



Marginalia as Message

Affordances for Reader-to-Reader Communication

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Marginalia as message: affordances for reader-to-reader communication

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Abstract

Purpose – The purpose of this paper is to investigate readers' annotations in library books and attitudes towards marginalia among library users. In particular, the study discusses how marginalia function as reader-to-reader communication.

Design/methodology/approach – The study used data collected from both public library and university library collections, as well as a user survey conducted among library users. The empirical results are discussed in relation to theories of affordances, in order to understand what characterizes the socio-physical realm within which marginalia exist (*RQ1*), and what specific conditions make marginalia possible as a communicative act between readers (*RQ2*).

Findings – The study suggests that marginalia in library books are mainly by-products of reading/studying processes. The user survey depicts an overall picture of ambiguous attitudes towards marginalia. It is argued that marginalia seen as communication rely heavily on the proximity of the context and the permanence of the physical medium. Three distinctive categories are proposed for classifying marginalia according to their relationship with the text: embedded; evaluative; extratextual. In spite of being an often unwanted communication, marginalia thus still function as an additional layer to the main message of the primary text.

Research limitations/implications – The findings are indicative pointing to follow-up studies that may further validate them. The study contributes to a referential frame for future studies on the subject.

Originality/value – The study addresses factual and communicative aspects of marginalia less covered in previous research, thus providing a basis for further research also in relation to designing affordances for annotations in e-books.

Keywords User studies, Libraries, Library users, Affordances, Marginalia, User-to-user communication

Paper type Research paper

Introduction

The perception of marginalia, and the very act of annotating in printed books, has evolved and shifted over centuries. In the Middle Ages, it was a legitimate and desirable way for scholars to comment on the subject, thus interacting with the text and (therefore) with other readers as well. In the sixteenth century, marginalia shortly appeared even as printed comments alongside the primary text, offering dogmatic instructions on how to understand the text properly – and in the eighteenth century marginalia were considered a part of literature culture as “explicitly a means of



communication" (Jackson, 1993, p. 224), when written by famous pens, as for instance Coleridge (Jackson, 1993, pp. 221-229, 2001, pp. 155-165).

However, in the perspective of the nineteenth century public libraries, marginalia became nothing more than destruction of library property, and the "cult of the clean book" (Sherman, 2008, p. 157) was firmly established. From then on, marginalia have continued a life of relative obscurity. Library readers keep considering the white margins of library books to be excellent places to write annotations and scrawl doodles, whilst, at the same time, library regulations threaten perpetrators with severe sanctions.

Collin's Concise Dictionary, fifth edition, defines marginalia in a matter-of-fact way as: "notes in the margin of a book, manuscript, or letter". The public opinion of the phenomenon seems to be more emotional, meandering between two opposite poles; online discussions thus contain marginalia romantics celebrating its anarchistic character and regulation proponents criticizing its anti-social character[1].

Further paradoxes cling to marginalia: annotations made by today's students are frowned upon, while older marginalia, or the ones committed by renowned persons, as mentioned above, are considered valuable artifacts; libraries condemn physical marginalia whereas digital counterparts in the shape of users tagging, commenting, reviewing, etc. seem to be greatly encouraged. For instance, users can add notes and tags to items in the British Library catalogue[2].

Perhaps yet the greatest mystery about marginalia remains its continuous existence, to the present day, when one might think that the abundance of physical and digital recording/writing devices would make it obsolete. Furthermore, the current e-book expansion has raised some concern for marginalia's well-being – as a Google search on the terms "marginalia" and "future" can illustrate – some lamenting its possible disappearance along with the apparent retreat and possible demise of the physical book. That alone makes the study of marginalia at the present time, in its present form, an urgent matter.

There are several studies that explore the phenomenon of marginalia, most notably by Marshall (Marshall and Brush, 2004; Marshall *et al.*, 1999; Marshall, 1997, 1998), whose work particularly concentrated on annotations and digital libraries; and Wolfe (Wolfe, 2002, 2008; Wolfe and Neuwirth, 2001), who investigated the ways marginalia affect subsequent readers. For a general introduction to marginalia, both historical and otherwise, Jackson's (2001) book *Marginalia: Readers Writing in Books* is the obligatory read. An interesting recent article, by Dahlström (2011), is written in the wake of an art project that traced marginalia in different copies of the same book across a number of libraries. Studies on modern days' marginalia are related to the larger study field concerned with the practice of commenting, be it from the Middle Ages, Romanticism or regarding modern days' authorial/publisher comments (Hauptman, 2008; Jackson, 2001, 2005; Sherman, 2008). Also, there are certain parallels between marginalia studies and the French structuralists' attention paid to the paratextual elements that surround a text (Genette, 1997). However, it is beyond the scope of the present paper to go deeper into these aspects and connections.

Marginalia have usually been investigated within a certain historic context, or in relation to the digital library of tomorrow. The present study[3] chooses to examine it as a current phenomenon: still executed by some, still making some exasperate by its insolence, still making some wonder about its character and nature. Throughout this paper, the terms marginalia, doodles, marks, readers' notes and annotations are all used as synonyms, unless specifically stated otherwise, and refer to any written mark

made by library patrons in printed library books. Only marginalia in library books are investigated in the study. The person writing in library books is referred to either as an annotator or marginalist. All examples and illustrations of marginalia presented originate from the data collection in the study outlined further below.

Research questions

Throughout this study, the investigative focus is on that very moment when a reader opens a book, only to release the additional layer of meaning applied on the original text by previous readers; that being the crucial moment when marginalia are no longer solitary acts of annotation or doodling, but turns into an interactive act of handing down information from one reader to the next one in the line.

The goal of this study is to analyze characteristics of marginalia seen as acts of communication between library users, thus addressing the following two research questions:

RQ1. What characterizes the socio-physical realm within which marginalia exist?

RQ2. What specific conditions make marginalia possible as communicative acts between readers, and how do marginalia perform that communicative function?

The above mentioned term socio-physical realm refers to the fact that this study will look upon marginalia not only as physical artifacts but also as a social experience of reading and sharing a library book. Addressing the questions of what characterizes and conditions marginalia, both as a phenomenon and a communicative act, the study outlined in this paper will: map the physical presence, form and readership of marginalia in modern libraries; investigate marginalia characteristics in relation to affordances of the printed book; and explore the value and form of present marginalia as a means of communication from reader to reader.

As mentioned above, the study only investigates marginalia in library books. The results achieved by this study should not only contribute to a more nuanced understanding of an obscure phenomenon, from a point of view that seems to be missing in previous studies, but could also be useful in the present process of marginalia migrating from a printed, physical medium into a digital one. Ideally, this study contributes to a referential frame within which the phenomenon can be further explored.

