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Seniors and ICT's: a Sense of Wisdom

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In the present paper we would like to summarize some of the points that have been highlighted in a study (*) conducted since the end of 2001 on the relationships between older people and ICTs in the French-speaking part of Belgium (the Walloon region).

We will begin by examining the societal aspects of this question. They helped us to make certain choices in drawing up the survey. We will then focus on some of the arguments used to clarify our survey results, namely diffusion and various factors leading to adoption or non-adoption, including the hostile or friendly societal bacground to this decision. In the last part of the paper, we will try to define new ways of interpreting the appropriation schemes, the ways and the concepts that have helped us to structure our own enquiries. This will bring us into contact with sociological theories such as the adoption of technologies, appropriation processes and the domestication of technologies. Finally we will offer a personal view on these questions of appropriation that highlights the role of mental representations in the appropriation process.

◼ Age, old age and ICTs

The spread of modern ICTs in everyday life, as well as in the latest social models, represents a challenge for our communities: the (effective) integration of the elderly in a societal environment that is constantly evolving, partly through the pressure and effects of the "ICT presence". Without

preaching the value of ICTs or the ICT industry, the obvious need for continued solidarity between generations is a strong enough argument in favour of achieving this challenge. This solidarity has, among other things, to materialize through a community of public spaces, symbols, conventions, forms of communication etc. Our society is also increasingly based on electronic supports or mediators. As a result, "in spite of" the advent of ICTs in today's life styles, the elderly tend to be unable to appropriate them.

We believe that ICTs could enable elderly people to be more closely involved in the society that is being built, but may also exclude them from it. Emerging or well-established ICTs contain a strong potential to create new means of expression; they also trigger new "needs" and simultaneously provide efficient answers to the pre-existing communication needs of this population. Finally, they hold great promise in terms of the indepence and preservation of the elderly's autonomy.

In short, ICTs will fall short of achieving their *mission* if they fail to cater for the needs, mentalities and capacities of older people people. Moerover, it is not socially acceptable to exclude the elderly from changes in our (common) society project for the simple "crime" of being "reluctant" to adopt ICTs, while those ICTs become an integral part of the lifestyle of most citizens. While the elderly are certainly not as familiar with ICTs as younger generations, there is certainly no widespread "maladjustment" towards ICTs among the elderly– even if this term is far from being adequate. Openness to the lifestyle of younger people, earlier retirement and their greater purchasing power are some of the characteristics that make "younger older people" more sensitive to ICTs for various reasons. Traditional socio-economical age categories seem to misrepresent this new situation. The advent of "old age" and its supposed effects are no longer maked by retirement. The role played by "younger older people" is becoming important and the ICT market is increasingly opening up to them. That is not true – on economical and, more broadly, on societal levels – of the place occupied by older (inactive, etc.) people.

■ Lessons from the survey

First lesson: ICTs meet with disparate success

The VCR and the television set are consumer electronics that are assigned an important and useful role by older people: i.e. 94% of people aged 65 and over consider TV to be very useful. The TV set is the only technology for which possession and usefulness increase with age. Our qualitative survey shows that television seems to play the role of a substitution interlocutor for older (75+) people. The VCR falls just short of achieving this status, but definitely remains a family product, mainly present in middle-aged (30-49) households composed of parents and children.

Telephony products are also highly popular, regardless of age. The mobile phone (GSM) is become a technology that is present in the everyday life of many older people and is rated as highly useful, whether used or not! Age remains the main barrier to the spread of mobile telephony, but the growing penetration rates seen right across Europe suggest that this trend will change in the future and that identitary or generational reluctance can now be considered marginal.

Given statistics on usage and opinion, we cannot yet affirm with any certainty that GSM is about to supplant the traditional fixed telephone in its classical role. Yet the elderly do qualify mobile telephones as everyday objects, which are highly valued for the feeling of security they offer, but the most frequent pattern of use among 50+ people is still passive (person called, rather than caller). From a general point of view, mobile telephones retain "hi-tech" connotations, but have almost become a basic individual good.

