



What Does Answering the Phone Mean? A Sociology of the Phone Ring and Musical Ringtones

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Abstract

I provide here an analysis of how users choose and design personalized ringtones as an example of subjects' current concerns with the management of social accessibility. As a result of the growing demands of 'connected presence' mobile phone users are faced with the proliferation of ringing phones in their soundscapes. They therefore exploit the new resources for customizing their ringtones with an orientation towards the management of the interactional problems which the development of 'ubiquitous summoning' may entail. Musical ringtones are chosen or designed by users, so that the shaping of the summons becomes a personal project of the recipients. They are shaped as ambiguous cues inviting two kinds of responsive actions, that is, treating them as a summons (inviting their being answered to) or as a music (inviting their being listened to). Their design becomes the locus of diverging rationales, with some users trying to exacerbate the summoning power of their phone ring and others to maximize their ambiguousness. Moreover musical ringtones are selected so as to constitute a personal gratification that the user addresses to himself (and sometimes also to potential bystanders). They become a 'treat' that users juxtapose and contrast with the obligation to answer that the ringtone incarnates. This provides evidence for a more general 'crisis of the summons' occurring as a collateral effect of increased availability requirements, which reshapes the ways we experience and perform the normative social order which underlies all social encounters.

Keywords

accessibility, availability, connected, encounter, mobile phone, presence, ring, summons

Introduction

Information and communication technologies provide resources and media which serve to regulate the sudden appearance of distant entities in people's proximal environment.

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The irruption of an outsider into an ongoing situation is an event fraught with risks and dangers, as phenomenology (Levinas, 1972) and interactionism (Goffman, 1959) both show in their own way. Generally speaking, the development of situations of face-to-face interaction makes people exclusively accessible, available and subjected to one another, so that public order, as regards its face-to-face aspects, consists of all the devices that normatively regulate this contingent accessibility.

It is such an important feature of public order that such devices are mostly everywhere and rarely considered for what they are, even if the event that they regulate and accomplish at the same time may happen to be noteworthy. The class of such devices is heterogeneous. It contains material artefacts such as telephone ringtones, as well as symbolic resources such as sequences of gestures and greetings (orientations of the gaze, hand-wave, orientation of the body, hand put-out, verbal greeting) performed by one person approaching another one (Kendon, 1990). It also comprises artefacts from ancient technologies such as doors, sometimes equipped with bells and bellboys (Latour, 1993). Information and communication technologies (ICT) based on digital networks are a fertile source of such devices, as attested by the spread of 'pop-up' windows which suddenly appear on one's computer screen to signal the arrival of an 'instant message' sent by a distant other who has just gone on line. Irrespective of their apparent differences, all these artefacts participate in the process of networking people, and contribute towards the interactional order.

This article is devoted to one of the most common ones, the telephone's ring, and to the consequences of its most recent incarnation, mobile phone musical ringtones. In the field of ICT, this device seems commonplace: ringtones are either free of charge or have a very small unit cost; their use is widespread; their use is part of an operation that we usually perform without thinking of it as such (the ring-answer sequence); it has not triggered the 'moral panics' and widespread public debates that attended the development of other uses of mobiles in public spaces. This article aims to correct such a view and show the meaningfulness and relevance of musical ringtones to cultural sociology, science and technology studies and communication studies.

The article examines what musical ringtones 'do' in a setting that includes a caller and a receiver, each with ordinary interactional competencies and expectations concerning the intelligibility and relevance of their mutual acts; and a mobile phone that rings and is heard by its owner (and, potentially, by others co-present) who thereby becomes a 'respondent' who may answer or not. This constitutes a heterogeneous 'assemblage' in which the agency may be distributed in different ways. To understand it, a sociology is needed that integrates and preserves 'the missing mass' of objects and artefacts in its analyses (Latour, 1992).

I will endeavour to show how the design, choice and use of musical ringtones constitute them as an affordance for specific forms of users' identification or differentiation, based on diverse forms of construction and manipulation of the force of the summons they embody. The case of musical ringtones represents a twofold trend: first, a creative appropriation of technologies by users equipped with resources to design, model and personalize their artefacts at will, and thus to express their autonomy and their identity; and second, a hybridization between musical ringtones as interactional artefacts (ringtones *qua* rings) and musical ringtones as cultural artefacts reflecting tastes and cultural

practices (ringtones *qua* music). Beyond a general discourse on interactivity or convergence, I will analyse precisely how these two pragmatic definitions of ringtones are articulated in choices and uses of musical ringtones. Do they merge into a homogeneous whole or do they remain under constant tension?

This study of the choice of musical ringtones will also highlight the diverse ways in which they are used and intended to be experienced. To apprehend this diversity, we need a plural approach that can account for the heterogeneous assemblage of people and artefacts, normative orientations and scripts, material and symbolic resources, that: (a) accomplishes the ‘telephone ring–answer’ sequence; (b) provides a frame of analysis to account for the pragmatic properties of ringtones, that is, the way the ringing of the phone projects relevant and proper responses (such as answering or not).