Theoretical approach

The way marginalia function is in this paper viewed through the prism of theories of affordances (Gibson, 1986; Norman, 1988, 1999).

Both in relation to the socio-physical realm within which marginalia exist (*RQ1*), and the specific conditions that make marginalia possible as a communicative act between readers (*RQ2*), theories of affordance are highly applicable. As will be further elaborated further below, affordances denote “actionable properties between the world and an actor” (Norman, 1999). Due to their holistic approach of accounting for how specific behaviour is both possible and executed, affordance theories offer tools to study how manmade objects may serve purposes additionally perceived by users, and not only those intended by their original design. The characterization of affordances by whether they have been intended or not and as such have been perceived or not by users (Sadler and Given, 2007) will also be used in this paper, to describe affordances for reader-to-reader communication through marginalia.

From a relevant body of research done on the subject of annotations and marginalia, this paper refers in particular to those conducted by Wolfe, Jackson, and Marshall, as mentioned in the introduction. More general approaches on the nature of marginalia by Jackson (2001), Hauptman (2008, pp. 71-112) and Sherman (2008, pp. 151-179) were inspirational when discussing communicative aspects of marginalia (RQ2).

Empirical approach

Dealing with a relatively obscure phenomenon presented the problem of insufficient factual knowledge from the start of this study. For instance, there had been no known prior investigation on the frequency of marginalia in Danish or non-Danish libraries, with an extensive “*en masse*” approach, or broader investigation on what library users think about this phenomenon. In order to establish these facts, and address the issues raised in the research questions, this study launched two empirical investigations. The first one was an exploratory data collection of the physical presence of marginalia in library books as outlined in the first subsection below. The second investigation consisted of an online survey conducted among library users as described in the subsequent subsection.

The main methodological problem here is that the topic presents itself as an equation with many unknowns, including annotators’ motifs; where and when marginalia were created; and how they are being perceived: all difficult factors to account for. We have therefore chosen to concentrate on marginalia as physical artifacts of an activity; as well as surveying the general views and experiences with marginalia among library users.

Data collection

The project of exploring library collections for signs of marginalia took place during February 2012. The primary goal was to establish the frequency of marginalia, and to get an idea of what kind of annotations readers make and encounter today, as well as to establish which factors should be considered in this context. The investigation was conducted across different types of libraries and different kinds of collections. Only monograph-type materials available on open shelves were investigated. The choice fell on exploring the collections of the Copenhagen Main Public Library and three different Copenhagen University Faculty Libraries: the Faculty Libraries of Social Sciences, Humanities and Pharmaceutical Sciences. The main reason for choosing three different faculty libraries was the way their collections are arranged and what that could offer to this investigation. Copenhagen Main Library was chosen as the biggest public library in the Copenhagen area, containing considerable collections on different topics. The intention was to investigate different parts of the overall collections, and different methodologies were used for that purpose.

In the Pharmaceutical Library all books on the pick-up shelf storing reserved materials were checked, as well as the first five books on every middle section of every wall-to-wall shelf at the library (with 26 of those, it amounted to 130 books being picked out and investigated). In the Social Sciences Library, where books are shelved exclusively in the order of their acquisition, the goal was to explore at least one (any) shelf from each year from 2006 to 2011. At the Humanities Library, the first seven books on the middle section of each wall-to-wall shelf of the open collection were investigated. Out of consideration, and restricted by the heavy traffic of users, the first couple of expeditions to the Public Library explored those collections that caused least inconvenience to the general library public; the primary goal being collecting data from

different genres, which then could be compared to each other. At first it meant checking fiction collections (novels) vs non-fiction (social sciences) sections. The decision was then made to add more nuances to the study by exploring certain subgenres of this binary division, in order to compare them to each other. Thus some sections on poetry (vs novels), natural sciences (vs social sciences) and hobbies (free-time reading vs obligatory reading) were explored. A mixture of random sampling and strategic sampling was thus used in this data collection with the limitations this may imply. For the purpose of registering marginalia, a scheme was constructed (Figure 1).

In the registration schemes, the genres of the investigated collection, as well as frequency and type of marginalia (categories were adjusted in the testing period) were noted for each library section in the investigated libraries. Furthermore, it was registered whether marks were made within or outside the text, as well if the tools used were more long-lasting, such as pens or highlighters (or pencils if nothing noted).

Registering how heavily books were annotated was not uncomplicated, and we ended with a blend of subjective and objective definitions. Small number of marginalia defined categories such as “one” and “a few” (cf. Figure 1); more numerous marginalia could be categorized as “once in a while” or “many”, depending of a subjective impression how many pages were annotated for instance, whether it was every 15th or third page. When the decisive factor seemed to be their noticeability, marginalia were defined as either “heavy” or “very heavy”[4].

Although inconsistent, shifting between quantitative and qualitative factors, these categories proved purposeful and efficient in practice (Table I). For instance, books with four pages so heavily annotated (Figure 2) that they could not be ignored, making the reading of the primary text difficult, is different from books with almost every second page annotated with small, easily ignorable marks.

User survey

In February 2012, a questionnaire (see the Appendix) was sent to a limited number of the University of Copenhagen students who had recently used the university’s library services. The aim was to investigate their views on marginalia and their possible

Library	Main Public Library		Date	18/2
Location	2 nd floor	Genre	Lit. and Language	
Shelf	80.10m3-	Number of books	46	
Numbers of marginalia		Marginalia percent		
Comments	+++	Pen	Highlighter	Other
Marks	cb ! ? : ! # * #	+++	1	
Underlined text	() +++ +++ +++	Outside the text		
Highlighted Text	/	(\)		
Doodles				
Vertical lines	+++ +++	One	/ /	
Summary/Explanations	+++	A few	+++	
Ref. to other works		Once in a while	+++	
Ref. to other authors		Many	+++	
Translations		Heavy	1	
Circle		Very heavy		

Figure 1.
Registration scheme
(example from Main
Public Library)

annotative practice. Permission for this investigation was obtained from the Copenhagen University Library Services, under the condition of respondents' anonymity. Conducting this type of a user survey was preferred to doing interviews with fewer numbers of respondents, in order to get a more general impression of how library users view marginalia. Naturally, an even larger number of respondents (being more sharply divided into public and research library users), or follow-up interviews, could have provided more representative results. We therefore use this survey as a validation and control instance to be seen together only with the data collected during our investigation of specific library collections described in the previous section.