Computers and the internet are viewed by Walloon seniors as "technologies for young people" of limited utility (85% of 18-29 people consider computers useful, versus only 32% of 65+ people). Furthermore, the elderly tend to associate these technologies with the world of work or professional needs. Indeed, according to our results, most seniors do not use a computer, so opinions and use patterns are correlated. On the contrary, younger generations consider both the internet, computers and GSM as part of their everyday lives.

"Underuse" vs. "overdesign": an annoying sophistication

Some new techniques like GSM may seem difficult to master and/or induce a rupture with traditional usage habits. They are nevertheless massively adopted (or are about to be adopted) by older people. Their measured or expected use value exceeds their measured or expected complexity, according to these (potential) users. This is not the case with technologies/objects like the computer, the internet and, to date, the DVD player. Even if no use problem seems insurmountable, ergonomics, functionalities and use value have not (yet) massively convinced elderly people. Their weak use value (measured or expected) on top of their complexity would seem to explain the elderly's reluctance to adopt them.

Mastery of the sophisticated functions characterising consumer electronics (TV set, VCR, mobile telephones) is limited among all user populations, but especially among seniors. This may be considered an obvious "underuse" of these technologies, but from another point of view it could be called "overdesign" – that is to say a clear disproportion between the functionalities offered and user needs and requirements. ICTs' high technicality, often presented as a commercial tool, does not seem to match the needs of their potential users. One could even affirm that, on the contrary, this sophistication detracts from products that could satisfy needs, but offer inappropriate functionalities. Some sociologists such as Breton and Conte claim that ICT design is marked by an ideology of youthfulness (CONTE, 2001). This seems to be the case with our survey results, which show a clear reluctance to adopt excessively sophisticated technologies or functionalities on the part of seniors. On a larger scale, elderly people – as well as other categories of consumers – are excluded from the construction of the imagination of the information society (BRETON, 1999) – even if the so-called "information society" is a philosophical and political concept with only a few concrete aspects.

It is worth noticing that older people are generally helped to use the ICTs they own: this is the case for 58% of GSM owners aged 50+ and 63% of computer owners. Although unproven by our survey results, this is probably linked to the findings of field studies, which show that helpers are, in fact, the real users (they use *on behalf of*) of technical objects owned by the "helped" persons.

Age as a kind of wisdom towards ICT

Age itself is a rather inaccurate factor to account for the (non-)use of ICTs. On the one hand, our survey clearly underlines the fact that age renders learning and familiarization costly in terms of efforts and time spent. Moreover, object design does not help in this respect due to the existence of plenty of unclear or time-restrictive manipulations, symbols and jargon that are not universal (contrary to common belief), etc. Instructions for use – when they exist! – pose real problems for every ICT in our survey. Our research reveals the creation of tips, tricks, strategies etc. used by people aged 50+ to bypass these deficiencies.

However, the survey also shows that ageing gives the elderly a kind of "wisdom" with regard to technological novelties: they behave as more educated and conscious citizens compared to other consumers. The intellectual process of appropriation is based by the elderly (especially 60+) on a true calculation, a very concrete comparison between the expected use value of technology and the effort, the "cost", demanded or presumed. Yet this "wisdom" is obviously also based on a sort of fear of the presumed complexity of ICTs.

The existing, but low percentage of 65+ advanced ICT users can not be considered, in a "Rogers-like" approach, as pioneers or first adopters who will finally be imitated by their peers (as time passes, etc.).

Gender as an important social factor

Taking gender into account highlights social disparities in terms of access to the labour market and the type of employment occupied during their active lives by people currently aged 50+ years. These differences explain general disparities as far as contact with ICTs is concerned. This observation remains true after retirement, since activities are generally more socially-oriented among Walloon men than women. Gender counts for what it implies in societal terms: in the private sphere, for example, we still see clear differentiation between role distribution within many couples aged 50+. This was revealed by responses to questions about assistance with the use of ICTs, as well as through opinion gauges.

