

TELEPHONE SAMPLES: THE EXCLUSIVE MOBILE CHALLENGE

Matthias Gitschel and Olivier Lê Van Truoc, Ipsos Médias

Introduction

Readership research based on telephone samples has developed since the late eighties and they have become a serious alternative to personal interviews. Today, some small but relevant countries such as the Netherlands, Finland or Switzerland use telephone sample for audience research purposes. In France, where telephone based samples are largely accepted, and two major audience surveys use telephone sampling:

- The NRS for daily newspapers: this survey is run separately from the AEPM survey our NRS for magazines, which is run on CAPI Double Screen technology
- The 75000+ Survey, which is the official radio audience measurement in France.

Telephone interviews cannot be as long as personal interviews. This is – together with title confusion – one of the main reasons why this research technique has not been adopted at a larger scale. However, they present important advantages such as cost efficiency, good interviewer control possibilities, best geographical spread of the interviews, high response and – last but not least – a good sampling frame: the public directory. Moreover, combined with RDD, telephone interviewing seems to be superior to personal interviewing in at least one point: When using telephone interviewing, we are sure that the interviewer will “knock at the door”! Can we really be sure of this in the case of personal interviewing?

Response rates fall sometimes dramatically for face-to-face interviews, due to such ugly things like ...

- ... better access controls to private homes: codes, cameras,
- ... higher concern of respondents and also interviewers about personal security
- ... lower willingness of respondents to participate in research

In France, at least when looking at the NRS for daily newspaper we do not have this concern, as response rates have been stable in the last ten years. However, this idyllic situation is threatened! In fact, the development of mobile phone use affects the credibility of our telephone samples, which are based on fixed lines. Today, a significant part of the population is exclusively equipped with a mobile phone, and has no chance at all to be included in our sample.

Suddenly, samples based on personal interviewing seem to provide a better quality to the market than any of our telephone samples, even if we admit – at least for France – that their contact probability is certainly lower than for telephone samples.

As media researchers we will have to develop strategies able to face this new challenge.

What do we know about exclusive mobile phone use in France?

The questions to answer will be the following:

- ✓ How much individuals are concerned by exclusive mobile use?
- ✓ Who are they? ... and: Are they different ?
- ✓ Can we construct a mixed sample, based both on fixed and mobile telephones? And if so: What about the individual selection probabilities?
- ✓ Is it possible to implement the interviews on a mobile phone and can we then guarantee acceptable interview conditions
- ✓ What impact on audience levels?

The paper will detail the strategies that can be developed in France in order to face the challenge. It also will relate the outcome of tests set up by Ipsos Médias in 2003 and draw the main methodological axes to be implemented in the French NRS for daily newspapers.

What do we know about “exclusive mobile users”?

Not very much! Though it is possible to define clearly the population concerned by exclusive mobile use, we know neither its precise size nor its exact demographic structure. The reason for that lack of information is easy to determine.

The first one is that official statistics do not seem to be interested in the problem. Indeed, the official French institute for statistics – INSEE – has published only one survey where it was possible to cross tabulate the two types of telephone equipments: Fixed telephone line and possession of a mobile phone. However, there are two major inconveniences with the data:

- The first one is the “freshness” of data: The survey refers to May 2001. Since then, a lot of water has flown down the river Seine and the situation has probably changed since: All statistics show that the telephone equipments evolves quickly. Hence the overall equipment not only has doubled in three years from approximately 30% in 1999 to more than 60% in 2002 and telephone operators are permanently offering new services and new – lower - prices. And each time the consumer adopts one of these new services he or she may be tempted to re-think his or her whole telephone equipment.
- The second one is that the data refer mainly to households, not to individuals. Mobile phones were asked as household equipment so that we cannot reconstruct precisely the link between the different household members and the equipment.

The second reason is that we cannot rely entirely in data from other surveys: The only surveys which could be used for an evaluation are those based on personal interviews and these of their own problems of representative-ness. Hence, response rates are relatively low, at least in France, where nearly all face-to-face surveys are quota based, and there is a real concern about the integration of especially young people living alone or in couple in big urban areas.. Most of these people spend a lot of time outside their home, at the university, for example, or at work. We can suppose that their selection probability is not as high as for people living in bigger households, with children, for example.

Despite of these doubts, let us have a look on the data.

Table 1: Size and demographic structure of exclusive mobile users in France

<i>Individuals 15 years +</i>	INSEE 2001 Population 15+	INSEE 2001 Individuals in Households with at least one mobile phone / no fixed line	AEPM 2002 Individuals possessing a mobile phone, no fixed line at home
Population	47 982 284	3 564 004	4 259 000
<i>% of total population</i>		<i>7,4%</i>	<i>8,9%</i>
TOTAL	100,0%	100,0%	100,0%
Gender			
Men	48,0%	52,3%	54,6%
Women	52,0%	47,7%	45,3%
Age			
< 25	15,9%	29,9%	29,7%
25 - 34	16,6%	30,4%	35,0%
35 - 49	26,4%	27,5%	24,6%
50 - 59	15,2%	7,7%	7,6%
60 +	25,9%	4,5%	3,1%
Family status			
Chief of household	51,1%	58,9%	66,2%
Partner of the chief of household	30,8%	24,1%	20,6%
Other person	18,1%	17,0%	13,1%
Occupation			
Farmers	1,8%	0,5%	0,2%
Craftsmen, Company proprietor, Professionals	3,4%	2,6%	3,1%
Executives	7,6%	3,7%	3,4%
Intermediate Professions	12,7%	12,5%	9,4%
Employees	20,2%	27,8%	23,4%
Workers	16,8%	28,7%	31,2%
Retreated	22,2%	4,2%	3,0%
Other not working	14,3%	18,6%	26,2%
DK / NA	0,9%	1,3%	0,0%

