

An existence of the still hidden CIA program to manipulate the human brain and organism with remote electromagnetic means

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Abstract

There are letters disclosed under the STARGATE declassification, which indicated that the CIA had covert programs to manipulate the brain function interacted with the external electromagnetic stimuli, which is still hidden to the public eyes. The CIA has had an intention to read and activate the human being from the outside and paid attention to the related studies and developments since MKULTRA Subproject 119 in the early 1960s. They naturally supported the earlier experiments on the remote electromagnetic sensing conducted by SRI, Stanford Research Institute, though halting their subsidies within several years. The problem was SRI's focus on the remote viewing, which was not necessarily the primary goal for the agency that would like to deploy the electromagnetic technologies into their information gathering to interrogate or manipulate their subjects. It is more or less the fact that the brain is synchronized to the external electromagnetic stimuli and the issue was to what extent the intelligence community has developed these methodologies. The CIA already acquired the basic technological foundation to manipulate the human brain electromagnetically in the 1970s, which has progressed to the critical level from then to now, considering the tremendous technological development of the overall society.

Introduction

STARGATE was the aggregated program to develop the remote viewing capability in the 1970s and 1980s, which was failed in the end.¹ Their failure was partly caused by their focus on the remote viewing rather than to research on the overall phenomenon as the remote sensing. There were several programs from the early 1970s under the overall STARGATE declassification, centered by the GRILL FLAME project, all of which were conducted by SRI, Stanford Research Institute and subsidized by various US defense outlets. There were a few research projects sponsored by the CIA, though their involvement was quite minor. The STARGATE program was generally perceived as the

joint research between the Department of Defense and the CIA, though it is not the real figure that the agency should be willing to take the bullet, together with these aborted projects of the remote viewing.²

The CIA had an interest in the brain reaction against the remote electromagnetic stimuli or the function to irradiate the extremely low frequency inside the brain even in the early 1960s.³ That was why they sponsored the initial SRI's experiment in the 1970s, but they halted it in a few years. Their behavior implied that there had to be hidden programs separated from the STARGATE declassification. The US military and SRI had just focused on the remote viewing as it was the capability that they would like to deploy in the battleground, while the CIA did not share the same motivation. Their different battlefield has required a distinctive set of capabilities and their aspiration should be to develop the technology applicable to their anti-human or anti-society operations. It is not necessarily to locate the enemy remotely, but their objective can be supported by other types of remote sensing as well.

They spent their funds into those experiments and there were some proofs which were directly related to the technological development to read and manipulate the human brain remotely or one step short toward its success. Their new venture was a progression from MKULTRA Subproject 119 and the SRI's struggle discussed in the precedent papers,⁴ which bore the intelligence capability to manipulate the human brain and organism through the synchronization to the external electromagnetic stimuli.

Smoking letter

There is a declassified letter sent from Robert P. Gow, President of Develco, Inc. at that time of 11 June 1973 to the classified personnel, probably the CIA officer.

From the viewpoint of the agency, this would not be a program intended to promote medical research in an esoteric field, but rather would be one designed and implemented to provide a continuing stream of achievements which would enhance the establishment's ability to meet its short-term goals and long-term objectives.⁵

This CIA classified letter implied that Mr. Gow was quite close to the agency, assumed to be one of the undercovers or contractors. In that sense, there was still a possibility

that he wrote a letter to one of the colleagues, not to his handler, though this difference does not yield any changes on its implication. They, including the CIA, would like to develop some technologies for their objective rather than the medical use, whose purposes were also later written in this letter.

- New and improved computer modeling capability with application in advance signal processing, computer design and crypto analysis.
- Improved signal processing and display systems.
- Improved sensors – magnetic, electric and optic; improved in performance, configuration and utility.
- The capability to provide accurate projections of the probable response of individuals and/or segmented populace to external and/or physiological stimuli.
- The real possibility that, at some point in the future, external measurements can be correlated with some degree of accuracy with simple thought process in humans.

He raised 8 bullet points, five of which extrapolated above. They discussed the brain EEG and would like to employ it to the intelligence information gathering, i.e. HUMINT. These ideas were actually quite similar to ones mentioned at the project targets of MKULTRA Subproject 119.

- a. Bioelectric sensors: sources of significant electrical potential and methods of pick-up.
- b. Recording: amplification, electronic tape and other multi-channel recording.
- c. Analysis: autocorrelators, spectrum analyzers, etc. and coordination with automatic data processing equipment.
- d. Standardization of data for correlation with biochemical, physiological and behavioral indices.
- e. Techniques of activation of the human organism by remote electronic means.⁶

The subproject 119 was more clearly purposed as these lines were written in the formal proposal to the agency, while Mr. Gow's letter was motivated to write a proposal. Moreover, the MKULTRA proposal was written by the leading doctors in this field, while Mr. Gow was the leading engineer in this field, not the researcher fully understanding how the brain neuron would work against the remote stimuli. Having said that, this similarity implied that the same people were involved in this project.

This point was actually proved in this letter mentioning that he “had several visits with Ross Adey and have a series of extremely good discussions with both him and R. Michelson on the subject of interest.” Dr. Adey, one of the MKULTRA 119 doctors, was frequently interacted with Mr. Gow and I have a reasonable assumption that Dr. Mary Brazier, the other doctor affiliated more to the agency, was involved in this new project as well, though at this time, the proposal was not written by them, contrary to the fact that they presented the MKULTRA proposal by themselves, a decade before.

It is my belief that they will cooperate to the degree that interest is shown by the agency; they are much too busy to waste time developing detailed proposals as an exercise and I think we all recognize that fact.

What I feel might make sense, in this regard, is that in conjunction with your people, we would work out some preliminary draft outlines and budgeting estimates from which a modest study contract could be let.⁷

Mr. Gow’s suggestion makes sense, considering the fact he ran the company to produce those apparatuses and he worked for the CIA to improve the intelligence capability. It was necessary for him to create new workload with a concrete idea supporting his company and the agency activities. The issue is how these projects were going to be developed from here and my answer is that this was highly likely led to the technology to control the human being electromagnetically from the outside.

