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Guilty (or invisible) materiality in everyday object relations?

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Abstract: In today's context, demanding radical change even on the scale of our daily behaviour, this article builds on research into guilty materiality to better understand obstacles to changing our everyday material relations. "Guilty materiality" refers to why materiality and material relations may be stigmatised, invisibilised, ignored and avoided.
Daily material relations self-documented by 82 university-level design students provide the tangible basis for exploring and highlighting obstacles and ambiguities in daily-life artefact relations and their materiality. Our study focuses only on what is touched by the cohort, constituting a limited number of artefact encounters. The main analysed material is individual maps produced by students visualising their daily consumption habits.
While the long-term aim of this research is to help identifying leverage points and action areas related to current practices and also mindsets, this paper also presents and explores the pertinence of the proposed methodology in this context. This research discusses, refines and adds to an existing list of triggers/influencing mechanisms that may act as obstacles to more environmentally-relevant everyday material relations.

Introduction

"*We live in a world overflowing with our own productions, a world in which objects beseige us, suffocate us*…" wrote Claudia Dona in 1988. This sentiment is reinterated by Daniel Miller (Miller 2008): "*We live today in a world of ever more stuff - what seems a deluge of goods and shopping*". Nearly twenty years before Dona, Jean Baudrillard was already lamenting the "*madness, this frenzied world of trinkets, of gadgets…their number, their redundance, their superficiality*…" There is little doubt that we have a problem with the quantity of objects, products, trinkets, gadgets we encounter in our everyday lives that Miller terms "stuff". And as these quotes illustrate, our awareness of this problem is not new. If we are aware of the issue, why has everyday behaviour in relation to stuff remained relatively stable?
Miller (2010) notes that "*Stuff is ubiquitous and problematic . But whatever our environmental fears or concerns over materialism, we will not be helped by either a theory of stuff, or an attitude to stuff, that simply tries to oppose ourselves to it*…" Nevertheless, previous research (Green & Treilhou, 2021) suggests that there are indeed a number of factors that may influence our daily relationships with stuff, and these factors may act as obstacles to changing behaviour. Termed "guilty materiality", the themes explored form a basis for looking at why materiality and material relations may be stigmatised, invisibilised, ignored and avoided.
In the current context, we need to encourage radical change, even on the scale of our daily behaviour. This article therefore aims to build on this research into "guilty materiality" to better understand the obstacles to changing our everyday material relations.
This study looks at both *1)* relations to things *2)* and relations with the materiality of things. Materiality is understood in the context of this research as being constitutive of, and underlying, the artefact, giving structure and confering its qualities (Burlot 2024). The notion of "invisibility" is therefore explored both in relation to everyday objects as entities, and in relation to their materiality.
Detailed daily material relations self-documented by a cohort of university-level design students provide the tangible basis for exploring and highlighting the obstacles and ambiguities in behaviour related to daily-life artefacts and their materiality.

Methodology

Any exploration of everyday material relations can potentially include a very large number of artefacts. In a widely commented study on 32

Californian households from 2001 - 2005, the average family owned 300,000 things, and even in the smallest household of the study 2260 objects were visible to researchers (UCLA: *Life at Home*).
The nature of our study reduces the number of artefact involved. Rather than North American households, our study is based on individual material experiences of French students, the majority of whom were living in student lodgings at the time. Equally, using a protocol inspired by the work of Paola Zucotti, and her "Everything We Touch project, our study focuses only to what is touched by the cohort, therefore further limiting the number of artefact encounters.

school	year	study year	class total	study cohort
Nîmes University	2017	5yr	11	9
Rubika	2017	2nd	15	11
ENSAAMA	2021	4th	23	21
Nîmes University	2023	5th	11	8
Rubika	2024	2nd	27	10
ENSAAMA	2024	3rd/4th	9	5
Nîmes University	2024	5th	10	9
Rubika	2025	2nd	20	9
TOTAL			126	82

Table 1. Schools, year, level and number of students involved in the study

This research is based on self reporting and reflection by eight different groups of students in higher education design courses in three different French teaching establishments (the university of Nîmes, the ENSAAMA (Higher National School for Applied Arts), Paris and the Rubika Design School in Valenciennes. The students are from years 2 to 5. The period covered by the eight different individual studies is from 2017 to 2025. An overview of the cohort is given in Table 1. As students in product, UX and social design, the cohort can be considered as already sensitised to environmental issues and also potentially more sensitive to products and materials. Whilst the bias related to the nature of the cohort needs to be taken into account, we consider that it does not limit the value of the study.