Cont'd

<i>Individuals 15 years +</i>	INSEE 2001 Population 15+	INSEE 2001 Individuals in Households with at least one mobile phone / no fixed line	AEPM 2002 Individuals possessing a mobile phone, no fixed line at home
AB+	23,7%	18,8%	15,9%
CDE	38,8%	57,0%	54,8%
Not Working	36,5%	22,9%	29,2%
DK / NA	0,9%	1,3%	0,0%
Region			
Greater Paris Area	19,4%	17,1%	19,1%
Province	80,6%	82,9%	80,8%
Size of Urban Area			
Rural	26,3%	16,6%	11,9%
Less than 20 000 inhab.	16,5%	16,3%	17,8%
20 000 à 100 000 inhab	12,5%	20,0%	17,5%
100 000 inhab.+	27,7%	34,6%	35,7%
Paris Urban area	17,0%	12,5%	17,0%
Size of household			
1 person	16,0%	26,3%	28,8%
2 persons	32,4%	27,5%	28,0%
3 persons	19,3%	16,5%	15,3%
4 persons	19,3%	15,2%	14,3%
5 persons +	13,0%	14,5%	13,5%

The above table shows clearly the **differences** between the two sources. Indeed, the INSEE 2001 data, even referring to individuals living in exclusive mobile **households**, show a significantly smaller population than the AEPM 2002 survey, which is referring to individuals. This difference may also reflect the increase of the exclusive mobile population, between 2001 and 2002, but – as both surveys refer to slightly different definitions of the exclusive mobile population – we cannot be sure about that.

However, there are also **common characteristics**, which are shown by both surveys. The exclusive mobile population appear to be mainly young and urban. Consequently, the percentage of individuals living alone is much higher than in the total population aged 15 +. Exclusive mobile users are either students (category “other not working”) or belong to the lower professional categories such as employees or workers. Consequently, their revenues are lower than those of the general population.

This profile is not exactly that expected by some of our clients who supposed the exclusive mobile users to be urban top executives or professionals with high income and who have no reason to possess a fixed telephone because they are rarely at home.

Integration of exclusive mobile users in telephone samples: Two options

We identify two options for an integration of exclusive mobile users in our telephone samples. Both options are likely to have important methodological implications on the telephone sampling process.

The **first option** is to add exclusive mobile users to the current telephone sample. This approach seems to be easier to implement without important changes in the current sampling method based on RDD, where each number is called up to 5 times in order to achieve a contact. A number where no contact has been possible is abandoned and replaced by a new one, which has been artificially created by changing the two last digits of the initial number. This process is not any more possible when concentrating on exclusive mobile users only. Indeed, each time we would have to abandon a given mobile number we would have all chances to create a new number which is not “exclusive mobile” anymore. Moreover, given the fact that we do not have any geographical information related to the mobile telephone number, it would become extremely difficult to manage the sample distribution as a whole. Hence, the management of this distribution is essential in order to achieve a sample, on which an accurate audience measurement of daily newspapers (or radios) is possible!

It seems that the operator of the 75000+ survey, Médiamétrie, has opted to adopt this approach to the problem. Following our informations, Médiamétrie pre-identifies exclusive mobile users by a specific screening stage run on mobile telephone numbers. Exclusive mobile users are asked whether they would accept to be re-called for marketing research. It is probable that main demographics including geographic information will be asked when willing to participate.

Pre-identification of exclusive mobile users helps in this case to introduce this target in the general survey, without operating substantial changes in it. The inconvenient is, however, that

- The sample is not any more a pure ad hoc sample, as generally requested for “proper” audience research
- Response rate may be considerably lower than in the case of pure ad hoc research
- Costs are expected to be rather high, due to the screening process and losses when re-calling respondents.

The **second option** is the contrary of the first one. The idea is to build a sample based on both fixed and mobile telephone numbers. In this hypothesis, interviewing on mobile phones would be extended to all mobile users, not only exclusive mobile users. However, if we can theoretically consider that – in good random conditions – the percentage of exclusive mobile users would be “naturally” good, there would be a real concern about selection probabilities. Indeed, mobile users with access to a fixed telephone at home would have a chance to be included in the mobile sample as well as in the fixed sample. This problem can indeed be resolved by down weighting this category of individuals, but – once again – reliable data are needed in order to achieve this process properly.

However, this option may be better adapted to the future changes in private telecom equipments. Indeed, **exclusive mobile users will continue to increase** in the overall population. There are two main reasons for this:

- The exclusive mobile users from today have a high probability to stay exclusive mobile users, even when getting married and / or with increasing revenues
- The maintain of fixed telephone lines may sometimes be motivated by its Internet access facility: in the future, this specific motivation will however decrease, given the development of broadband access to the Internet.

Why we should test mobile based interviewing

Whatever solution we will adopt in order to represent exclusive mobile users in telephone samples, **we will have to realise interviews on mobile phones**. This fact seems however to be worth a closer examination. Indeed, can we reasonably pretend to administer audience questionnaires of 15 minutes and more on a mobile phone and pretend a similar quality than for interviews that have been realised on a fixed line?