The engineer

This engineer, Robert Gow, was not sanitized in the letter, even though playing a critical role to promote the project related to the remote sensing. It was likely because he was deeply involved in the STARGATE program to develop the capability of remote viewing conducted by SRI. It was mainly supported by the US Defense outlets including the DIA, while the CIA also sponsored some of the oldest projects experimented till the middle of the 1970s. This classified letter was written in 1973 when the CIA still supported SRI’s research which was published in the end as “Information transmission under conditions of sensory shielding”.⁸ In this experiment, the sizable magnetometer was used to send low-level frequencies, made by Develco, Inc. where Mr. Gow worked as the president. This company was established as a spin-off of SRI’s engineers⁹ to support their experiments from the outside independent engineering company.

This letter was made public as one of the STARGATE declassification and there was no doubt that he was involved in the program. The CIA also subsidized the SRI's remote viewing experiment, named as the project SCANATE later than this letter was written. That was why it was declassified under STARGATE, however this company, Develco, was not the primary source of SRI's experiment in the end, as another engineering company, SAIC, fully cooperating later on the project GRILL FLAME. It can be partly explained by the fact that he was closer to the agency as mentioned; he viewed all of the related matters from the CIA's standpoint, leading to a reasonable interpretation that he worked for the agency as an independent contractor, if not working as an undercover.

Moreover, this letter was not about the experiment conducted by SRI. He wrote it on 11 June 1973, while SRI asked the fund for the CIA and the Defense department on 14 February to install the expensive magnetometer made by his company.¹⁰ In this letter, they discussed a different project more focusing on enhancing the intelligence capability to grasp the brain behavior against "the external and/or physiological stimuli", which was far away from the remote viewing. Due to his background and reference to Dr. Adey, the letter was declassified with STARGATE, though it potentially mentioned other projects, highly likely still classified.

Three letters

This letter was one of the correspondences related to Mr. Gow and I found two others in the same matter. The initial one was also written by him on 26 April 1973, sending to a classified personnel whom it is hard to elucidate, while the letter was straightforward to describe its nature in three points.

- In line with our past discussion on the subject, I have enclosed a recent book of Koestler's and a paperback which, in lay terms, describes certain published work on psychic phenomenon reported mainly by the Soviets.
- I am utterly convinced that the intelligence community should be looking objectively, but definitively, at certain aspects of the reported communication phenomenon associated with human biology.
- Perhaps more important is the likely impact on GNP. Underlying the entire medical understanding of the biophysics/biochemistry of the brain appears to

be the quite enormous return in a vastly improved optimization of human material.¹¹

The second line indicated that the other party definitely belonged to the intelligence community and the third implied that this person should be senior amongst them as GNP (Gross National Product) was discussed as the probable outcome of the study on the psychic phenomenon. Adding to this, this was not a letter between doctors as Mr. Gow was not bothered by his lack of its proficiency and was willing to mention the psychic ability. His interest was definitely evoked by his involvement of the SRI's experiment taking place from 1972 about the paranormal phenomena and they asked for the subsidies against the CIA and the US military outlets on 14 February 1973 for the psychoenergetic phenomena,¹² about two months before of this letter. They hired Ingo Swann and Uri Geller, the famous psychics, to conduct a series of experiments to confirm the brain reaction against the remote stimuli, eventually focused on the single capability, the remote viewing. This experiment required the gradiometer to send remote electromagnetic stimuli, built up by his company. That was why he was more convinced on the psychic ability and this letter was declassified under STARGATE.

This discussion was by far improved by the second letter written by Dr. Ross Adey to Mr. Gow on 30 May 1973. He mentioned it was a reply of the letter which Mr. Gow wrote on 24 May, though I could not find it still. There is a possibility that this letter was not kept as a classified originally, or it might be still under the secret. In any way, the second letter was quite decisive as it was written by Dr. Adey and improved a direction of their project detached from the psychic ability.

First, a functional sensitivity of the human central nervous system has been demonstrated in several laboratories to very weak electric fields in air where these fields are oscillating at bran wave frequencies. - - - The VHF field studies showed an absence of effect with unmodulated fields, and selective effects with different modulation frequencies between 3 and 16 Hz. - - - It is feasible that the surface of nerve cell membranes may act as transducers for extremely weak chemical and electrical influences through the sensitivity of a charged sheet of glue-like molecules cover the cell surface. - - - I turn now to the future, from the viewpoint that these preliminary studies indicate a feasibility to manipulate and control brain states by modifications of the environmental electromagnetic "atmosphere".¹³

It was clear that Dr. Adey would like to conduct experiments to elucidate the human brain system and its interaction with the external electromagnetic stimuli. He emphasized “that promoters of this program are not seeking a fishing license just to pursue a dilettante interest”, which led this project out of the pure paranormal detection. This letter also mentioned a “therapeutic significance” when the brain was manipulated by the modulated electromagnetic field. These points were certainly succeeded by the third letter, the one mentioned at first to establish a research proposal to the CIA. Mr. Gow suggested a strict approach to analyze the brain reaction against the external stimuli, though he discarded an intention to promote a medical application but focused on the intelligence objectives to gather the information directly from the brain or to manipulate it from the outside.

As explained, this discussion started from an influence under the SRI’s experiment on the psychic ability as he was fully involved in those projects. He, as the CIA affiliate, proposed the senior officer in the intelligence community to develop this capability for the agency as a new way for the information gathering. That was why those letters were classified and declassified under STARGATE, while their discussions were actually more diverted to physiological studies due to Dr. Adey who was one of the leading doctors in that field. It meant that their project should be materialized apart from the remote viewing and other STARGATE programs, though there was no information found yet for this progress.

Doctors

It is critical to understand which doctors were involved in this project for further elucidating what they were going after. In the third letter written on 11 June 1973, there were several classified names still under the secret, one of which was a receiver of this letter: i.e. the senior officer in the intelligence community involved in the CIA.

I have initiated these on-going dialogue because, from my discussion with you and =====, I have been encouraged to believe that there is an increased interest in your shop in the Life Science.¹⁴

This statement was written to the recipient, the intelligence senior officer, and the shop likely meant a research vehicle under the CIA, though there are other possibilities that it

might be another firm quite attached to the agency. Mr. Gow, the sender, had visited this person and wrote this letter after meeting with several related personnel in California where his company was located. There was another person still classified who encouraged him to believe “there is an increased interest in your shop in the Life Science.” It is quite hard to figure out who the other person was from this sentence, but there was another classified information which narrows down the possibility.

