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:
An Archaeology of Mobile Media

Introduction: Rupture or Fad?

Look for words like “mobile,” “portable,” “wearable,” “nomadic” from any standard media history, say, Brian Winston’s *Media Technology and Society, A History: From the Telegraph to the Internet* (374 pages, 1998), and be ready for a surprise: they are not there. At best, what you may find are a few hasty references, usually from the concluding pages of the book. Media histories have been constructed upon the idea of media as fixed coordinate systems - signals penetrate walls, and broadcasting blankets huge virtual territories, but the concrete nodes of the network, the equipment used as transmitters and receivers, are conceived to be found in permanent locations. Whether situated in a public or a private space, to use the medium we need to stop, approach the device, sit down, switch it on, adjust the controls... Think about all the media machines conceived to be placed on a table or a stand of some sort, and

kept there. Think about the phone booth, the television set in the living-room corner, or even about the "desktop" [sic] computer. It is interesting to note that even David Morley's ambitious *Home Territories: Media, Mobility and Identity* (2000), a synthetic cartography of changes in the ideas about home and homeness in the postmodern era, has little to say about the role portable media devices have played in these changes, although it dedicates ample space to notions like "media, mobility and migrancy". Marshall McLuhan, whose prophetic insights about the "new extensions of man" anticipated many of the future developments in media culture, had little to say about "mobile media".

The surprise arises from the evident contast between the historical accounts and the perceived realities. As Paul Virilio famously explained, we are living in a "dromological" society characterized by speed. It has been a long time in the making. The once new means of transportation, such as the train, the automobile and the aeroplane, brought profound changes to the ways in which humans conceived temporality in relation to space. The development of the urban metropolis emphasized the role of the automobile as a mobile prosthesis and an extension of the home, particularly in extreme environments like Los Angeles (according to Reyner Banham's apt definition, an "Autopia"). Elsewhere, it was linked to other forms of urban mobility, often combining the use of public transportations like taxis and the underground with the "proto-motion" of walking. Purportedly there are various modes of urban walking, from

goal oriented darting along pre-defined vectors to leisurely "urban roaming" (derived by critics from Walter Benjamin's reading of Baudelaire's *flaneur*). Whether by driving, walking and even flying, we are spending much of our time within non-descript venues defined by Marc Augé as "non-places". While doing so, using mobile media - mobile phones, pocket cameras, car radios, GPS tracking devices, PDA's, pagers, Gameboys, iPods - has become a self-evident practice for us. Why isn't it so for media historians? Is it the inadequacy of our historical eyesight that prevents us from adjusting our focus from near to far and back again?

In his introduction to the pioneering anthology *The Social Impact of the Telephone* (1977) the editor Ithiel de Sola Pool was wondering about the limited amount of research done on the social impact of the telephone, a technology that already had a history spanning one hundred years! One reason, de Sola Pool proposed, was that "we take the phone for granted; we use it without a thought." Before it became a common household tool, the telephone received more attention, but since the 1930s its presence had become too commonplace to draw social researchers. The current situation of mobile media seems somewhat different. Both their introduction and mass scale adoption have (at least so it seems) happened recently, in many cases within the past ten years. While the users have rapidly taken their relationship to the new mobile gadgets "for granted", cultural critics and historians have yet to pay serious attention to them (although many of them no doubt are mobile users

themselves). Some pioneering efforts, such as the anthology *Perpetual Contact* (2002), edited by James E. Katz and Mark Aakhus, have appeared, but these are mainly concerned with mapping the international territory of mobile communication, as well as developing a sociology of the users. Even *Perpetual Contact* has little has to say about history. This has led to a curious situation in which the omnipresent mobile media seem to be suspended in a cultural space opening towards the future, but without a past.

So media archaeology faces another challenge. Have we finally encountered the much anticipated "rupture", a phenomenon so different and so total in its impact that it will tear media history apart, throwing everything that came before it into the dustbin of obsolescent things? Other candidates announcing such a rupture have emerged before. The appearance of television broadcasting in the 1950s seemed to inaugurate the era of new orality, which would make literacy and printing, the pillars of media culture for half a millenium, fade into insignificance. Yet, as we know, television came to stay, but the need for written texts did not disappear. Indeed, new forms of audiovisual literacy, often emphasizing rather than belitting the role of text, but woven together with other forms of expression, emerged. Around 1990 virtual reality was touted as the "medium of the 21st century", and even more: it was a whole new ontology that questioned the prevailing borders of material and immaterial, mind and body. Gradually it was proven to be just another fad, one of many waves of virtual realities (including the Victorian

"stereoscomania", the craze for stereoscopic "armchair travelling", and the "cineramania" of the 1950s) appearing and disappearing from time to time. And the Internet had not yet come of age, when Tom Standage already published a book called *The Victorian Internet*, in which he pointed out that although amazing, it wasn't so totally different from what happened during the heroic era of the electric telegraph in the nineteenth century.