Revisiting Some Current Approaches to the Uses of Information and Communication Technologies

Musical Ringtones as Cultural Products

Because mobile ringtones are often based on pieces of music, they are related to users’ cultural tastes. They therefore lend themselves to a sociology of cultural practices *à la* Bourdieu, first because the choice of musical excerpts is made in relation to musical tastes structured by social positions and a logic of distinction (though it is dictated only slightly by a normative relation to legitimate aesthetics); and, second, because these tastes are put to the test of the challenges of presentation of self in the public sphere and of the forms of domination attested by the judgements produced there. The choice of musical ringtones could then be compared to the analysis of photography as an ‘*art moyen*’ (Bourdieu, 1965). Like photographic practices, the choice of musical ringtones is available to just about anyone and it is not fully formatted by established aesthetic norms. Bourdieu concludes, in the case of photographic practices, that far from being random, image choices almost directly reflect ‘in the subjects’ consciousness . . . the social function of their practice’ (1965: 103). They afford ‘an ideal opportunity to observe the logic of seeking difference for difference’s sake’, the principle of which ‘is nothing other than class ethos’ (1965: 138).

While some users and their audiences orient towards such a rationale for the expressivity of musical ringtones, others base their choice of ringtones on their particular meanings regarding social relationships, especially intimate ones. Like many other objects used and exposed within the intimacy of private places, their use or their shared experience become part of many negotiations and conversations. This constitutes the crucible of a common culture and experience within intimate social relationships such as couples, as shown by the sociology of family (Kaufmann, 2004, 2007).

We will see that these different forms of sociological analysis are relevant, but only in so far as musical ringtones are treated as music, disregarding any other properties. These sociological perspectives may start by looking at artefacts, but usually the ‘thingness’ and artefactuality of the objects end up disappearing as the analytical focus is shifted towards a description of the social relations for which they have served only as a marker. With Bourdieu, photographic practice is taken to reflect and reveal class ethos and

positions. If Kaufmann seems to give pride of place to the toothpaste tube and a few similar objects within 'the heart of the turmoil' that the experience of living as a couple may be, it is mostly because conflicting uses reveal tensions and annoyances. From the materiality of uses, the analysis rapidly slides towards a focus on the management of 'annoyances' as a test of the modalities of construction of conjugal logics, which appears the purpose of legitimate sociological research (and not the now forgotten artefacts it started with).

A parallel strand of research tried to tackle more directly the artefactuality of communication- and media-related technologies. In French research for instance, the term '*usage*' was coined in the 1980s to denote 'multiple practices that deviated from the operating instructions, other than errors of manipulation', and that therefore had a particular *meaning* and consistency (Perriault, 1989). From the Minitel to the Internet, a French '*sociologie des usages*' stream (Jouet, 2000) endeavoured: (a) to show that the use of technology should be analysed within a collective not an individual frame because it always involves others, whether present or not; and (b) to grasp the logics governing users' unorthodox and unforeseen uses of the network technologies available to them and that were seen as challenging the industrial designers' motives (Breton and Proulx, 2002; Flichy, 1991). This was marked by an almost constant reference to the work of Michel de Certeau, and by users being referred to as 'poachers' of cultural and practical resources, with short-term tactics rather than large scale goal-oriented strategies (De Certeau, 1984). Many similarities exist between this '*sociologie des usages*' and the 'domestication theory' developed in Great Britain at the same time (Silverstone and al., 1992).

The field of mobile studies has developed in their wake, with a focus on the use of handheld devices in mobile situations (Katz and Aakhus, 2002; Ling, 2004). Research has concentrated more on communication practices than on the beginnings of phone calls. Phone rings have however been studied from an ethnomethodological perspective as a form of summons available and relevant to multiple parties in public spaces (Murtagh, 2001), or more tangentially from ethnographic perspectives that provide rich contextualized accounts of call pre-negotiation practices, as in the case of 'beeping' in East Africa (Donner, 2007), or the use of free call-back services by poor Jamaicans (Horst and Miller, 2006). The multimedia turn in the mobile phone industry has also led recent research to pay more attention to the way communicative uses of mobile phones are interwoven with media consumption and production (Goggin, 2006; Koskinen, 2007), although musical ringtones remain an understudied case.

In the case of mobile ringtones, while it is true that users display some measure of autonomy in their choices and design, this is granted to them from the outset by socio-technical devices which enable them to choose or configure the type of ringtone that they wish to download onto their mobile phone. Rather than an unintended type of use, the personalization of ringtones reflects the 'user turn' which seems to mark contemporary technological innovation (Oodshorn and Pinch, 2003), especially information and communication technologies. While these researches were useful in the 1980s and the 1990s to counter the technical determinism of engineers who wanted to script the uses of technology, and the social determinism of some sociologists who wanted all uses to derive solely from social structure, they lacked a focus on understanding exactly what a given object 'does' when used in a particular situation and setting. This becomes apparent

when we focus on the mobile musical ringtone as a particular instance of phone rings, and start to wonder what phone rings do in a pragmatic sense.

Ringtones as Phone Rings

The distributed cognition model (Hutchins, 1994, 1995) treats artefactual occurrences such as an instant messaging notification or a reader reaching a pre-determined value on the scale of a display as perceptive cues, which prompt specific responses. They constitute space-time 'entry points' for activities (Kirsh, 2001). A good design aims for significant cognitive economies by delivering the user from having to think about his or her response; if prepared, the user will quasi-automatically have the appropriate reaction to a well-designed cue. The standard landline phone ring of the 1980s did not provide any information about who was calling, though this information seems critical with respect to the decision to answer (Grandhi, 2008). Caller recognition devices were introduced precisely to simplify the decision to answer (or not). While we will see how this perspective describes rather well the way ringtone users personalize their tunes with respect to callers, it is mostly an extension of the cognitive outlook of most contemporary psychology (Button, 2008). It does not account for other, interaction-oriented properties of phone rings, which make them more than perceptive cues notifying a change of state in the environment and triggering a quasi-automatic response.