Students were chosen as an easily identifiable and reachable user group, but the survey was constructed in order to hear respondents' opinion as library users in general and they will be referred to as such (although one can bear in mind that they in reality represent a specific segment of all library users). Placing the last remark in parenthesis should not be perceived as an indication of its unimportance. We have chosen to conduct our research proposing the conscious acceptance of the

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Categories	Number of books	Percentage ($n = 195$)
One	28	14
A few	102	52
Once in a while	34	17
Many	27	14
Heavy/very heavy	4	2

Table I.
Extent of annotations in
all investigated libraries

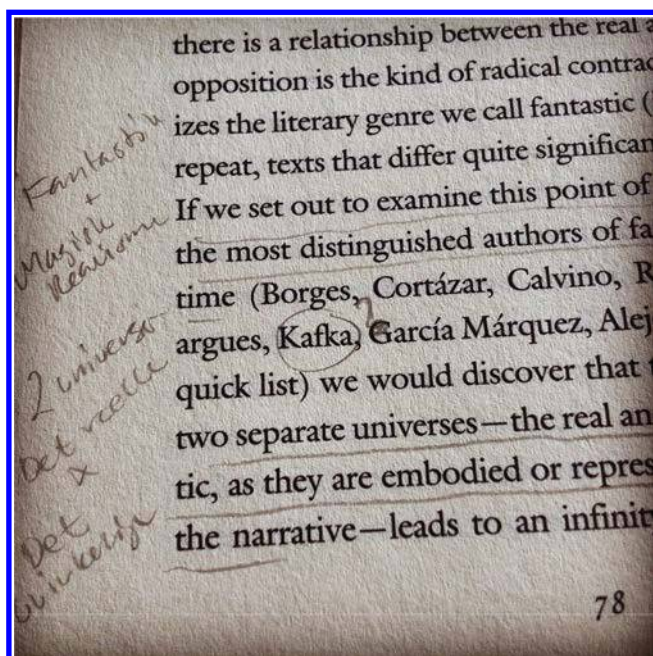


Figure 2.
Heavy annotation

abovementioned generalization, primarily because our questionnaire is not a sole parameter on which we draw our conclusions. For instance, based on our survey we would not conclude that all library users meet marginalia frequently, but will instead relate the findings from the investigation of library collections to the results of our survey. A secondary reason has something to do with the way Danish university and public libraries practice an open door policy for all citizens in Denmark. Furthermore, collections of practically all Danish public or research libraries are interlibrary-loan available through a single portal (bibliotek.dk). As a result, Danish university students would during their studies rely on both public and university library collections. That should somewhat alleviate the aspect that there was not identified which libraries or collections that respondents used more frequently.

A list of users that had borrowed books from Copenhagen University libraries in two months prior to the investigation was used to send an invitation to an online survey to the first 280 of them (minus around a dozen e-mail addresses turning out not to be valid). In total, 66 persons answered; the majority of them postgraduate students. The results of the investigation revealed that the invitation was mostly sent to Humanities and Social Sciences students. The flaw was deemed ignorable, since, as discussed in the previous paragraph, all respondents were regarded as being library users in general (cf. the abovementioned reservations). Many of the questions are multiple choice type, and the most of them leaves possibility to write comments (see questionnaire in the Appendix). All answers by respondents were in Danish; quotations in this paper are English translations.

Findings from data collection: marginalia in numbers

Extent of annotations

Table II shows the total number of books (1,155) investigated in the different libraries in the study, and the number of those books with marginalia (195).

As shown in Table II, books in the Main Public Library had the highest percentage of marginalia in the study. An explanation could be the age of the materials; books on the shelves of the Main Public Library being, on average, of older age than books at the Faculty Libraries' open shelves that display relatively newer collections. For instance, the Social Sciences Library has on its open shelves only books acquired after 2005. This library has a policy of placing books on the shelves according to the acquisition date, giving the opportunity to partially verify the very plausible and logical assumption that older materials are more annotated than the newer ones[5]. As shown in Table III, the percentage of investigated books at the Social Sciences Library acquired in 2006 that contain marginalia is almost 30 per cent; and only 3 per cent in the books acquired in 2011.

Table II.
Total number of books
investigated and
marginalia found

	Number of investigated books	Number of books with marginalia	Percentage of books with marginalia
Main Public Library	412	110	27
Humanities Library	126	17	13
Soc. Sciences Library	343	40	12
Pharm. Library	274	28	10
In all	1,155	195	17

Another plausible correlation, the one between the popularity of the book and the frequency of marginalia, was supported by the investigation at the Pharmaceutical Library. Over a period of several weeks, the ordered books, waiting on shelves to be picked up by patrons, were checked for marginalia. They proved to have much higher percentage of marginalia than the investigated books on the ordinary shelves (respectively, 13 and 7 per cent). This could also suggest that the books most saturated with marginalia could have escaped this study, since they were out of the libraries, in the hands of library patrons.

In general, the numbers of marginalia at the Pharmaceutical Library seem to be lower (Table II), compared with other faculty libraries, which calls on another investigation into whether books in specific topics are more or less prone to be annotated. One explanation could be a tendency of some scientific fields to rely more on journals (and e-journals) and journal articles and less on monographs.

All the findings above are indications only, as it would require a more extensive study to further validate them. However, there are strong indications that the presence of readers' marks depends heavily on genre: there are huge differences between numbers of marginalia in different parts of the Main Public Library collections, as shown in Table IV.

Acquisition year ^a	Number of books investigated (<i>n</i> = 343)	Percentage of books with marginalia
2008	86	2
2011	58	3
2010	69	7
2009	38	11
2006	92	29

Note: ^aThe year 2007 was not included in the data collection

Table III.
Social Sciences Library
collections

Subject	Number of books investigated (<i>n</i> = 412)	Percentage of books with marginalia
Literature theory	46	60
Ethics	40	45
Psychotherapy	40	45
Politics	73	41
Cooking	10	30
Mental health	15	27
Environment	20	20
Poetry	15	13
Economy	10	10
American Fiction	25	8
Fiction	44	5
Crime Fiction	30	0
English Fiction	24	0
Astronomy	10	0
Tools	10	0

Table IV.
Main Public Library
collections

Further, only a few annotators used pen or highlighter to write in books (15 such cases in the whole study); even fewer wrote outside the main, textual body of the book, for instance on blank pages inside the covers (seven cases in all). This issue is discussed in more depth further below, and may be interpreted as a certain reluctance by the annotators to damage books for good.

Types of annotations

Table V shows what types of marginalia were found during the data-gathering investigation, ordered by their frequency. The numbers show the presence of specific marginalia categories in books that contained annotations, for instance, of the 195 books that had one or several kinds of marginalia, vertical lines in the margins of the text were found in 94 of them (48 per cent). Of all 380 occurrences of marginalia in the 195 books, vertical lines counted for 29 per cent of them. None of the libraries investigated has the policy of replacing or withdrawing books from their collections solely due to the extent of marginalia in them.

