

Missed Calls: Barcelona and Los Angeles compared

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- Abstract** I discuss the phenomenon of missed calls and their intentional use by older mobile phone users in two different locations: Barcelona and Los Angeles. Deliberate missed calls (DMC) are made, with the intention that the receiver is not to answer them. They appeared as an innovative, low-cost communication practice. They constitute a limited form of communication, compared to voice calls, as there is no feedback from the receiver and, therefore, more uncertainty is involved. While youth, teenagers and children have been the main focus of scholarly attention in this field in developed countries, few studies have focused on elders. To address this absence, this paper explores the use of missed calls amongst senior individuals (60 years old and over). I describe the main purpose of this practice, the context in which it is used and the motivations for using it. The main conclusion is that elders communicate by means of missed calls if younger generations in their society do.
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1. Introduction

Missed calls are short signal calls intended not to be answered. These have no cost for the sender or the receiver, and in most cases a prior meaning must be agreed upon in advance. They can be called beeping or boom calls, here I refer to them as deliberate missed calls (DMC).

DMC appeared as an innovative communication practice that was, and still is, popular among younger users in Europe (Oksman & Turtiainen, 2004; and Ling, 2004 were among the first authors describing it). It is also a prevalent communication system in Africa and in other developing contexts, where they are even used for business purposes (Donner, 2008; Sey, 2009).

Deliberate missed calls constitute a communication practice per se that is linked to the economic rationale of maximizing communication while minimizing associated costs. A DMC is a message that goes in one direction; it might therefore involve a certain degree of uncertainty because there is no feedback between communicants. In this sense, it is a more limited form of communication than a voice call or an SMS. The full use and the exact meaning of DMC communication is linked to the ability of screening incoming calls. In addition, a DMC can have several meanings, or no meaning at all, as it is just a ring call. Prior agreement to what a sent message means becomes very important. As DMC are not intended to be answered, they constitute a zero-cost form of communication.

Young people and teenagers use deliberate missed calls to communicate with peers and with parents (Ling, 2004; and Castells, Fernández Ardèvol, Linchuan Qiu, & Sey, 2006). Young peers mostly use DMC for coordination and micro-coordination, and for emphatic purposes. When used to communicate with adults, usually the youngster's own parents, the typical aim is to be called by them. These are 'please-call-me-back' messages that allow for a transfer of resources from those with higher purchasing power –parents– to those with a lower purchasing power –children. When it is emphatic –for instance when it means 'I miss you'–, a DMC does not necessarily need any immediate action to be performed by the receiver (Castells et al., 2006).

Age plays a key role in the adoption of mobile telephony and the way it is used (see Ling, 2002; or Castells et al., 2006 for an early discussion on

the issue). Given the general diffusion of this technology, age contributes to specifying “the type of use rather than the use itself” (Castells et al., 2006, p. 41). While most of the available evidence in this area of knowledge is focused on teenagers and young adults, there is little evidence on the older population, to the authors’ knowledge, in the case of missed calls and elders. However, seniors need to be studied carefully when it comes to understanding the use and appropriation of mobile communication. This is particularly important as ageing is currently a key characteristic of developed societies (United Nations, 2009).

The available evidence on older population shows differences in the mobile phone adoption and usage patterns among countries (see Conci, Pianesi, & Zancanaro, 2009 for northern Italy; Kurniawan, 2008 for England; Oksman, 2006 for Finland; Sawchuk & Crow, 2010 for Canada; or Wong, Thwaites, & Khong, 2008 for Malaysia). These particularities must be understood within each country’s context, as differences in the telecommunication market and/or differences in communication practices of the whole population shape the appropriation processes of every generation and, therefore, the appropriation of mobile telephony among older cohorts.

For instance, mobile telephony is more popular in Catalonia than in the United States, a trend older cohorts reproduce: Nearly 95% of the population between 16 and 74 years old are mobile phone users in Catalonia, a figure that drops to 82% among seniors (65-74 years old, Institut d’Estadística de Catalunya, 2011). In the US 85% of adults are mobile users, and among seniors the proportion falls to 68% (66-74 years old, Zickuhr, 2011).

Market conditions in each country shape the use of DMC. In Spain, the Calling Party Pays (CPP) system, together with a low level of flat rate use (International Telecommunication Union, 2011), could be encouraging the use of missed calls. In general, the bill directly depends on the effective airtime consumed. That means that every call that is turned into a DMC saves money. When users change to flat rates it could be that missed calls are not used anymore as the final bill does not depend on the consumed airtime.