More specifically, the phone ring which marks the beginning of the phone conversation as a 'communicative event' (Hymes, 1964) can be considered as a summons, that is, the first part of a summons-answer interaction sequence. Schegloff (1972) has shown how the summons constitutes a sequentially ordered device, based on the principle of 'adjacent pairs'. The summons that initiates the sequence (e.g. in the form of a telephone ring or a gesture likely to attract attention) is the first part of a pair. It projects a normatively expected second part in the form of taking the call and proffering a token greeting ('hi', 'hello', 'allo', etc.). The old electromechanical ring (which is ironically still an option on many modern mobile phones) often consisted of the repetition of identical beeps. It was therefore designed to embody the fairly general sequential organization of the 'summons'. If the initial beep was ignored, it then became legitimate for the caller to treat the corresponding silence as an absence of response and to let the beep be repeated (rule of conditional relevance). This did indeed lead, almost each time a phone rang somewhere, to summoning sequences of the 'summons-no answer, summons-no answer, summons-no answer, summons-answer' type.

We will see later how the ring as a summon is still a very relevant issue to musical ringtone users who orient with respect to this feature of the phone ring when they choose and design their ringtones. I will therefore also need to use some of the constructs of Conversation Analysis to account for the use of musical ringtones. However, these ringtones are also used as musical excerpts which are expected to be 'listened' to. To make sense of their 'musical-ness' in a pragmatic perspective that tries to account for their agency and performativity without reducing them to the expression of socially determined cultural tastes or some user's improvised tactics, it is interesting to adopt the semiotic approach to artefacts developed in Science and Technology, although we will be led to explore some of its limits. The actor-network theory provides a way of thinking

the relationship between the choice or conception of an artefact and the actions that it guides and orients. The artefact incorporates an 'action programme' in the form of a discursive script that sociological analysis makes it possible to recover by means of a 'description' (Akrich, 1987; Akrich and Latour, 1992). Actor network theory provides an interesting way of understanding what a phone ring 'does' by allowing us to transform it into an utterance (through the semiotization that its 'description' as a programme of action entails), and therefore to treat its occurrence as a form of speech-act (the situated enunciation of the programme of action it incorporates). The issue becomes that of the performativity of the particular type of 'utterance' that the ringing of the phone may constitute.

We propose to use this semiotic approach heuristically here, to illuminate a particular aspect of the meaning of a ringing telephone in a world where phones are mobile and equipped with varied musical ringtones,¹ in contrast with an earlier world in which only fixed standardized ringtones were available. For instance, in that older world, the 'script' of a telephone ring could be described as something like: 'when you hear me ring, if you're available, lift the receiver and answer'. In a sense such an imperative expression of the action programme of the phone ring fits nicely with its meaning and use as a summons, even though it ignores the fine details of its sequential organization. We will try to show how to rewrite the script of musical ringtones to account for their equivocality (both summons and 'music') and the particular way users play one of these meanings against the other. But we will be left dissatisfied with the imperative format usually given to scripts. Do they order us (as suggested by scripts written in the imperative mode), invite us, tell us, or hint that we pick up the phone when it rings? Or something else altogether? This becomes crucial when we have to understand the subtlety of what such equivocal artefacts as musical ringtones are expected to do or make us do, or actually do.

To paraphrase Wittgenstein, the meaning of musical ringtones is in their use. In some cultures the ring may be embedded in a language game, so that missed calls may happen and become even become desirable to the caller (Donner, 2007). This is what I will try to document empirically in more detail with respect to musical ringtones. There is some irony in the fact that so many different conceptualizations of artefacts will be required, to account for such an apparently banal artefact. But we need to recover fully its underlying complexity, to grasp some of the meanings of the interplay of the two experiences it provides, interactional (as a summons) and musical, and argue for its wider sociological relevance.

Methodology

The study consisted of two stages. The first stage was a semi-structured questionnaire for which 245 answers were obtained, mainly from intense French-speaking users of mobile technologies with a 'mobigeek' profile. A small company selling mobile ringtones provided a customer base that enabled me to recruit 23 users, living in various French cities, who agreed to in-depth interviews on their uses of mobile ringtones. Rather than representativeness, I opted for variety of profiles as regards gender (15 men and 9 women), age (spread out equally, from 15 to 40), socio-professional category (4 upper SPC, 10 intermediate, and 9 lower), and intensity of use. Five of them had a North African ethnic minority background. The recruitment was fairly difficult as users were annoyed at being contacted via their mobile phone and had little interest in talking about mobile musical

ringtones and their uses, which prevented us from building a more representative sample. In what follows, quotes are taken from users who best exemplify a particular orientation towards musical ringtones.

Ringtones as Music, and Their Uses as Cultural Practices

A Choice of Musical Ringtones Oriented Towards the Self and Towards Others: Between Autonomy and Standardization

The use of musical ringtones for mobile phones has grown considerably over the past few years. This success has had economic effects: in 2003 the mobile musical ringtone market was worth 3 billion dollars – more than that of music purchased on line. This is one of the rare cases in which a large number of users agree to pay to download music. Personalizing one's ringtone implies choosing it and installing it on one's phone. This can be done in many different ways: by SMS, by Audiotel, by WAP, or via a Bluetooth connection. Moreover, instead of having no alternative to a completely standardized artefact (like the electromechanical ring of telephones in the 1970s), or a partially standardized one (like mobile phones that propose a choice of several kinds of pre-defined and pre-recorded rings), the mobile phone user can now download (and, for the more advanced ones, create) a ringtone from a vast range of possibilities. The development of mobile musical ringtones is an example of the numerous cases in which users manifest their autonomy and creativity by influencing the choice and design of information and communication technology devices.

