

Problem of Nominalisation in Design Research

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The following is an edited version of a response on 23 January 2019 to the following and other posts on the Phd-design list on JISCMail.

'One of the consequences of these theoretical projects [theorising about design] is that the presumed underlying activity is treated as if it had objective, even material, status. Thus, for example, instead of talking about what people need, we talk about people having 'needs'. Such reification gives an altogether misleading impression, endowing vague, hypothetical and, by definition, hidden states with objective status.' (Prof David Sless of CRI)

And from Klaus Krippendorff in the same discussion,

'The product of a "gestalter" is an "entwurf", something "thrown out of one's body". In practical terms, an "entwurf" is a drawing or depiction of something, but also a law before it is enacted. There is also a verb: "entwerfen" and actor that does it, an "entwerfer", a draftsman or designer "gestaltung", "gestalter" and "gestalt" carries the baggage of visual holism'

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Different cultures coin different terms for the same phenomena. Krippendorff's description aligns with that of the definition of *entwurf* in Wiktionary, which also describes 'entwurf' as a nominalisation of 'design' as an activity (<http://en.wiktionary.org/wiki/Entwurf>). Is there any fundamental difference between an 'entwurf' and a 'design', where 'a design' is seen as 'a specification for how to make or do something'.

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The problem of nominalisation of design is a similar ontological issue the nominalisation problems of identifying a suitable definition of design.

We already have a word for the activity of 'having a swim'. It is 'swimming'. The idea of 'a swim' is a nominalisation. It makes ontological sense to see nominalisations such as 'a swim' as the name of an abstraction representing a pseudo-reality.

In many ways, ontologically, this is similar to seeing objects in a mirror. The objects 'as seen in the mirror' are best seen ontologically as abstractions of a pseudo-reality rather than real objects. One doesn't usually think of images of objects in a mirror as being real things behind the mirror glass. Usually, they are seen as a pseudo-reality.

These are pretty crucial points in trying to sort out these issues in design theory relating to exactly how the activities associated with 'self' is connected to exactly how we generate novel ideas or make judgements about partial design possibilities. I'm not sure the level of detail we are using is even now deep enough. What is obvious, however, is that these theory issues can't be sorted out at less level of conceptual detail. You can see this in the way the existing design theory literature is incapable of addressing these issues using ways of thinking that are too broad brush to produce theory that has predictive power.

Professor Michael French, author of one of the earliest books on design thinking in the 1960s and my university academic mentor, taught the use of *practical* 'abstraction' rather than theory to get the action-guiding benefits claimed for theory-makers but not provided by theory. He continuously added the rider 'abstract only until it ceases to be useful - and no further', to avoid unhelpful theorization.

Another idea of that time and place (1970s North of England practical academia and Illich) was the to 'avoid nominalisation' as a corruptor of professional action.

The aim of avoiding the converting of actions into objects (i.e., avoid converting swimming into 'having a swim', converting 'needing' into 'having a need') was that such nominalisation corrupts and compromises clear thinking. Which is why politicians and others who wish to manipulate use nominalisation as a matter of course.

For designers and design researchers, nominalisation compromises thinking and theorising about design and designing/design thinking.

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From different viewpoints, Ken Friedman and David Sless have recently (2003) argued on this PhD - design list for particular modes of discussion.

I suggest this issue is much more important than it appears.

There are several reasons that indicate it is time to seriously address the problems of modes of discussion and modes of theoretical analysis in design research.

These are important issues that appear to be hampering development of the field and causing many problems with theory and concepts, especially in relation to concepts such as 'creativity', 'design', 'design methods', 'intuition'.

I've appended some thoughts below. These include:

- some characteristics of particular problems in design research discourse
- a suggestion as to why these characteristics occur
- a method to address these discourse problems; and
- some benefits that I've found in applying the method.

This article is not a call to halt discussions about these issues. It's primarily a call for strategic meta-analysis to improve the discourse of design research because present modes of discussion and analysis previously and currently don't seem to have been helpful [nor do they up to the time of this edit in 2023]. The above problems have been noted by several contributors in recent discussions on 'creativity', transformative learning and the differences between engineers and designers.

