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Everyday life information seeking behaviour in relation to the environment: disposable information?

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Abstract

Purpose – This paper describes one of the preliminary results from interviews conducted as part of a larger study entitled Examining the Role of Peer and Family Influences on Information Seeking Behaviour.

Design/methodology/approach – The principal method of data collection was 38 semi-structured critical incident interviews, based on an interview guide and a short questionnaire to collect factual data. Some social network analysis of interviewees’ information sources is considered. Both quantitative and qualitative methods of analysis were used to code the interview transcripts. A naturalistic approach to everyday information seeking is taken.

Findings – One of the preliminary findings of this research is that the notion of a new type of information has emerged – disposable information. A new type of information seeking behaviour is also suggested here for disposable Information – disposable information seeking. Disposable information is task-specific and likely to only be required by an individual on a one-off basis, causing different everyday life Information seeking (ELIS) patterns to emerge. Ultimately, people are only prepared to expend effort to get quality information if they perceive a value or further, continued use for that information.

Research limitations/implications – Because of the research location and participant population, the results may lack transferability. Further research into this area is advised.

Practical implications – The paper has implications about how people may search for and use information in certain situations where information is perceived as relevant to a particular task but unlikely to be needed in the future.

Originality/value – This paper introduces the new concept of disposable information and disposable information seeking behaviour.

Keywords: Information Seeking Behaviour, Disposable Information, Principle of Least Effort.

Article Type: Research paper

Introduction and Background

This paper describes the preliminary results from interviews conducted as part of larger study entitled Examining the Role of Peer and Family Influences on Information Seeking Behaviour. This study explores the environmental information seeking behaviour of individuals within both family and social networks in the Welsh county of Ceredigion. It considers the specific area of environmental and recycling information pertaining to the everyday lives of the study participants. The main aims of the research are to establish what information seeking behaviour is employed by different age groups and to explore generational differences in information seeking behaviour, as

well as how the interactions between members of family and social network affected these behaviours. Exploration of the causes of these differences considers whether there are changes to an individual's information seeking behaviour throughout their life. Previous research has considered different age groups, but not compared them within a single study. To date, no studies have concentrated specifically on generational differences or longitudinal changes to information seeking behaviour, so this research has important implications for informing government policy in the area of information dissemination methodology and advancing the knowledge within the information behaviour discipline.

The researcher interviewed up to three different generations from the sample families, who were living in the locality, to identify their information seeking behaviour patterns. One reason for this was to assess if different generations use different information sources, for example, teenagers might use the internet, while their grandparents might use more formal sources.

The aim of this paper is to present one set of findings which emerged from this research, relating to the notion that a new type of information has emerged: disposable information. A new type of information seeking behaviour is also suggested here for disposable Information: disposable information seeking. Disposable Information is task specific and likely to only be required by an individual on a one off basis, causing different everyday life information seeking (ELIS) patterns to emerge. The scope of this paper therefore does not cover the generational aspect of the information seeking.

For the purposes of this study, quality information is defined as that which has been checked by the seeker against various criteria and safeguards. These would normally include cross checking for similar or same answers from more than one source, checking the validity or authorship of the information and that it is relevant to the search query.

Research Question

Are people willing to sacrifice quality of information for ease of use and accessibility of information and if so, why?

Literature Review

Human information seeking behaviour has been defined by many noted scholars, including Kari and Savolainen (2003), Case (2002), Kuhlthau (1991), Vakkari (1998), Sujatha (2014). Nel (2001) cites Marchionini and Komlodi (2001, p.25) who define information seeking as "... a process in which humans engage to purposely change their state of knowledge. The process is inherently interactive as information seekers direct attention, accept and adapt to stimuli, reflect on progress, and evaluate the efficacy of continuation...". This definition is the one most closely aligned with this research, in that it concurs with Foster's (2004) non-linear model of information seeking. Foster (2004) also states that "Information seeking was found to be framed by the resolution of the information problems..., and by limits to time and financial resources" (p. 232).

