The Ankle Bracelet Is History: An Informal Review of the Birth and Death of a Monitoring Technology

By Robert S. Gable[1]

The 1961 film, *Westside Story*, retells the tale of an ill-fated romance between young lovers from opposing social groups. In a series of ironic twists, the protagonist is killed by a rival gang member. The acclaimed film stayed-on as reruns in movie theaters for years, and it was a favorite of Ralph Kirkland Schwitzgebel,[2] then a graduate student at Harvard. He described his inspiration for an electronic communication system as follows:

> "I would take dates to the movie because it had a romantic effect on them. (I wasn't very creative about what to do with dates back then.) By the third time I saw the movie, I had a good understanding of the plot. During the movie, the hero's girlfriend tries to get to him in time to warn him of the danger of a gang fight, but she is too late. I wondered how we could have helped him. I thought, if only we could have sent him a signal. If only we knew where he was, we could have saved his life. Then I had an idea. If he wore a transmitter we would contact him and prevent his death" (Gable, 1989).

The following week, Schwitzgebel met an electrical engineer, William Sprech Hurd, at a cocktail party. This began a cordial and productive relationship until Schwitzgebel moved to California in 1975. An office was established in a vacated corner storefront in Cambridge, MA, where at-risk youth, parolees, psychiatric patients, and student research volunteers participated in various behaviorally-oriented research projects between 1960 and 1975.[3] The original location monitoring system included a combination of surplus missile tracking equipment, portable transceivers, battery packs, and stationary radio-frequency relay stations.

The portable equipment was quite cumbersome. The monitored individual carried a 27 MHz AM transmitter and a separately housed timer/encoder unit which provided a 600 Hz and an 800 Hz audio signal to the portable transmitter. The time/encoder measured approximately 9x15x2.5 cm (3-1/2x6x1 in); the transmitter measured approximately 7.5x10x2.5 (3x4-1/2x1 in). The total weight of both was about 1kg (2 lbs). A 1.4 kg (3 lbs) battery pack was also required.

Jack L. Love, Albuquerque, NM, November, 29, 2006. Photo by Robert Gable.

If the transmitter of a wearer was within a prescribed urban area, it would activate a stationary relay station every 30 seconds. The signal was transmitted to the antenna (mounted on the steeple of the Old Cambridge Baptist Church), then relayed to the base station. The size of the monitored area depended upon the number of relay stations and the transmission characteristics of the environment. The monitored area usually covered about five square blocks near the participant's place of residence. A patent was granted on the system in 1969 (Schwitzgebel and Hurd, 1969).

One study (Schwitzgebel, 1969) summarized the results from sixteen participants who ranged from an offender with over 100 arrests and eight years of imprisonment to a young business person with no arrests. The results indicated that the participants either adjusted to the monitoring system within the first few days or rejected it as too intrusive and embarrassing.

Reports of this experiment (e.g., *New York Times,* 1969), typically brought negative reactions. For example, Schwitzgebel sent a manuscript to the well-known government publication, *Federal Probation,* and was surprised when the manuscript was returned with a letter from the editor, reading in part:

> I get the impression from your article that we are going to make automatons out of our parolees and that the parole officer of the future will be an expert in telemetry, sitting at his large computer, receiving calls day and night, and telling his parolees what to do in all situations and circumstances.... Perhaps we should also be thinking about using electronic devices to rear our children. Since they do not have built-in consciences to tell them right from wrong, all they would have to do is to push the "mother" button and she would take over the responsibility for decision-making." (Evjen, 1966).

Schwitzgebel's twin brother, Robert, who had participated in the Harvard research project (Schwitzgebel, *et al.*, 1964), moved to UCLA and later to Claremont Graduate University in California where he initiated smaller monitoring projects with young adult

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1 Jack Love, David Hunter, Glen Rothbart, and Ricardo Rivera generously provided historical information during interviews with the author in 2006–2007. Any factual errors are the responsibility of the author, and he welcomes corrections.

2 Family name, "Schwitzgebel," shortened to "Gable" in 1983.

3 See Schwitzgebel (1965) for a general description. Film rights to tape-recorded interviews were sold to Universal Pictures (Fielder, 1961).