In the US, Receiving Party Pays (RPP) systems lead to subscriptions based on the purchase of minutes in bulk that are usually valid for a given period of time (30 days). These plans typically require the purchase of a

minimum of 200 or 250 minutes, which expire at the end of the month. The user will therefore try to use all the airtime she/he is paying for. In the context where a given consumption is committed monthly, there is not much motivation for communicating by means of a free but uncertain service like DMC.

The aim of this paper is to contribute to a better understanding of the relationship between mobile communication technologies and older people regarding the specific case of deliberate missed calls. For reaching this goal I will analyze evidence coming from two case studies conducted in Barcelona (Catalonia, Spain) and Los Angeles (California, USA).

The remaining of this short paper is structured as follows. Section 2 explains the methodology; results are presented in Section 3 while Section 4 is devoted to discussion and conclusion.

2. Methodology

The empirical evidence I analyze in this paper comes from two case studies that follow the same methodological design and goals to allow for comparability. First of all, semi-structured interviews were conducted. Conversations were based on an open, flexible outline that revolved around the communication channels used by the individual (landline, mobile phone, Internet...). It also looked at the people and institutions the individual communicates with in their everyday life, and the common uses of communication channels with a specific focus on mobile phones (if used). The conversation also considered motivations, opinions and personal experiences regarding the decision to have a mobile phone or not. In addition, mobile phone users were asked about which specific services they used, how the mobile handset was used and how it was adopted in their everyday life. Interviews were voice recorded to allow further text analysis.

Secondly, the interviewee's mobile phone was directly observed whenever possible, i.e. if the individual was a mobile phone owner and had the handset with them during the interview. The researcher took a picture of the mobile phone and observed how the owner handled the device. And thirdly, additional interviews were conducted with specific, key informants to set the information in a wider context.

Individuals studied were 60 years old and over. They were identified by means of a snow-ball sampling process. The non-probabilistic sample

included both mobile users and non-users to better understand motivations of adoption and rejection. Every individual participating in the research was previously informed about the goals of the interview and the research project, as well as the anonymity of their contribution. Some individuals were contacted through an institution or a volunteer's organization. In these cases, a key person of the corresponding institution introduced the researchers to interviewees and explained to them the goals of the research project. During the interviews, all questions that individuals had regarding the research project were answered by the researcher. A symbolic reward was given, although in some cases it was not handed over at the specific request of informants and/or interviewees.

53 individuals were interviewed in the metropolitan area of Barcelona (Catalonia), between autumn 2010 and spring 2011; while 20 individuals were interviewed in Great Los Angeles (California) during autumn 2011. The younger individuals in the study were 60 years old, while the older ones were over 90 years old (96 in Barcelona, 92 in Los Angeles).

The author together with a research assistant, conducted interviews in the metropolitan area of Barcelona. Language of the interviews was Catalan or (and) Spanish. Interviews in great Los Angeles were conducted by the author. All of them were conducted in English, with the exception of one that was conducted in Spanish.

3. Results: observations on the use of deliberate missed calls

Voice communication is the most important mobile service for the participants in the study, both in Barcelona and in Los Angeles. In Barcelona, DMC are commonly used among research participants, but in Los Angeles they are not. This key result is elaborated in what follows.

It should be noted that, at a general level, there are clear differences between Barcelona and Los Angeles regarding the adoption of DMC amongst adults. In Barcelona, the use of deliberate missed calls is common in the everyday communications of adults. Even though it has limitations, DMC are useful in some circumstances, and they are adopted because they are free. In Los Angeles, however, DMC have not been

incorporated in the everyday communication practices because they are not convenient.¹

3.1. Barcelona: deliberate missed calls are common

While some older seniors do not even know what a deliberate missed call is it happens that the use of DMC is more popular than the use of SMS amongst the participants in the research, as DMC appear to be less sophisticated (no literacy required) and are able to reach a wider range of individuals.

This zero-cost communicative practice is used mostly with close relatives. Although, they are sometimes used with friends of the same age:

I make a lot of missed calls. If I arrange to meet a friend, when I leave the house I give her a missed call. (Woman, 66)

Missed calls are reported to be used to transfer costs to the richer communicant as well. This is the case of a 76 years old woman who had moved to a retirement home some weeks before the interview. She had a low pension, and she defined herself as almost illiterate, and said she barely knew how to use a mobile phone. However she described using missed calls in very positive terms: her son, who is around 40 years old, introduced her in the practice of DMC. He asked her to give him a missed call when she wants to talk to him. It seems that by doing this, they make the most of her son's flat rate.