The exercise carried out by all eight student groups is a four step process. This involved noting everything touched during one day, reflecting on this list, categorising/sorting, and visualising material interactions as an annotated/reorganised map. The students were introduced to the exercise immediately before carrying out their touch/list activity.

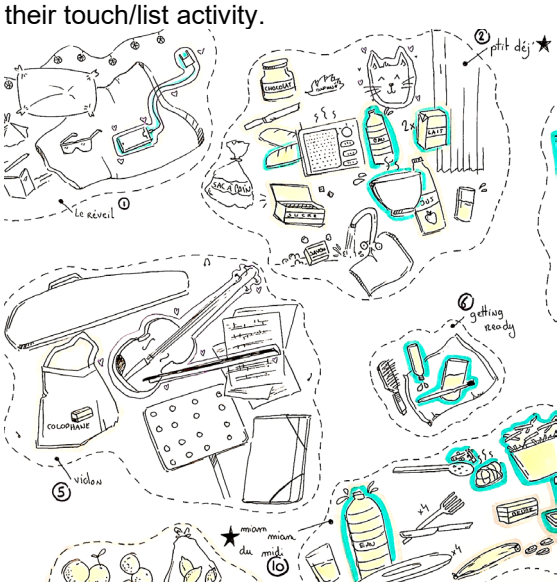

Figure 1. Extract from student map (N.Bodart, 2024)

The exercise was not a stand-alone activity, and was part of a number of different teaching modules, due to the relevance of this type of autoethnography exercise (Schouwenberg & Kaethler, 2021). The nature of the teaching modules related to this study are noted in Table 2.
The main analysed material for this study is individual maps produced by students visualising their daily consumption habits. Figure 1 shows an extract from a student map with a sorting system by zones and colour highlighting for other forms of categorisation. The maps are all illustrated documents containing both images (photos or sketches) of the objects touched and text notes.
A second source of information is the comments by students on the exercise and additional notes and comments added to their maps.
Despite the homogenous nature of the cohort, each of the 8 individual cohorts generated lists with important divergence in the number of objects noted. We can thus compare potentially exhaustive inventories and those which may

school/year	total exercise duration	sort/ map time	included in what teaching module?
Nîmes,2017	24hrs	4hrs	User research tools
Rubika,2017	1 week	2 days	Basic design
ENSAAMA,'21	2 weeks	1 week	Creative speed projet on Material relations
Nîmes, 2023	24hrs	4hrs	Systems approaches for Transitions
Rubika,2024	2024	2nd	Basic design
ENSAAMA,'24	2 weeks	1 week	DfS & Design for transitions
Nîmes,2024	24hrs	4hrs	Systems approaches for Transitions
Rubika,2025	1 week	2 days	Basic design

Table 2. Duration of exercises and related teaching modules

be incomplete within each student group, particularly in relation to things that may
be invisibilised. Differences observable across the whole cohort are considered to be less rigourous as the exercises were carried out by students in different schools, at different levels of study, and with probable (slight) variations in the task descriptions.
It is important to highlight a certain number of ethical issues and also limitations and biases in the study. From an ethical standpoint, it was important for the students to be aware of the authors' research, and that these exercises could be part of their research. The ongoing research carried out by the authors was discussed with all student groups before, and during the listing and mapping exercise. Previous research and findings were also shared and discussed with student groups after this exercise phase. As the materials were discussed and viewed in a classroom setting, students were asked to make exhaustive lists and maps, but also were encouraged to exclude any elements that they considered too personal or intimate. The maps were analysed only by the co-authors in order to respect the approval of students for their use in this research. Any maps/extracts used for communication purposes in relation to this research are shown with renewed approval from the students concerned.
One of the limitations of this study relates to reproductability. This study of illustrated maps is made possible by the specific nature of the student cohort, able to produce readable visual artefacts ("maps") from lists of what they have touched. It is important to note that the exercise is not necessarily easy, even for this cohort. Nevertheless the difficulties are more related to the length of time needed to sort, iterate and illustrate than doing the illustration itself. Based on self reporting, there may be issues of subjective interpretation of the instructions, and students clearly may chose to not list/show certain objects touched for moral, cultural, religious or even legal reasons. We can confirm that drawn (rather than photogrpahic) representations allow the students to include more objects in their maps, while respecting their intimacy. In discussions, students appeared to be much more comfortable with this type of map, which may be more relevant for future studies.