So there are questions to ask. "What factors will explain the sudden appearance of mobile media and their equally rapid rise to prominence?" "Who are the users and what do they do with their mobile devices?" "What are the characteristics of the new cultural forms influenced, or given rise to, by mobile media?" These questions can be left for a sociology of the media to tackle. For a media archaeological investigation the questions should be formulated differently: Did mobile media really appear so unexpectedly? Could the suddenness of its appearance be an illusion, caused by our inability to perceive the past from an appropriate perspective? Is it possible to excavate enough "traces" to develop an "archaeology of mobile media", a cultural mapping of those phenomena that have raised issues about media and mobility in earlier contexts? How would such a mapping help us understand the current uses of mobile media and the discussions surrounding them? These are the premises underlying the present article, an early mapping of the territory. To provide some tentative answers, tracing fragments of discourses, visual as well as textual, will be as valuable as

finding artefacts actually existing within social spaces. Whether used by secret agents, superheroes or normal citizens, both material and discursive gadgets have been associated with prospects, dreams, hopes and fears that are essential elements of cultural processes enveloping them. To map them and to assess their relevance for an archaeology of mobile media, it will also be necessary to touch upon issues that at first look may have little to do with the subject matter - and even with media culture itself.

Prolegomena to Mobile Media

Mobile media is linked with cultural desires; the last mentioned, as Adorno and Horkheimer famously pointed out, can be fabricated and disseminated through established channels of mass persuasion. This, however, as more recent media scholarship has shown, is always only a partial truth. Cultural desires are not the exclusive property of "cultural industries". They are molded through continuous processes of negociation between varied agents within society. These include the consumers with their widely different tastes, backgrounds and semiotic competences. In a sense media culture as a symbolic construct is an outcome of such never-ending multi-party negociation, which, however, has to acknowledge the existence of boundaries, inbalances and pre-set conditions. Each era possesses certain "horizons of expectation" to which the

negociation of the meanings has to conform. It is, then, not an easy task to judge when, how and under which conditions the cultural desire for mobile media may have first emerged. Quite obviously the preconditions include relatively developed spatial "mobility" within society, if not as a widespread practice, then at least as a shared idea. The mobility may be motivated by official needs (a messenger services) and commercial imperatives (the distributions of goods, for example), or by a developing taste for "mobility for the sake of mobility", as exemplified by the habit of strolling the city streets and the emergence of modern tourism. However, for mobile media to gain ground, the desire / necessity of mobility needs to meet the desire / necessity of media in conjunction with the experience.

There is nothing self-evident in the connection between "mobile" and "media". Although communication is a low-level behavioral need shared by all human beings (and animals, although not necessarily through a process of learning), the idea of moving around with devices that perform this function is cultural rather than universal. It emerges when certain social, cultural and economic conditions are met. Being in "perpetual contact" with absent people by means of a portable device would have made little sense for the inhabitants of a medieval village, who rarely travelled and stayed within a limited radius all their lives. Daily communication was based on regular face to face encounters with familiar people. If the idea of remote communication was evoked, it probably addressed metaphysical realities in the form of a prayer. However, much the same could

be said about the leisurely lifestyles of the landed gentry during the seventeenth and the eighteenth centuries. In a society with carefully crafted social rituals and codes of honor, slow lifestyle and an appreciation of privacy the mobile phone would probably have been considered an unnecessary nuisance. At most, it could have been treated as a fad, suitable for delivering secret amorous messages, for a while. The habit of listening to MP3 files through headphones with the iPOD while strolling in an English garden would not have made much sense either in an environment where noise and crowds weren't problems. However, it probably would not have pleased Baudelaire's flaneur either, roaming the streets and arcades of nineteenth century Paris. For the flaneur, deliberately blocking one sensory channel would have denied a potential source of seductive pleasure to be derived from the city. The urban experience had to go through many changes before auditory seclusion from the surroundings became an accepted and desired practice.