Before starting interviews on mobile phones, we should be able to answer to the following main questions:

1. Which interview times are the best to get in contact with mobile phone users?
2. What response rate can be expected on mobile phones?
3. What incidence of professional mobile phones?
4. What about mobile phones shared by several persons?
5. Who takes the call? Is it the proprietor?
6. What incidence of exclusive mobile phone users?
7. What is the geographical sample distribution
8. In which place does the interview take place? At home, elsewhere?
9. What about the transmission quality?
10. Which sample profile? Does it fit to other available sources?
11. Who do respondents and interviewers perceive the interview quality?
12. Does respondents prefer to be interviewed on their fixed telephone?

Ipsos Médias has organised a pilot survey in order to investigate on these questions.

Methodological outlines of the test

Universe:

The universe was defined as main-users of mobile phones ages 15+ and who are present, at the moment of the interview in the French mainland.

Sample:

The objective was to achieve a sample of **600 interviews**. The final sample size was **628 respondents**. This size was considered sufficient in order to analyse response rates and to get a realistic idea on the incidence of exclusive mobile users in a mobile phone sample.

Sampling Process:

Sampling was based on a “**pure**” **random process**, which is exceptional in the French context, where quotas dominate.

The French telecoms authority (ART) attributes so called “root numbers” to each of the three French mobile network operators. These root numbers consist of the four first digits, the last six ones are attributed by the operators themselves. The only thing we had to do was to create sets of artificial mobile numbers, for each operator. We created a total of 12 000 mobile numbers which were split off in ten different “lots” for each operator. The size of these lots was different for each operator, in order to take into account their share in the mobile phone market.

During the fieldwork, the lots were opened one by one in order to achieve the sample. **Each number was called up to ten times** between 6 p.m. and 9 p.m. in order to achieve a contact. The number of attempts was doubled when compared to the French NRS for daily newspapers, whereas the interview hours were exactly the same.

Two supplementary contacts were tempted then between 3 p.m. and 5.30 p.m. in order to take into account those individuals who switch off their mobile phone early in the evening.

Questionnaire:

The main idea for the questionnaire was to “achieve” a similar interview length which was similar to that of the French NRS for daily newspapers: 16 minutes in average.

The questionnaire structure was however rather different:

- Localisation of the respondent
 - ✓ At the moment of the call: at home, street, ...
 - ✓ Geographical localisation of the main residence
- Status of the mobile phone
 - ✓ Professional / private
 - ✓ Personal equipment / household equipment
- Description of the mobile phone subscription
 - ✓ Type of subscription
 - ✓ Daytimes when the mobile phone is switched on/off
- Fixed telephone line and Internet
- Audience: 12 months filter, frequency, recency
 - ✓ National Newspapers
 - ✓ Regional Newspapers
 - ✓ Free newspapers

The organisation of the audience part of the questionnaire – Wording, Media List – was identical to the French NRS for daily newspapers. However, data collection on readership of free newspapers has been specifically introduced for the pilot.

- Demographics
- Perception of the interview
 - ✓ Respondent’s perception
 - ✓ Interviewer’s perception

Moreover, we have also added some questions on political opinions, which were asked on behalf of the Ipsos department for political studies, which has been associated to the pilot study.

Fieldwork:

Fieldwork was undertaken between June 27th and July 21st.

Results**Response**

During the fieldwork stage of the survey, a total of 15 867 contacts attempts were made on the basis of 3605 different telephone numbers. 628 questionnaires were achieved.

The analysis of the **contact distribution** shows clearly the main problem of research on mobile phones: Automatic answering machines are available for nearly all mobile phones. Nearly two third of all contacts attempts were classified in this category. This situation explains the high average number of contacts that were necessary in order to achieve one interview: 25 against 17 for the French NRS for daily newspapers.

The comparison with data from the French NRS for daily newspapers shows clearly the differences between the two approaches.

Table 2: Distribution of the contacts attempts

	Pilot	French NRS for dailies Wave 1 2003
Number of contacts: Base	15867	211 803
	%	%
Result of the contact attempt		
Wrong number	9,1	5,9
Line busy	1,3	4,1
No response	9,4	38,1
Answering machine	63,8	Coded in no response
No communication possible	0,6	2,9
Refusal / Abandon	3,9	9,1
Appointment	7,8	33,6
Interview start	4,0	5,9
Average no. of contacts/interview	25,3	17,0

The analysis of the obtained results on the basis of used telephone numbers shows a very good response rate achieved with the mobile phone sample. More than 30% of response, compared with 27 % for the French NRS for daily newspapers. It might be added that the latter figure underestimates the real response rate on fully exploited telephone numbers: at the end of the fieldwork stage, we have to add “fresh” telephone numbers in order to maintain the requested number of interviews per day. These fresh numbers cannot be fully exploited, thus introducing a certain bias in the statistics shown below. The real response rate of the French NRS for daily newspapers is approximately 32%.

Moreover, it may be interesting to know that the high percentage of wrong numbers in the mobile sample can partly be explained by the fact that all telephone numbers used in the pilot have been created artificially. In the French NRS for daily newspapers, interviews are started on the basis of in-directory telephone numbers first: these are incremented only if no interview is possible.