The choice of a ringtone reflects two very different orientations. First, one chooses a piece of music for oneself. This choice leans towards personal tastes and preferences, on the fringes of cultural practices, and is often linked to a particular context justifying it. One may also choose a tune in relation to others, because the ringtone is a perceptively salient device which very frequently rings in situations where the owner of the mobile is not alone. By ringing, the ringtone also draws the attention of others co-present, whether the owner of the mobile knows them or not. They are likely to make various inferences on the basis of the ringtone itself and the way in which it is dealt with. The choice of ringtones takes this real or potential presence of the other into account. It aims to satisfy two related requirements: that the ringtone be recognized by everyone and 'suit' them; and that it fit into the panoply of mediums for the 'presentation of the self' in the public sphere.

The majority of users interviewed are concerned about their ringtones being recognizable. They therefore choose tunes to which they are personally attached (orientation for oneself), but which are also present on the current music scene (hits) or are references likely to be shared, as part of a mass culture (golden oldies, music from a film or TV series, etc.). Despite their critical attitude towards mass-consumption music, some music lovers even choose hits rather than music reflecting their passion, like the following young gospel fan: 'In general, it's current hits. I downloaded Alicia Keys, Usher, "Enamora me"' (man, 21). The minority that choose more personal and more singular tunes nevertheless also attest to this need for the choice to be significant to others. This personal choice is part of a deliberate strategy of affiliation: 'It may be by your ringtone that people recognize your taste in music. And if it's a rare piece and someone recognizes it, you can easily meet people with the same tastes' (man, internet respondent).²

The need to be recognizable in the public sphere tilts the choice of a ringtone towards standardized, mass-consumption music. There is a paradoxical tension here, characteristic of post-industrial capitalism: whereas on the one hand there is a massive promotion of the individual and values of autonomy and authenticity, reported by a considerable sociological literature,³ on the other hand the countless micro-decisions through which an individual may take the initiative, apparently without being encumbered by institutional ties, are guided towards the logics of mass consumption. In the case of musical ringtones, it is the orientation of their choice in relation to the challenges of expressiveness in the public sphere that constitutes the mechanism of articulation between autonomy and standardization of the musical choice.

If these requirements are so strong, it is because users treat their musical ringtone as an element of their 'presentation of self' (Goffman, 1959). Telephone ringtones are nevertheless a particular and highly sensitive device for presenting the self. It is particular in so far as it lies at the intersection of distinctive (and potentially affiliative) signs worn on oneself and of the kind of devices for presenting the self, which proliferate in electronic worlds (through the relationship with downloaded music): 'It's like blogs, personal pages, they can enable you to meet people like you, with the same interests' (man, 40). Second, this device is sensitive because the ringing of the phone marks a distant person's irruption in the situation of co-presence; such a micro-event is likely to highlight and challenge the posture displayed and claimed by the user. All the more so because of their perceptive salience, for telephone ringtones are particularly noticeable and capable of capturing the attention of different individuals co-present, through both their perceptive properties and their interactional meaning.

Musical Ringtones as Distinctive and Expressive Resources

When a ringtone is treated as a device for presenting oneself, its choice is rooted with respect to different ways for displaying social differentiation. It may be oriented towards signalling and claiming particular identities and affiliations. This is the case of young people who often use their ringtone to project a musical preference, marking a distinctive affiliation to a peer group (from the 'local gang' at school to the 'imagined community' of rappers, depending on the context). It may also be a musical choice that projects an identity claim, with the risk of this concern for singularization being difficult to implement because of the standardization of readily available tunes: 'I use rap ringtones because I'm Kabyle. But Kabyle tunes are very difficult to find, I've never got the music I want, so there's no originality' (woman, 16).

The public sphere is a space in which the implications of social visibility are combined with logics of domination. The choice of musical ringtones is a resource to produce and reproduce these logics of domination. Most women in the sample choose to be discreet and avoid attracting strangers' attention: 'I don't like attracting attention because of the ringtone and because of everything in general' (woman, 15). It follows that this concern also causes them to minimize anything that might be the expression of a personal preference, and to choose standard ringtones: 'I certainly don't want to exhibit my personal tastes to others' (woman, 22). Other users, ill at ease in public and very concerned about how they might be considered, use musical ringtones strategically, as tools for presenting themselves. They may choose a tune that is foreign to their personal tastes but that they think would be

likely to engage the other person's attention positively, and/or to contribute to constructing a façade likely to be evaluated more positively, like the following youth from a working-class background: 'People say when they see me, ah, he's dressed like that . . . but when they hear my ringtone they'll say, hey wait! He listens to that music, it's not for his generation . . . then they'll look at me kindly' (man, 24). It is with this type of use of musical ringtones (in which they are seen as musical excerpts) that we get the closest to a sociology of cultural practices *à la* Bourdieu, first, because the choice is made in relation to musical tastes structured by social positions and a logic of distinction; and, second, because these tastes are put to the test of the presentation of self in the public sphere and of the forms of domination attested by the judgements produced there.