The question of the "origins" of mobile media could be approached from a different angle as well. Instead of looking for portable devices with explicit communicative and recording functions, we might focus on the fact that objects are assigned symbolic meanings both by their owners and others. Whether they are kept visible for everyone to see or hidden from the others' sight bears significance. From this perspective the habit of carrying mobile media machines could be seen as a manifestation of the much wider tradition of portable objects. An example could be women's fans and hand-screens, those

seemingly superfluous objects that have, however, a long and varied history. Not only have they been used to guard the bearers from heat and intruding gazes; they also have become symbolic manifestations of the owner's social status, and means for erotic play. For centuries, enormous varieties of pictorial fans have been produced from delicate miniature artworks to cheap mass-produced advertising giveaways. This makes the pictorial fan a visual medium of a kind, and a predecessor to objects like promotional T-Shirts. This does not mean, of course, that we should treat fans as a form of mobile media. Neither would the gunbelts worn in the Wild West qualify, although speculative connections may be drawn between them and the current habit of wearing pagers and mobile phones attached to one's belt. Easy and fast access does not seem to be a sufficient explanation in any of these cases. Whether intended or not by the wearer, the displayed objects become tokens of power, wealth and technological prowess. Once they are hidden, the meanings they emanate change.

The Camera Epidemic

The complex networks of practices, symbolic meanings and discursive formations developing around a medium can be exemplified by briefly examining what was arguably the first mobile medium proper: amateur photography. Unleashed in the late 1880s with the introduction of celluloid roll film and easy-

to-use box cameras, it soon developed into a veritable craze, with thousand of amateurs joining photoclubs and roaming public spaces in search for a subject. The phenomenon had been well prepared. For nearly half a century photography had been engaged in creating a simulacrum of the visible reality. The likenesses it produced were unprecedented in their precision. From the outset it had been associated with travel, although the equipment were bulky and only fit for professionals to operate. It also had immortalized the faces of thousands of ordinary people, bringing them in contact with new technology. Photographs of one's loved ones could be carried in one's pocket or purse. When amateur photography made its breakthrough (thanks to technological improvements, and the business acumen of George Eastman, the founder of Kodak), it rapidly activated the non-professionals' dormant desire to photograph. Taking snapshots came to be conceived an indispensable part of holidays and travel, as well as of the various rites of passage of bourgeois life, like weddings and confirmations. However, the roaming amateurs were also encouraged to "snap" every aspect of public life, including impromptu events, like traffic accidents. Eastman Kodak and the other manufacturers presented amateur photography as an easy, democratic and modern hobby, also suited for women, and even children.

That the positive ideal promoted by the photographic industry was not wholeheartedly embraced by the late Victorian society, can be discovered by examining contemporary discourses.

Indeed, there were frequent complaints about "The Camera Epidemic", referring to the ways in which amateur photographers transgressed existing social rules, particularly those related with privacy and decency. Their activities developed into a kind of distributed panopticon - anybody anywhere could be the target of a snapshot. Caricaturists often interpreted such intrusions as sexually motivated (the pleasure beach being a favourite setting), but the camera also seemed to have a de-humanizing effect on the person carrying it. In a telling cartoon a group of ladies are seen pointing their cameras at a man hanging from a branch of a tree over water, struggling for his life. Instead of terror or empathy, the faces of the ladies show excitement about the photogenic event; as can be expected, none of them makes the slightest effort to run for rescue. As this example shows, as early mobile media enthusiasts, women could (in fantasies, at least) be quite as ruthless as their male peers. Obviously this motive also signifies wider changes taking place in the woman's role at the time, also in relation to technology. Another issue that often appears in this context is the fascination (or obsession?) with the candid camera. Numerous models, disguised as bags, walking sticks, hats, pocketwatches and other familiar objects were conceived. Some of them, like C.P. Stirn's "Concealed Vest Camera", shooting through a button-hole, enjoyed commercial success. Whether hiding the camera was a protective reaction to the negative attitudes toward amateur photography, or the ultimate weapon of the snapshot-voyerist, is an open question. What is clear is that amateur photography wasn't received with the

unqualified enthusiasm that corporate discourses and standard histories of photography have wanted us to believe. Beneath the smooth-looking surface there were cracks, traces of ideological struggles going on underneath.