Table 3: Distribution of used telephone numbers

	Pilot	French NRS for dailies Wave 1 2003
Number of contacts: Base	15867	65 172
	%	%
Result of the exploitation		
Wrong number	40,0	19,2
Line busy	0,2	1,5
No response	8,6	16,6
Answering machine	12,6	Coded in no response
No communication possible / Fax / ...	2,7	10,6
Refusal / Abandon	17,1	29,6
Appointment	1,3	3,1
Interview start	17,4	19,1
Response rate	30,4	27,3 (32,1)
Average no. of telephone numbers / interview	5,7	5,2

It may be noted that response differs from one mobile network operator to another. These differences are due to a higher incidence of “wrong numbers”, which vary considerably from

- Orange 35 %
- SFR 41 %
- Bouygues 55%

At present, we still do not have a reasonable explanation for these phenomena. Indeed, the number of root numbers attributed to each of the three operators seems to be proportional to their market share in France. Thus, when creating the set of mobile numbers to be called, each number should have an equivalent probability to be wrong!

However, one of the main results of the pilot is that **response rates do not differ significantly between mobile samples and fixed samples !**

Sample Profile

Let's now have a look on the sample profile.

The below table shows significant differences between the mobile sample and the sample of the French NRS for daily newspapers, wave 1, 2003. Indeed, nearly two third of the sample has been realised with at least two attempts for contact, whereas nearly 60% of the NRS sample is interviewed after a very first contact. We have two explanations :

- Different sample structures: few of the mobile users are elder than 60 and we can assume a high degree of mobility amount this population
- Technical facilities of mobile phones: On the contrary of fixed telephones, mobile phones can be switched off. They are mostly equipped with an answering machine.

Table 4: Sample distribution by contact attempts

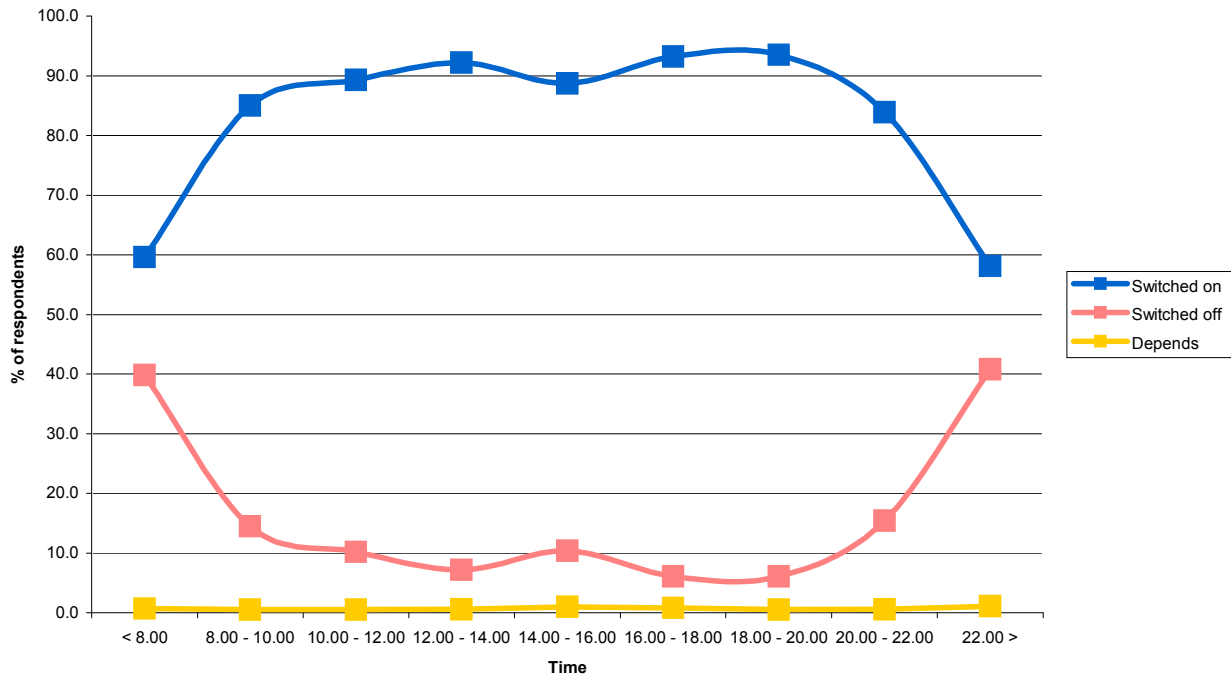
		French NRS for dailies	
		<i>Pilot</i>	<i>Wave 1 2003</i>
Base		628	12455
		%	%
Attempts			
	1 st	36.3	58.9
	2 nd	22.1	23.1
	3 rd	12.3	9.8
	4 th	8.6	5.4
	5 th	8.6	2.7
	6 th	4.8	-
	7 th	2.7	-
	8 th	1.6	-
	9 th	2.1	-
	10 th	1.0	-
	Suppl 1 st	0.9	-
	Suppl 2 nd	0.0	-

We can conclude that if we are able to achieve correct response rates with mobile phone samples, **we have to “pay” for it by increasing the number of attempts** to be achieved before a definite abandon of a given number. A minimum of 8 contact attempts seems to be necessary in order to achieve a mobile sample.

However, the chosen interview times seem to be sufficient in order to achieve the interviews. Indeed, the supplementary contacts that have been realised for those telephone numbers, which could not be contacted in the first ten attempts, do not contribute in order to achieve a significantly higher response rate. When these contacts have been realised, lots of the respondents have asked for an appointment ... after 6 p.m. !