In what follows, I'm suggesting the problem lies in the ways we are discussing and analysing the issues, rather than the actual design research issues and concepts themselves, which from this perspective are relatively simple and straightforward. This is in contradiction to those who uncritically assume the modes of discussion and analysis are unproblematic and that the problems are due to complexity of the design concepts and issues.

The following is not assumed to be complete. It is intended to raise the issues rather than be the definitive word on it.

I welcome comments, thoughts and criticisms.

Some thoughts about the ways design researchers discuss and analyse that have consistently resulted in theory problems

There have been problems with the development of theory foundations for design research since the 1950s. The problems have been consistently reproduced and appear to be primarily due to the ways design researchers use language to try to build theory.

The following collates issues that seem to be central to the problem:

- The discussions on creativity and other core concepts have not led to conclusions that clearly advance the field.
- Recent postings to PhD-Design on 'creativity' show many similar characteristics to earlier postings on 'design' and to earlier (printed) analyses and theories about a wide range of similar concepts such as 'inventiveness', 'knowledge', 'information', and 'systematic methods'.
- Design researchers have been having a problem with defining the core basic concepts for around 50 years.
- The problem seems to be due to the ways that we, as design researchers, conceptualise, discuss and analyse issues rather than the issues themselves.
- None of the core concepts are, in epistemological terms, particularly difficult to address. There are a small number of alternative possibilities for the meanings of each. A key part of the discussion is simply to choose which meanings are preferable for building theory in this field. For example, 'What will we use the term 'creativity' to mean?' rather than 'What is creativity?'
- The relevant discussions and explanations in the design research literature have an intellectual muddiness that renders difficult the use of critical analysis and careful productive theory making.
- Academic discussion and analysis in the design research literature and on the phd-design list is characteristically qualitatively different from other, theoretically more productive, fields.
- Practical weaknesses of discussion and analysis in the design research field (as in the problems in the field in defining basic concepts) are understandably echoed in weak status and reduced research funding for design research.

A helicopter view suggests the design research field is marked by a particularly consistent, characteristic and problematic way of discussing and analysing issues since the 1950s. In short, significant ongoing adverse effects of this persistently problematic mode of discourse are problems with definitions, terminology, core concepts and theory foundations.

The question is 'What is it we do so consistently in theory-making in design research that is so problematic?' The reason for asking this so bluntly, is that the actual conceptual and theoretical issues are essentially similar to many other fields that have successfully and straightforwardly addressed them

To recap, there is a longstanding and ongoing problem with conceptual and theory development in design research that appears to be caused by the ways that design researchers discuss and analyse - because the concepts are intrinsically relatively straightforward. The theoretical perspectives, empirical and analytical methods of design research are nothing especially difficult. Finding a simple

explanation of what we do in discussion that consistently causes problems potentially offers great benefits to the field.

The problem of nominalisation in theory development

One of the most obvious explanations that addresses all aspects of the problems of design research described above is the inappropriate use of nominalisation. Uncritical use of nominalisation is unusually widespread in the design research field in discussions about design theory. The adverse effects of nominalisation would explain most of the difficulties, errors, muddiness of analysis, and poor conceptualisation in creating design theories and concepts, in discussions between design researchers, and the low quality of critical review of design theories.

Nominalisation refers to the creation of nouns (and associated adjectives and adverbs) from verbs (nominalise - to give a name). For example, nominalisations of the verb 'play' include the noun 'play', the adjective and adverb 'playful'.

The use of nominalisations leads to many problems in critical and theoretical discourse including: increased ambiguity, a reduction in precision, shifts in meaning, increased number of meanings, increased unnecessary value-ladenness (examples below). These problems apply both to the activity that is nominalised and all associated parts of sentences and discourses.

In essence, nominalising any verb significantly reduces the information carried. In many cases, the nominalisation is actually intrinsically epistemologically invalid whilst being apparently linguistically correct. This is particularly problematic in the design and design research realms because such texts appear to make sense regardless of their epistemological (and hence conceptual and theoretical) errors.