Over the last forty years the discipline of information science has explored a wide variety of issues, including aspects of information retrieval, information problem solving, and information behaviour. Many studies (e.g. Kuhlthau, 1993; Wilson, 1997) have adopted a basic interpretation of Information

Seeking and Searching Behaviour in a way that relies upon an interpretive framework based on problem stages, processes, and simple feedback loops.

Over the last ten years a new area of investigation, has identified the true complexity of what we now refer to as human information behaviour. Spink (2004) identified features such as successive searching and later with Cole (Spink and Cole, 2006) described multitasking information seeking, while Foster (2004; 2005; 2006) modelled human information behaviour as a continuous, dynamic and evolving non-linear process.

Other recent studies have developed the study of human information behaviour into the more defined area of everyday life information seeking to:

- introduce the concept of ELIS (Savolainen, 1995)
- Emphasise that human information behaviour occurs in both formal and informal contexts (Savolainen, 2005)
- Show that information seeking and learning are closely related cognitive functions (Limberg, 1998)
- Demonstrate that through the dimension of Information Horizons (Sonnenwald, Wildemuth and Harmon, 2001) we may see a full picture of human information behaviour
- Reiterate that the type of information search strategy used is affected by the purpose of the search at a given moment (Bronstein, 2007).

Whilst neither Limberg nor Bronstein actually use the term ELIS, the activities they refer to within their papers are or everyday life information seeking activities, being ongoing, changing processes within daily life. These and other studies have pointed to a move away from interpreting individual information problems, and have begun to explore Human Information Behaviour from an holistic, social, and psychological perspective which interprets information behaviour as a fundamental psycho-social attribute that must be viewed within a network of contexts. Savolainen, in his 1995 paper, states that

“Broadly defined, the concept of ELIS refers to the acquisition of various informational (both cognitive and expressive) elements which people employ to orient themselves in daily life or to solve problems not directly connected with the performance of occupational tasks. Such problems may be associated with various areas of everyday life, for example, consumption and health care” (p. 266-7).

Everyday life information seeking (or ELIS, as it has become known), is the main focus of this paper.

When considering the principle of least effort, as described by Bates, (2009: p4; see also Zipf, 1949, Simon, 1976, and Poole, 1985), there are a variety of explanations as to why people will sacrifice this quality of information over ease of use and accessibility of information, depending on the context of the information search or task. Mooers (1960) suggested that a person will only use the information they’ve sought if it will not cause the searcher subsequent difficulties. His work is often quoted as being similar to the principle of least effort, rather than being about the use of information after the search. Another explanation could be that the context of the information seeking is for an item of disposable information – one that is foreseen by the seeker to be only required once, or for a single, unlikely to be repeated task.

Method

The principal method of data collection was semi-structured critical incident interviews, based on an interview guide and a short questionnaire to collect factual demographic data. The methods used were influenced by Bryman (2004; 2006). The instruments were designed and modified after a pilot

exercise. The aim was to interview individuals up to three times in an eighteen month period, in order to identify life cycle changes to their everyday life information seeking behaviour (ELIS – see Savolainen, 2005,) over a longitudinal period. These may include changes in the influences and any generational differences in information sources or behaviours that emerge from the interviewing.

Social network data was also collected as part of the interview process, to allow social network analysis (Mackenzie, 2005) and to identify whether the networks changed over the interview period. The social network analysis carried out was used to establish how or if participants knew one another. It is not relevant to the context of this paper so will not be discussed further here.

The sample for interviewing was drawn from local community groups already known to the researcher, referrals from these primary interviewees, and self-selection by contacting university staff either in person or via email to request the involvement of additional participants. These recruitment methods enabled purposive building of a representational sample of age ranges and socio-economic groups from within the locality.