As long as this "classical" role representation endures, really differentiated uses (in terms of intensity) may still remain. Let us note that studies have emphasised men-women differences in interest in ICTs: women's interest is

generally more dictated by pre-existing needs, while men often show interest in technologies per se (CRÖNBERG, 1992). This should lead to the delayed appropriation of technologies by female groups. Our survey could not prove such reasoning (but did not refute it either).

Decisive factors: occupation and sociability

An individual's past or present professional occupation (its nature and duration) appears to be the most discriminating factor in seniors' relationship to the internet. This is due to the contact possibilities with ICTs of all kinds offered by a professional occupation. Indeed, this contact is a real indication of *reusable* – partially resistant to technological evolution – knowledge and savoir-faire. Moreover, an individual's current or past occupation strongly models his/her identity and, in doing so, provokes affinities or rejections towards different ICTs, which stimulate intellectual *echoes* in every person (CARADEC, 2001).

Sociability – social and cultural activity structuring lifestyle – seems to play a key role in the elderly ICT appropriation process. Our survey shows a systematical correlation between high sociability and a higher level of ICT use. Sociability and its implications seem to act as an open-mindedness vector among seniors towards ICTs – open-mindedness through social contacts developed by the 50+ age group within or outside the enlarged family unit.

Interpersonal relations and social norms

The influence of close relatives on the adoption decision and on the process of appropriation by seniors proved to be important. Yet it can work against such a decision or process: the intervention, actions or presence of a relative is likely to discourage or even hinder the appropriation of a technological object. However, this influence is also often positive (through information, help, assistance and even gifts – for 38% of GSM owners aged 50+ their mobile phone was offered as a gift).

Media are another important external factor. Rogers' perspective may help us understand the influence of interpersonal relations and the media. According to Rogers, the media mainly influence the first stage of the adoption process: information and knowledge of the existence of an

innovation, while interpersonal relations mainly come into play in the later stage of *persuasion*.

Yet this dichotomy is more than likely outdated and both factors are overwhelmed here by the influence of a broader phenomenon: societal pressure to embrace modernity, which is brought to bear through both of these two channels (EVE, SMOREDA, 2001). Our survey has clearly demonstrated the existence of determined social norms and their influence on the opinions of our Walloon interviewees in all age groups. There is an ambient, unsaid discourse that says, "ICT=modernity" and "You have to be modern" (also see BRETON, 1999).

Prejudices present at all ages seem to contribute to structuring opinions on ICTs. In this respect, users and non-users share the same "social vision" of the computer, the internet and the mobile phone as vectors of time saving and better interpersonal relations. This also applies to bank card and internet users of all ages: they feel totally confident with these technologies, regardless of well-known, fundamental security and civil liberties issues.

On the other hand, this kind of social pressure can have the opposite effect. This is clearly the case with the internet. Many seniors consider the internet to be an instrument of cultural domination or home to illicit content. Online-banking is perceived as dehumanizing. All these reactions should be analysed as expressions of rejection of this so-called modernity and its values (youth, speed, competition, loss of social sense and links, etc.). This is all the clearer given that isolation and individualism are constantly stigmatized as expressions of this "modernity".

■ ICT appropriation: theoretical issues

Too often surveys of ICT usage only deliver "mechanical" statistics on age (and related factors), usage rates and opinions on these technologies.

However, ageing is a far from linear process and defining any "normal behaviour" is nonsense, since each individual's behaviour is worth analysing. Furthermore, surveys that provide a deeper analysis of seniors' behaviour often conclude by opposing the effects of age to so-called *generation* effects. This does not provide a comprehensive sociological explanation of the reality or a solution to practical questions of why some people acquire and use certain equipment "in spite of their age" (see

CARADEC, 2001). As Britt Östlund states (ÖSTLUND, 2001), the majority of official surveys are governed by partial and biased views of the elderly and this is leading to a biased overall understanding of the situation. Elderly people are compared to the disabled! At the very least, seniors are presumed to be "technophobic". Such studies consequently focus on finding and remedying the causes of this anxiety and incompetence.