These results – similar to those reached by Marshall (1998), where 39 textbooks titles represented by 410 copies were investigated – show that the most common ways readers interact with the text are by underlining it, drawing vertical lines in the margins, making marks and writing summaries/explanations. Summaries/explanations are mostly one-word digests written in the margins that sum up the topic of the text. We will see later that our user survey respondents say that underlinings are the most common kind of annotations they meet or make, although their answers indicate that comments and translations (probably characteristic for the Danish educational environment, where a vast number of curriculum consist of books in English) are a very frequent kind of marginalia, while the results from the investigated library books present quite a different picture as shown in Table V. Without being able to verify it at the present time, one could speculate that this might be due to comments and translations being a more memorable kind of marginalia.

The kind of marginalia found in this investigation suggests that annotations happen as a part of an active reading/studying process. That gives us a clue why annotations cannot be written elsewhere: not only because of the proximity of the primary text, but also because it is “[...] more ‘continuous’ with the reading itself, requiring fewer shifts in concentration than with note-taking” (O’Hara *et al.*, 1998, p. 237).

Table V.
Types of annotations

	Number of books with this marginalia (<i>n</i> = 195)	Percentage of all 195 annotated books	Percentage of all 380 marginalia occurrences
Underlined text	129	66	34
Vertical lines	94	48	25
Summary/explanations	53	27	14
Marks	46	24	12
Comments	25	13	7
Circles	12	6	3
References to other works/authors	10	5	3
Highlighted text	5	3	1
Translations	4	2	1
Doodles	2	1	<1

Marginalia also seem to be physical displays of the mental process of conquering and digesting the matter in the text, in the way Adler and Van Doren (1972), in their classical text on *How to Read a Book*, talk about making a book “one’s own” (pp. 35-37) by writing in it. As we will see in the next section, this is also confirmed by respondents in the user survey (Q15 in the Appendix), where the majority of respondents answer that they make annotations as their own tactic of how to comprehend and conquer the text. This finding is also backed by the small number of doodles (Table V) and scribbles done aimlessly and with no apparent purpose.

Another interesting aspect revealed was the high frequency of marks, such as asterisks, question marks, stars, etc. These marks can be personal inventions and at times can be followed through the entire book or chapter, and, very often, are coded in ways that only make sense to their creator. Marshall *et al.* (1999), just as O’Hara *et al.* (1998, p. 237), find that readers often make marks that are too vague, and often become a mystery to their originators after some time. In the next section we will see how such marginalia are being perceived by those who did not make them.

Findings from user survey: marginalia and readers

Almost all 66 respondents (96 per cent) who took part in our user survey have at some time experienced that library books were annotated by previous readers. At the time of answering the survey, 45 per cent or 28 of the respondents answering the question were reading such library books containing marginalia.

On the general question about their experience with library books annotated by previous readers (Q6 in the Appendix), and given the opportunity to choose one or more answers, and write their comments, respondents’ answers can be grouped into: negative (52 per cent); positive (31 per cent); and neutral (17 per cent). On the multiple choice question about their general view on the fact that people write in library books (Q9), it is interesting that many (47 per cent; 30 of 64 respondents) chose the neutral category: “It can go both ways, depending on the relevance of the comments”. The majority of comments on this question used negative and emotionally strong language, seeing marginalia as: “interference; annoyance; irrelevant; sloppy; vandalism; nuisance; patronizing; self-promoting; a lot like public toilet’s graffiti”.

On the multiple choice question how they would feel if marginalia were to disappear altogether from library books (Q17), respondents’ answers were primarily neutral; 42 of 76 answers (“wouldn’t notice it”, “I might miss them”, “don’t know”, or added comments such as: “it depends on the comments themselves”). Still, the large number (25 of 61 respondents or 41 per cent) answered they would feel liberated if the annotations by previous readers were gone for good.

In general, the answers indicate a tendency towards a negative and neutral view on marginalia. The negative views seem to be more explicit in condemning annotations, while neutral ones are usually conditioned by the quality of the marginalia. Those who have positive views in this user survey are more reluctant to express them in form of comments, and mostly limit themselves to choosing one of the positive options – as for instance in Q9, where 21 of 93 (23 per cent) multiple choice answers were divided between options such as: “sympathetic; fun; it’s a bit exciting since you never know what you might find in a book”.

However, the answers given on Q7 and Q8 may indicate that some marginalia can be useful. On Q7 whether they have ever noticed that they can comprehend the text more easily because of the comments and annotations made by previous readers, 25 out of 63 respondents (40 per cent) answered positively, 30 (48 per cent) negatively

and 8 (13 per cent) answered that they never gave it a thought. In Q8, as we will see in the next section, a relatively high percentage chose categories that indicate serendipitous and positive effect of marginalia.

The intention with the user survey was also to find out whether anyone would admit to annotate in books themselves (Q13). Out of 62 respondents answering this question, as many as 20 (32 per cent) confessed that they had tried to do so. Several had similar reasons for doing so (Q15): “not to use too much time when trying to retrace an important paragraph; in order to better comprehend the text; to better remember; to create better overview; for personal benefit”. This indicates once more that annotations are primarily being created for personal reasons, in studying/reading situations, as mnemonic and structural devices. That does not contradict our discussion further below on marginalia’s performance also as a reader-to-reader communicative act; it merely suggests that the communicative function often comes as a derived and unintended effect. However, two respondents answered (Q15) that they comment on other comments; one answer seemingly opposed the statement from the introduction that a lack of a notebook cannot be an excuse for writing in books today: “Laziness (in case I don’t have a notebook at hand)”. Even though laziness is blamed here, the explanation in the parenthesis indicates that the reason for writing in books could actually be a preference not to lose concentration during the reading/studying process.

We find that the results of the user survey and library book investigation in many ways complement each other by creating a basis for trying to understand why library patrons write in library books. Using the theory of affordances, we will in the following sections look more into the dynamics and potentials of marginalia as acts of communication between readers.

Discussion: affordances for marginalia

As already mentioned, we use theories of affordances in relation to both the socio-physical realm within which marginalia exist (*RQ1*), and the specific conditions that make marginalia possible as a communicative act between readers (*RQ2*).

The term affordance was originally coined by the psychologist James J. Gibson (1986) in order to describe the interaction between an actor and the environment. Gibson defines affordance as something that exists in the environment or object, independently of an observer, but, at the same time, the perception of the object by the actor is a realization of its affordances; affordances thus being both objective and subjective (Gibson, 1986, p. 129). In his book *The Psychology of Everyday Things*, from 1988, Donald A. Norman, in a user-centered design approach, uses the term in a sense that deviates somewhat from Gibson. In his later attempt to clarify the concept, Norman (1999) states that his use of the term actually covers perceived affordances, i.e.: “what actions the user perceives to be possible” (Norman, 1999, p. 39).