Examples of nominalisation are widespread in both common language and theoretical/technical language. The problems nominalisation brings to conceptualisation are perhaps most clear in silly cases where the nominalisation has to be invented. For example, the nominalisation of 'sit' (verb) into 'sittingness' (noun) results in a shift from 'The cat sits on the mat' to something like 'The relation between the cat and the mat is one of sittingness'. The meaning of the verb form is sharp and relatively unambiguous. 'The cat sits on the mat' refers to 'that cat', 'that mat', and it is 'that cat that is behaving in that way' (sits). There is nothing else that is left partially said or, can be interpreted very differently.

Changing the verb 'sits' to the noun 'sittingness' makes the sentence abstract and much less precise in multiple ways. For example, the relation might be one of 'sittingness' but it's not exactly clear whether that means that the cat is, actually, at this moment, sitting on that mat (the key concept of the verb sentence). More importantly, the invention of the concept of 'sittingness' immediately corrupts the relationship between the physicality of the situation (cat sits on mat) and the discourse. Without any reference to whether there is a physical actualisation of the attribute of 'sittingness', this new nominalised concept and term is now introduced into the discourse as if 'sittingness' is physically and conceptually legitimate.

This new and epistemologically problematic (in physical terms at least) concept becomes then integrated into discourse by the use of the usual linguistic and analytical tools appropriate to be applied to nouns, which enables other outcomes to be apparently legitimately derived.

So, what are the problems? In the main, the problems stem from the corruption of any discourse that develops as a result of the inclusion of inappropriate nominalisation and its further manipulation via the conventions of language construction.

The problems of nominalisation in design research occur even in the simplest concepts. For example, it is relatively unambiguous to say, 'Dick created that email'. It refers to a particular Dick, a particular email, and specifies what Dick did in terms of a particular behaviour ('creating' - rather than 'writing', 'posting' 'editing' etc.). To specify the same event in terms of a nominalisation of the verb 'create' automatically reduces the precision, and makes the situation more ambiguous and open to reinterpretation. This is especially problematic in research because the usual intention of research and theory making is precision - of making theories that have exact singular and accurately defined meaning. This is different from facilitating people deriving multiple meanings from a text, in activities such as art, and in political and commercial manipulation. In these cases, facilitating reinterpretation to enable manipulation might be regarded as helpful.

In design research and design theory, many problems of developing the field are due to unnecessary 'muddiness' of the discourse. This muddiness seems to stem almost completely from nominalisation problems. The worst problems are in the nominalisation of key terms such as 'designing', 'creating', 'feeling', 'emoting', 'thinking', 'communicating', 'informing', knowing', 'managing'. For each of these the verbs are precise, simple, relatively unambiguous and can be tied directly to the physicality of situations. In each it is possible to directly perceive either the outcome (e.g., the physical changes of emoting) or the activity itself.

In terms of theory making, nominalisation of the verbs defining the above activities, however, is usually epistemologically problematic resulting in increased ambiguity and slackness (and sometimes errors of logical derivation) that are unhelpful in research contexts. For example, nominalisation of 'Dick created that email' might result in 'Dick's email is creative' or 'Dick wrote a creative email'. These are logically different to and cannot be derived from the original. The problem is that at first glance the connection seems plausible due to the linguistic consistencies (they include 'Dick', 'email' and something to do with 'create'). This hoodwinking of human logical facilities and good sense is what makes nominalisation so problematic in research contexts and so powerful in persuasion.

One of the worst aspects of nominalisation is the creation of noun objects that are epistemologically invalid though linguistically apparently correct. The problem with these objects is that application of the usual language processes gives people the illusion that these noun objects (with no connection to physicality) have agency (that is they can do things). When 'Dick created that email', the agency resides with Dick - 'he did it'. It might be possible to dig a bit deeper into the physicality of Dick's functioning and derive a more detailed physical explanation, but the essence of the agency is that it is Dick (in whatever form he is conceived) that 'created'. It certainly (unless magic is now part of scientific discourse) wasn't the email creating itself (as in a 'creative email'). To allocate agency to even more abstract but epistemologically problematic concepts such as 'creativity' results in serious theory problems because of the lack of epistemological validity and the increased ambiguity. To say 'Creativity caused the email from Dick' faultily ascribes agency to 'creativity', and results in a sentence that makes apparent sense but is epistemologically corrupt. Note: this is not to preclude the role of AI or other algorithmic devices that in themselves might create the email.