Another bias lies in the frequent "market-driven" approach that informs many surveys and public policies. It unfortunately prevents them from having the necessary hindsight or opting for innovative approaches. Moreover, citizens (users) are generally offered limited opportunities to express their needs and expectations *independently*. In our opinion, many studies have quite "academic" or "middle-age" connotations (ÖSTLUND, 2001). Examples include the market-driven approaches in the Bangemann report or in its successive eEurope Action Plans.

Some studies or discourses lapse into other excesses: social or technical determinism. Like Serge Proulx (PROULX, 2000), we believe that any analysis starting from an isolated or extreme point of view can only be anything but complete.

A considerable corpus of qualitative theoretical research in the field enabled us to opt for the broadest possible starting point. We decided to go without any ex-ante explanation model, which would have necessarily required us to challenge it. This did not facilitate the interpretation of results, but enabled us to conclude our study with new hypotheses and research questions. Indeed, the Rogers classical model (ROGERS, 1995) (innovation diffusion, attitudes towards innovation) did not help much with our enquiry. This is because the Rogers model does not tackle factors influencing the adoption process or characteristics structuring adopters' behaviour, both objects of our own case study. More basically, the idea supported by "Rogerian" authors is that the adoption decision mainly results from a personal deliberation in terms of perceived advantages. For our own purposes, we wanted to highlight the role of other (interrelated) processes: use meanings individually or collectively granted to technical objects, feelings like self-esteem (SPECHT, SPERANDIO, DE LA GARZA, 1999), fears, the need to stay hip or trendy, etc.

We would like to think here in terms of "appropriation" rather than "adoption". Multiple factors are at stake and no innovation is the object of an unequivocal or linear process – as a superficial application of the "Rogerian" models could lead us to believe. The Internet offers a recent example of a

very popular technique charged with opinions and values, but which remains marginal for many populations. Moreover, this is of little help in explaining non-adoption and non-appropriation, as well as the real reasons behind these choices. In other words, negative decisions are no less *rational* than positive decisions. Another important point is that appropriation approaches are use-centred, while adoption approaches tend to be impact-centred or conception-centred. This is the case with the domestication of technologies approach (see SILVERSTONE, HIRSCH, 1995). Silverstone and Hirsch describe the integration of a new technical object in everyday life as ruled by a process of domestication that ends in the mutual adaptation of technology and everyday life. As Östlund reminds us, these theories clearly underline the importance of the context in which integration takes place.

The French analyst Caradec also bases his analysis on the concrete (potential) user and on his/her reasoning to explain his/her own (non-)usage strategies. He condemns the pronouncement of value judgments and denies approaches and attempts to justify/explain – and resolve – so-called "under-equipment", "reluctance" and "unfitness" issues. He distinguishes four logics in these discourses (use value granted, "identitary" echoes, role played by third party people and overall personal evaluation of the object). We think that the restrictions of such an analysis lie in the lack of attention paid to societal factors, as well as factors linked to the object itself (including historical and economical aspects).

Some analysts try to combine both approaches (user-centred and technology-centred) or at least tend to underline the character of social reality. This reality is deeply sophisticated, with many technologies trying to emerge from anonymity and endlessly influencing each other to build a constantly evolving technical environment. Some of these approaches focus on the problem of the dialectics of technical object design (design vs. use, involved stakeholders and their respective representations). Serge Proulx defends a clearly conciliatory perspective and proposes an, "ethnography of uses" that would study and observe uses and non-uses directly in the field and would refuse any reification of the technical object as excluded from the analysis black box.

◼ The appropriation process and equation of representations

We would like to present some prospective considerations and develop our impressions of a relationship whose existence and importance in the appropriation process has become gradually clear to us.

The interaction between the person and the technological artefact is built on a "dialogue" between designer and user. The designer develops conscious or unconscious hypotheses and mental representations of what the user and objects are or should be. Although these hypotheses are not always based on unbiased or scientific elements, it is still worth noting the positive trend of recent years that includes the increasing sophistication of the industrial design process, which is now often completed by experimentation. As a direct result, objects have improved dramatically in terms of ergonomics and conviviality. A strain nevertheless remains between the object – and its inevitably imperfect design – and the image it projects to current or potential users (in terms of its interest, appropriateness to needs, etc.). This confrontation (among other factors) gives rise to social appropriation.