I believe that in Drs. Adey, Michelson and ===== their respective staffs and Develco, we have the makings of an extraordinary well qualified, competent and enthusiastic team nucleus.¹⁵

This line basically indicated that he expected research inputs at least from three doctors. Drs. Ross Adey and Robin. P. Michelson were mentioned in other parts of this letter, while the other classified doctor showed up here just once. That cannot be right as it was necessary to legitimate his expectation of the cooperation, implying that it had to be this doctor who initially encouraged him to pursue this project proposal: i.e. the other classified personnel. This doctor should be one of the leading doctors who was specialized in the brain physiology and also quite near to the CIA, as an almost given fact, even to affect a course of their research direction. Considering the other two doctors and Mr. Gow had worked in the California, UCLA, UCSF and Develco, this other person had to be located there as well. The most suitable identity was Dr. Mary Brazier at Brain Research Institute, UCLA, who was the leading doctor in this field and also quite near to the CIA. She was sponsored by the CIA for MKULTRA Subproject 119 with her colleague, Dr. Adey¹⁶, which also explained why their research target was apparently an extension of that subproject. Having said that, it is quite hard to confirm the real identity of this classified person just from this information without any others.

Brazier’s later work

Dr. Mary Brazier had always been a prominent figure for the brain research since the 1950s until the 1980s, though her work was transient over the time. She was concerned on the electric phenomenon in the brain nervous system and its analysis through the EEG technology from the start of her career. She became one of the leading doctors in this field already in 1950s and also one of the founding members to establish IBRO (International Brain Research Organization) around the start of the 1960s, which she

assumed a secretary general from the late 1970s.

However, she stopped writing on the general issue on EEG until the middle of the 1970s and spent more time on the history of researches about the electric phenomenon in the human organism. She apparently did not change her interest, while she halted her work on the updated technologies. It might be because she became old enough to ponder a philosophical meaning of the brain research as she was born in 1904. Or, there was another possibility that her team made a success to manipulate the human brain with remote stimuli, sponsored by the CIA, which obliged her not to write due to the classification as the whole secret in the end.

This explanation made sense as she was still a practitioner even in the 1980s when her writing was spent on the historical and philosophical themes. Additionally, her historical interest was set toward “Pioneers in the discovery of evoked potentials”¹⁷, to elaborate on how the research had progressed to elucidate brain direct reactions against external stimuli. This theme was actually not far from her on-going works in the 1970s that she wrote some papers on how the electric seizure occurred at the epileptic brain, which was monitored with in vitro electrode through the EEG analysis. She, until then, came to realize that the brain functioned or malfunctioned with an electric burst at a certain frequency or frequencies. This realization did not determine that she was the classified personnel in Mr. Gow’s letter, though it raised a possibility that she was involved in the program to develop the capability to read or control the brain with remote means. She was actually the main researcher for this goal affiliated to the CIA in the 1960s, highly likely kept that status later to support the agency to gain new technology for the intelligence gathering directly from the brain.

EM effect in vitro

As she researched, the electric seizure concurrently irradiates a certain pattern of frequencies which has been more elucidated since then. The below is a citation from the paper related to this matter, “High-frequency oscillations and seizure generation in neocortical epilepsy”.¹⁸

We describe, for the first time in an unselected group of patients with neocortical epilepsy, the finding that high-frequency (60±100 Hz) epileptiform oscillations are

highly localized in the seizure onset zone, both before and temporally removed from seizure onset.

Many experiments basically mention that the electric seizure begins with the high-frequency or relatively higher frequency amongst normal brain activities. This fact implies that we can decode the brain activity from the frequency standpoint. Dr. Brazier also had a clinical interest in the electric signal on the muscle movement, which is also more elucidated. The below is quoted from one of the suitable recent studies, "A $\theta - \gamma$ Oscillation Code for Neuronal Coordination during Motor Behavior".¹⁹

The motor cortex of humans shows a transient increase in γ band (80 Hz) activity around the time of movement (Crone et al., 1998; Gaetz et al., 2010; Yanagisawa et al., 2012), as in the high- γ activity reported here, whereas μ (8–14 Hz) and β (15–30 Hz) oscillations are prominent during movement preparation and suppressed during movement execution (Miller et al., 2012).

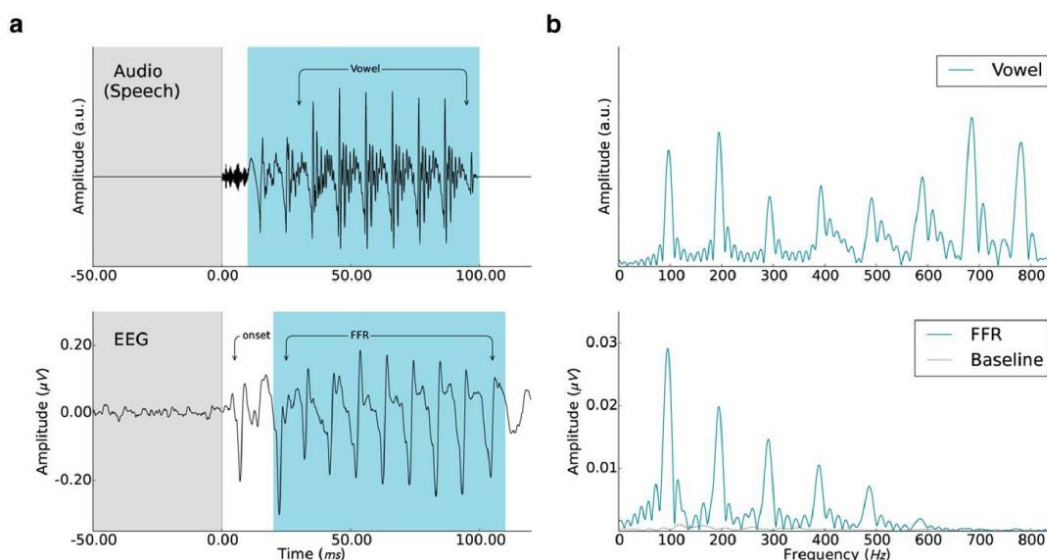
This kind of developments holds true to works conducted by other doctors named on Mr. Gow's letter. Dr. Robin Michelson was a leading doctor on the otolaryngology in those days, working at the UCSF, closer to Develco run by Mr. Gow. Their relation seemed tight and had a joint research, which was written on the third letter.