The generations were defined according to age: participants over the age of 50 are generation 1, those aged 25 – 49 are generation 2 and the participants aged below 24 are generation 3. Table 1 below shows the age range of the interview participants.

Age Range (years)	Number of males	Number of females	Number of people
16-20	3	3	6
21-40	3	7	10
41-55	5	5	10
56+	6	6	12
TOTALS	17	21	38

Table 1: Demographic information from Questionnaire: Age Range and Gender

As can be seen from Table 1, the gender split of the interviewees was not equal, with seventeen male respondents and 21 females. This equates to 45 per cent male and 55 per cent female participants. Three of the age groups were equally balanced, with the 21 – 40 age group being predominantly female. The main reason for this was that the interviews were mostly conducted during the working week of Monday to Friday, and there were fewer male respondents available within that particular age group and that timeframe.

Interviewing was conducted between July 2010 and March 2012. A total of 41 people from the Ceredigion area were invited to take part in the research. Thirty-eight of those initially invited to participate were interviewed, giving a 92.6% response rate.

In total, 38 interviews were conducted; questions included what recycling was carried out within the home and how easy people found it to get information about recycling, as well as how easy they found it to actually do recycling. The questions asked were concerned with exploring the information seeking behaviours connected to recycling; the participants' attitude to recycling; and their social network influences in relation to their information seeking. Participants were allocated an anonymous identification number – these did not start at “1” to protect participant anonymity.

The analysis entailed qualitative and quantitative techniques. Interview transcripts and questionnaire responses were analysed on a continuous basis, throughout the process of data collection. Microsoft Excel was used to analyse the demographic questionnaires as this data was quantitative. Interview transcripts were coded to reveal themes in the participants’ responses. QSR NVivo 10 software was used in these analyses, as the methods encompass both qualitative and quantitative data collection. Codes were checked by a second researcher to ensure validity, but as the study was a single researcher study, there was no inter-coding.

Lincoln and Guba’s (1985) naturalistic inquiry and Savolainen’s ELIS works form the theoretical framework for the study from which these results are found. Naturalistic inquiry was used as the theoretical paradigm within which to explore the information behaviour of family and household members in relation to recycling and green issues as it seemed to offer the best fit with the research. Patton (2002) defines naturalistic inquiry as “Studying real-world situations as they unfold naturally; non-manipulative and non-controlling; openness to whatever emerges (lack of predetermined constraints on findings)” (p. 40). He goes on to state that “Inductive analysis is built on a solid foundation of specific, concrete, and detailed observations, quotations, documents, and cases” (p. 58) and “Naturalistic Inquiry preserves natural context. [...] qualitative inquiry elevates context as critical to understanding” (p. 62). The objectives of the research were all context based and as such, naturalistic inquiry allowed the behaviours and the contexts to be examined together.

Savolainen’s concept of ELIS complements naturalistic inquiry in that it considers the holistic environment of the information seeking context. His 2005 work discusses the tendency for values and way of life to pre-dispose a person towards certain information sources, while providing “only general criteria for preferring and using various sources and channels” (p. 146), having referred back to his own 1995 paper in which he “... defined the concept of way of life as ‘order of things’ which is based on the choices that individuals make, ultimately oriented by the factors constituting habitus” (2005, p.143-4), with “mastery of life” described as “a general preparedness to approach everyday problems in certain ways according to one’s values”. Savolainen goes on to say that “Information seeking is an integral component of mastery of life” (2005, p.144).

Results

A variety of themes emerged from coding the interview transcripts. The top level theme codes are shown in Table 2. These themes are only relevant to this paper in so much that the notion of disposable information emerged as a result of analysing the data from the transcripts, so they will not be discussed further in this paper.