We should also examine whether our **interview times** – from 6 to 9 p.m. – can influence response. In the questionnaire, we have asked respondents by time tranches of 2 hours, whether their mobile phone is usually switched on or off. The results are represented in the following graph:

Graph 1: Mobile phone switched on / off by time tranches

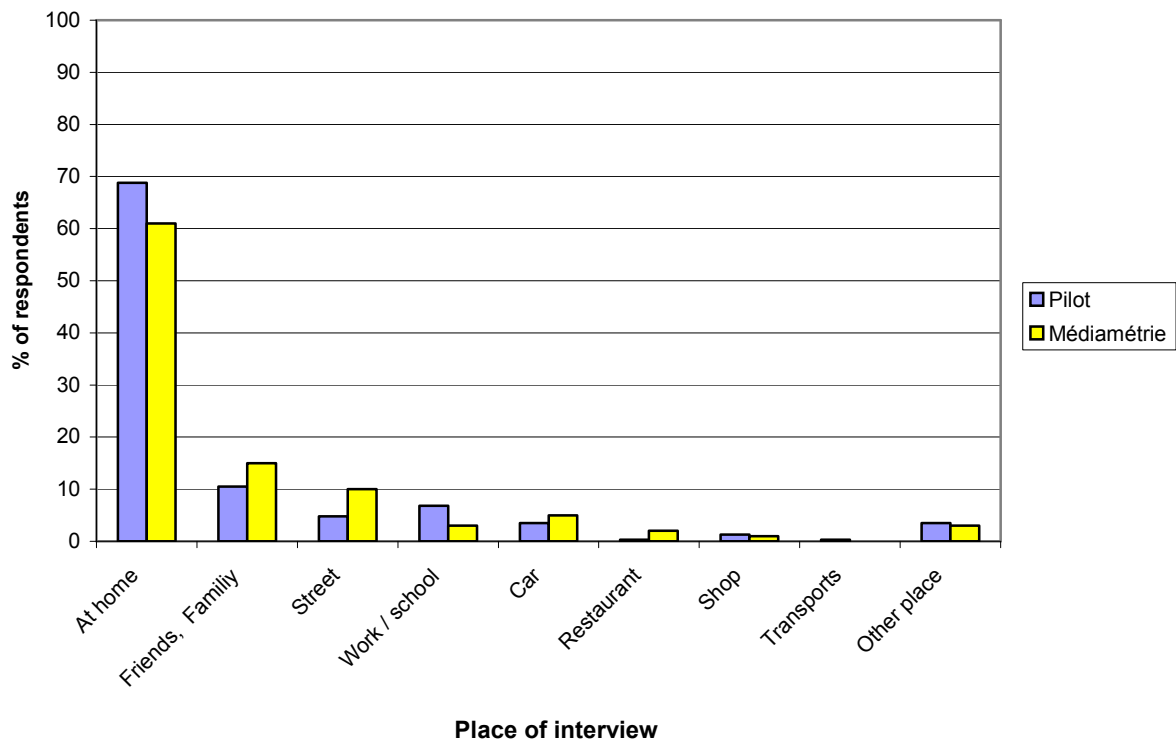


Approximately 90% of the respondents declare that their mobile phone is switched on between 8 o'clock in the morning until 10 o'clock in the evening. There are no significant differences between the fieldwork times – 6 p.m. to 9 p.m. – and the other moments of the day. If respondents could be contacted nearly during the whole day, it may useful to remember that these moments may not necessarily be convenient for a 15-minutes interview. Respondents can be working or studying and the place of interview may not favour the respondent's concentration on the questionnaire.

In the case of a future integration of mobile numbers in the sample of the French NRS for daily newspapers it seems that **there is no reason to change the current interview times**. On the contrary, we should even insist on the same fieldwork times in order to maintain the coherence of the survey. Moreover, these fieldwork guarantee a high percentage of interviews with respondents being at home, where the interview conditions are probably the best. (*cf. chapter Interview conditions, below*)

Interview conditions

Interview times are also closely related to the place of the interview. We have asked the respondents the place of the interview. We have compared the gathered data with existing data that has been published by Médiamétrie in 2002. The following graph shows a high degree of coherence between both sources. However, it may be pointed out that the Ipsos pilot survey has generated more interviews “at home” (69%) than the Médiamétrie survey (61%), of which we do not know the exact fieldwork times which may influence on the place of interview.

Graph 2: Place of interview

We now should interest in the **perception of the interview conditions**, from the point of view of the respondents: An overwhelming majority of respondents agree that the overall interview conditions have been “good” (96%) and that the interview on their mobile phone did not affect their concentration during the interview (95%).

However, when we have asked the respondents about specific problems which may be linked to the use of mobile phones, a significant part of the respondents complain about

- Noise (21%)
- The overall transmission quality (20%)
- The fact to be not comfortably installed (14%)
- To be forced to move during the interview in order to maintain the transmission quality (29%)

The analysis of these results by the place of interview (in home / elsewhere) show that the “out of home” respondents complain more about noise (31%) and the fact that they are not sufficiently well installed during the interview (23%). These inconvenients of mobile phone use do not seem to affect significantly the judgement of the overall interview conditions: moreover, there is no difference at all between in home and out of home respondents when asked whether they would have preferred the interview on their fixed telephone, at home.

However, we find that 10% of “out of home” respondents who declare that the interview on the mobile phone has had an influence on their concentration during the interview: this percentage is three times higher than among “in home” respondents.

