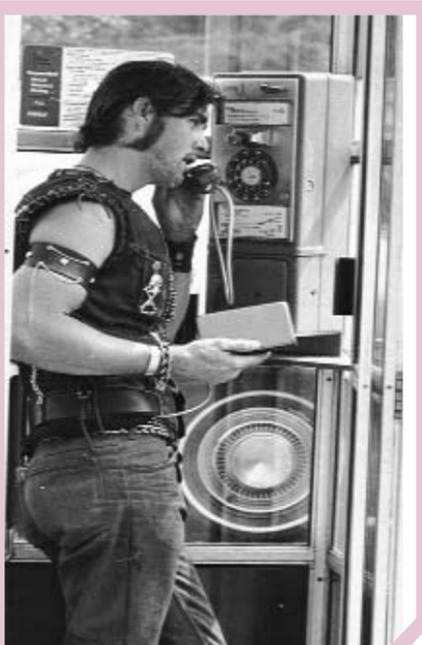


## Tagging: 'an oddity of great potential'

Robert S. Gable on how he and his brother invented electronic monitoring, but with an early emphasis on positive reinforcement

When the Harvard behavioural psychologist, B.F Skinner, was a graduate student at Indiana University (USA), he used pigeons as research subjects. They were cheap, did not require research permission forms, and worked hard if you treated them right.

One class with Professor Skinner was all I needed to know that I wasn't interested in data about pigeons. Fortunately, my twin brother (Ralph Kirkland Gable) was also a graduate student, and after watching the movie *West Side Story*, he had the idea that the life of the protagonist might have been saved had there been a way to warn him of the danger of a gang fight. 'How about trying to set up a communication/reinforcement system with juvenile delinquents?' he asked. It didn't take long to realise that juvenile and young adult



Participant with tagging device reports in using a public phone booth

offenders would be perfect research subjects: they are cheap, do not require research permission forms, and will work hard if you treat them right. Shortly after my brother had his inspiration, he met an electronic engineer (William Sprech Hurd) at a cocktail party. Thus, his idea of tagging (electronic monitoring) started to take physical shape.

The first project location was a cozy, hollowed out space with stone walls in the basement of the Old Cambridge Baptist Church in Cambridge, Massachusetts. The small room had thick carpet and some coloured lights, a desk, and a few chairs. It had the feeling of a 'nest'. The minister of this very liberal church was also the Dean of the Harvard Divinity School. An antenna was installed on the steeple of the church for the tagging system. Most of the seriously delinquent youths enjoyed coming for interviews because probation officers would never consider looking for them in a church.

Later, the project office moved to an abandoned storefront in a rather grungy part of the city. It gave us more space but had the disadvantage of giving visibility to delinquents and police. One day while unloading a large truckload of military surplus missile tracking equipment for the project, the police stopped by to do some serious questioning. The police were doing surveillance of us while we were doing surveillance of the offenders! In the years that followed, local police were never very comfortable with 'bad kids' running around town with high-tech equipment.

The project 'participants' or 'employees,' as we called them, were paid a modest fee for tape-recorded interviews during which they described their experience with the tagging equipment as well as their daily activities. The equipment consisted of a transceiver and a battery pack (see photos), each of which was approximately 15 x 7.6 x 2.5 cm and

weighed about 1 kg. Certainly clumsy by today's standards.

As a participant walked through a monitored area, his transceiver activated strategically placed repeater stations, which then transmitted a signal with a special location code to the base station at the lab. At the base station there was a large lighted screen that mapped various parts of the city, typically within five blocks of the participant's residence. In addition to location-monitoring, a few participants had their heart rate data transmitted to the lab. Participation was voluntary.

Generally, the lab became a community attraction among wayward youth and young adults. First, there was the high-tech equipment. For example, the control panel of the missile tracking equipment had three buttons: 'Search,' 'Track,' and 'Destroy.' The youths particularly enjoyed pressing 'Destroy' when someone was being monitored. (The 'Destroy' button had been humely disabled by the experimenters.) Second, the participants were being paid by the hour for interviews which gave them social status as 'employees'. Most of the

"I should have realised that potential harm makes better news than innovative altruism"

interviews were conducted in a confidential, supportive, non-directive manner by psychology and theology graduate students. Third, bonuses of various types (e.g. cash, food, sports tickets) were given to participants for meaningful interviews and pro-social behaviours (e.g. attending classes, going to work, being sober). The bonuses were given in accord with operant conditioning principles on a variable ratio / variable interval schedule. In brief, the lab was a place of fun, novelty, and compassion.