In our analysis, we use a blend of specific points from both approaches: Gibson’s ecological approach of seeing affordances as properties of an object existing in the actor’s environment; Norman’s idea of affordances being a part of designed objects, intended or not, affordances resulting “from the mental interpretation of things” (Norman, 1988, p. 219). In the present paper, the term affordance is thus to be understood as a “usage potential” (Björneborn, 2010) of an object or environment for a human actor to perform a specific activity.

The notion of constraint (Norman, 1999), as physical, logical or cultural limitations of affordances offered will also be explored here.

Human environments and situations seldom offer just a simple affordance; instead, affordances tend to be nested within each other, one opening possibilities for the other (Bærentsen and Trettvik, 2002, p. 57). We will deal here only with those affordances of the printed book that are related to our primary goal of exploring marginalia as a reader-to-reader communication. We therefore chose to focus on affordances for writing, for comments, and for passing on – and not, for instance, affordances for organizing knowledge or retrieving specific passages.

Affordances for writing: material and design

Using the expression psychology of material, Norman (1988) points out that the affordances of objects' building materials often remain preserved, posing the danger for designers to be "trapped by the affordances of their materials" (Norman, 1988, p. 9). Following that idea, one could claim that in their fight against marginalia, libraries are trapped by the affordances of the physical book, since the fact is that physical books are made of paper, and paper as material contains the easily perceptible affordance for being written on. This is a good example of how an object and its affordances are inseparably intertwined. "The affordance of an object is what the infant begins by noticing" states Gibson (1986, p. 134), and indeed, small children tend to gladly draw on anything, from a bank statement to the rare copy of *Principia Mathematica*, if given a pen.

On this level, marginalia may sound easily explainable: it is being produced because the object affords the possibility to do so. Not only the affordance of the object (to be written on) is present in this situation, but this affordance is also being perceived by the reader, because his/her behaviour (studying/reading) produces the specific need (to note something down).

Categorizing marginalia according to the earlier mentioned intended/perceived scheme (Sadler and Given, 2007), it can be concluded that writing marginalia is a perceived, although not intended, affordance: books are not being published and placed on library shelves to be written in, but readers perceive the affordances to do just that.

The design of the printed book, with margins surrounding the printed text, provides affordances for marginalia. Throughout history there have been periods with regular and normative practices of books having considerable number of blank pages (Jackson, 2001, p. 33), left as such for the purpose of providing space for readers' notes and comments. The opposite extreme, rather reading-unfriendly, could be to design physical books with constraints that suppress marginalia, for instance, by having text covering the entire page, without margins and with minimal distance between lines.

Affordances for comments: context and permanence

The possibility to write in books as a way for readers to interact with the text we here call: affordances for comments. Examining the kinds of marginalia found during our investigation of library collections, we define the most remarkable attributes of this affordance to be, as it will be argued, their proximity to the primary text and their permanence.

The vast majority of annotations made by readers do not make any sense on their own. Without the referential frame of the primary text, marginalia literally would have no meaning. On their own, one-word summaries and references to other texts are quizzical random statements that tell us nothing, while lines and marks would be deprived of any lexical sense. Written comments can, only in exceptional cases, stand

on their own by being grammatically self-contained units. Marginalia exist therefore only due to their proximity to the primary text; as only there they can make sense and fulfill their role. The poignant metaphor that Hill *et al.* (1992) use to describe computational/physical wear could be used for marginalia as well: "It is also embedded, unavoidably tattooed directly on the worn objects. It appears exactly where it can make an informative difference" (Hill *et al.*, 1992, p. 6). Or as one of the respondents in the user survey (Q15) explains as a reason for writing comments: "I prefer to have them close to the source". This is also the reason why marginalia can be economic in its expression, exactly because it is firmly placed within its referential frame. This affordance for commenting is, therefore, above all conditioned and made possible, that is, afforded, by the proximity to the text. That proximity provides marginalia with a lasting context.

This lasting context provides another remarkable quality of this affordance for comments: its permanence. Once written, marginalia become physical artifacts, whose function is a constant and inseparable part of both the text and the physical book. Only total obliteration of marginalia, their physical removal if possible, can make them abandon their function completely.

This is a very important point with regard to marginalia seen as reader-to-reader communication. Other unintended but perceived affordances for user-to-user mediation often are created and disappear again in a more fleeting fashion; for instance, books on return trolleys, or books left behind on library tables, signal desirability by other readers (Björneborn, 2010, 2011) only as long as they stay there – once removed they lose that affordance instantly.

Even librarians themselves scribble cataloguing data, shelving signatures and other information inside the covers of books. When asked provocatively why librarians write in books, a librarian at one of the libraries investigated in this study answered: "Where shall we write it otherwise? Here it stays in the book" (paraphrased).

Affordances for passing on: communication and usage

Affordances for passing on marginalia are crucial in our study. Its name indicates that marginalia can be seen as a forward-propelled kind of communicating; we can write dismissive comments on already existing marginalia, but it is the completely innocent next reader of the book that will receive it, and not its originator.

The affordance for passing on is, in the majority of cases, unintended by the annotator, because marginalia in most cases seem to be created for the reader's own benefit, as we have seen. On the other hand, the affordance to use marginalia is mostly perceived because the next reader is left with little choice but to acknowledge them. Ignoring them is often impossible, either due to marginalia's volume, physical presence or controversial opinion. Whether intended or not, marginalia are often forced upon the readers, or as Hauptman puts it: "they seduce with their immediate demand" (2008, p. 74). Exposed to marginalia, the reader has to do something with them; even ignoring them demands an effort: "I find those difficult to ignore. Graphically, as well as with regard to their content" – as stated in one comment in our user survey (Q11).

Some studies have investigated the degree to which annotations can be used by subsequent readers. Wolfe (2002, p. 300) considers not only the possibility that "the annotator's presence can influence readers' interactions with the source text" but she even goes further and imagines that "if students perceive the annotator as a potential reader of their own texts, they might envision a particular, opinionated reader already familiar with the source texts" (Wolfe, 2002, p. 301). Some research indicates that

highlighting improves retention and that “readers of instructional material containing little or no typographical cueing may benefit from highlighting done previously by others (especially if done by students seen as high achievers)” (Fowler and Barker, 1974, p. 364).

We have already mentioned the positive and serendipitous effects marginalia can have according to our user survey; in Q8, choosing between several options, 40 respondents (giving 62 answers) indicated that, besides being an irritation, marginalia also did that they: “discovered another perspective on the given topic” (12 answers); “discovered information that become a major influence on your understanding of a subject” (ten answers) or “found useful tips about other writers and works” (eight answers).