This paper does not aim to exhaustively cover economical variables (like prices). It is obvious that they play an important role in the individual appropriation process – as do other "objective" variables. We contend that the success of the appropriation process, and thus the decision to pay the price for the technology in question– largely depends on an implicit calculation that will be made by every individual who is confronted with a new technology, which we will call the "*personal equation*". This equation is composed of three variables, which are the subjects of mental representations: their influence is more closely linked to what these variables evoke than to what they really do, or could do, and be (on an objectified basis). These three variables can be summarized as follows:
- the object's usefulness,
- its complexity,
- the social norm.

Usefulness refers to the meaning a technological artefact could assume in the everyday life of a (potential) user. This meaning lies in the individual's comprehension of the technology, his/her ability to imagine the object's insertion into his/her life. In other words, this first dimension refers to the personal building of a use imagination/projection for the concerned technology/object. This use projection is mainly based on an ability to

imagine the sense and place the object could assume, a place that is obviously linked to real and imaginary projections in the individual's personal and social environment.

The second dimension of the personal equation is more closely linked to the representation of the technology, of the technological artefact based on the object. This level concerns the perceived complexity of the object, namely the idea a person has of the effort that will have to be made in order to integrate the object into his/her "normal" life. This representation is truly personal and will largely depend on the past and the technological experience of the individual, as well as on the competences s/he has already accumulated.

Lastly, the third dimension of our personal equation of representations is the pressure resulting from some social norms that influences one's representations of a definite technological novelty. These representations may translate the pregnancy of some values generally associated with the object/technology and its *positive* control – modernity, youth, ambition, pragmatism, etc. They might also translate the influence of a social meaning that is building itself around the object/technology through "promotional" discourses – emanating from the individual's involvement in his/her social environment or from his/her private background.

Our hypothesis can be schematized as follows:

Normativeness
society

PERSONAL
REPRESENTATIONS

Usefulness
person

Complexity
artefact
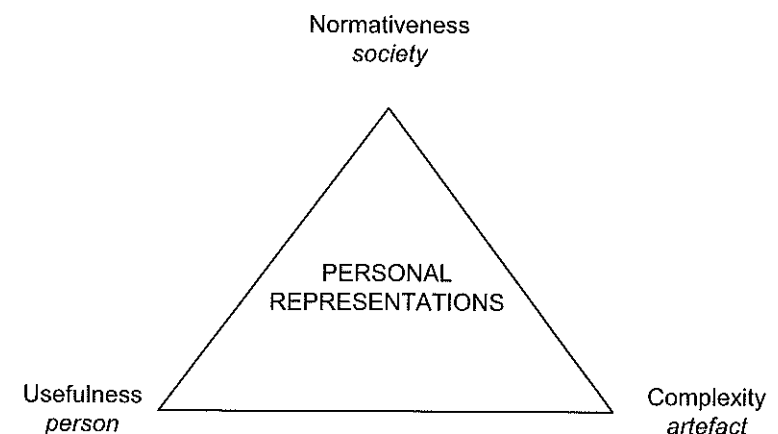
Three parameters consequently have to be taken into account in this equation of representations: the individual's consideration of him/herself and his/her relationship with the object, the individual's view of the object and, lastly, the influence of his/her background and society on the individual's representations.

This equation interferes with the object itself and shapes the personal appropriation process, together with more external elements such as those covered in our survey.

Thus, the product of this equation is intended to become one of the factors in the (complex!) process of appropriation. Indeed, we do not contend that mental representations are the only dominating factor in this game. Our feeling is that its *favourite* field of intervention lies upstream of the (conscious or otherwise) intention of appropriation symbolized by the act of purchase and/or other expressions. Other mechanisms also converge to create favourable or unfavourable mental dispositions and for this reason influence the so-called decision of use. This applies to the individual's perception of his/her professional situation and of the societal role s/he assigns him/herself. This is also the case with the experiences and impressions the individual has of his/her own "technological past," or even of his/her awareness of his/her health or cognitive abilities. Finally, but in another register, we have to take into account the more direct interactions linking society (its evident and latent potential influence) and the technology/object (its availability, its price, etc.) with the intention of use/appropriation.