It is not difficult to associate this example with the discursive struggles currently taking place around the mobile phone. A new portable medium has, once again, interfered with existing behavioural patterns and questioned prevailing social codes. While there are those who praise the liberating and assuring effect of carrying an ever-ready telecommunications terminal in one's pocket, others complain about the disturbances caused by the use of mobile phones in public spaces. To which extent and under which conditions can individual acts like chatting to a phone be tolerated on bus or in a theatre? While the formation of "smart mobs" (virtual versions of late nineteenth century photoclubs?) through pervasive mobile phone usage is lauded as a harbinger of new flexible and dynamic social groupings, there are those who fear the potential side-effects of such virtual mobility within urban spaces. As the recent terrorist attacks in Madrid demonstrate, mobile phones can be turned into versatile weapons in the hands of extremists. Another issue concerns the collapse of traditional face to face encounters in public spaces containing increasing numbers of zombie-like individuals talking to a distance, but barely noticing each other. The clearest parallel, however, has to do with the emerging habit of using camera phones, which has already re-activated many of the late nineteenth century concerns. The latest "camera epidemic" may

prove to be more disturbing than the previous one - not only can pictures be snapped anywhere and anytime without notice (even from under schoolgirls' skirts, as some Japanese incidents have demonstrated); they also can be transmitted instantaneously. The classic defense, trashing the intruder's camera, has lost its effectiveness. As could be expected, official regulations limiting camera phone use have already began appearing.

Cocoons in Motion

When not attached to moving bodies, media can be made mobile by linking them to means of transportation. For clarity, vehicle-mounted devices could be called "auto-mobile media". Instead of being carried around by people, such media machines are part of the vehicles carrying them, leading to complex conjunctions of physical and virtual mobilities. While the vehicle travels through a physical space, the auto-mobile media both creates virtual spaces within the vehicle, and connections to other localities, which may be in motion as well (a radio-phone call between two truck drivers). Conceptually "maps", some of them in stasis, some in motion, get as if piled up in constantly changing configurations. The humans, travelling in the vehicle, come to inhabit a We can imagine a situation in which a "skycam", a television news crew in a helicopter, follows a high-speed chase on a Los Angeles freeway, relayed in real-time to television spectators (a common occurrence).

Perhaps there is a TV set in a bus travelling on the same freeway. Passengers watching it may use their mobile phones to inform their parents staying at home about the situation, causing them to turn on their television sets. Other streams of communication, including the messages sent between the police cars chasing the suspect complicate the situation further, particularly if they are intercepted by other parties.

For some, in the beginning there was the hot-air balloon. Nadar took his camera to the skies over Paris in 1858, introducing a new perspective on urban reality. During the 1870-71 Franco-Prussian war, balloons were also used to transport messages from the besieged city. With the development of aerial reconnaissance, as Virilio has shown, photographic recording from above was recruited to military uses, and when wireless telegraphy was introduced at the end of the nineteenth century, fire control from balloons and aircraft flying above the battlefield became possible. At sea the advantages of auto-mobile media were quite evident for wireless pioneers like Guglielmo Marconi and Nikola Tesla. Safety of travel and commercial uses were seen as equally important as military ones. In a gesture of bravura, Tesla controlled miniature boats wirelessly by radio signals already in 1898. Describing his unrealized "World-System" (an integrated utopian solution to global communication and energy transmission) around 1900, he demonstrated a full awareness about the possibilities of wireless (multi)media with a global reach: "[The World-System] makes possible not only the instantaneous and precise

wireless transmission of any kind of signals, messages or characters, to all parts of the world, but also the inter-connection of the existing telegraph, telephone, and other signal stations without any change in their present equipment. By its means, for instance, a telephone subscriber here may call up and talk to any other subscriber on the Globe. An inexpensive receiver, not bigger than a watch, will enable him to listen anywhere, on land or sea, to a speech delivered or music played in some other place, however distant." Tesla's intuition is important, because it implied that the user of the "watch-sized receiver" could be anybody. In earlier fantasies, like those of Albert Robida in *Le vingtième siècle* (1883), mobile users were usually professionals. Robida's camel-mounted war-reporters use "Telephonoscope" transmitters to provide real-time moving pictures and sounds of atrosities to remote spectators safely sitting in front of their "crystal disc" receivers.