Within the past few weeks, on the joint Michelson/Develco program, we were able to identify, on a scalp probe, the electrical analog of an audio signal applied in a test subject's ear. The results appear to be unambiguous and free from artifact. This represents a potentially significant step forward which, while it is a very long way from thought reading, could eventually lead to a greatly improved understanding of the overall processing mechanisms involved.²⁰

His wording was characterized by his engineering background, requiring some clarifications, especially for the first sentence. It had already known that our brains irradiate electrical frequencies when we hear a sound in our ears, which is called FFR, Frequency Following Response. However, it was still not known at that time, how to observe the phenomenon from the outside of the head, as it had been captured through the electrode set into the brain. This joint team found out this frequency detected as an analog wave through the EEG on a scalp probe. This fact should be confirmed his paper published in Feb 1975, "Auditory Evoked Frequency Following Responses in Man".²¹ It

is a common practice to read FFR on the temporal scalp, but he was the one who found out this technique with the help of Develco and Mr. Gow according to this letter.

Figure 1: Example of FFR, Frequency Following Response



Cited from: Cortical Correlates of the Auditory Frequency-Following and Onset Responses: EEG and fMRI Evidence, Emily B.J. Coffey, Gabriella Musacchia, and Robert J. Zatorre, 2017

This figure should be one of the best representations of FFR, cited from the research paper “Cortical Correlates of the Auditory Frequency-Following and Onset Responses: EEG and fMRI Evidence”.²² The experiment was conducted at a steady state voice based on 98 Hz, though it had a harmonic in nature to show several spikes of the amplitude according to the multiples, on the top right graph. These were sound frequencies applied to the subject’ ear, which was transferred to the electric frequencies in the brain, shown on the bottom right. Both figures had a similar harmonic structure, though the brain interpretation was more simplified than the actual vocal harmonic pattern. These experiments were conducted for the medical practice or the further understanding of the brain function, though the CIA has had a different motivation. As Mr. Gow pointed out, they would like to use this approach for the thought reading from the outside, as its success yields a new way of the interrogation.

Dr. Adey’s work was also critical to the further understandings, which certified these phenomena from the physiological standpoint that he figured out the certain frequency triggering a chemical change in the brain.

Both frequency and amplitude sensitivities were observed in $^{45}\text{Ca}^{2+}$ efflux from the chick forebrain during field exposures. Decreased efflux occurred under most field conditions. Maximum effect occurred at frequencies of 6 and 16 Hz ($P < 0.01$) with field gradients of 10 V/m.²³

He had always asserted the importance to grasp the physiological phenomenon against the electromagnetic exposure, which was clearly mentioned in the letter he sent to Mr. Gow and in the critical review against the SRI's remote viewing.²⁴ He actually found out the brain cell effluxes calcium when exposed to the certain frequency ranged and later realized that the whole brain was more affected by the electromagnetic environment.

Remote synchronization

Dr. Adey found out the calcium efflux in the brain caused by the certain frequencies, though the phenomenon itself had been already known that the human brain was affected by the remote electromagnetic stimuli. SRI's GRILL FLAME project was well known as a psychic program to see remote objects, though it was originally one of the experiments to confirm the human reaction against the remote stimuli.

In a number of laboratories evidence has been obtained indicating the existence of an as-yet-unidentified channel wherein information is observed to couple from remote electromagnetic stimuli to the human nervous system as indicated by physiological response.²⁵

This was stated at the onset of the research proposal written by SRI to the potential sponsors, the CIA and the US Defense organizations in 1976. Dr. Adey wrote a research paper on the calcium effect in the same year and found out its phenomenon at least in the previous year. I am not sure it was also a result of the experiment supported by the CIA, while it was highly likely that SRI knew this physiological explanation. However, they claimed it was not sufficient, "as-yet-unidentified", partly because they realized the broader phenomenon that the brain is coupling to the remote electromagnetic stimuli, which has been clearly recorded through EEG. It is the couple that the brain synchronizes the same frequency given remotely, apparently more than the calcium efflux caused by the certain frequencies.

In this proposal, they preferred to use the frequency (9-11 Hz) and already knew that 16 Hz had the same effect. Dr. Robert E. Ornstein retested the original SRI's work and found out this frequency had the same effect, the remote synchronization.²⁶ He was even invited to the SRI's experiment to control the protocol as his way was more meticulous than the original work. Dr. Adey later wrote another note related to the remote synchronization as well.

As a representative model of receptor coupling to intracellular enzymes, Luben [1991] has examined EM field effects on coupling of the parathyroid hormone (PTH) receptor to adenylate cyclase via a G protein. Osteoblasts exposed to a 72-Hz pulsed magnetic field for as little as 10 min show a persistent desensitization to the effects of PTH on adenylate cyclase.²⁷

We have a plenty of studies that the human brain and organism synchronizes to the remote electromagnetic stimuli, though there is one critical leftover issue that it is not easy to create low-level electromagnetic stimuli or to irradiate the extremely low frequencies, ELF. In the early 1970s, the electromagnetic field was dependent on the apparatus and many laboratories used different frequencies restricted to its capacity. That was a part of the reason why Dr. Ornstein used a different frequency to the SRI's experiment. Having said that, there were facilities already capable to manipulate extremely low frequencies and send the signal to the remote subject, even in those days.

ELF development by US navy

The US Navy had an interest in the ELF before those experiments as means of the long-distance communications system. "The Department of the Navy announced on July 1, 1968 that an ELF communications test facility would be constructed in northern Wisconsin."²⁸ They built another facility in Michigan, implying their seriousness on this technology. The submarine should rise from the deep water when receiving signals, while the extremely low frequency goes through the water in depth, which was why the US Navy would like to obtain the communications system encoded in ELF.