Name	References
Attitude to Recycling	273
Disposable information and value of information	11
Ease of information on recycling	44
Ease of recycling	78
Green or sustainability issues raised	194
Influenced	46
Influencing others	61
Information seeking habits	160
Information dissemination	19
Information ease – council website	6
Information ease – internet generally	17

Information needs perceptions	3
Information seeking habit changes	5
Information sources	130
Information use	38
Non recyclable items	12
Non recycling places	21
Perception of others' views on recycling or sustainability	27
Recyclable items	12
Recycling places	80
Re-usable items	25

Table 2: Top Level Codes from Interview Transcripts

Table 3 shows the range of physical sources the interview participants named when asked what information sources they used to obtain information. The table does not include the various people that the participants mentioned. These included, but were not limited to, a variety of household members, non-immediate family members, friends, colleagues, neighbours and a range of professionals.

Source type	Source name	Count
Named Websites	Council / Ceredigion website	7
	Google	10
	Freecycle	1
	WRAP – Waste Recycling Action Project (A Quango.)	1
	BBC Websites – various	1
	Wikipedia	2
	Busbro	1
	Atlantic Kitchen	1
	BBC Farming pages	1
	Huffington Post – Daily Caller	1
	Facebook / Twitter	2
	MoneySavingExpert.com	1
	Bing	1
	Unspecified websites:	
	“one of the Aberystwyth sites”	1
Unspecified websites:	“I use the web a lot.”	1
	“The internet, obviously.”	6
	Forums – several mentioned, but none specifically named	3
Magazine articles		3
Books		3
Packaging		3
Information literature provided by the council at the start of the new scheme,	including leaflets and the recycling bags	8
Newspapers	Telegraph	1
	Cambrian News	2
	The Guardian	1
	Wired Magazine	1
	Christopher Booker – in Telegraph	1
	George Monbio, who writes for the Guardian on environmental stuff	1

Table 3: Information sources used

Table 4 shows a selection of responses from the interview transcripts wherein participants described how they would seek information and how much effort they would use to obtain certain types of information.

P71	"Google and Bing. [...] I just follow the first one [link] as long as it's not Wikipedia. If it's something that I needed to find out and it made sense in my head, then I'd use that. I wouldn't look any further."	
P81	"First on the leaflet. If it's not on the leaflet, tend to just put it in the household bin. I wouldn't know where to go to get the information."	
P83	'I think it depends on how lazy I feel. And it depends on whether I can be bothered or not.'	
P108	'Yes, I probably would. [use a Facebook group] Because there's usually somebody somewhere that's had the problem before.'	
P101	R	If you did want to find out if something could be recycled, would you just go straight to the internet, or would you do something else?
	P101	I'd ask my Mum.
	R	Ok, and if she wasn't around to ask, is there anyone else that you could ask...? Or would you then think, I'll just black bag it, or would you think, no I want to find out if I can, I'll go to the internet?
	P101	I'd just put it in the black bag.

Table 4: Quotes from Interview Transcripts – responses detailing how much effort would be expended to obtain recycling information

Analysis

One of the preliminary findings of this research, which is reported here, is the notion of disposable information. Disposable information is exactly what it sounds like – information that is used once and then discarded.

Evident in the results is that some people consider themselves inherently lazy. In this study, 12 of the 38 participants (32%) considered themselves too lazy to make the effort to find recycling information to enable them to actually carry out the recycling. As Participant 83 stated, when asked how much effort they would put in to getting information and then acting upon that information: *'I think it depends on how lazy I feel. And it depends on whether I can be bothered or not.'* Participant 101 expressed similar views, reiterating that they would only make a minimum effort before placing the item in the general refuse (black bag), while Participant 108 explained that they would look on Facebook for recycling information, *'Because there's usually somebody somewhere that's had the problem before.'* Participant 90 continued this least effort theme, in that the information was similar enough to not need to check too closely.

"I think now we have got to a point – sounds awful, but your rubbish is quite repetitive – the bulk of it, so once you have come across the sorts of things that you use in your house regularly, you know which bin they go in." Participant 90.