From early on, publicity stunts often associated wireless technology with means of transportation. Lee De Forest displayed a "Wireless Auto No 1" at the St. Louis Exhibition 1904, and a little later introduced portable equipment to be mounted on horseback (in a way fulfilling Robida's prophecy)! In the early years of the radio craze in the 1920s, even bicycles, rigged with antennas and equipped with receivers and earphones, were featured. The horse notwithstanding, the purpose of these stunts was no doubt to "infect" wireless with the appeal of the new means of transportation. The "auto-mobile media", however, became most closely connected with

cars. This connection was rapidly understood, although “car radio” was not initially conceived as a permanent feature of the dashboard. Rather, it was a box that could be transported in the car, and lifted out to the beach or a picnic area, perhaps reflecting that fact that the automobile was not yet conceived as a “total environment”. But it didn’t take long for the car radio proper to appear. Introduced already in the end of the 1920s (the appropriately named Motorola was one of the pioneers), it was one of the factors that contributed to turning the car interior, particularly in the United States, into a mobile miniworld the travellers were reluctant to leave (thus the development of “drive-in” services from hamburger bars to drive-in cinemas). More than in a symbolic sense, cars became mobile extensions of their homes. Just like at home, the car radio could be used as a mood controller. It filled the space with a soundscape that drowned the annoying noises from the outside, emphasizing the cocoon-like quality of the interior.

The ultimate development of the car radio is the car sound system that turns the automobile into a mobile sound cluster. According to a website, for “Los Angelenos spending more time on the road than in their living rooms, a good sound system in the car has becoming [sic] a virtual necessity for maintaining sanity during the commuting hours.” However, the cultural meaning of such systems can be assessed from the opposite perspective as well, that of the “outsiders” (other drivers, pedestrians). The pulsating bass of the sub woofer that makes the car tremble can be read as a sign that points to two

directions, drawing attention to the car and the driver, but also repelling potential intruders (particularly when loud rap-music is played). In this sense the phenomenon is related to the "ghetto blasters" carried along the streets of inner cities (although the last mentioned habit obviously lacks the "surplus value" provided by the expensive car with its "sexy" sound walls). Compared with one-way sound from a radio, cassette or CD-player, two-way telecommunication has become a standard part of the auto-mobile media more slowly, in spite of its long history that some claim goes back all the way to 1910, when Lars Magnus Ericsson, the founder of the Swedish telecommunications giant, equipped his car with a telephone (to use it one had to stop and connect it to telephone wires by means of two long sticks). The first real radio telephone systems for cars seem to have been invented in the 1920s, although practical use only became more common from the 1940s on, first by officials (highway patrols) and gradually by professional automobilists (taxi and truck drivers). Batman's Batphone, mounted in the dashboard of his Batmobile in the 1960s television series, was hardly a novelty by then, except perhaps for its futuristic design.

It took much longer before telephones became common in private cars. This can be partly explained by external reasons, such as cumbersome and expensive equipment, the need for specialized networks and restrictions to their use. That the idea, however, stirred popular imagination is demonstrated by a French cartoon from the early 1950s. It shows a stylish young

lady sitting at an outside table of the “Cafe des Sports”. A car has stopped in front of the cafe, and the (male) driver is seen eagerly talking to a car phone. The waiter comes to tell the lady: “A gentleman would like to talk to you on the telephone.” What is happening here? Does the cartoon simply say that making a phone call provides a psychologically easier channel for flirtation than a direct face-to-face encounter (anticipating the stories of bar clients making mobile phone calls from table to table)? Or does it also claim that having a car phone contains “attraction value”, potentially making an otherwise unremarkable male (and car?) as something special? Having the lady retire inside the cafe to answer the call and then return to meet her seducer face-to-face may also function as a classic trope of “retardation” (well known from Hollywood movies), giving time for the creation of expectations before the “encounter” with the “star”. Be it how it may, this scenario remained largely imaginary until mobile phones came to wide use by private drivers less than a decade ago. One link from professional toward private uses was the “Citizens’s Band Radio”, introduced in the United States in 1973, but outlawed in most other countries. As a way of responding to the speed limits imposed by the government in the wake of the Oil Crisis, it provided truck-drivers a way of warning each other about speed-traps and highway patrols. It came to be used by yachtsmen and hunters as well.