[My son] tells me 'look, so you don't have to pay so much, (...) send me a missed call'. And then I don't have to pay. (Woman, 76)

Regardless of who is more well off, this seems to be a common practice when one of the communicants has access to 'free calls',²

¹ For Barcelona: personal observation. For Los Angeles: interview with a key informant from California who at the moment of the interview lived in Barcelona and had a deep knowledge of the situation in both places.

² 'Free calls' can refer to calls made within a flat-rate plan (they are not really free, but they do not constitute an extra cost for the user). They can refer, as well, to calls that are not paid for by the person who calls (for instance, when the bill is paid by the company the person works for).

I send him [her son] missed calls and he calls me back. Also for the same reason: because it costs nothing to him and (...) maybe the call would have some costs for me.
(Woman, 62)

Regarding frequency of use, two profiles can be identified: occasional users and regular users of DMC. Among occasional users, there are individuals who declare they have used DMC a few times in their lives, or who declare they rarely use them in their everyday lives. For example, a 63 years old man mentioned having used DMC not more than ten times in his life, or a 64 years old man who says he only receives boom calls from his daughter from time to time.

Regular DMC users use boom calls in their everyday lives with their friends, spouses and/or adult children.

Yesterday, for example, my wife said 'send me a missed call and I'll hurry up if I haven't finished yet'. (Man, 69)

DMC are mainly used for micro-coordination as a cost-reduction strategy. This saving strategy is clearly explained and perceived in positive terms.

First I don't spend any money, and second she [the friend she sent a missed call to] knows I'm leaving home, right?
(Woman, 66)

In other cases, individuals do not explicitly identify missed calls with the economic rationale that supports the logics of their use. However, as long as the most popular uses of DMC are coordination and micro-coordination, with very little evidence of emphatic uses, it can be interpreted that this communication practice is related to a general cost-reduction strategy that it is, in general, incorporated into the way adults manage mobile telephony.

DMC are far from being a perfect communication method, so there is no motivation for using them when cost-free alternatives arise. An example illustrates this substitution. A 62 years old woman now uses the instant messaging service (IM) *WhatsApp* with her daughter instead of missed calls. She has a flat rate that includes data on her mobile phone and reports an increasing use of costless applications to communicate with her daughter. For her, IM does not increase her final monthly bill while, at the same time, allows for improved communication:

It's amazing! It's got this (...) the WhatsApp icon here. Here you can call and see another person who has Wi-Fi and who has this software. And on top of that you don't pay.³
(Woman, 62)

She reported, however, that she could only use IM with her daughter as she is the only one in her personal network using this service. Moreover, she would not expect friends of her generation to use these advanced services.

3.2. Los Angeles: no deliberate missed calls

Using the mobile phone for coordination and micro-coordination is common among studied individuals in Los Angeles. The next three examples refer to situations in which DMC could have been used but they were not, as none of these three individuals ever send or receive deliberate missed calls:

And we use the cell phone if my sister [...] is coming to pick me up. [...] when she arrives, she calls me on the cell phone and says, "I'm here." (Woman, 80)

Somebody was going to meet me at, uh, at the bus stop. [...] And I called him and I said, "I'll, I'll be there in ten minutes." (Woman, 63)

I volunteer at the church and it's a pretty good-sized campus, and so if I need something to do the work, you know, like a hose or a rake or whatever... [...] I call the guy on the cell phone and then he brings it to me. (Man, 87)

Only one participant in the research identified a situation in which she would send a deliberate missed call. A 69 years old lady, an advanced user of the mobile phone, first stated she does not use DMC. After a short reflection she remembered that sometimes, not very often, she could use them. Interestingly, it wouldn't be critical if the call were to be answered.

Actually, now that you [mention it]... I may have said to somebody, "I'll call you just to let you know, and if you pick up fine, but you don't have to pick up if you don't want to." I've probably said that maybe once or twice if I knew somebody was wanting to know if I was going to make it

³ In this case, 'you don't pay' refers to the fact that no extra cost is associated to the use of IM. However, access to IM is not free but requires a flat-rate mobile data connection for the handset –a Smartphone.

someplace if I was driving... to a place I didn't know, and I'd say, "Well I'll call you and you'll just know that I'm there and..." you know, "if you pick up, fine. If you don't, you'll know I'm there." (Woman, 69)

Another lady, 66 years old, an intensive user of mobile telephony who prefers to communicate by mobile phone than through her landline at home, clearly explains that "if I have a missed call, I call them back" (Woman, 66). She said that a generalized practice is to call back every non-answered incoming call. It does not matter if the number is that of someone that the user is not familiar with:

Well, it's just that sometimes you call the wrong number and they'll call you back. Everybody calls back. [...] 'Cause they say, "Did you call me?" And it's like they think it's so important. [...] And it's like "I accidentally called you". (Woman, 66)

Regarding DMC, she would receive them from her grandson as well, but answering him seems to belong to her general strategy of calling back any non-answered call:

Researcher: And your grandson, does he ever call you like doing a beep? Just one or two rings so you will call him back.