Table 5: Place of interview and perception of the interview conditions

	All	At home	Elsewhere
Base = accept the perception part of the questionnaire	584		
Overall interview conditions			
Good	96,9	98,2	94,0
Not good	3,1	1,8	6,0
Reasons that may influence the interview conditions			
Use of mobile phone for the interview	11,6	10,2	14,9
Not well installed	14,2	10,5	22,6
Noise	20,7	16,0	31,5
Transmission quality	20,0	19,6	20,8
No fixed interview place	28,9	27,7	31,5
Did the mobile phone influence on your concentration?			
Yes	5,3	2,9	10,7
No	94,7	97,1	89,3
Base = accept the perception part of the questionnaire + presence of a fixed line at home	443		
Would have preferred to be interviewed on your fixed line			
Yes	20,1	20,0	20,5
No	79,9	80,0	79,5

The interviewers also confirm the respondent's perception of the interview conditions: We have asked them to code the overall transmission quality and the presence of noise during the interview. Only 6% of the total number of interviews was coded in "deteriorated transmission quality" and the same percentage of interviews was coded in "lot of noise on the respondents side". We must also point out a majority of the respondents of these interviews still insist on good overall interview conditions and that the use of the mobile phone did not affect their concentration during the interview.

We judge these results as extremely encouraging for the use of mobile phones for survey purposes.

Status of the mobile phone: Phone share and multi-equipment

Mobile phones are mostly considered as personal equipment, on the contrary of fixed telephones. The different status may influence on the individual selection probabilities when the French NRS for daily newspapers will finally adopt a methodology based on a mix of mobile and fixed telephone numbers. It seems therefore being worth to investigate on this aspect.

The pilot has confirmed that mobile phones are mainly individual equipments. It must however been pointed out that 7 % of the respondents declared to share the telephone with other persons.

The same percentage of respondents declares that their employer has furnished their mobile phone. Two out of three of these use their professional mobile phone also for private calls. This is the main reason why we find only one out of five professional mobile users who declare to possess a personal mobile phone.

Multi-equipment with mobile phones is however rather limited, as only 6 % of the respondents have more than one mobile phone in their possession. We have taken this information into account for the data processing, where multi-equipped respondents have been down-weighted by number of mobile phones in their possession. This weighing process has been necessary in order to balance the effects of a higher selection probability of multi-equipped individuals.

How many exclusive mobile users in France?

The exclusive mobile phone use was the main reason to conduct an exhaustive pilot survey. Among the 628 respondents, we have found not less than 153 individuals (or 24 %) who declared not to possess a fixed telephone line. With a given mobile phone overall penetration of 62% of all individuals aged 15 + living in France, do we have to deduce that nearly 15% of the total 15 year + population of France – 7 million individuals – are exclusive mobile users?

Even if this projection is based on a sample of only 628 interviews (confidence limit: +/-3,4 %) it seems to confirm that the exclusive mobile population is more important than it was expected to be!

There may be **several explanations** for these rather important differences.

The **first one** is the fact that exclusive mobile users seem to be mainly young, urban people who are either employees and workers or who are students. We now from other research experiences that these categories of population are generally

- highly mobile (low presence at home): young people, living alone, students
- less open-minded to market research: employees, workers

These two factors contribute certainly to a certain **under-representation of exclusive mobile users in quota based face-to-face samples**.

We may also advance a **second possible explanation** for the differences. This explanation is linked with the fact that fixed telephone lines can be assimilated to household equipment, whereas mobile phones are mainly individual equipments. It seems to be logical that the number of mobile phones – and mobile users – in households without fixed telephone line is higher than in households who maintain their fixed telephone line.

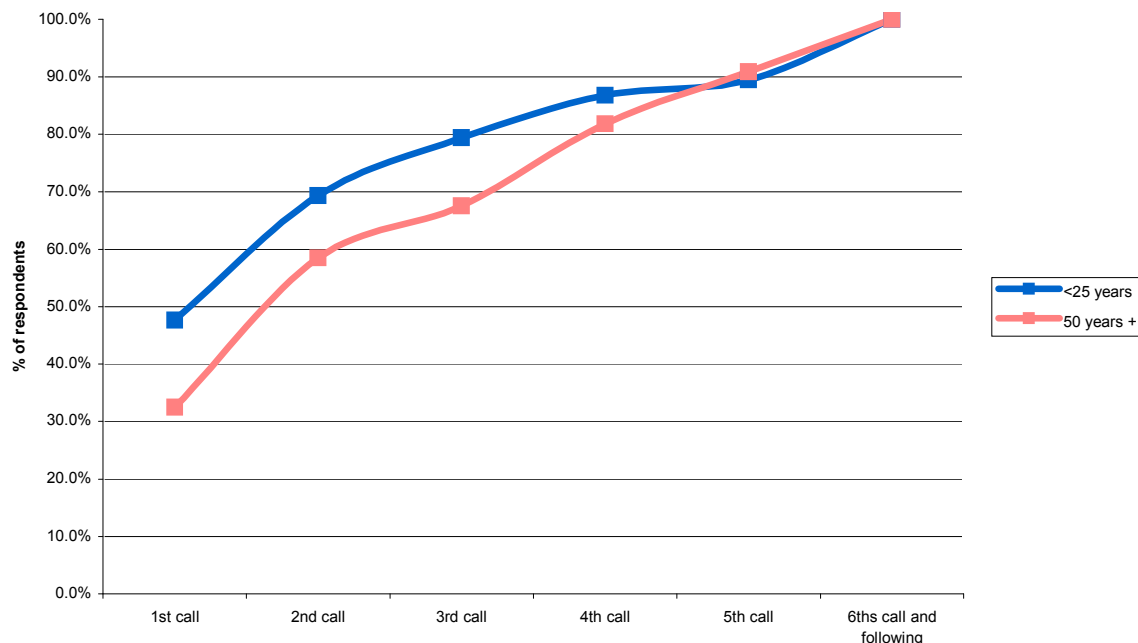
Hence, our traditional research techniques used for surveys such as the NRS for magazines (AEPM) or the Daily Newspaper NRS are based on the approach of households, as they admit only one interview per household. This rule seems to be reasonable, but it has probably the inconvenient to under-represent exclusive mobile users!