Compared with sound, the role of visual media in the car has remained more limited, for obvious reasons: while sound fills

the space and provides an audio background, sight is directional. Screens require attention, and thus compete with the views seen through the car windows. Of course, a distinction can be made between screens meant for the driver and those for the passengers. Some makers of SUV's ("sports utility vehicle", essentially a family van) advertise video screens for the back-seat passengers as optional accessories; these have been targeted for the children of the videogame era, who - so the marketing departments seem to think - have lost their interest in the "real world" visible through the windows. For the driver the visual media is related to the controls, including the tiny screen of the GPS navigation system, and such novelties as the rear-view video camera whose view is displayed in real-time on a screen inserted in the dashboard. However, media resercher Anne Friedberg has suggested that visual media actually plays a much greater role in the experience of travelling in an automobile, which in itself can be considered a "viewing machine". Quoting Paul Virilio, Friedberg states that "[w]hat goes on in the windshield is cinema in the strict sense". For her, "the visuality of driving is the visuality of the windshield, operating as a framing device." The visual impressions of the flaneur strolling the city streets have been replaced by those gathered by the driver speeding along the L.A. freeway. The metaphoric connection with cinema gets some concreteness in the drive-in theater, where a giant screen is actually watched through the other "screen", the windshield. Here, however, the auto-mobile media reached their limit, immobilized for the duration of the show. From the point of view of mobility, this is

not so different from Lars Magnus Ericsson stopping on a Swedish country road in 1910 to make a call from his car-mounted phone. In both cases a physical contact by wire had to be established - the one connecting Ericsson's carphone to the phone lines and the other serving the speakers attached to the sides of the car in the drive-in theater. In an almost symbolic fashion, the emerging mobile media was held back by wires.

Overt / Covert Wearables

Wearable media - not meaning just "smartwear", but more generally also objects tied around the wrist, stuck in one's pocket, mounted on the head, hanging from the neck, etc. - seem to be situated somewhere on the axis between overt and covert. In one extreme one has to do with status objects - things meant to dazzle and impress more as signs than serving as practical appliances. Of the pre-media examples already mentioned, ladies hand-shades and fans often did exactly this; their visual appeal as part of the owner's outfit was essential. In the late nineteenth century ladies dresses covered entirely by photographs or (illuminated!) lightbulbs were sometimes designed as publicity stunts for these new technologies; although in a sense an ultimate manifestation of "wearable media", using them for any other purpose would have been totally unpractical. In the other extreme there is, for example, the "ero-tech": the large family of miniature objects often

carried around and, when discreetly displayed for someone, meant to raise sexual thoughts. Such objects are often based on peeping into a tiny lens, or on a sudden transformation. It may be enough to turn a little statuette upside down, open a hidden cover, or secretly push a button: an innocent looking object suddenly turns into an overt erotic fantasy. There have also been large amounts of tiny erotic photographs, stereographs and flipbooks (also known as "pocket movies", *cinématographe de poche*) used for similar surposes. Most of these objects do not *as such* qualify as media, but their uses anticipate the cultural practices associated with mobile media.

Another example of covert technology is the "spy tech", the huge tradition of hidden devices that have been used to record conversations, take snap-shots, transmit secret messages and kill people. As the example of the early candid cameras demonstrated, these kind of devices are not always used only by private detectives, professional spies or super-criminals. Spy tech is interesting, because unlike most forms of media, it tries to carve out secret channels of "private" communication. It exists as a highly specialized niche within the wider field of communications, which often strives toward openness, as exemplified by broadcasting (however, a tension often exists between the efforts of opening up or limiting certain means of communication, as the early debate on wireless telegraphy well demonstrated). Another thing that makes spy tech interesting is its ambiguous location between the "real world" of covert operations and science fiction fantasies, which arguably have

influenced each other. Thus the famous cavalcade of gadgets (not all of them “mobile”) introduced in the James Bond films were inspired by existing devices, and in turn influenced future developments. The shoe phone used by the secret agent Maxwell Smart (Don Adams) in the 1960s television series Get Smart was, in its turn, a parody of a long tradition of efforts to disguise communication devices into ordinary objects, although in retrospect it also anticipated “smartwear”.

Listing examples of early portable media from still and moving picture cameras to “pigmy” gramophones and portable radios (that, by the way, existed decades before transistors were invented, as Schiffer has revealed) is fairly easy. How about wearables? If conventions of use and symbolic meanings are equally important as exact functions, considering a device like the wristwatch makes sense. There is a wonderful story according to which this ubiquitous device was invented by the Frenchman Louis Cartier in 1904 for the Brazilian aviation pioneer Santos Dumont, who found it difficult to check the time from his pocketwatch while steering his aircraft. The association between aeroplanes and body-mounted time-keeping resonates well with the connections already made between transportation and mobile media. What can be said about the pocketwatch, the predecessor of the wristwatch? While it also belongs to the prehistory of wearable media, it often remained hidden within the owner’s clothing (including dedicated pockets), to be inspected only sporadically. Sometimes, however, it was kept visible, as the status objects