With respect to the orientation to others, one has to bear in mind that the choice of ringtones is also oriented towards their reception by other individuals with whom the user is acquainted. In the case of teenage groups subjected to the 'tyranny of appearances' (Pasquier, 2005), the choice of musical ringtones participates in the construction of a social boundary. It is oriented as much towards the members of the group (as a mark of belonging and subjection to its local norms) as towards outsiders, in relation to whom it is a sign of distinction. This is also the case when the choice of musical ringtones is oriented towards the person's partner or family. A user in her 30s chooses mainly tunes relating to her love story with her husband, especially a piece by the group Evanescence which has a specific emotional potential for both of them (music from the film they went to see when they first met several years back). She explains that she likes it when her husband hears this tune (for instance when she receives a call in his presence). As he uses the same tune on his mobile, this ring has become a sort of 'musical tattoo' for the couple. It constitutes an affordance for the occasional, fleeting improvisation of a private and intimate space in public places: 'Every time we hear it there's silence around us, there's nothing else that matters'. In this type of case, the choice of ringtones is oriented towards a common stock of experience and the elicitation of shared emotions. They are meaningful within the common biography constructed in the experience of an intimate bond, to which their choice patently refers.

In a sense then, the choice of a musical ringtone is not independent from a social-structural distribution of taste. It also sometimes takes its meaning from specific relationships which it 'expresses'. It would however be too restrictive to argue that mobile ringtones are just music and that their choice and design directly 'reflect' social positions, class ethos or biographies. Such a position neglects the users' autonomy to do some forms of inventive 'bricolage' by playing with the artefacts and their meanings. Moreover, these different forms of sociological analysis are relevant only in so far as musical ringtones are treated as music, disregarding any other properties that might be relevant to their use.

Ringtones *qua* rings and ringtones *qua* music

Mobile musical ringtones participate in two ways in the construction of telephone interaction. First, because they can be personalized, musical ringtones have a cognitive function: they contribute to various forms of recognition of the caller, before the call is taken. Second, depending on the type of temporal organization characterizing them, their ringing can be treated to a greater or lesser degree as a part of 'summoning' sequences, that is, as a relevant interactional move.

Personalization of Musical Ringtones: Lightening of the Cognitive Load Involved in Deciding Whether to Answer

Musical ringtones are used by 80 per cent of our sample to personalize their rings according to correspondents or groups of correspondents, with a view to lightening the cognitive work involved in deciding whether to take a call or not: 'As soon as I hear the music I know who it is, *without thinking*' (woman, 21). The cognitive and evaluative work that accompanies the telephone ring is relieved because it is now distributed between the user and an environment prepared by the setting of rings. The issue is 'to prioritize the answering: knowing whether I absolutely have to answer, irrespective of the situation in which I am, or if I can wait and call back later' (man, 33).

To benefit from this cognitive economy, the user needs to learn to recognize and deal with several different rings as perceptive cues triggering appropriate treatment of the call. The more firmly the corresponding ringtone settings are anchored habitual uses and become familiar, the more lasting they are. The quality of the automatism in place, refined over time, exerts a strong resistance to change: 'The idea wasn't really to have a whole lot of rings, or to keep changing them, but to have the ring really suited to the person calling me or to a group of callers. Once I've found a specific ring for my eight groups of calls, I can stop there' (man, 26). Users rarely change their choice of personalized musical ringtones; they rely mainly on their ability to simplify the processing of interactions and learn by experience not to lose the cognitive and interactional gain achieved: 'Recently, I wanted to change and when it rang I didn't recognize the ring, so I went back to the old ones. One gets used to a certain tune and afterwards you're lost' (woman, 27). The learning curve tends to bring users back to the settings stabilized by experience and adjusted to usual situations. The durability of such settings of personalized musical ringtones shapes the way in which they act as a summons, and configures in advance the conditional relevance of different ways of answering. It is from the prior sociotechnical organization in which the 'telephonic' surge of a distant other occurs, within a 'prepared' environment, that the perceived lightening of the receiver's cognitive load stems.

As regards the personalization of musical ringtones, choices and uses therefore revolve around an effort to 'distribute' recognition of the caller. Users choose and configure their ringtones in such a way that they delegate to them the notification of who calls, and the consequent shaping of their decision to answer or not. Their account of the meaning they give to the ringtones and the way they use them sounds like a lay version of the principles of distributed cognition discussed earlier. The ring is described as a perceptive cue which guides the action of answering in a low-level perception-action sequence mode, since the decision to answer or not seems to directly, immediately and unreflexively follow the perception of the ring. With respect to their engagement with the ringtone, users present themselves as reactive organisms looking for cognitive economies, adjusted to an environment adapted and prepared by the setting of their ringtones, rather than as subjects deliberating on whether it is opportune to answer or not.

There are reasons to support the thesis that the burden involved in the accomplishment of the decision to answer the phone (or not) may be a significant social issue, towards which phone users might increasingly be oriented. With the standard ringtone that went with the landline phones of the 1970s, it was relatively easy to account for the action of answering the phone: agency lay mostly with the receiver. Usually they did not

know who was calling,⁴ but analysis of phone conversation beginnings showed that both receiver and caller seemed to acknowledge the fact that it was up to the caller to make a prior assessment of the relevance of his or her decision to call at a precise moment, and to make it visible (Schegloff, 2002). Receivers were faced with ringtones that were always the same, and which notified them of potentially relevant incoming calls. The decision to answer or not seemed to lie mostly on their side, depending on their activity context and their normative orientations towards availability.