Unfortunately, we are unable to produce reliable data in order to illustrate this hypothesis. Indeed, we have asked respondents the number of available mobile phones in their household and we know also the household size. However, the sample size of the pilot survey does not allow such analysis.

We can also advance a **third hypothesis** for the high level of exclusive mobile users in the sample of the Ipsos pilot: Indeed, the obtained mobile user sample is **younger** than mobile users when identified by traditional research methods (*cf. table 6, below*). Hence, we know that age is closely linked to exclusive mobile use (*cf. table 1*). However, this would mean that our pilot sample has been somewhat biased ...

Our available data may illustrate this, at least partially. Indeed, we find that nearly half of the achieved sample of young respondents, aged <25 years can be interviewed after the first call on their mobile phone. On the opposite, we have interviewed only one third of our respondents aged 50 years and more after the first call. Indeed, it seems to be more difficult to get into contact with elder mobile phone users.

Graph 3: Percentage of sample achieved by call number



Demographic profile of exclusive mobile users

Let us now look more precisely at the **profile of mobile users**, such as it was generated by the pilot survey, in comparison with other available data sources.

When comparing the profiles of not exclusive mobile users with those from the NRS for daily newspapers and the profiles of exclusive mobile users with those from the NRS for magazines (AEPM), confirm the above observations. Respondents from the Ipsos pilot survey appear clearly **much younger** than the respondents from the NRS.

Moreover, we find a **higher proportion of AB individuals** in the exclusive mobile sample.

Table 6: Profile comparison: Pilot / Daily Newspaper NRS / Magazine NRS:

	Pilot	Dailies NRS Jan-May 2003		Pilot	AEPM 2002
<i>Individuals 15 years +</i>	Total	Not exclusive mobile users		Exclusive mobile users	
<i>Sample size</i>	628	475	7400	153	1780
TOTAL	100,0%	100,0%	100,0%	100,0%	100,00%
Gender					
Men	52,9%	52,9%	51,6%	52,8%	54,60%
Women	47,1%	46,9%	48,4%	47,9%	45,30%
Age					
< 25	31,6%	33,5%	20,8%	25,7%	29,70%
25 - 34	25,7%	19,0%	20,0%	46,5%	35,00%
35 - 49	30,1%	32,4%	28,4%	22,9%	24,60%
50 - 64	9,3%	10,5%	19,3%	5,6%	10,70%
65 +	3,4%	4,5%	10,5%	0,0%	

Cont'd

		Dailies NRS			Pilot	AEPM 2002
		Pilot	Jan-May 2003			
Occupation						
Farmers	0,5%	0,7%	1,1%	0,0%	0,20%	
Craftsmen, Company proprietor	2,9%	3,3%	3,6%	1,4%	3,10%	
Executives / Professionals	11,7%	12,9%	9,5%	7,6%	3,40%	
Intermediate Professions	17,1%	17,0%	13,3%	17,4%	9,40%	
Employees	18,1%	15,2%	17,4%	27,1%	23,40%	
Workers	20,2%	16,7%	16,0%	30,6%	31,20%	
Retreated	5,8%	7,4%	15,9%	0,7%	3,00%	
Other not working	23,7%	26,3%	23,1%	15,3%	26,20%	
Social Class						
AB	31,6%	33,3%	26,4%	26,4%	15,90%	
CDE	38,7%	32,6%	34,6%	57,6%	54,80%	
Not Working	29,4%	33,7%	39,0%	16,0%	29,20%	
Size of household						
1 person	14,4%	8,7%	11,5%	31,9%	28,80%	
2 persons	26,2%	23,9%	30,7%	33,3%	28,00%	
3 persons	18,6%	21,7%	21,7%	9,0%	15,30%	
4 persons	23,3%	27,5%	22,1%	10,4%	14,30%	
5 persons +	17,7%	18,5%	14,0%	15,3%	13,50%	

Some of the observed distortions may be also a result of the **small sample size** of the pilot survey. It seems however hardly believable that this is the only factor that we have to take into account.

Another explanation may be the fact that the question that we ask in both French NRS is not precise enough for the respondents. Maybe respondents consider having personally at their disposal even if another person in their household mainly uses the equipment? Elder people may use sometimes a mobile phone of their household and may therefore answer positively to the question we ask to them.

If we cannot totally exclude this hypothesis, it seems however more **likely that response among elder people is simply lower**. Do they have their mobile phone "switched on" all day long such as a lot of young people?