Analysis

Invisibility of things

The first level of analysis of the student maps focuses on simply what things are present and what are absent in these illustrations. In the 73 maps analysed from the first seven student groups (see Table 1) the most obvious omissions seem to concern food, single use objects and particularly packaging, different forms of paper and individual items of clothing. Chargers, cables were also missed from a number of lists and subsequent illustrations.
During the exercise with the most recent cohort the mapping process was followed by a revaluation of what had been missed. The missing items were added to the illustrations in text or sketches. This confirmed the objects mentioned above but also enables us to generate a number of object families:

- things on us/wearing (clothes, jewellery, sometimes the mobile phone)
- parts of the touched environment (cushions, chairs, blanket/throw - things not touched by our hands)
- things as a means to do something (chargers, spatula/stirring spoons, scissors…)
- single use/disposable things (yoghurt pots, wipes, cotton pads, paper, toilet paper, ready meal food containers and also actual fruit, vegetables…)

The activities by the student cohorts related to cooking and eating contain perhaps the highest number of "blind spots". The social practice theory framework might be useful in this context (Kuijer, 2014, Rinkinen, Jalas & Shove, 2015). Nevertheless our study focusing on the "stuff" mediating these practices highlights that many of the material elements involved go unnoticed. Interestingly there is notable irregularity in what

is missed, with often one object identifying an action that was carried out; diary, notebook, list but no pen, or cooking pan but no spoon, spatula or food cooked.
The notion of mediation (Rosenberger & Verbeek, 2015), after Ihde) may explain some omissions when the object as a means to do something is part of an embodied relation. The famous example of Heidegger of the hammer "ready-to-hand" illustrates how a tool becomes invisible in the action of use. (In the case of our study pens, chargers, spatulas, mixing/stirring spoons.)
The invisibility of single use and short life objects, and also of food could be linked to the notion of transitory things and consumerisation (Fromm, 1976). It is perhaps worth noting that short life objects have their origin in the theories (almost exactly one hundred years ago) of "Consumer Engineering" of Earnest Elmo Calkins (1932); suggesting "Consumer engineering must see to it that we use up the kind of goods we now merely use", and the notion of positive "Creative Waste" of Christine Frederik in "Selling Mrs Consumer" 1929.
The study by Ripoll (2023) looking at human comportmental obstacles to behaviour change highlights the human tendency to place emphasis on the short term, and short term gratification which may also help explain the absence of single/short-life objects.
Our study does not enable us to determine if this invisible short term consumption is or has become purely automatic, or as Stuart Walker suggests (Walker, 2017) capable of generating feelings of dissatisfaction and therefore perhaps avoidance. Certain student texts/comments support the idea of displeasure in relation to waste, and to non-durable, short-life objects.
Finally it may be worth noting that beyond the "consumption" explanation, the absence of food could also be linked to the absence of clothing and things on our bodies. This might raise questions around the status of our bodies in everyday interactions.

Presence of materiality

Students were encouraged to consider different ways they might group, categorise and make sense of their lists of objects. These categorisations give insights into how students reflected on the list they generated, and how they wanted to organise and make sense of their lists. The initial categorisations by the majority of students are by activities, or "moments" of the day, but most maps included other forms of grouping/sense making. Other recurring classifications concern attachment, need, what is indispensable, what I like/love.
Surprisingly despite the process encouraging a reflection on the things touched, and the fact that students (re)observed these objects, only a minority suggest consideration of the materiality of things. Only 1/3 of categorisations make any clear reference to materiality (22 out of 73 analysed).
Out of 73 student classifications, less than five use actual materials as a way to group objects. What could be termed the "stuff" they are made of (Markosian, 2015) is in all but three cases the visible external materiality. Only three students comment on contents, material inside or complexity, or of objects as forms of "container".
Other references to materiality, present in equally small numbers, relate to sensorial material qualities (stickiness, softness, smells, sounds made by), to weight, to volume and to the resistance/fragility of materials.
Interestingly for some students a classification or group based on material qualities occurs only when the objects do not fit into a clear activity or moment category, therefore things defying habitual classification.