The intention of use in itself is nothing but a single step in the whole appropriation process: it precedes concrete use and any unforeseen turns of events: search for resources and help, mediation by relatives, including the eventuality these relatives end up using the object themselves on behalf of the senior, time and energy allocated to the learning and control phase, etc. According to our survey, however, this single step is quite critical to an explanation of the observed disparities in the appropriation processes.

When does the process really end? What kind of criteria can be used to certify this ending? Here is another basic aspect of the problem...

■ A brief conclusion

The survey has helped us to measure the difficulty of understanding the exact nature of the relationship between the age of seniors and their attitude/behaviour towards ICTs. That is, to examine the exact weight of each factor: those related to ageing, to social attitudes/positions and to the membership of one generation or another (defined by a proper way of living and of consumption, as well as by proper values and opinions). With this in mind, and in arguing the unavoidable succession of generations (CARADEC, 1999), could we then foresee an imminent shift in the attitude of seniors towards ICTs? Such a change is unlikely to happen soon. Our survey showed that it would have to be linked to a deeper cultural and social change among the 50+ age group.

Other factors have proven to be important such as (past or present) professional occupation and social activity. We can at least affirm that older people, more than younger generations, generally base any (non-)use decision on a true (even if intuitive) calculation. Only a small share of purchasing decisions by seniors are made on impulse. The fact that an object has a proven usefulness is not inevitably strong enough to provoke a positive decision: many obstacles intervene. These barriers include excessive sophistication, as well as too rapid technical evolutions, because they force people to resume a learning process and thus imply an "unaffordable investment." These obstacles render many objects fundamentally *incompatible* with the ambitions of the 50+age group – despite their potential usefulness. Such a statement should call for more control over technological obsolescence, as well as a broader industrial offer that delivers more basic objects in terms of functionalities. It should at least support the deeper involvement of potential users in the design process, which may eventually reduce the clash of representations described above, as well as smoothing the conception-representation-use-expectation loop.

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Annex: Methodology of the survey

We split our study on ICT appropriation by the 50+ age group in the Walloon region (Belgium) into two major parts. The first part consisted of a survey of a representative population sample, which is the object of this paper. A second part consisted of a monograph survey lead on intensive 50+ internet users that tried to reach the operative goal of determining which predictive value their behaviour could have concerning broader populations.

The goal of the survey was to throw light on the obstacles that prevent appropriation of ICTs by older people. However, from a more constructive point of view, we also sought a clear expression of their demands and needs. So we questioned the way that environment and family, social and professional situations interact in the relationship with ICTs. We then wanted to gain a better understanding of the role of the design of technical objects in their success/failure with older people. Finally, and more generally, we tried to determine the influence of widespread (political, economical) enthusiasm for ICTs on the attitude of senior citizens.

We concentrated our efforts on a limited panel of ICTs (even if possession figures reflect a larger number of ICTs): mobile phones, television and VCRs, ATMs, computers and the internet.

For the purposes of the survey, a sample of 750 people aged 50 and over was determined. In order to compare the attitudes of this population with the those of younger generations, we drew two additional (non-representative) samples of 250 peoples each. The first sample addressed the population aged between 18 and 29 (called the "*mobile generation*" after the study), while the second sample addressed people aged between 30 and 49 (the "*PC generation*").

It should be noted that no more than 30% of Walloons aged 50+ have more than a primary school diploma. On the contrary, only 22% obtained a university or high school degree. 63% of the 50+ age group are retired or have taken early retirement, while only 51% are aged 65 or over. The recent decrease in retirement ages could partly explain this difference. If the unemployed are included, then 73% of 50+ Walloons must be considered as unemployed, or no longer working. These figures are important because of the correlation observed between the world of work and the adoption of advanced ICTs. 35% of the 50+ age group either live alone or in retirement homes, while 18% live with children at home.