In the user survey (Q11), respondents’ answers indicated different strategies of dealing with marginalia. One particularly elaborate and nuanced answer, that shows a high degree of acceptance, but also reservation towards marginalia, is quoted here in its entirety:

Yes, they [marginalia] do influence me. At the moment I’m reading Michel Foucault’s ‘Surveillance and Punishment’. It is in Norwegian, and at times there are translations that are useful, although I would always check them up myself, in order to see whether there were especially important words or terms. Corrections of spelling mistakes appear unimportant and patronizing. So far, I get the impression that those who earlier have read the book were interested in the same aspect as myself, and that is why I’m more attentive when I reach the paragraphs that are marked, and it happens that I skim fast across the page and only read attentively those passages that are underlined. So it naturally affects my reading, but I have read the book so many times now, and I’m now searching for particular passages and points and punch lines so they do that task easier, since the underlined sections are those I probably would have marked myself, if the book were my own. I’m always a bit skeptical with regard to the annotations offered, such as translations, underlinings, references and summaries, but translators themselves do make similar comments in parentheses or footnotes, and they sometimes mislead and sometimes help – and those two can be compared.

Only a small number of those who answered Q14-Q16 in the user survey said that they write with the next reader in mind, one commenting that she/he draws a smiley every now and then, in order to share an “academic joke”; others limit themselves only to writing comments on other people’s comments, thus starting a chain of communication. The awareness of the possibility of one’s marginalia being read by others must, however, be vaguely present with the annotator, even if clouded by the task at hand, but it seems as though some of the comments are produced with the explicit awareness of a possible audience, perhaps even with an intention of reaching them.

Marginalia as a social taboo

Besides negative views on marginalia as a hindrance to reading/studying the text without interference (Q8; Q9; Q11) there is also another kind of objection – one calling upon social norms. These views dismiss marginalia as being an asocial act of destructing the common property that library books are; marginalia are thus regarded as violations of the social code, (Q9 and Q15):

I don’t really think it is o.k.; I limit myself to “be a smart-ass” in my own books; it’s annoying if done to public property; basically, one commits the act of vandalism on the object that doesn’t belong to one; in general, I don’t think one should write in books.

This social stigmatization of marginalia is to be found among respondents' general view on annotations. When asked how they feel about marginalia in the books they were reading at the time of the survey (Q11), among many that described them as nuisance on the practical level (and a few that did not), a couple of respondents included this general objection as well, e.g.:

There are marked and underlined words only, so it's not all that disturbing. In general though, one has to respect and cherish the books [...] They belong to all of us.

Norman (1999) uses the term of constraint, differentiating between physical, logical and cultural constraints, defining cultural constraints as conventions that are generally agreed upon (Norman, 1999, p. 41). It is the cultural constraint that keeps people from annotating in library books (besides the declarative library practice of assigning fines to marginalists as mentioned in the introduction), but also what makes library patrons reproach marginalia and those who make them. Still, the affordances for writing, commenting, and passing on marginalia seem to be so alluring that many are still ready to break this social convention and annotate library books, regardless of how annoying it may be for the next reader. As Sadler and Givennotice: "just as some affordances can be harmful to the library, some can be harmful to users as well" (2007, p. 126).

Three of the respondents in the user survey stress that they erase the annotations they have made, if they remember to do so (Q14). It is, therefore, possible that a number of marginalia could/should have been deleted, but the annotator never got around to doing so.

As indicated in the previous section, those who write in library books state that they write for their own benefit and often intend to come back and use their annotations (Q15). This kind of communication intended for one "future" self, if not erased, becomes in practice communication with unknown others as well.

Discussion: marginalia's communicative function

As indicated in our user survey and discussed in the previous section, marginalia can dramatically change the way we comprehend texts or what kind of reading experience we have. Visually and aesthetically, offering varying degrees of comments and marks, marginalia are challenging readers by modifying the same texts from book to book, offering readers marginalia-modified versions. Hauptman (2008, p. 74) renders exhaustively marginalia's functions as: "One can acknowledge, attribute, cite, refer, connect, correct, define, gloss, comment, clarify, explain, adumbrate, expatiate, enlarge, translate, or agree".

In our study, we focus on the communicative functions of marginalia, and in the premise for our *RQ2*, marginalia are viewed as communicative acts between readers. To justify that premise, it seems appropriate to discuss the way marginalia perform that function, as well as their nature and characteristics as communication.

We start that discussion by noticing and classifying marginalia according to the way they interact with the primary text.

Other studies have categorized marginalia according to other criteria. For instance, in her exploration of students' own textbooks, Marshall (1997) makes these different kinds of categorization: "Was the annotation in the text, or was it in the margins or other blank spaces?"; "Was the annotation telegraphic – a personal, opaque coding – or was it explicit in meaning?"; "Was the annotation removable or had it become part of the materiality of the book?" (p. 134). Further, she categorizes annotations into six

different categories, depending on their function as: as procedural signs, aids to memory, in situ locations for problem-working, as a record for interpretive activity, as traces of the readers' attention, and as incidental reflections on the material circumstances (pp. 135-137). In another study, Marshall (1998, pp. 41-45) constructs some antagonistic categories, for example, formal vs informal; explicit vs tacit; permanent vs transient, etc.

Overlapping some of the abovementioned categorizations, the present study proposes the classification of marginalia into three different kinds with regard to marginalia's relation to the text, in continuation of the discussion of affordances in the previous section, naming them as: embedded; evaluative; and extratextual.

Embedded marginalia (mostly underlining, vertical lines and translations) are a kind of annotations that interact closely with the text; in fact, they do not give any meaning without it, and also are physically close to the text. It usually strengthens, emphasizes and clarifies the text, i.e. reinforces it, for instance, by telling us (either in word or by underlining): "Look, this paragraph is about sociology!"

Evaluative marginalia take a stance on the text, either by comments, question marks or some other sign of the annotator's attitudes. It challenges the text and gives an opinion: "The author must be kidding!" This kind of marginalia is most often to be found in the margins, or at the bottom or top of the page, as if also physically distancing itself from the text. It has a tendency to be more articulate than other types of marginalia.

The extratextual kind of marginalia projects its attention outside of the text, referring to other authors or works. Thus it expands the text and digresses from it: "If you read this, you should also read Eco". It is the kind of marginalia that can also be found on the outskirts of the text, beside tables of contents or in reference lists.

These categories (examples of which are shown in Figure 3(a)-(c)) are constructed solely on the basis of marginalia's relation to the text, irrespective of marginalia's shape or form, but highly dependable on the context. For instance, an author's name scribbled in the margin could either be embedded ("This passage is about Eco!") or extratextual ("Read also Eco!") kind of marginalia. At the same time, categories can easily get muddled; for instance, one library patron's comment on a text reads: "Nonsense. Ask Proust". First part of this comment is evaluative (Nonsense), while the second one ("Ask Proust") is extratextual. It is also interesting to notice how the originator of marginalia is hidden in the embedded marginalia – Jackson calls it: "complete suppression of the personality of the marginalist" (1993, p. 219) – is more or less explicit in the evaluative, and involves the third part in the outward pointing kind of marginalia.

