

Assignment One: Social Construction of Technology

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In 1973, Dr. Martin Cooper from Motorola made the world's first portable cellular phone call to inform Dr. Joel Engel, his rival at Bell Labs, of Motorola's success at creating the first portable cellular phone. But neither inventor would have predicted the political and societal shockwaves this new technological artefact would have. By the twenty-first century, the cellular phone is no longer enjoyed exclusively by those driving BMW's and Jaguars, but is now in the "must-have" category of almost every demographic. In this paper, I examine the social consequences of cellular phones in a population of recently graduated high school students.

In order to provide a SCOT analysis of the cellular phone, it is important not to narrow in on one monolithic meaning, but to examine the respective definitions of all the relevant social groups. In this analysis, there are many relevant social group definitions to consider: those who are college bound, those who are starting to enter full and part-time employment, those who will join the military, those starting a young family as parents, and those who are planning to travel. All of these classifications may use the same cellular phone technology, but they perceive the cell phone in strikingly different ways. In order to analyze the graduating senior population, we have classified these groups in an effort to juxtapose their meanings and evolving expectations of cellular phones.

Our relevant social groups share some similar meanings of the cellular phone. All of these individuals in the groups are likely moving out of their parents' homes, which may provide some new problems. All the groups could interpret the cellular phone as a "safety device" in case of emergencies. Without their parents' oversight, the graduating seniors will have to face a new level of social responsibility and increasingly important roles in society. The cellular phone would also likely provide a shared meaning of a convenient solution to many problems and provide new opportunities for coordination.

Our examination of graduating seniors also provides interpretative flexibility: fundamentally heterogeneous definitions of the cellular phone among the social groups. Travelers and college bound students may perceive the cell phone as a "portable home landline," due to their highly transitional lifestyles. The travelers and college bound students likely share similar problems of erratic traveling schedules, lack of alternative communications and the problems of a non-static location. Some may also perceive the cell phone as a means of entertainment and a device for sociability among family and friends. In contrast, new employees would perceive the cellular phone more as a "remote office" which provides a sense of professional responsibility. Precise verbal communication and time sensitivity attributes of cell phones may be incredibly important expectations of new white-collar employees. For them, a mobile phone is used to draw attention to urgent matters (for example, to call to confirm an important fax to a client, or to arrange to have a document sent to an important client by office staff while they are traveling.) In addition, new employee cell phones can also provide portable access to email and other documents related to business matters. Sociability expectations would be less for these employees who see their cell phones as a business-oriented tool. Military enrollees would likely have a different communicative practice. They will want to have more control over who has access to them at all times, and more likely want to limit their

accessibility by having their cellular phones off. Their interpretation of the cell phone would be a device primarily for outgoing calls. New parents might interpret the cell phone as a “coordination device” for sharing responsibilities and resources.

Over time, interpretations and expectations have changed. Cell phone plans have become so affordable and generous in their minute quotas that people can abandon their landlines completely. The number of landlines at most college campuses have significantly decreased. As cell phones replace landlines, however, people who have abandoned their landlines have new problems such as lack of service at times, and frequent dropped calls. This may encourage cell phone makers to increase signal strength and make more expensive cell phones with better connectivity features. Cell phones have also provided young families the means of tightly coordinating events, even minutes or hours before they happen, changing the way they organize their days.

Considering these differing definitions and expectations among the relevant social groups, we can assume that each group would have a unique idea of their ideal cellular phone. For students and travelers, portability is likely most important. Ideally, their artefact would be small enough to carry in their pocket. New employees, on the other hand, may prefer a larger cell phone size if they can have more document and other business functionality. They would prefer their cell phone artefact to give them the ability to work on business out of the office or on the road. The viable functioning artefact for new parents would also be unique to their relevant social group, likely being most concerned with having their cell phones available at times, to provide a flexible means of planning and organization. The most important attributes for young parents may be a cell phone with voice activation and other features so they can make or answer calls when driving the kids to school. Document services may not be important to them, and they would support the vision of a more portable artefact.

Considering the advancement of cellular phone technology and changing cellular network standards over the last ten years, it seems certain that cell phones have not stabilized. Just in the last few years, we have experienced several paradigm shifts in wireless communication technology. Cell phones are becoming significantly smaller and lighter every year, making them even more convenient to pack or even carry around in your pocket. Fully voice-activated devices seem to be providing a solution for those who are expected to be able to use the phone even where they can not press the phone buttons (for example, while driving). Email and PDA functionality is being incorporated into the cell phone, allowing for those dealing with documents, (such as young employees in our example) and additional options for collaboration and coordination among colleagues. In a strategy which seems to be reacting to the interpretation of the cell phone as an entertainment and sociability device for students and travelers, music and video games are being incorporated into cell phones. Even the cell phone network standards have not stabilized. Currently, GSM, PCS, TDMA, CDMA, and AMP network systems provide unique cell phone service. PCS has been growing in popularity due to its low price and international compatibility, which would be especially preferable for the travelers. But PCS has smaller cell location sizes compared with other networks, and requires many tower antennas in a given geographic location. Because of this, PCS networks have been

found to be less reliable (more dropped calls and coverage holes). TDMA is a more reliable system, but is not compatible with European or Pacific Rim networks, which may cause problems for both new employees who travel, college bound students and travelers. GSM seems to be where cell phones are stabilizing, which delivers many enhanced services like email and web browsing, which may be very desirable by new employees. Considering the currently-evolving wireless communication technology, it is difficult to foresee any type of closure, as seen in the famous Pinch and Bijker examination of the bicycle.

The value behind using a SCOT approach is that it provides a model to examine the roles of social groups in determining the choice and forms of technology. SCOT was helpful to show how radically different features and models of cell phones are explained by radically different interpretations of social groups. My SCOT analysis revealed that some recent high school graduates think of the cellular phone as a “portable home landline,” whereas others see the same phone “remote office” or primarily as a “coordination device.” Some social problems solved by cellular phones are shared among all the social groups, still some social problems are exclusive to a certain social group and affect their vision ideal cellular phone artefact. Using the SCOT approach of focusing on the interpretative flexibility of artefacts by social groups also seems to greatly ignore some important social aspects. SCOT seems to lack an appreciation of potential influences of social structures such as simple economic behavior, socioeconomic factors or gender issues. While attempting to apply the methodical SCOT approach as I’ve seen it applied in our readings, I’ve also found that in my analysis I need to disregard my own opinions of actual technology. I feel a SCOT analysis is suppose to make no true claims about technology operability and efficiency, and the intrinsic effects of technology with social groups, which also seems to reduce the integrity of the SCOT analysis results.