Contemporary societies value autonomy, adaptability and reactivity, so much that in the domain of interpersonal communication, constant reachability becomes an ideal for respondents, however difficult and unacceptable it may be to maintain in practice (Licoppe and Heurtin, 2001). Some forms of interpersonal communication such as ‘connected presence’ which suppose a continuous flux of mediated contacts to support close social bonds legitimize more impulsive forms of calling (Licoppe, 2004, 2006), in particular short, almost ‘phatic’ calls in which the caller expresses immediate feelings. Since the reason for calling in these cases is in the impulse to call, the caller may *in general* be expected less to have thought about the relevance of calling beforehand. The evaluation of the relevance of taking the call or not is thus shifted to the receiver, as is the regulation of calls, based essentially on the latter’s availability. This justifies the growing advantage, for a telephone user, of any device that lightens the increasingly burdensome decision to answer or not, particularly by indicating who is calling. It explains the success of services displaying the caller’s number and, more recently, of personalizable musical ringtones.

With the latter, the sudden ring of a musical ringtone gets a complex socio-technical arrangement going, which ‘responds’ or ‘answers’ as a whole. Agency is differently distributed between the receiver and his or her phone with its pre-defined settings, which guides proper, immediate and apparently easy (from the answerer’s immediate perspective) responses to a given ring. Some of the receivers’ preferences and orientations are now incorporated into the ringtone settings. The new arrangements characterizing uses of musical ringtones are accompanied by a growing awareness of the distributed nature of the decision to answer, for the ecology in which it occurs is prepared beforehand.

Shaping Ringtones as Summons

The traditional musical ringtone, consisting of the repetition of identical beeps, has the fairly general sequential organization of a summons. As regards the choice of ringtones for the mobile phone, my survey highlighted three extreme design strategies, in which the question of the phone ring as a summons is worked out very differently.

Intensification of the Summons. A small fraction of expert users develop a functional and instrumental view of ringtones. They play with the possibilities of designing ringtones to intensify the effect of the summons. In order to do so, they manipulate the sequential organization characterizing the traditional telephone ring by composing ringtones such as ‘beep – BEEP-BEEP – *BEEP-BEEP-BEEP*’ etc. It strongly projects a proper response (taking the call), so that the callee who fails to answer the phone is even more likely to feel the need to explain his or her unavailability. Some users go even further by intensifying this sequential organization with the ironic use of a type of universal and particularly effective summons: ‘It would be a baby’s cry. It would start softly, and each repetition of

the cry would be louder, in proportion to the time spent ignoring it. I can't imagine a better way of being allowed to leave a meeting' (post on an expert forum).⁵ Without any attempt to achieve a musical effect, these ringtones are based on the principle of conspicuous manipulation of their sequential organization to intensify and exacerbate the summons effect.

Attenuation of the Summons. Other users adopt the opposite position. They choose tunes and preferably long excerpts rather than short repetitive samples: 'In general I choose quite long excerpts because it's less boring than a ringtone that's repetitive. It's dumb but it actually doesn't feel so much like it's the phone' (man, 21). Because there is no more repetition, the summons effect is not as clear and 'it's less like a phone'. This opens onto a different type of experience, listening to music, even if it remains limited in time and due to the situation.

Maximization of the Equivocal Character of Musical Ringtones. The third type of design of musical ringtones aims for a very particular balance between summons and music, based on a 'looping' technique: the ringtone is based on a fairly short and rhythmic music sample, repeated in such a way that the repetition is imperceptible and adjusted to the rhythm and tune: 'Ideally, one shouldn't hear the moment when the ringtone loops' (man, 24). The looping weaves a seamless fabric between music and ringtone, and projects an object that can be perceived in two ways like the 'rabbit-antelope' so dear to Gestalt psychology: it could be heard successively and alternatively as a ring-summons (due to the repetition), that is an invitation to answer, or else as a ring-music (due to the continuity of rhythmic and melodious lines), that is an invitation to listen. This type of design maximizes the perceptive and semantic ambiguity of the mobile ringtone.

These different choices and conceptions of ringtones show a grasp of the artefact that is closely adjusted to its pragmatic properties. The ringtone is no longer apprehended as a symbolic marker (which categorizes the users according to their positions in the field of cultural practices) or as a technical object in general (which serves as a medium for demonstration and for the public validation of individual skills, in the framework of an ethos of virtuosity). It is treated as a performative interactional artefact which contributes towards initiating a particular sequence, the summons, within a heterogeneous arrangement.

Despite their very different orientations, these three musical ringtone design strategies have two common points. First, they are based on an explicit use of the sequential organization of summons devices as a tool, a symbolic resource effectively used to produce intelligible effects through ringtones and to modulate their pragmatic effectiveness (as a summons). Second, they produce and reproduce a tension between the ringtone-summons (that projects the act of answering as a relevant next action) and the ringtone-music (that brings into play the pleasure of listening and projects the action of doing so) which their designers make use of all the time.

It is interesting to adopt the point of view of activity theory for a moment. If we consider the ring-answer pair of actions as an elementary 'operation', embedded in actions and activities which vary according to the context,⁶ we can say that it is 'remediated' when users personalize their ringtones. In remediation a part of the task is delegated to an outside tool, while the very nature of the function of remembering is transformed (Vygotsky, 1978). Both individual and activity have 'developed' through the remediation;

both become rich in new potentialities, not yet actualized (Clot, 1999). Applied to our case, this paradigm suggests that the switch to musical ringtones is accompanied by a form of development of interactional competencies. The sequential organization characterizing summonses is no longer known intuitively and unreflexively. It becomes a symbolic instrument used explicitly, particularly by the most skilled users, for manipulating the environment in which ring-answers occur; modulating the telephone summonses and their pragmatic status (i.e. their relation to the actions projected by the ringtone); and, as we will see later, radically redefining the meanings associated with the ring-answer sequences. In this model a competence expressed 'without thinking' in the interactional order (recognizing and dealing with a summons) is internalized, as the sequential organization of summonses becomes a symbolic tool for the choice and design of mobile ringtones. Musical ringtones are both a consequence and a cause of a larger transformation in the patterns of normativity that are embedded in our experience of inhabiting a world of ringing phones.