We propose a categorization of marginalia into these three different kinds not only because they reflect three different ways the annotator treats/reads the text, but because they also indicate three different ways that reading is communicated – perhaps unintentionally – to the next reader.

Using the proposed distinction between different kinds of marginalia, we can see that they in fact ask the next reader, as the receiver of previous readers' annotations, to either: pay notice to what the text is about (embedded); to take a personal stance because the previous reader has done it (evaluative); or to find another text and compare it to the present one (extratextual).

We therefore propose the argument that in those cases when a text comes with annotations it is their sum that really is the message; it is both the primary text and the marginalia united that are being communicated. Using our previous categorization of

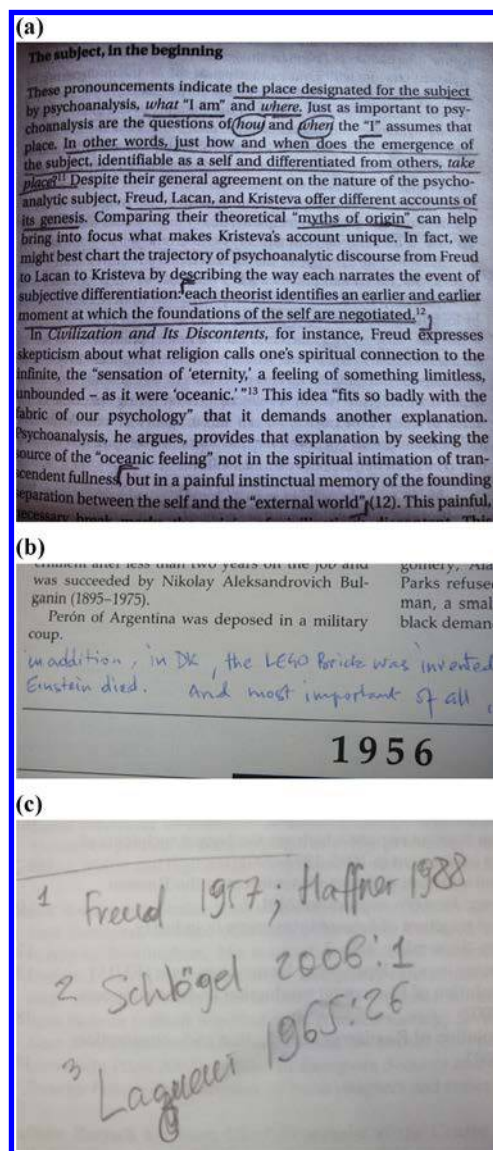


Figure 3.
(a) Embedded marginalia;
(b) evaluative marginalia;
(c) extratextual marginalia

marginalia into three distinctive kinds, depending on their interaction with the text, one could argue that in those cases when a text is modified by marginalia, these kind of messages are being communicated: the primary text with added emphasis (underlining, marks, summaries telling us what the text is about); the primary text with comments that challenge or evaluate it; and the primary text along with references to authors, works and terms outside the text.

It is this united output that meets the reader; his or her original intention to comprehend the primary message – the pure primary text itself – is being spoilt or enriched by marginalia that establishes itself as an interfering factor.

There are many other studies that echo this specific situation, by taking up the issue of the ways texts are being conveyed to (and perceived by) readers under the influence of everything that lies outside the text itself (footnotes, annotations, prefaces, context, other works, etc.). For instance, as noted in the introduction, there are certain parallels between marginalia studies and the French structuralists' attention paid to the paratextual elements that surround a text including authorially/editorially created thresholds into the text (Genette, 1997). However, as also stated in the introduction, it is beyond the scope of the present paper to go further into these aspects.

We can though mention a few more relevant reflections found elsewhere that share the present study's main premise of dealing with marginalia created by readers in today's library books: Dahlström uses the term "polyvocal cacophony" (2011, p. 126) in order to describe this merging of marginalia and the primary text; Jackson sees annotations as a kind of dialogue between the text and the reader, that turned into "an uncomfortable threesome" (2001, p. 142) when the next reader opens the book.

We find that, these remarks despite, not enough attention has been paid to this communicative function and nature of marginalia. Many library readers experience it on a daily basis how marginalia force their way into the primary communication between the text and the reader, inserting an additional layer of meaning and attaching an extra subject to it. Marginalia can thus be seen as an additional statement to an already existing communication between the text and the reader, both enriching and muddling it, creating a polyphonic dimension to the reading experience.

Conclusion

This study has primarily been motivated by the "don't talk about the elephant in the room" kind of paradox: marginalia are officially non-existent, and yet, every day library users open library books only to find comments, marks and highlights made by previous readers. While libraries seemingly provide identical copies of one title to their patrons, they in reality provide reading experiences that can vary from case to case, depending on the extent (or lack) of marginalia in them.

Addressing the first research question related to the socio-physical realm of marginalia, findings in the study suggest that marginalia in library books is not an uncommon phenomenon, with the frequency of its occurrence depending on the age and genre of the material. From the kind of annotations found in books, as well as from the user survey, it seems apparent that marking in books mostly happens as a part of an active study/reading process. Major findings of previous studies – for instance, with regard to the forms of marginalia found (Marshall, 1998); their creation as a part of reading processes (Marshall and Brush, 2004); the ways they are used and perceived (Bradshaw and Light, 2007; Fowler and Barker, 1974); how they influence readers (Wolfe, 2000) – correspond and are being supported by this study as well.

Readers' opinions on marginalia are not univocally clear from this study as they are somewhat ambiguous. They appear to vary from case to case, although negative views tend to be strongly negative. There was a strong disapproval of marginalia when respondents were asked about the phenomenon in general; however, the findings indicate that marginalia are found useful at times. A small number of respondents thus indicated positive attitude towards marginalia.

Addressing the second research question, the conditions that make marginalia possible as a reader-to-reader communication were explored. It was shown that what

the physical book offers, in terms of affordances to interact with the text, first and foremost, has to do something with the proximity of the primary text. The crucial factor that constitutes affordances for reader-to-reader communication is marginalia's permanence, both in the physical and contextual sense. This affordance quality is interminable, threatened only by physical removal of marginalia, which is often a difficult, time-consuming or impossible task.

The present study has proposed classifying marginalia into three distinctive categories, according to their relationship with the text: those unconditionally embedded in the text; evaluative: those taking critical stance on the text; extratextual: those pointing outside the text. This categorization also reflects the way marginalia behave as a communication between readers, acting as a meddling and modulating factor of the communication between the text and the next reader.