However, there has been a concern on this frequency band having an influence on the environment and creatures including the human being. It is partly because the brainwave is coded in the ELF and partly because they knew the remote ELF stimuli affecting on

the brain through those experiments which were supported by various US military outlets. They made a series of environmental feasibility studies on this matter, accordingly and, the initial study was asked to AIBS, American Institute of Biological Sciences, which concluded as follows.

The AIBS Committee members are in agreement with the conclusion of the 1977 Academy report, and based on their finding in this study, the Committee believes that it is still unlikely that exposure of living systems to ELF electric and magnetic fields in the range of those associated with the Navy's ELF communication system can lead to adverse public health effect or to adverse effects on plants or animals. However, because of certain ambiguities in the scientific literature, the Committee recommends that the Navy continue to monitor the literature and respond appropriately to any significant new information.²⁹

This statement was a little hedged, though basically concluded that no influence was expected by the Navy ELF communications system, while this hedge required the US Navy to monitor further studies in this field. Their final report concluded the same in 1986 that it was unlikely that the Navy ELF had an adverse influence on the living system, while they realized a slight impact.

Physiological and neuroendocrine effects were evaluated in experiments on small animal exposed in vivo to ELF electromagnetic fields. Some studies involved lengthy expo-exposures. At present, the physiological significance of the reported effects is uncertain, and many tests show no overall disruption of the neuroendocrine system.³⁰

This account was misworded a little, though the meaning is quite clear that there were some experiments showing small animals were affected remotely by the ELF exposure, though it was under the unusual circumstance; exposed to the lengthy time frame. Adding to this, they at least realized researches conducted by Dr. Ross Adey, which was more or less apparent that they actually asked him to review SRI's remote viewing in 1984 as there was not enough outcome to continue its development.³¹ The US Navy was not necessarily ignorant on the related issue that the human brain and organism is affected by the remote electromagnetic stimuli, but they underestimated its capability as they would like to deploy the ELF communications system. Their intention was justified by AIBS's review and their following monitor on the published reports that there was no

significant result to clearly show the electromagnetic stimuli was a danger to any living systems.

Their attitude provides one answer that any US military outlets had not been involved in the development of the remote electronic means to activate the human organism or to read the human brain. They consider the remote viewing and ELF communications system were more important than the capability to activate and read the human brain, which is more applicable to the interrogation and human intelligence. That was why they had focused on the remote viewing, not the whole remote sensing and it was only the CIA that spent money on new technology to manipulate the human being remotely.

Machine Development

The laboratory experiment is not necessarily transferred to the application in the universal environment, requiring some technological developments as well. Although, those initial experiments were conducted in the 1970s; i.e. the technology has by far advanced. There is still a general understanding that the ELF irradiation requires a huge facility and it is partially true, but not the whole truth. As mentioned, the US Navy built a pilot ELF facility in Wisconsin in the 1960s, which was upgraded to the gigantic system built in Michigan in the 1980s.

The ELF IL Product (antenna length times antenna current) needed for those signal strengths was then calculated. For the best deep-earth conductivities expected in the upper Great Lakes region (typically 3.2×10^{-4} siemen/meter at 76 Hz), the IL Product is 27×10^6 ampere-meters, one-half of which is provided by the ELF Facility in Wisconsin (28 miles of overhead antenna operated at 300 amperes). An antenna current of about 150 amperes, and an antenna length of 56 miles in Michigan would produce the remainder of the IL Product. One-half of the antenna length will be perpendicular to the other half.³²

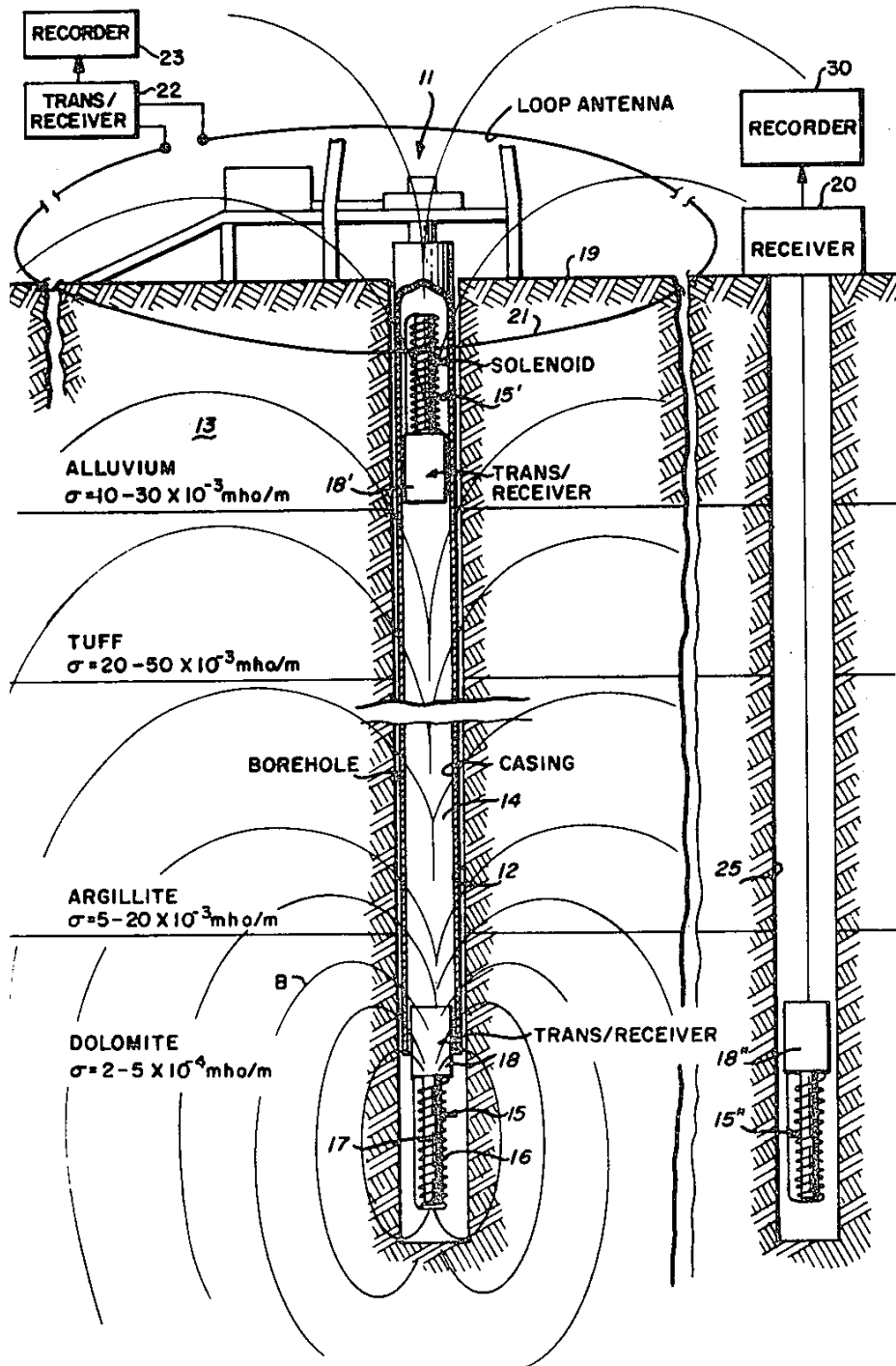
It is theoretically necessary to use the long antenna to irradiate the extremely low frequency and the US Navy prepared a 56-mile one for the new Michigan system. This condition was changed when they constructed the antenna system for HAARP, High Frequency Active Auroral Research Program, which was also capacitated to send the ELF signal.