Ambiguous materiality

Despite the relatively small number of references to materiality in our study, a number of observations can be made which highlight a form of ambiguity in relation to materials and materiality.
In an article on "Clutter" (Baker, 1995) this type of excess stuff in our homes is described as matter out of control, and therefore reflecting our lack of control. A small number of student comments and categorisations support this notion of mattter "out of control"; things that are "always falling", things that are "not cooperative", things that "I lose all the time".
A related family is of objects that are, or might be, misused or could be misappropriated; a number of students have a category of things that "I'm always fiddling with". Just two students comment on sound-related fiddling, no
ticing or playing with the sounds objects can make.
Related to the alternative use theme, object materiality is evaluated by a small number of (only female) students for their potential for use to "defend yourself in an attack situation". Here the weight, angular forms, grip etc and therefore materiality seem to be considered.
The notion of durability highlights another aspect of the ambiguity of materiality. While some

students comment on not liking single use and short life objects, others classifying keepable and disposable objects show surprising choices - a computer is disposable, but the fabric case is not. Sneakers are considered disposable.
While notions of pleasure/displeasure are present in student categorisations these are largely in relation to pleasurable activities, with only a very few refering to sensorial pleasure (soothing, smell, comforting). There is little evidence of either satisfying or dissatisfying material qualities.

Discussion

Verbeek & Kockelkoren (1998) argue that designers seem to be Platonists, failing to see things as *material entities*. The initial analysis of student maps reported in this article seems to suggest that this may still be the case. We may question if our cohort is infact less concerned by materiality than the wider population, but this is beyond the scope of the current research. It nevertheless is of concern that future designers may not be sufficiently conscious of material entities.
Analysis of the student maps and comments gives support to a number of the themes previously identified which may contribute to negative perceptions leading to invisibility or avoidance of material objects and their materiality. See Table 3.
A number of these themes are also partially confirmed by the current research, but are not sufficiently characterised, and also necessitate longer presentation than is possible here.
The themes confirmed and those partially confirmed do enable us to identify larger families which may be relevant for future research, namely relations to the family of transitory, unidentified, soon to be waste “stuff“. A second family that deserves attention, especially for designers, concerns material confusion, knowledge, durability and toxicity and therefore perhaps the need for normalising materiality relations.

Implications and further research

The invisibility of material things in our everyday interactions certainly appears to be confirmed here.

too much	things overflowing, flooding, becoming unmanageable	**?**
stuff	unidentified material, unseen	YES
waste	things without value	YES
short lived	seen as transitory	YES
inept materials	unadapted to life-cycles, wrong materials/use	?
material confusion	and lack of material knowledge	YES
toxic materials	and lack of information and reaction	?
toxic behaviour	and behaviour dictated by things	?
anti-social	object relations detract from human relations	
morally wrong	we should aim for “being” rather than “having”	?
entrapping	objects can entangle or trap us	?
restrict movement	treadmill effects, restricting personal mobility	
materialism	desiring things for themselves	?
spying	objects can spy on us, and collect information	
hoarding	pathological behaviour	
clutter	matter out of control, reflecting our lack of control	YES

Table 3. themes which may negatively influence material object relations (based on Green, Treilhou, 2020). (Shading and YES/? indicates those confirmed/partially confirmed in this paper)

Whether this can be linked to the even more evident invisibility of materiality, and notions of avoidance and/or guilt is not yet proved. We can nevertheless identify a lack of positive associations/pleasure in relation to individual things or their materiality. Equally certain reasons for avoidance of things and materiality - termed “guilty materiality“ in previous research appear to be supported.
While the long-term aim of this research is to provide a step towards identifying leverage points and action areas related to current practices and also mindsets, this paper also presents and explores whether the proposed methodology may be valuable in this context. The everything we touch protocol followed by

sorting and mapping is a fastidious and time consuming exercise, but one which has produced rich analysable supports. It is also, in the case of this specific cohort, an exercise that is generally very positively received.
The results show a high level of heterogeneity, even within a seemingly homogenous cohort, The research here takes advantage of the heterogeneity of reactions and interpretations to the exercise as an analysable material, through a process of comparison. This heterogeneity also nevertheless highlights the need to remain cautious about conclusions or generalisations on material behaviour and indicates the need to consider domestic material relations as potentially ideosyncratic and diverse.
Further research may need to go into more depth, and perhaps the use of a more rigorous version of this protocol with motivated self-reporting participants, who might potentially be recruited through exercises such as those used here.