Future perspectives

While this study maps marginalia's present situation, it inevitably also raises questions of its future as reader-to-reader communication. By understanding how marginalia work as communicative acts in the physical book as discussed in this study, future research could perhaps point to improved affordances for annotations and how they could be shared among users of the digital library as well. The user survey probed with Q18 (64 respondents and 95 answers) attitudes of library users with regard to marginalia and e-books. It appears e-marginalia can count on some goodwill (number of answers indicated in parenthesis).

(Q18) Will you consider it a good idea if annotations could be made and shared in library e-books (feel free to choose more than one answer):

- That sounds interesting (21).
- It sounds like a good solution, since annotations in e-books can easily be shown or hidden (20).
- It sounds like a good solution, especially if the identity or profile of comment's originator is known (19).
- It wouldn't be the same as written annotations in physical books (8).
- I don't know (12).
- Other (15 = 6 negative and 9 neutral).

If marginalia proved to be thriving so far, even when scorned and forbidden, there is no reason why it could not be so in the e-library too. Or, even more important, if affordances for writing marginalia are so important for readers so far, facilitating similar affordances in the new medium surely must be important? Or, as Marshall, writes: "On paper, annotation is one crucial record of a reader's interaction [...] there are compelling reasons to duplicate this effect in electronic books" (2010, p. 39)[6].

Another thing is whether marginalia in an e-world might change beyond recognition, since it might become less anonymous, spontaneous and study-centered, and become more calculated, public and perhaps having intended communicative affordances built into it from the very start.

One way or another, both the physical and digital future of marginalia depend on the reading habits of users and the development of the book as a medium. As for the nature of marginalia, deemed perhaps to remain partially unanswered, one book

cleverly leaves the last word to the reader: “Are annotated books ‘soiled by use’ or are they ‘enlivened by association’? [...] You may, depending on your answer, wish to respond in the space below” (Sherman, 2008, p. 178).

Notes

1. See for instance: www.guardian.co.uk/commentisfree/2011/mar/22/notes-in-the-margin-social-networking
2. <http://explore.bl.uk/>
3. The paper is based on the master's thesis by Fajkovic (2012).
4. In order to allow leafing through as many books as possible, more discrete annotations may have been unnoticed.
5. The year 2008 in Table III is apparently an exception here.
6. There are some projects already doing this, for instance: <https://findings.com/>; www.openbookmarks.org/; <http://openmargin.com/>

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- 1) Are you currently?
 - ☐ Undergraduate
 - ☐ Postgraduate
 - ☐ PhD student/ Researcher/Teacher
 - ☐ Other, please specify:
- 2) What is your field of study/research?
 - ☐ Humanities
 - ☐ Social Sciences
 - ☐ Health and Life Sciences
 - ☐ Theology
 - ☐ Law
 - ☐ Other, please specify:
- 3) Have you borrowed or read a library book within last 12 months?
 - ☐ Yes
 - ☐ No
- 4) Have you ever noticed that a library book you have read contained annotations, remarks, doodles, or any other written comments made by previous readers/users?
 - ☐ Yes
 - ☐ No
 - ☐ I cannot remember
- 5) Do you remember what kind of marks and annotations you have encountered in library books (feel free to choose more than one answer)?
 - ☐ Underlining
 - ☐ Comments and remarks
 - ☐ Notes
 - ☐ Doodles
 - ☐ Translations
 - ☐ Summary
 - ☐ References to other works/authors
 - ☐ Everything above-mentioned
 - ☐ Other, please specify:

- 6) How do you experience books marked by previous readers (feel free to choose more than one answer):
- Annoying
 - I manage to ignore what other write
 - Sympathetic
 - Those books are more difficult to read
 - These comments can be useful
 - Inspiring
 - All above-mentioned, from case to case
 - Other, please specify:
- 7) Have you ever noticed whether you can more easily comprehend the text because of comments and annotations made by previous readers?
- Yes
 - No
 - I never gave it a thought
- 8) Have you ever experienced that annotations and marks made by previous readers were so pronounced that you (feel free to choose more than one answer):
- Couldn't use the book at all
 - Discovered another perspective on the given topic
 - Found useful tips about other authors or works
 - Discovered information that become major influence on your understanding of a subject
 - Your study or research took a certain direction
 - Other, please specify:
- 9) What is your general opinion of the fact that some library readers/users make marks in library books (feel free to choose more than one answer):
- They are just ruining books
 - I find it sympathetic
 - It can go both ways, depending on the relevance of the comments
 - It's a bit exciting, since you never know what you might find in a book
 - It's fun
 - I don't know
 - Other, please specify:

10) Are you by any chance at the moment reading a library book that contains annotations and marginalia:

- Yes, actually I do
- No, I haven't noticed any
- Yes, but I first discovered them when I tried to answer this question
- No, but I had to check the books, just to make sure
- Other, please specify:

11) Do marks in the book(s) you are reading at the moment have any kind of impact on your reading/studying experience?

12) When you stumble upon comments in library books, would you prefer to know the identity or the profile of the person that wrote them?

- Yes
- No
- I don't know
- Other, please specify:

13) Have you ever written in a library book yourself?

- Yes
- No

14) What kind of marks do you leave in library books?

15) What are your reasons for doing so?

16) When you write notes in library books, do you have the next reader on your mind?

(feel free to choose more than one answer):

- No, I write them solely for my benefit
- Yes, I write them so that also other readers can see them
- In a way, I write them to the author of the given text
- Other, please specify:

17) If all annotations and doodles disappeared from the library books do you think you would (feel free to choose more than one answer):

- I would miss them, since they can be useful at times
- It would be such a liberation
- I don't think I would notice it
- I might miss them, for no good reason
- I don't know
- Other, please specify:

18) Will you consider it a good idea if annotations could be made and shared in library e-books (feel free to choose more than one answer):

- That sounds interesting
- It sounds like a good solution, since annotations in e-books can easily be shown or hidden
- It sounds like a good solution, especially if the identity or profile of the comment's originator is known
- It wouldn't be the same as written annotations in physical books
- I don't know
- Other, please specify:

About the authors

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Dr Lennart Björneborn is an Associate Professor at the Royal School of Library and Information Science, University of Copenhagen. His research deals with how design dimensions and affordances in physical and digital information spaces may enable and support creative practices in everyday life, especially in the shape of user participation, exploratory information behaviour, social navigation, information sharing and serendipity. Dr Björneborn's empirical research covers, e.g. webometric studies of small-world network phenomena in web link structures; serendipity dimensions and users' information behaviour in physical libraries; behavioural traces and indirect user-to-user communication in the participatory library; micro-serendipity as meaningful coincidences in everyday life shared on Twitter. Dr Lennart Björneborn is the corresponding author and can be contacted at: bvk942@iva.ku.dk