People place different values on information based upon their expectations of its future use to them. P79 and P80, a pair of siblings who were both in college at the time of their interview, discussed the fact that often they only needed information in order to complete a piece of coursework or for examination revision. P80: *"I'd keep it, like with the information I got for my homework, I kept it in a file."* P79: *Then you can go back over it if you need it."* P80: *"Yes. The*

information I got for my IT homework I referred back to it in the class.” Both participants said that after an exam, they usually disposed of the notes from that subject.

When referring to the information on how to actually recycle, Participant 81 (the parent of P79 and P80) stated that one of the household’s teenagers had been given responsibility for ensuring that rubbish and recycling were put out on the appropriate days. As a result, P81 no longer has any interest in the issue as P79 now deals with it. *“To be honest, I don’t deal with it any more. [P79] has got the poster on his bedroom wall and the little leaflet at the back of his bed and he deals with it.”* P81 did confirm that prior to handing over the job of recycling to the teenager, information would be sought in a minimal way *“First on the leaflet. If it’s not on the leaflet, tend to just put it in the household bin. I wouldn’t know where to go to get the information.”* P81 would not make any extra effort to get information on recycling an item which was not listed as suitable for the recycling bag.

Participant 71 stated that Google and Bing were the search engines of choice, although, again, minimal effort would be expended, with the first non-Wikipedia result being used. (P71 stated that *“Wikipedia is not reliable.”*) *“I just follow the first one as long as it’s not Wikipedia. If it’s something that I needed to find out and it made sense in my head, then I’d use that. I wouldn’t look any further.”*

Discussion

In the context of this study, information was often required by participants for the specific recycling or disposal of a particular item or type of item. In most cases this was an item which would only be disposed of once, so the information was unlikely to be required again. The term “disposable Information” came about in the first instance as the information was about disposal. It was during the second iteration of coding the transcripts that the associated behaviours for this type of information became more apparent, allowing the term to fully emerge. Different types of information seeking behaviour are dependent upon circumstances and context. Disposable information is task specific and likely to only be required by an individual on a one off basis, causing different ELIS patterns to emerge.

Context dependency is relevant to this study as the participants had all just changed from one refuse and recycling scheme to a new one. Some of the participants were still in the changeover period of this process and one or two who worked in the Ceredigion area but lived just outside the county were on a different scheme at home to the one they had to comply with at work.

A new type of information seeking behaviour is suggested here for information that is likely to only be needed as a one-off instance: disposable information seeking. Disposable information is often not viewed as important in the normal sense of things, but is still necessary in everyday life information seeking.

During ELIS behaviour, people regularly need quick answers to minor questions, such as whether a particular item of rubbish may be recycled or not. This is an example of a piece of disposable (in every sense) information. The information is possibly only ever going to be used once, or if needed in future will be considered of low importance in the main theme of ELIS. This renders the level of information seeking behaviour used different to that for an issue of higher perceived importance,

implying that less effort will be made to acquire this disposable information as it has a lower perceived importance level.

"I do get stumped sometimes and it depends how much you want the answer to the question. If it's something that you... particularly with things like recycling, if they just don't give me an answer on something then I might just be tempted to take a short cut, on the basis that you know I tried, and if I haven't got the answer that I want. I also work on the basis with the recycling, that they're encouraging you do as much as you can, therefore if you make a couple of mistakes in terms of what you do and stuff then it's not going to kill anything." Participant 90.

It should be noted that not all one-off use information or decision making information would be considered disposable information. An example of this would be choosing which university to attend. Clearly this is an important decision with far reaching consequences, whereas the type of information this paper is considering as disposable would not have long lasting effects on the seeker. Even disposable information seeking requires some effort – one has to be motivated to get the information and have the available resources. This means that the information has some value to the seeker who has expended even a minimal level of effort to obtain it. Also, once information is found and known, it can't be not known. (Although if it is not deemed "valuable information," it may be forgotten.)