Generation of ELF/VLF Waves: Much of the research at the facility is focused on the generation of ELF/VLF because of the value of these frequencies to the Navy for undersea applications. Propagating radio waves in the ELF/VLF frequency range are generated at the lower edge of the ionosphere when high-power HF radio waves modulate the conductivity of the ionospheric D and E layers in the presence of a background or “electrojet” current.³³

This statement explained the experiment under HAARP at the time when this review was written in 2004 by the Naval Research Laboratory. Some of the facilities were still under construction in those days, though they had already made a success to send ELF/VLF waves, while it requires a remark as their irradiation is not straightforward. They basically send high-power high-frequency radio waves to the ionosphere where ELF waves are separated out and sent back to the earth. When they encode the signal on the lower-end of high-frequency radio waves’ array, it can be received by the submarine under the deep water as the ELF signal. The US Navy has had scaled facility for their ELF communications system, which required to send the signal to the long distance. This procedure has been assumed to be normal, but it is not necessarily the case for a short distance with a weak current.

SRI already had an apparatus to manipulate the low-end electromagnetic field in the 1970s, which could deliver ELF signals remotely. As mentioned, it was built by Develco run by Mr. Robert Gow and the research was supported by the CIA and the US military outlets, initially. In their patent 3,696,201, Develco illustrated the facility to manipulate the frequency between 1 Hz and 1 MHz, whose size was substantially smaller, still long enough, though.

Figure 2: Develco's Magnetometer Patent



Cited from: United States Patent 3967201

The apparatus had an antenna on the top, indicating ELF waves were irradiated according to the manipulated frequencies, while the issue was still a size. It was downsized to 11,000 feet³⁴, almost 2 miles from 56 miles though still too long to mobilize.

Regarding the size issue, there was a similar but contradictory figure scripted by the CIA officer who overlooked the machine delivery from Develco to SRI.