The Ambiguous Meaning of Ringtones

The telephone ring brings into play the potential irruption of a distant other. Its ringing is therefore more than simply a cognitive cue. It also activates normative expectations, for the receiver and others co-present, concerning the propriety of the actions that might follow with respect to that distant other that has thus just materialized within their ecologies. The ethnographic analysis of the way in which mobile phone ringtones are treated in public spaces has shown how the user and those co-present display their expectations and evaluations relative to the way in which it is then treated (answer or not and, if so, quickly or slowly) (Murtagh, 2001).

To make clearer what musical ringtones are expected to do and some of the consequences, I will go back to actor network theory and consider what the 'script' of a musical ringtone might be, and what kind of performativity its ringing (understood as the situated enunciation of its 'script') is endowed with. The mobile musical ring combines the intrusion and the summons that a ringing telephone may embody, with the fact of deriving a small pleasure from it: 'the ring softens the constraint . . . with a constraint it's important to have some enjoyment' (woman, 25). Or again: 'You're going to answer in another frame of mind, you're not going to shout that you're over the moon but yeah, it's perceptible, it can make you feel more like answering . . . I answer but at least I've heard my ringtone, I'm happy' (man, 24). Some even manage to configure their ringtone specially so that it can be treated as a gift, an offering intended for them: 'On my birthday, a few weeks ago, I put "Happy Birthday" by Stevie Wonder as the ringtone for all my contacts, that was a scream' (man, 26).

The gratification and pleasure procured by musical ringtones are also intended for others co-present. By choosing their ringtone from a set of shared cultural resources, recognizable by everyone or almost, users can assume that they will be more discreet, less intrusive and less 'summoning': 'Because you already listen to them on the radio, you don't notice them so much . . . These ringtones don't provoke particular reactions anymore' (woman, 22). Some adjust their ringtones to anticipate situations in the company of strangers. The choice of a ringtone in a common reference framework is a potential wink to strangers, something that softens the intrusion: 'If I'm expecting a business

call and I'm on the bus, I'll put on something that people like, like music from a TV series or something funny because it goes down better' (woman, 27). Even if the interview situation probably does introduce biases of rationalization and prompts the respondents to exaggerate their concern for 'telephone courtesy' in the public sphere, the representation of the musical ringtone as a kind of gift, or at least something addressed to others so that they can enjoy appears remarkably widespread. Some mobile ringtone users also seek deliberately to elicit positive reactions in a potential audience. Marks of appreciation (for instance of a humorous nature) of their ringtones will then be taken as a confirmation by others of the propriety of the way they choose their own ringtones. The ringtone is no longer entirely a ringtone since the summons makes way to an improvised and shared pleasurable musical experience.

The relationship between the musical ringtone and the action of answering the phone is consequently different. The sound and meaning of a ringing phone differ, ways of answering it differ, as the answerer itself. If the subject answers her musically ringing phone it is not simply that she is ratifying the particular summons that the ringtone materializes, but also because she has enjoyed the experience of listening to the musical excerpt the ringtone is made of. The obligation to answer remains that which old electro-mechanical ringtones embodied, since for some the pleasure derived from hearing the musical ringtone is a way of making acceptable that which formerly appeared as a raw constraint. The response, on the other hand, no longer depends only on the 'prescription-oriented' design of the summons. The possibly direct and imperative link between the ring and the answer is reshaped. It becomes possible that the reply, if there is one, may stem not entirely from the 'ringtone *qua* summons' but also from the pleasure of experiencing the 'ringtone *qua* music', which makes it even possible for users to envision the extreme case in which the mobile owner will not answer because he or she is entirely absorbed in listening.

Musical ringtones therefore correspond to a new script: 'when you hear the ring, if you're available, pick up the phone and answer but, while you're at it, take advantage of the opportunity to enjoy listening to me'. The particularity of this script and of the assemblage of individuals and artefacts supporting it, is the way in which it distinguishes the experience of the ring as a summons, from that of the ring as music, and plays the one off against the other. Rather than producing a hybrid compound in which the ringtone and the music characterizing the ringtone as an artefact can no longer be distinguished, this assemblage produces a clear separation between the two experiences, and an articulation between them in the form of a transaction (exchanging some of the harshness of the obligation to answer for a little pleasure). Because of that transactional tension, the ring *qua* summons appears even more imperative, since it appears one has to soften it with a pleasurable (if transient) musical occasion, which is experienced as a compensation to the obligatory force of the summons. The music incorporated in the ringtone is maintained clearly in the sphere of cultural experiences and leisure, since this is the very condition on which it seems to afford a compensation for the obligation to answer. This maintenance of a clear separation between the experience of the ringtone as a summons and the ringtone constitutes a distinctive feature of the pragmatic assemblage of individuals and artefacts that accomplishes the 'ringing telephone-person who answers' sequence in a world where telephones are provided with personalized musical ringtones.