Sample spread

One of the main objectives of the pilot survey on mobile phones was to verify an acceptable sample spread. Indeed, the sample distribution is one of the most important advantages of the fixed line based telephone sample of the French Daily Newspapers NRS. The initial sample of telephone numbers to be used in the RDD process can be precisely allocated conformingly to available statistics at the department (province) level. These initial telephone numbers are then distributed over the whole fieldwork period. This process enables us to achieve a well balances sample in terms of time and space.

We do not possess this amazing facility for samples based on mobile phones. No directory! No public statistics!

However, the comparison of the geographical data from the pilot with the Daily Newspaper NRS shows a pretty good sample spread.

Table 7: Sample spread comparison: Pilot / Daily Newspaper NRS :

		Pilot	Dailies NRS Jan-May 2003
<i>Individuals 15 years +</i>	Total	Not exclusive mobile users	
<i>Sample size</i>	628	475	7400
TOTAL	100,0%	100,0%	100,0%
Region			
Greater Paris Area	18,9%	20,9%	20,4%
Province	81,1%	79,1%	79,6%
Champagne Ardennes	2,2%	2,3%	2,6%
Picardie	3,5%	3,2%	3,0%
Haute Normandie	2,5%	3,2%	2,9%
Centre	5,1%	4,0%	4,3%
Basse Normandie	2,4%	2,3%	2,7%
Bourgogne	3,4%	2,7%	2,5%
Nord-Pas de Calais	6,8%	6,3%	6,6%
Lorraine	3,5%	3,9%	4,0%
Alsace	3,5%	3,0%	3,0%
Franche Comté	2,5%	1,8%	1,8%
Pays de Loire	3,7%	5,2%	5,5%
Bretagne	3,4%	4,6%	4,2%
Poitou-Charentes	2,4%	2,5%	2,3%
Aquitaine	6,3%	5,0%	4,9%
Midi Pyrénées	4,6%	4,1%	3,8%
Limousin	0,8%	1,1%	1,0%
Rhône-Alpes	7,3%	9,3%	10,1%
Auvergne	2,4%	2,2%	2,2%
Languedoc-Roussillon	4,1%	3,8%	3,7%
Prvce-Alpes Côte d'Azur Corse	11,1%	8,8%	8,7%
Size of Urban Area			
Rural	18,8%	22,4%	23,0%
Less than 20 000 inhab.	15,9%	16,7%	17,3%
20 000 à 100 000 inhab	14,9%	13,0%	13,7%
100 000 inhab.+	33,8%	29,4%	28,0%
Paris Urban area	16,6%	18,5%	17,9%

We judge these results as extremely encouraging for the use of mobile phones for survey purposes.

Indeed, it appears possible to construct “hybrid” samples, which are based on the use of both mobile and fixed phones. In these samples it would be possible to balance the geographical sample spread by an intelligent management of the fixed telephone numbers, thus achieving the overall sample objectives given by public statistics.

Readership

The standard readership questions have been integrated in the pilot questionnaire and – of course – the author of this paper could not avoid looking at these data. Of course, there are differences when we compare our data with the levels observed among mobile phone users, who have been identified in the sample of the French NRS for daily newspapers. These differences seem however largely due to differences in the sample structures (*cf. table 6*) and cannot be linked with the interview method.

It should be noted that the interview conditions allowed administering the readership questions correctly: we can therefore consider that the mobile-based research method is as valid as traditional telephone interviews for readership research.

Conclusions and outlook

The author of this paper are reasonably satisfied with the outcome of the pilot survey on mobile phones. Indeed, it allows the following conclusions

- Readership research on mobile phones is possible: the interview conditions are good enough in order to guarantee the administration of an audience questionnaire in similar conditions as provided by an “ordinary” telephone interview, based on a fixed telephone line.
- We can achieve a sample based on mobile phones in similar conditions as in the French NRS for daily newspapers: Fieldwork times can be maintained, and response is very similar to ordinary interviews based on fixed telephones at the conditions to increase the number of calls on a given mobile telephone number.
- As far as we can judge this on the basis of the achieved 628 interviews, it seems to be possible to obtain a “reasonably good” sample distribution. This is one of the main conditions if we wish to integrate a mobile phone sample in the future version of the French NRS for daily newspapers.
- The “pure random” method that we used for the pilot was not be able to produce a sample with the same characteristics that we expected to find. The distortions concern mainly the age distribution, one of the key factors for readership of daily newspapers in France. This is undeniably a problem, which may be difficult to resolve.
- However, mobile phone interviews seem to be particularly adapted to contact young people, aged 15 to 30 years.
- It seems to be rather easy to interview the exclusive mobile population: We only have to call these people on their mobile phone.

It will however be much more difficult to design representative telephone samples in the future. These will necessarily be based on a mix of mobile and fixed telephone interviewing. Given the quick decrease of fixed telephone lines, it may be more reasonable to adopt a survey technique based on a double sample – mobile and fixed.

On the long term, this solution seems to be more adequate than a mere concentration on exclusive mobile users which are merely “added” to a fixed telephone sample which continues to be constructed in the same way as 10 years ago.

A mixed sampling technique, despite the tricky selection probability problem, may even improve the representativeness of our samples, as it is (will) not any longer possible to contact the whole population by one unique research channel. We will have to diversify our research techniques ... and to cope with the problems generated by this.

The French plan to publish a unique directory of mobile users and the recent decision that a mobile phone user can guard his or her telephone number even when changing the operator may help us to face the challenge.