Figure 3: Magnetometer used at the SRI experiment

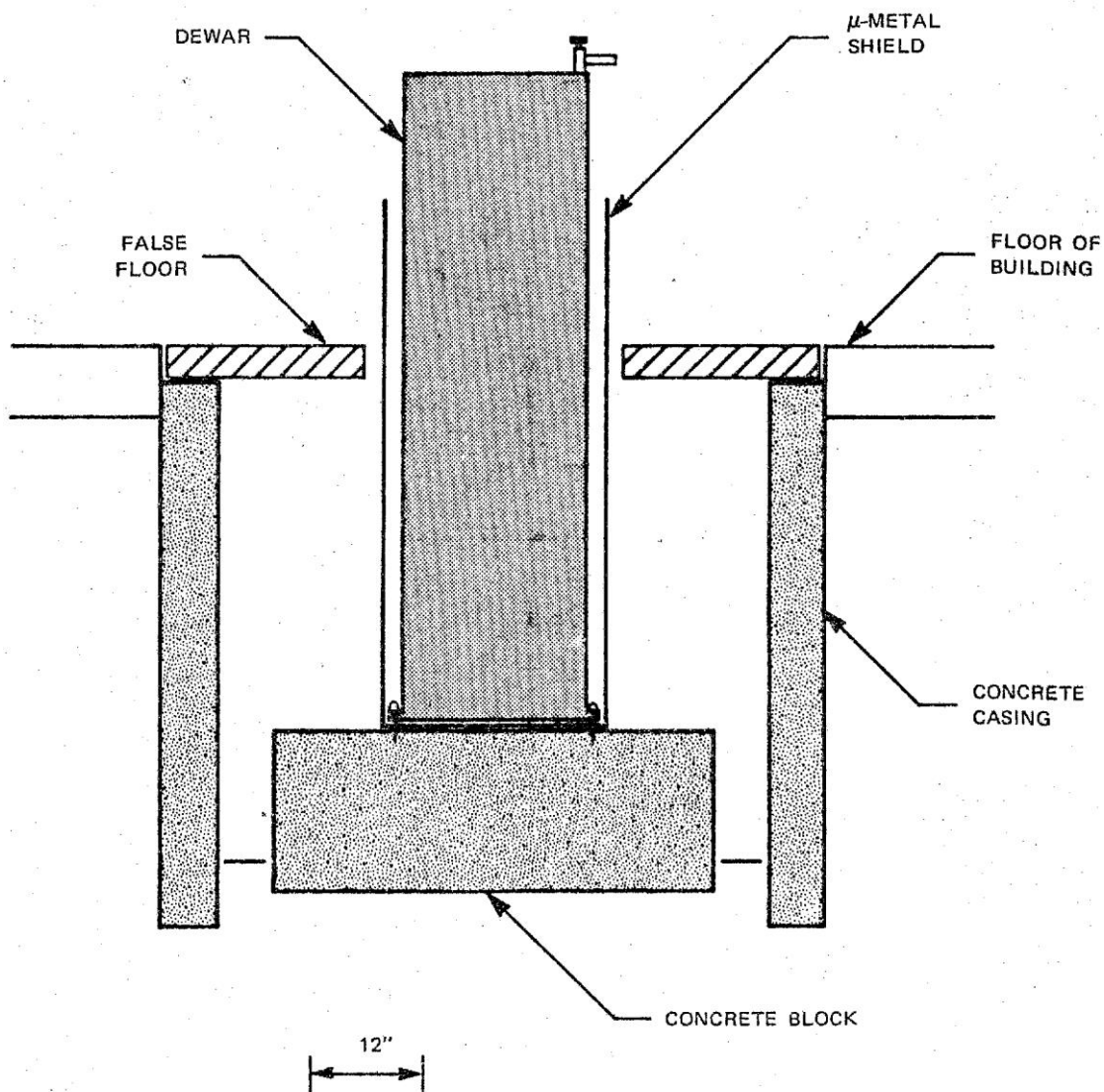


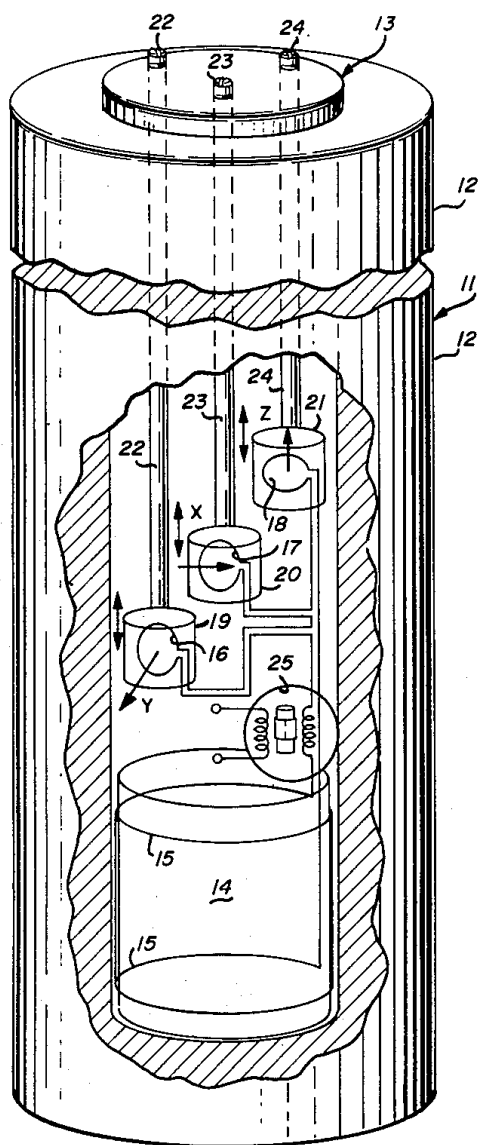
FIGURE 1 MAGNETOMETER HOUSING CONSTRUCTION

Cited from: CIA-RDP96-00787R000200190001-1

Those two figures were quite similar as both were invented by Develco to manipulate the electromagnetic field, while the size was completely different; it was about 10 feet long, considering the 12" measure written below. This downsizing should be achieved

by a replacement of the core magnetometer to the superconductor. The US patent 3,956,690 was also submit by Devleco and it was about the superconductor to create an electromagnetic field in the similar structure shown above.

Figure 4: Superconductor magnetometer



Cited from: United States Patent 3956690

This patent explained it was supported by the US Navy, implying that this was the one used at SRI's experiment. Mr. Gow actually mentioned this technology in the third letter to propose the experiment for the remote electromagnetic means.

Materially improved and far more reliable noncontact polygraphs. There are at least two prime candidates, in this regard; the cryo-magnetic and a combination of infrared and microwave.³⁵

This cryo-magnetic exactly meant the superconductor built by his company, though it is still hard to elucidate how he would like to apply this machine to the polygraph. He envisioned this electromagnetic capability to be developed as a thought reading, hence he might mean this machine could be used for that purpose. For example, this whole facility could be used for the receiver of ELF waves as well, which could be one way of the ideas to read the human brain. I could not decipher what he thought or what the CIA considered in those days as a technological backing, but it is clear that they have had a motivation to deploy it to the human intelligence, to take the information directly from the brain and to manipulate the subject through the electromagnetic wave.

It is also clear that they acquired the basic facility and technology for that purpose in the middle of the 1970s, at the same time with the physiological elucidation that their affiliated doctors found out the brainwave was synchronized to the external electromagnetic frequencies. Their researchers also found out some of the basic coding in the brain, how it irradiates frequencies according to the brain behavior. The issues were left still, though the progress should be straightforward, considering the technology advancement from that time. They needed to make the apparatus smaller and easier to be mobilized; the superconductor has to function in the same way with a higher temperature through the time, which has reduced an electricity consumption; they needed to modulate frequencies for their final goals to read or manipulate the brain. There were more struggles left, though, the most of issues should be solved with the technology advancement from then to now.

Conclusion – MKULTRA 119 extended

There was a hidden project conducted by the CIA, which was purposed to read and manipulate the human brain remotely. It was different from the remote viewing, as they were skeptical of its capability and procedure, whose stance was also quite contradictory to the US military outlets that had supported those researches and developments for decades. Their difference resided on their respective motivations that the military would like to obtain the capability to locate the enemies and their facilities remotely, while the

CIA has desired to upgrade their human intelligence techniques with remote electromagnetic means.

The military ignorance was also seen at their development on the ELF communications system. They were required to conduct the environmental feasibility study to confirm there is no substantial effect on the environment including the human being. They continued to review this matter until 1986 from an establishment of their initial plant completed in the 1960s and concluded that their EFL irradiation should be harmless under the normal circumstance. It implied that the military outlets did not realize the covert CIA operation on the remote electromagnetic stimuli as they basically share the same wavelength, extremely low frequencies.