described above. Although the flaneur probably would have preferred to carry no timepiece at all, the pocketwatch was approriate for someone who still had some spare time, and also relied on one's feet. The wristwatch made more sense in the high speed technological environment of an aeroplane or a motorcar, where intense concentration was required, and one false move of the arm could be fatal. Although Dumont really got his wristwatch from Cartier and never flew without it since, the story is not quite accurate. In reality, the wristwatch had been invented decades earlier, but its popularity grew slowly, because it was considered feminine - perhaps it was associated with the habit of wearing bracelets. Obviously it needed the masculine, technology-studded profile of Santos Dumont and the fame of Cartier to convince men. Further proofs about its usefulness and newly found masculinity were gathered some years later in the trenches of The Great War.

When David Sarnoff, one of the pioneers of radio broadcasting, spoke in 1922 about his vision about the portable radio, he used the watch as his reference point. The radio should have as its ideal "the watch carried by a lady or a gentleman, which is not only serviceable but ornamental as well." Although it is not clear whether he meant a wristwatch or a pocketwatch, his idea of the portable radio as a personal utility, which is both useful and neatly designed, resonated within media culture. Indeed, the St. Louis jeweller J.A. Key soon introduced a radio set modelled after the pocket watch, and a radio "pinkie ring" was proposed by another inventor. In the 1940s Chester Gould's

comic strip hero Dick Tracy wore a voice activated videophone looking like a wristwatch. Although such novelty devices (still constantly presented, as one can see from the Play: Fetish section of *Wired*) have usually remained little more than publicity stunts, the association between usefulness and visual appeal is a permanent aspect of product design, evident in the field of mobile media. The right combination matters much more than in Sarnoff's time, because of the greatly increased design awareness, tough competition and the urgent need to differentiate between products meant for many different user groups. Pursuing this analogy further, it might be interesting to ask how the overt / covert axis functions in mobile phone culture. It seems that many users use their phones much like pocketwatches: the mobile phone is hidden in the pocket or a bag, and only pulled out when it happens to start ringing. Another option, already referred to, is to keep the phone permanently visible, attached to the belt or even hanging from the neck (wristphones have yet to prove popular). Although both choices can be explained by down-to-earth functional reasons, more is probably at stake. Devices like mobile phones become woven into their users' personal lifestyles, through them to cultural practices and codes, and eventually to ideological formations.

Conclusion: The Life and Times of the Mobile Cyborg

A third option for the overt / covert practices has emerged: keeping the phone hidden in the pocket, but wearing a hands-free headphone / microphone combination to stay constantly on-line. In California it is more and more common to see people seemingly talking to themselves, whether paying for their purchases at the supermarket, jogging, waiting for a *latte* at a coffee shop or sitting in the car waiting for the traffic lights to change. Of course, they are really engaged in a remote conversation. The choice of the hands-free interface is justified by health reasons (fear of radiation), busy lifestyle (risk of losing a contract or a deal) and the safety of driving. Although these explanations make sense, an underlying motive could be the lurking "cyborg logic", the physical co-existence with and within the medium. Tracing the evolution of such a logic here would take too much space, but clearly the phenomenon seems much older than usually assumed. In the nineteenth century, cartoonists often presented the early photographers as "a new species", partly human, partly technological: the camera, with its one large "Cyclops eye" had replaced the photographer's head, hidden under the hood. Later we encountered the "cyborg ladies" at the telephone exchange, where young women were forced to spend hours "bondaged" to the switchboard, donning a headphones / microphone combination. Within the field of mobile media, a decisive event in the "life and time of the mobile cyborg" was the launching of Sony's Walkman in 1979. Unlike earlier portable media, transistor radios and cassette decks, the Walkman was meant to be listened exclusively via headphones.