Conclusion

The basis of this research is the relatively simple protocol of "everything I touched" accompanied by the classification of the objects concerned by the people involved. This process nevertheless provides information and raises questions that go beyond the simple symbolic, emotional or ideological attachment to everyday objects.
This research discusses, refines and adds to an existing list of mechanisms that may act as obstacles to more environmentally-relevant everyday material relations. Our findings suggests a high level of invisibility of material things in everyday interactions. The materiality of these objects (understood as the constitutive/underlying materials and structure and therefore physical qualities) appears to be even less perceived in everyday practices. Together these observations highlight ongoing everyday activity and perceptions that appear difficult to reconcile with the need to become more aware of our material-related behaviour. These findings need to validated through further and more in-depth research.

References

Baker, S. (1995) To go about noisily: clutter; *writing and design, in Emigre* No35, Summer

Baudrillard, J. (1970) *La Société de Consommation*, Editions Denoel, Folio Essais, Paris

Binswanger, M. (2006) Why does income growth fail to make us happier? Searching for the treadmills behind the paradox of happiness. *The Journal of Socio-Economics 35*, pp366 - 381 DOI: 10.1016/j.socec.2005.11.040

Burlot, D, (2024) Materials, materialities, making. Histoire de l'art, no. 93: Materials, materialities, making. In: ArtHist.net, Apr 28, 2023 (accessed Dec 8, 2024), <https://arthist.net/archive/39180>.

Dona, C. (1988) Invisible Design, in *Design After Modernism*, ed; Thackara, p152 - 159

Fromm, E (1976) *To Have or To Be*, 2013, Bloomsbury Academic, London

Green, C. & Treilhou, S. (2020) Guilty Materiality. why we play down material relations. In *DC (S) Design Culture(s), Cumulus Roma, June 16 - 19, Roma*, 2020 (2021)

Heidegger, M. *Being and Time*, (1927) trad. Macquarrie & Robinson, Blackwell, Oxford, 1962 (Sein und Zeit)

Hodder, I. (2014) The Entanglements of Humans and Things: A Long-Term View, *New Literary History*, Volume 45, Number 1, Winter 2014, pp. 19-36 DOI: 10.1353/nlh.2014.0005

Kuijer, L. (2014) Implications of Social Practice Theory for Sustainable Design, doctoral thesis, TU Delft, NL.

Lee J. (2014) The True Benefits of Designing Design Methods. *Artifact, Volume III, Issue 2 DOI: 10.14434/artifact.v3i2.3951*

Life at Home in the 21st Century, UCLA research, 2001 - 2005, commented on in newsroom.ucla.edu/magazine/center-everyday-lives-families-suburban-america (accessed Dec 8, 2024)

Markosian, N. (2015) The Right Stuff, *Australasian Journal of Philosophy* 93 (4):665-687 (2015) https://doi.org/10.1080/00048402.2014.999001

Miller, D. (2008) *The Comfort of Things*, Polity Press, Cambridge

Miller, D. (2010) *Stuff*, Polity Press, Cambridge

Rinkinen, J., Jalas, M. & Shove, E. (2015) Object Relations in Accounts of Everyday Life, in *Sociology 1-16 - Special Issue on Sociologies of Everyday Life*

Ripoll, T. (2023) *Pourquoi je prends ma douche trois minutes de trop?*, Editions Sciences Humaines, Auxerre, France)

Rosenberger, R., & Verbeek, P. P. C. C. (2015). A field guide to postphenomenology. In R. Rosenberger, & P.-P. Verbeek (Eds.), Postphenomenological Investigations: Essays on Human-Technology Relations (pp. 9-41). (Postphenomenology and the Philosophy of Technology). Lexington Books.Postphenomenological Investigations: Essays on Human-Technology Relations, Lexington, p.9-41

Schouwenberg, L. & Kaethler, M. Eds.(2021) The Auto-Ethnographic Turn in Design, Valiz, Amsterdam

Verbeek P-P, & Kockelkoren P, (1998), The Things That Matter, in *Design Issues*, Vol 14. Number 3, Autumn

Walker, S. (2017) The object of nightingales: design values for a meaningful material culture, in the Routledge Handbook of Sustainable Product Design, ed. Chapman, p53 - 68, Routledge, UK

Zucotti P. (2015) *Every Thing We Touch: A 24-Hour Inventory of Our Lives*, Viking, UK

DOI: 10.2752/175470812X13281948975459