The success of musical ringtones is embedded in a more general normative transformation of communication practices which drives it and which it contributes to shape at the same time. In a networked world where there are more and more opportunities for telephones to ring, and where the obligation to answer is generally intensifying (because reactivity, availability and reachability are celebrated), the appearance of musical ringtones appears as a resource to constitute and display this normative pressure (redefined as the opposite of musical pleasure) and simultaneously to soften it with a musical experience that is both personal and collective. At the same time, the very experience of this compensation reinforces the normative pressure, in a sense, by making more salient the obligatory character of the summons/answer sequence (since retrospectively it appears justified to partially offset it by a little gratification). Musical ringtones are both a consequence and a cause of a larger transformation in the patterns of normativity that are embedded in our experience of inhabiting a world of ringing phones.

Conclusion

Ringtones are cultural artefacts that display a particular orientation towards the personal and the collective. They can be treated as tunes whose choice partially reflects users' tastes and preferences, and as tunes whose choice will be perceptible and interpretable by known and unknown people, especially in public places, which requires such tunes to be meaningful to everyone (and are therefore oriented towards the mass consumption cultural reference framework). They are designed, used and interpreted as a distinctive mark and medium for presenting the self. They simultaneously reproduce and transform different postures in the public sphere, from certain women's wish for discretion, to the strategic shaping of an image. With certain users, another conspicuous use of ringtones corresponds to a demonstration of skill and virtuosity.

Ringtones are also interactional artefacts. When they are personalized they become perceptive cues that enable recognition of the other before the beginning of the interaction, and lighten the cognitive work that the decision to answer involves. They can also be seen as devices around the use of which the pragmatics of the ringing/answering sequence is reshaped by playing the sequentially ordered 'ringtone *qua* summons' (which projects an answer as a relevant 'next action') against the pleasant experience of the 'ringtone *qua* music' (which projects listening as a relevant next).

By comparing the uses of mobile musical ringtones with those of 'classical' phone rings, it appears that the action of answering a ringing telephone should be related to a complex material and social configuration. This configuration associates not only a caller and a receiver who have expectations and normative orientations concerning the relevance of calling (and of answering) at that precise moment, and their respective roles and competencies in such judgements; it also involves the pragmatic organization of ringtones and the field of conditional relevance that it constitutes (i.e. the way in which this artefact projects certain probable, relevant and meaningful actions for the respondent to accomplish), in the framework of a dual orientation of the receiver towards actual or potential co-present participants and towards the interactional problems posed by the phone-framed irruption of a distant other in its immediate setting.

From electromechanical ringtones to musical ringtones there is a transformation of the distribution of agency in this small sociotechnical system, triggered by the ringing of

a phone. When a musical ringtone 'rings', interactional and cultural practices become entangled in a specific way through the tension between summons and music. The ringtone as a summons and the ringtone as music are used as contrastive resources, both from a cognitive and normative point of view: cognitive because a musical ringtone is an ambiguous object which can be apprehended either as a summons to answer or as an invitation to listen, without any mixing or merging of these two perspectives; and normative because this co-existence of the two dimensions as radically distinct in the same artefact constitutes an affordance for an original form of transaction in which the pleasure derived from listening to the ringtone (as music) is interpreted as a compensation, a gratification for the self (and to some extent for the others co-present) which lessens and softens the obligation to answer. This obligation is thus rendered both more salient and its compelling character more unacceptable as such.

The contrast and tension between summons and music becomes an explicit symbolic tool for the design and uses of ringtones. In the sense of the psychology of activity, this marks the internalization of an interactional or communicational competence (that involves a reflexive understanding of the function and meaning of summons) and therefore a form of 'development' of users. Moreover, the success of musical ringtones and the growth of their use can be reinterpreted as part of a broader evolution of mediated communication practices to which the mobile phone has already contributed substantially. Consistent with theses on the individualization of social relations, the emphasis on values of autonomy and reactivity are reflected, in the world of interpersonal communication, in the multiplication of possible mediations and the intensified pressure on people to be available and contactable. This is evidenced in the development of a management of mediated interactions with close friends or family, in a mode of 'connected presence'. In this context the assessment of the relevance of calls by the caller becomes more difficult, and the decision to answer or not is caught in a different and probably denser web of normativity. Musical ringtones are a valuable resource for the caller since their use is a relief in two respects: cognitive (through the personalization of ringtones) and normative (by associating a compensation in the form of a small musical pleasure, with the action of answering and the obligation that it fulfils). Consequently, use of musical ringtones anchors a little more the very interactional configuration which it aims to lighten, by making more salient and explicit a generic obligation to answer. The development of a configuration equipped by mobile ringtones and whose agency is redeployed around this resource seems to be both the consequence of the development of a regime of 'connected presence' in the management of interpersonal communication and a resource for deepening it. But because the phone ring is also a paradigmatic example of the way we produce and treat a summons, and of the way any kind of social interaction begins, its transformation and the shifts it denotes might also signal a more profound reshaping of the ways in which we experience and accomplish the normative order that underlies all social encounters.

Notes

1. In this heuristic use the script serves to reveal the differences of signification in the forms of categorization and association in worlds equipped with different types of artefact (Latour, 1993).
2. Participants who answered an electronic questionnaire did not always fully complete the socio-demographic forms so that data such as their age may be missing.

3. This subject has been covered in an abundant sociological literature; see for example in the English-speaking world (Beck and Beck-Gersheim, 1995; Giddens, 1991; Lasch, 1979) .
4. Hence the importance of recognition sequences in the first conversation turns after answering (Schegloff, 1979).
5. Whereas this participant was simply imagining this type of ring and its effects, I have actually heard a similar ring, based on a baby's cries, in a public place.
6. Activity theory distinguishes three levels within activity systems, that of the encompassing activity with its object, that of actions with definite goals, and that of operations that are unreflexively and routinely accomplished (Leont'ev, 1974).

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