Since Shuhei Hosokawa's pioneering "The Walkman Effect" article (1984), quite a lot has been written about the phenomenological and psychological effects of the Walkman. Some of the issues researchers have been pondering are the following: In which sense does the Walkman isolate the user from his/her immediate surroundings? How does the Walkman affect its user's behaviour / experience of the surrounding visual reality? How does the continuous presence of music turned into an exclusive auditive environment differ from a situation where the music emanates from a more distant external source, mixed with other sounds and noises (in a concert, for example)? Most researchers seem to agree that listening to a Walkman represented an experience that had few if any real precedents. Using headphones to listen to music was not something unprecedented; it had been common already in Edison's Phonograph Parlors in the late nineteenth century, and the early radio listeners also normally used headphones. The novelty was using them while roaming in public spaces. It would be hard to deny that the uses of the Walkman differed from the habit of carrying transistor radios or even ghetto-blasters in urban environments. Although perhaps experienced as disturbing by others, these devices still existed within the mutually shared continuum of sounds and noises. A ghetto-blaster may have challenged their supremacy, but even when used in a deliberately offensive manner it was only a "counter-social instrument". Walkman had a seclusive and privatizing character that early observers often found irritating. It was as if the user,

while sharing the same space with others, was refusing to accept the "social contract", based on certain codes of availability and communicativeness.

Many of the issues raised about the Walkman are still valid when thinking about devices like Apple's phenomenally successful iPod, which, in spite of radical changes in technology and design, is essentially a "boosted" Walkman for the era of the Internet and downloadable MP3 files. Apple's add campaign uses black shadow figures against colorful backgrounds, each holding a white iPod with wires leading to his/her ears. All the figures are urban types, male and female, each of them engaged in a silent act of dancing. When Apple began the campaign it displayed single figures (on a billboard, for example), whereas its television commercials and series of wall posters now commonly feature whole series of them. Although forming a group when posted side by side and above and below each other on a fence or a wall, the figures on the posters have no communication between them. Each is spending pleasurable moments in one's own microworld, re-confirming the "Walkman effect". However, except for each figure's personalized sound worlds, this mode of being "together alone" is not very different from the way many observers describe the experience of techno raves, a formative experience for the iPod generation. Most likely this is not a coincidence, although the masses of co-existent bodies characteristic of raves are not likely to appear in most contexts in which iPods are used. As it is, the iPod is an interestingly "non-convergent" device.

Although it has other functions, its primary goal is to serve just as a personal music player, containing “10 000 songs in your pocket. Mac or PC”. In this it differs from the super-convergent multimedia mobile phones and personal digital assistants trying to contain as many applications as possible in one package.

It would be important to figure out whether the experiences provided by “immersive” devices like the Walkman and the iPod differ from those made possible by “non-immersive” handheld game consoles, mobile phones and PDA’s. Walking through a public space, the Walkman-user replaces the existing soundscape with another one and matches this with the changing visual surroundings. This produces a kind of real-time audiovisual montage, a situation recently used by media artists organizing “sound walks”. Although the Walkman-user experiences a kind of “bi-location” (the sound and the visuals belong to different “realities” before being integrated by the user’s mind), it seems to be quite different from the ones experienced by the users of the other devices. The Gameboy user interacts with a fictional world that may deeply absorb his/her attention, in spite of being “non-immersive” (the reality surrounding the device and the screen isn’t excluded, albeit perhaps by the player’s mind). The multimedia mobile phone, even when used with a headset and a microphone, seems to allow a more radical and varied form of bi- or multi-location: the mind wanders between “here” and “there”, present and remote, physical and virtual, active input and passive reception, as the user switches between applications and modes. While

doing all this s/he may be travelling in a car or walking down the street, which adds another layer of mobility and visuality to those emanating from the phone. How all these elements are co-ordinated into one integrated experience is not yet clear. What is clear is that the mobile phone, as well as devices like the PDA's, are giving rise to intricate forms of co-existence and possible symbioses berween humans and ever-present technological prostheses.

"Did mobile media really appear so unexpectedly?" This was one of the questions that provided the starting point for this media archaeological odyssey into the vicissitudes of mobile media. After all the places visited, after all the excavations conducted, the answer must remain inconclusive: it does not seem so. For sure, mobile media of the early twenty-first century have never before existed in such forms. They have never reached as many people as they reach today, nor have they ever had as much power. Many of the technological solutions they are based on would have been totally utopian just a few decades ago. However, the media alone neither determine their users' behaviors nor the cultural forms the technologies are moulded into. Much more is at stake. Media, including mobile media, get their meanings within cultural processes that are layered and complex. These meanings are unstable, constantly shifting and metamorphosing, as they migrate from one context to another. Frequently they seem to evaporate, only to re-appear in another place and time. Media archaeology helps us register the traces of such processes, although - let's make it clear - it is

neither a patent remedy nor a philosopher’s stone.