In general information seeking, people will often continue to search for information after they have found what they require, to ensure saturation, completeness and accuracy or full verification (Foster, 2004; Kuhlthau, 1991). With disposable information seeking, it is expected that the information will only be needed once, so the searcher doesn't worry about the usual safety checks. A searcher will often use the first piece of information that sounds likely or easy to find, based on the principle of least effort! Even within this type of information seeking, however, it should be noted that searchers still follow several stages within the search process, as detailed in both Foster's (2004) and Kuhlthau's (1991) models, although they will only do those deemed necessary and will stop as soon as they feel they have the information needed for the immediate task.

Conclusion

It was found that people were willing to sacrifice quality of information in certain cases. From the results of the recycling information seeking interviews presented in this paper, it was found that not only will people only recycle if it is easy and fits conveniently within their lifestyle. The study participants will also only recycle if it is both easy to get the information on how to environmentally and ethically dispose of things and then easy to do the recycling!

Ultimately, people are only prepared to expend effort to get quality information if they perceive a value or further, continued use for that information. In general ELIS behaviour, as suggested by models such as Foster's (2004) and Kuhlthau's (1991), there are several elements of ELIS behaviour, which are often used either concurrently or in a linear manner. These elements establish the safety and veracity of the information being sought. This behaviour is similar to Simon's "satisficing" (1955, cited by Prabha *et al.* 2007), in which a decision on when to stop the information search is made.

Further research to understand the differences in the emerging disposable information seeking concept would be of value.

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Tables

Age Range (years)	Number of males	Number of females	Number of people
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Information dissemination	19
Information ease – council website	6
Information ease – internet generally	17
Information needs perceptions	3
Information seeking habit changes	5
Information sources	130
Information use	38
Non-recyclable items	12
Non recycling places	21
Perception of others’ views on recycling or sustainability	27
Recyclable items	12
Recycling places	80
Re-usable items	25

Table 2: top Level Codes from Interview Transcripts

Source type	Source name	Count
Named Websites	Council / Ceredigion website	7
	Google	10
	Freecycle	1
	WRAP – Waste Recycling Action Project (A. Quango.)	1
	BBC Websites – various	1
	Wikipedia	2
	Bushra	1
	Atlantic Kitchen	1
	BBC Farming pages	1
	Huffington Post – Daily Caller	1
	Facebook / Twitter	2
	MoneySavingExpert.com	1
	Bing	1
Unspecified websites:	"one of the Aberystwyth sites"	1
	"I use the web a lot."	1
	"The internet, obviously."	6
	Forums – several mentioned, but none specifically named	3
Magazine articles		3
Books		3
Packaging		3
Information literature provided by the council at the start of the new scheme,	including leaflets and the recycling bags	8
Newspapers	Telegraph	1
	Cambrian News	2
	The Guardian	1
	Wired Magazine	1
	Christopher Booker – in Telegraph	1
	George Monbiot, who writes for the Guardian on environmental stuff	1

Table 3: Information sources used

P71	"Google and Bing. [...] I just follow the first one [link] as long as it's not Wikipedia. If it's something that I needed to find out and it made sense in my head, then I'd use that. I wouldn't look any further."	
P81	"First on the leaflet. If it's not on the leaflet, tend to just put it in the household bin. I wouldn't know where to go to get the information."	
P83	'I think it depends on how lazy I feel. And it depends on whether I can be bothered or not.'	
P108	'Yes, I probably would. [use a Facebook group] Because there's usually somebody somewhere that's had the problem before.'	
P101	R	If you did want to find out if something could be recycled, would you just go straight to the internet, or would you do something else?
	P101	I'd ask my Mum.
	R	Ok, and if she wasn't around to ask, is there anyone else that you could ask...? Or would you then think, I'll just black bag it, or would you think, no I want to find out if I can, I'll go to the internet?
	P101	I'd just put it in the black bag.

Table 4: Quotes from Interview Transcripts – responses detailing how much effort would be expended to obtain recycling information