Interviewee: Oh, yeah, I'll call him like that. [...] Yeah, 'cause I figure he needs something. (Woman, 66)

Last example that illustrates that DMC have no meaning for the individuals in the study corresponds to an 80 year old lady. She is retired and has a very active life that is reflected on the intensive use of the mobile telephony. She has specific persons with whom she talks more time on the mobile phone than in the landline, as she has a special plan with them. She, however, needs to take care of communications with other persons as the monthly bill could rocket. Even though she is a very conscious consumer; she does not acknowledge DMC as a communication practice. Indeed, about the possibility of receiving short call signals followed by a hang up: "No. Um, (...) if that happens, it's a... a mistake, not intended" (Woman, 80).

When asked, and after explaining what DMC are for, interviewees agreed that deliberate missed calls might not make sense for them because a short call would not represent an extra cost. Therefore it is

possible to infer that, for all these users, price is not acting as an incentive for using DMC, as there are no savings associated to them.

4. Discussion and conclusion

As for the available evidence, older ICT users tend to replicate other generations' communication practices, but rely much more on traditional communication practices. Seniors are "catching up to the levels of mainstream innovation, but largely lag behind in the use of new services integrated into the technology" (Karnowski, Von Pape, & Wirth, 2008, p. 191). First gathered evidence shows this trend: main communication service is voice calls, and seniors' practices depend on the general landscape of the place where they live. Regarding the use of DMC, in Los Angeles they do not use them because nobody does. In Barcelona, some seniors communicate by means of deliberate missed calls while others, specially the older elders, do not even know about this communication practice.

Price structure and billing systems shape the way [mobile] phones are used. When billing is based on actual, effective consumption –that is, on the number of calls and their length– there could be a clear incentive for communicating through DMC, since DMC are free, but calls are not. This is the case in Barcelona. On the other hand, when billing is based on the purchase of a bulk of minutes that must be spent in a give period, DMC would not be that interesting since they do not save users any money. This is the case in Los Angeles. The current pricing system encourages the use of DMC in Barcelona and does not encourage it in Los Angeles.

Short-term cost-reduction strategies can change when billing systems change. In this sense, changing to a flat-rate subscription implies that one extra [short] call would not increase the monthly bill; therefore, there would be no need to use a limited communication practice like DMC. In the Catalan and the Spanish context, however, the current pricing system landscape suggests that missed calls would be a popular practice among seniors, at least in the medium term, because prepaid and non-flat post-paid contracts are common (Comisión del Mercado de las Telecomunicaciones, 2011). In the Californian case, on the other hand, it seems that DMC are not going to have a place in the communication landscape.

In Barcelona, deliberated missed calls are mostly used with close relatives and close friends. DMC are incorporated both by sophisticated users and by very basic users. Sophisticated users, on the one hand, tend to be younger seniors, who have longer experience using information and communication technologies. They incorporate DMC to get the most from their mobile subscription, as they want to maximize communication and minimize costs. Very basic users, on the other hand, just follow the instructions they receive from their adult children, which is the way they are introduced to the practice.

The way older basic users are introduced to DMC constitutes a clear example of how important close relatives are in the incorporation of specific, innovative practices by older individuals. It seems that, without their relatives' implication, elders would never know about specific innovative uses, like DMC. While it is possible to identify this teaching process with the external pressures described by Ling (2008), I do prefer to describe it as the circulation of knowledge that is allowed when close individuals in the elder's network take care of these issues. In any case, the specific communication practice will be only incorporated when it is proved to be useful.

Missed calls are used for coordination and micro-coordination and to transfer costs to the richer communicant among mobile users in Barcelona. Emphatic uses were not reported. In Los Angeles, on the other hand, coordination and micro-coordination communications always involve setting up a voice call.

Finally, it is interesting to highlight that a common practice in Los Angeles is to call back any (real) missed call, even when the number is not recognized by the individual; which indicates that deliberate missed calls do not belong to the common set of practices when it comes to use a mobile phone in this city.

Summing up, our first conclusion is that general context of communication practices shapes effective use of mobile services by seniors, and this is particularly valid for DMC. Our second main conclusion is that personal abilities and external pressures are in operation for defining the kind of DMC that are used. Finally, DMC users could give up the practice if they move to contracts, such as flat rate schemes, in which the final bill is not directly related to the amount of airtime consumed.

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