used.

To some extent, ignoring users is recommended by Nielsen. He advises that when evaluating a web site's usability through user testing, it is important not to listen to what users say, but what they do.

'...pay attention to what users do, not what they say. Self-reported claims are unreliable as are user speculations about future behaviour.' (Nielsen 5 August 2001).

Herein lie some contradictions: usability is intended to assist the user in completing their online tasks easily and speedily, but the user is not asked whether ease and speed are the most critical factors in their web interactions or how their web experience could be improved. It is user-centred to the extent that the user is being observed, but in the absence of input from the user, it could not be called participatory user-centred design (Gaffney 1999).

Another anomaly is that usability can only be assessed for usable objects. The user can only 'do' something with certain elements of the interface. Nielsen's conclusion is to improve usability for those elements that are used and to eliminate those that are not.

'Since most sites are so bad, it doesn't take much to stand out and be one of the easiest sites on the Internet. Get rid of the spinning logos...Don't trust what customers say - trust what they do.'

However, without input from the user, it is not possible to ascertain whether those elements serve a purpose other than that of usability. Does this then warrant getting rid of anything that cannot be 'used' such as a logo or banner? This highlights the conflict between usability and design standards.

### **Following the flock vs good usability**

Nielsen contends that good usability often contradicts design standards because many poor instances of design (and hence usability) have become defacto standards. In choosing between a standard design or better usability, Nielsen concedes that standards should be followed even if usability may be sacrificed, generalising that users want all web sites to work similarly (23 July 2000).

'If 80% or more of the big sites do things in a single way, then this is the de-facto standard and you HAVE to comply.' (Nielsen 14 November 1999).

Nielsen reiterated this as recently as last year, adding that where there are no standards, web sites should still be designed according to conventions. A design convention is defined quantitatively as an attribute which is evident on 50-79% of the big sites. Thus, all web sites should be lead by the standards and conventions of large (and by association mainstream, corporate, e-commerce) sites.

Nielsen (14 November 1999) offers a critique of online elements which exemplify bad design and usability, but which have become the norm. Firstly, the standard navigation bar on the left hand side of a web site occupies more valuable screen space than a top navigation bar. Furthermore, it takes the user longer to move the mouse to the left side of the screen than to the right or top. Secondly, the usual blue font colour to indicate a hypertext link is described as 'the mother of bad web design conventions' because of it reduces the speed of reading. The abuse of space and time are given as reasons for poor usability: every inch of the screen needs to be exploited for utility and time-saving potential. But rather than breaking with traditions, Nielsen (29 October 2000) opts to retain the status quo:

‘Splash pages were an early sin of abusive Web design. Luckily, almost all professional websites have removed this usability barrier. However, we’re now seeing the rise of Flash intros that have the same obnoxious effect... Flash encourages gratuitous animation.’

Nielsen famously claimed in 2000, that Flash was 99% bad because it ‘breaks with the Web’s fundamental interaction style’ and ‘encourages design abuse’. In other words, a technology or site which deviates from the conventional, and facilitates engagement with the web beyond hypertext is described as a ‘usability disease’. For Nielsen, Flash is a disruption to the utilitarian web interactions he advocates and instead offers online experiences which might be considered more akin to film. Flash presented an alternative to the dominant paradigm of the web page, yet Nielsen was opposed to this despite that at that time Flash already had a vast reach being bundled with Windows 95 and 98 operating systems, and has been steady at 98% penetration of the Internet population since March 2002 (Macromedia 2004a, 2004b). Was this a valid objection given that Flash, by Nielsen’s own criteria, was already a technological standard?

### **Innovation, where art thou?**

Nielsen’s past objection to Flash raises some critical questions about the role of innovation. If standards must be followed and conventions should be followed, where is the space for experimentation? How can one stand out whilst following the flock? In Nielsen and Norman’s (14 February 2000) critique of Hewlett Packard’s online catalogue for printers, they argue that the products were not sufficiently differentiated to enable the consumer to make a purchase decision. Yet on a larger scale, the same could be said about the constraints that usability rules present to the design of online experiences: the universality of web design for which they lobby often makes it difficult to distinguish web sites and pages from one another.

Additionally, looking at issues beyond usability in isolation, what are the possibilities for thinking about web experiences other than as mere quick and easy transactions? If web design was considered through the lenses of other forms of design, then the application of universal rules of usability seems problematic. Web design has the potential to be conceptualised architecturally, as the design of virtual space; or theatrically as a form of stage design (Laurel 1991). Similarly, embracing the web in terms of industrial or furniture or textile design allows it to be constructed as web as part of a lifestyle, the fabric of everyday life. This is not the place to discuss the intricacies of how this can be done, but it immediately highlights the limitations of distilling web design into series of heuristics.

### **Conclusion**

The intention of this paper has not been to suggest an abandonment of usability concerns. Rather, it is arguing for an understanding of the politics of usability, both disciplinary and economic, before the wholesale application of Nielsen’s usability guidelines.

An analysis of the disciplinary politics of usability shows it to emerge from the field of engineering, rather than from more traditional areas of design that are closely affiliated with art, craft, artists and artisans. Although designers working in the dot.com industry respect Nielsen’s perspectives on usability, this is not reciprocated in Nielsen’s views of design.

Closer inspection of Nielsen’s ideas demonstrate that they pertain to doing business on the web, particularly the big web sites of big business. Nielsen has earned his reputation as the ‘king of usability’ by advising corporations on how to improve on ease and efficiency of use for their e-commerce customers. This consultancy work is done in his capacity as a principal in the Nielsen Norman Group: indeed, his comments about Flash being 99% bad (29 October 2000) lead to Macromedia contracting him to develop a series of 117 Flash usability guidelines

(Macromedia 3 June 2002). It is against this backdrop of the political economy of Nielsen's work that his concern with the quantifiable and the conditions for which his usability rules were meant can be contextualised.

It is this critical engagement with Nielsen's arguments that will grow the discipline of web design and encourage designers to ask 'usability for what end?'. The unquestioning status given to Nielsen and his notions of usability become a tyranny if they inhibit a more complex understanding of the relationship between web usability and design, and the role of usability in design.

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