Because participants could leave the project without legal consequence, one measure of the perceived restrictiveness of 24-hour tagging was the number of days that they carried the equipment. Within the first several days, participants either tended to adjust to the system or reject it. About half of the participants returned the equipment after five days. The equipment was heavy and cumbersome, and a source of potential embarrassment among peers. Some participants did not like the idea of carrying a 'mobile conscience'. Two participants continued for several weeks; one participant continued for five months.

The Streetcorner project, based on positive reinforcement and electronic monitoring, elicited strong reactions.

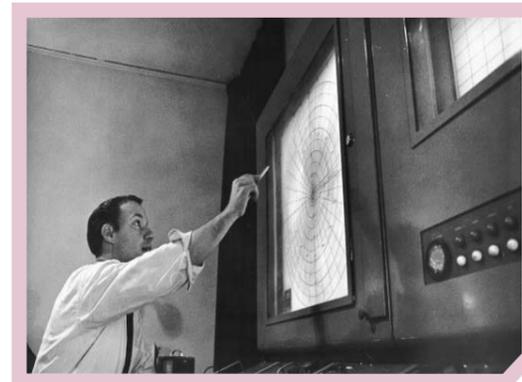
Favourable reactions resulted in a national magazine article, a book contract, and a movie screen play. Negative reactions were similarly vigorous. An early manuscript submitted by my brother to the U.S. government publication, *Federal Probation*, was returned with a note from the editor that read, in part: 'We don't want material of this type in our office'. Inaccurate reporting by a few journalists resulted in a myth, still circulating on the Web, that



Participants either tended to adjust to the system or reject it

the Schwitzgebel Machine could be fitted with a brain implant to keep track of known criminals.

All this early experimentation occurred in the pre-digital age of the 1960s. Transistor radios and color televisions were still novelties for many people. Fear of a literary-fueled 1984 dystopia was far enough away to allow for unrealistic fantasies of technological capability. Yet not everyone received the system in the spirit in which it was intended. When I wrote an article in



At the base station there was a large lighted screen that mapped various parts of the city

*Psychology Today* in 1969 describing a waist-worn, two-way tactile unit, I was surprised by the editor's decision to title the piece 'Belt from Big Brother'. I should have realised that potential harm makes better news than innovative altruism. The eminent American law scholar, Laurence Tribe, wrote in 1973 that my brother attempted for several years to receive funding and explore the potential abuses of monitoring (tagging), but was rebuffed by virtually every professional organisation, foundation, and citizen group to which he turned.

About 20 years after the initial tagging experiments, electronic technology became sufficiently advanced (with the commercialisation of the transistor and the invention of the integrated circuit) that tagging was economically and aesthetically feasible. In 1983, a judge (Jack Love) in New Mexico (USA) sentenced three offenders to home curfew with a system using a cigarette pack-size transmitter unit strapped to an ankle. The transmitter propagated a radio signal every 60 seconds which was picked up by a receiver connected to a telephone line, and then transmitted to a mainframe computer. This was the 'live birth' of tagging. Within six years, hundreds of units were deployed in the US. A few years later, a similar spread of the technology occurred in the UK, but with more thoughtful consideration of the civil rights of offenders.

In retrospect, the first tagging experiment probably failed for two reasons: (1) it was technologically premature, and (2) it relied almost exclusively on positive incentives. 'What works' to permanently reduce crime among moderate-risk offenders is both incentives and some threat of sanctions. Unfortunately, most tagging today functions almost exclusively as an information system to document rule violations. There is virtually no use of valid operant conditioning strategies by tagging officers in the United States. Yet we know



'Belt from Big Brother' - a waist-worn, two-way tactile unit

that cost-effective compliance and public safety is best achieved through persuasion more than control for the majority of non-violent, non-career offenders. Advances in cellular and battery technology even enable the installation of a network of inexpensive transceivers in a neighborhood or city sector. Location-specific tagging can allow real-time positive reinforcement of pro-social behaviour along a 'digital pathway'.

I do not regret the naive enthusiasm of our early experiments. I do regret that so much of contemporary tagging has turned homes into prisons instead of making public spaces into areas of positive excitement.

In 1987, Professor Marc Renzema of Kutztown University in Pennsylvania (USA), initiated the professional newsletter (now a journal) *Offender Monitoring*. In his first editorial, he concluded that electronic monitoring of offenders was 'an oddity with great potential'. It still is.

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