Inspection of the design research literature shows similar problems with the term 'design'. For example, it is almost trivially easy to make singular sense out of 'Chris is designing a chair'. It is not so easy to make singular sense out of 'This is a 'designed' chair' (are there chairs that are not in some way designed?). It is getting a bit close to magic and a long way from singular theory to say 'Design created this chair'. To make sense in theory terms, there would have to be some very precise answers to 'What is this "Design" entity?' 'How is it physically actualized?' 'How does its agency operate?' 'How does it physically create things?' and a raft of other questions.

A reasonable question is 'Why would anyone want to do nominalisation?' The answer is because it is a very powerful technique of persuasion and personal manipulation. Secondly, of importance in design research, it gives the illusion of truth and proof.

The use of nominalisation lies at the core of effective techniques for manipulating people's behaviour in fields as diverse as advertising, political speechmaking and seduction.

Research and theory making depends on critical thinking. The outcomes of nominalisation work against critical thinking and hence are unhelpful in the practice of research. This, to me, seems to be especially important in design research bearing in mind its long and ongoing history of conceptual 'mess'.

So, if the problem is nominalisation, what is the cure? The main defenses against manipulative techniques based on nominalisation are techniques and practices of critical analysis and critical thinking plus a rejection of the nominalised concepts: converting the nouns back into verbs. The ways of addressing the problem in design research are relatively obvious - emphasis on verbs and critical analysis; the avoidance of nominalisation and nominalised nouns, adjectives and adverbs; and the conversion of nouns back into verbs.

For PhD students, this approach is helpful in several ways. First, it clarifies academic writing immensely (active verb-based writing). Second, it provides a powerful tool for critically analysing other peoples' texts and theories: in the literature review of a thesis, in identifying the real conceptual issues at the 'cutting edge' where the students' research problem lies, in any section in which theoretical perspective and method are discussed, and, perhaps most usefully, in sections in which the candidate presents their interpretations of their findings.

Practically, the method has four steps:

- 1 Look in the text for noun, adjective and adverb forms of key activity words (designing, creating etc.)
- 2 Rewrite these sections using the verb forms of the same words
- 3 Look for inconsistencies, multiple meanings, errors and other problems. From experience, these will stand out.
- 4 Rewrite to make sense

Reducing the nominalisation problems in design research is an immediate, easy and helpful basis for contributing to the field by critiquing the literature to remove its messiness.

Using verb forms also offers the benefit that it clarifies thinking by making more obvious one's choice of concepts and language. This also gives a check for epistemological validity. For example, take the sentences:

"Ken created a furore with his email"

'Ken caused a furore with his email"

"Ken sent an email that raised a furore"

Focusing on the verbs offers insight into exactly which choice of words makes most sense or best fits the intentions of the author.

A side thought is that there are quite a lot of potential PhD and other research projects whose main methodological focus could be addressing the nominalisation problems in particular theory and practice areas.

Conclusion

To summarise, I'm suggesting that:

- Nominalisation in design research discourse is a primary root of conceptual, terminological and epistemological problems in Design Research and Design Theory
- There is a general lack of awareness in the field of the problems of nominalisation in research and theory making (e.g., increased ambiguity, a reduction in precision, shifts in meaning, increased number of meanings, increase in unnecessary value-ledness of terms.)
- The current problems in discussion about 'creativity' are part of the consistent problem milieu caused by inappropriate nominalisation in discourse.
- That the literature that depends on core concepts of design research is plagued with problems due to nominalisation
- That critical analysis and the use of verb forms are the main antidote to nominalisation problems.
- That identifying and addressing nominalisation problems is a very powerful tool for doctoral candidates and design researchers.
- That a four-step method for clarifying theory is:
 - 1 Identify nominalisations,
 - 2 Rewrite in verb form,
 - 3 Look for inconsistencies, multiple meanings, errors and other problems,
 - 4 Rewrite to make sense.

The usefulness of the above four step method is easy and quick to test. Simply try it on any design theory text (preferably not your own!).

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