The agency originally had an intention to manipulate the electromagnetic signal, either reading it through the standardized reaction or activating human organisms with remote means. It was clearly articulated in MKULTRA Subproject 119 in the early 1960s, though it was ended with publishing some bibliographic books. This intention and their researchers were revived by the development in the early 1970s, especially by some advancement achieved by the SRI team. They eventually spent their whole resources into the remote viewing, but found out initially that the human brain was affected and synchronized to the remote low-level electromagnetic frequencies. The brain physiology was more elucidated since then and it is known that there are various frequencies encoded uniquely according to the specific brain functions.

It is the CIA that has developed this capability eligible to their human intelligence, to interrogate or manipulate the subject with remote electromagnetic means. Although, it is still unclear who was really in charge of these experiments. Dr. Ross Adey was one of the doctors related to this exact development and also to MKULTRA Subproject 119, but his consciousness indicated that he was not in charge, nevertheless he realized there was a big problem behind.

Life on earth has evolved in a sea of natural electromagnetic (EM) fields. Over the past century, this natural environment has sharply changed with introduction of a vast and growing spectrum of man-made EM fields. From models based on equilibrium thermodynamics and thermal effects, these fields were initially considered too weak to interact with biomolecular systems, and thus incapable of influencing physiological functions. Laboratory studies have tested a spectrum of

EM fields for bioeffects at cell and molecular levels, focusing on exposures at athermal levels. A clear emergent conclusion is that many observed interactions are not based on tissue heating. Modulation of cell surface chemical events by weak EM fields indicates a major amplification of initial weak triggers associated with binding of hormones, antibodies, and neurotransmitters to their specific binding sites.³⁶

This is the onset of his paper written in 1993 that he was vocal about the remote electromagnetic stimuli interacting with the human brain and organism. He was definitely involved in the CIA development of the remote electromagnetic means, but he sounded like he was not in charge, while he was fully aware that his research and experiment was paved to manipulate the human being electromagnetically. This was actually in line with the remark written in Mr. Gow's third letter: "and assuming Ross could be persuaded to become involved".³⁷

Mr. Gow's correspondences were accidentally declassified as a part of STARGATE, as he was a president of Develco to develop the superconductor apparatus used at the SRI experiments and his initial idea was actually ignited by their initial research with two psychics. However, their intention was clearly deviated from the remote viewing, partly due to the CIA's intention to use these technologies for the human intelligence rather than finding the enemies remotely and partly due to their affiliated researchers who were leading doctors specialized in the brain physiology to have an interest in the manipulation of the brain function with remote electromagnetic means for years. This progress was still classified but necessary to be disclosed to the public for better understandings how our brains and bodies are affected by the remote electromagnetic stimuli.

¹ Failure and Success of the Project STARGATE to develop the remote viewing capacity, Kenji Miyamoto, 2018

² Failure and Success of the Project STARGATE to develop the remote viewing capacity, Kenji Miyamoto, 2018

³ The CIA MKULTRA Subproject 119 was their initial electromagnetic program, Kenji Miyamoto, 2018

⁴ The CIA MKULTRA Subproject 119 was their initial electromagnetic program, Kenji Miyamoto, 2018 and Failure and Success of the Project STARGATE to develop the remote viewing capacity, Kenji Miyamoto, 2018

⁵ CIA-RDP96-00787R000400080004-8

⁶ MKULTRA Subproject 119-18

⁷ CIA-RDP96-00787R000400080004-8

⁸ Information transmission under conditions of sensory shielding, Russel Targ and Harold Puthoff, 1974

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- ⁹ August 2018 Alumni Association SRI International, written at a memorial for Louis H. Rorden
- ¹⁰ CIA-RDP96-00787R000100140001-7
- ¹¹ CIA-RDP96-00787R000400100013-5
- ¹² CIA-RDP96-00787R000100140001-7
- ¹³ CIA-RDP96-00787R000400080005-7
- ¹⁴ CIA-RDP96-00787R000400080004-8
- ¹⁵ CIA-RDP96-00787R000400080004-8
- ¹⁶ The CIA MKULTRA Subproject 119 was their initial electromagnetic program, Kenji Miyamoto, 2018
- ¹⁷ There are several related papers starting from, Challenges form the philosophers to the neuroscientists 1979; The early development of quantitative EEG analysis: The roots of modern methods, 1980; Pioneers in the discovery of evoked potentials, 1984
- ¹⁸ High-frequency oscillations and seizure generation in neocortical epilepsy, Greg A. Worrell, Landi Parish, Stephen D. Cranstoun, Rachel Jonas, Gordon Baltuch and Brian Litt 2004
- ¹⁹ A θ - γ Oscillation Code for Neuronal Coordination during Motor Behavior Jun Igarashi, Yoshikazu Isomura, Kensuke Arai, Rie Harukuni, and Tomoki Fukai 2013
- ²⁰ CIA-RDP96-00787R000400080004-8
- ²¹ Auditory Evoked Frequency Following Responses in Man, Robin P. Michelson, Wilbur R. Vincent, 1975
- ²² Cortical Correlates of the Auditory Frequency-Following and Onset Responses: EEG and fMRI Evidence, Emily B.J. Coffey, Gabriella Musacchia, and Robert J. Zatorre, 2017
- ²³ Sensitivity of calcium binding in cerebral tissue to weak environmental electric fields oscillating at low frequency, S. M. BAWIN AND W. R. ADEY, 1976
- ²⁴ The previous paper or, CIA-RDP96-00792R000600230001-6
- ²⁵ CIA-RDP96-00787R000200120002-7
- ²⁶ CIA-RDP96-00787R000500240024-7
- ²⁷ Biological Effects of Electromagnetic Fields, W. Ross Adey, 1993
- ²⁸ A109555, US Military declassification, P7
- ²⁹ A152731, US Military declassification
- ³⁰ A179987, US Military declassification, PDF17
- ³¹ Failure and Success of the Project STARGATE to develop the remote viewing capacity, Kenji Miyamoto, 2018 or CIARDP96-00792R000600230001-6
- ³² A109555, US Military declassification
- ³³ NRL Review 2004, (Naval Research Laboratory)
- ³⁴ United States Patent 3967201
- ³⁵ CIA-RDP96-00787R000400080004-8
- ³⁶ Biological Effects of Electromagnetic Fields, W. Ross Adey, 1993
- ³⁷ CIA-RDP96-787R000400080004-8