Journal of
Scientific
Exploration

Anomalistics
and
Frontier
Science

RESEARCH BRIEF

A Plausible Thermo-Dynamic Cause of an Implausible Psicho-Dynamic Course From The CIA Archive

Daqing Piao

daqing.piao@okstate.edu

School of Electrical and Computer Engineering, Oklahoma State University

SUBMITTED April 10, 2023
ACCEPTED April 19, 2024
PUBLISHED June 30, 2024

https://doi.org/10.31275/20242959

HIGHLIGHTS

Advanced analysis suggests that inexplicable temperature changes documented by a Chinese study within declassified US-government records could have a common hidden link to brain functioning.

ABSTRACT

The STAR GATE archive included an experiment from China of psicho-physical claim reportedly conducted on aqueous object (Wu et al, 1991). Over a time-lapse of approximately 208 seconds, total 7 phases of significant temperature deviation from the baseline temperature of 25 °C may be identified, without an explainable source of thermal generation. Not questioning the genuineness of the experiment, this work analyzes the thermal-energy transfer on the test-object that could have caused the reported temperature changes. A non-adiabatic single-compartment produces first-order low-pass responses between a thermal-input and the object's temperature. Whereas the input determines the steady-state condition, the thermal dissipation dictates the dynamics. Under the assumption of ONLY first-order responses and adjusting the input parameters including DC and AC magnitudes and time-constant of the single-compartment responses, multi-phase temperature changes resembling the reported patterns could be reconstructed. One rising phase and three falling phases with apparent oscillation were reconstructed by considering the thermal input to contain modulatory patterns of 0.4-0.5 Hz in frequency. Such modeled modulation of the thermal inputs would correspond to a correlation coefficient of 0.95 between the DC and AC magnitudes at a varying AC/DC modulation-depth of ≤ 94%. The low-frequency may suggest relevance to altered neuro-electro-physiology.

KEYWORDS

Psi, PK, China, CIA, STAR GATE, heat transfer.

INTRODUCTION

The vast volume of CIA's STAR GATE archive that has been declassified to the public [1] included an experiment originated from China in 1991 [2]. That experiment concerned an anomalous or an unexplainable change of the temperature of a body of aqueous object held in the hand of one individual claimed to have psicho-physical faculty. Since there was no additional information regarding the details of the experiment, the document included in the declassified archive needs to be taken in its original form and entirety towards any discussion concerning the experiment. However, before initiation of this present work, the author (Piao) discovered that he met the first author (Wu) of the referred document once in a professional setting more than 2 decades ago (between 1995 and 1998, a time when Piao had no prior knowledge of the referred document of Wu) when Wu was an advisor to the employer of Piao at that time. By tracing the declassified document, Piao was also able to access the original Chinese version of the report of the experiment with help from a friend (see Acknowledgement). Because of the personal knowledge of the professional credential of Wu as the first author of the referred document, the experiment reported in this declassified document will be discussed in terms of focusing on only the aspects that were mechanistically subjectable to model-analysis, without questioning the genuineness and complete controllable conditions of the experiment.

That original report appearing in Chinese presented only one figure which was slightly miss-aligned in terms of the leveling of the abscissa, as was archived in the English version. The English translation of that report fixed the alignment of the figure, as is snapshot reproduced in **Fig. 1** *by overlapping with shades of different colors and sizes and addition of some numbers and symbols for the convenience of segmenting*. What Fig 1 registered corresponded to the following results claimed in [2]: the temperature of approximately 5 ml of water contained in a test-tube that was held in one hand of an individual of psi-cho-energetics claim was monitored with semi-conductor temperature sensor having a time-resolution of 0.2 seconds. The temperature of the water in the test tube was registered over a duration of approximately 208 seconds, covering the claimed psi-cho-energetic tasking of the individual. The water temperature rose 27 °C above the baseline temperature of 25 °C in approximately 52 seconds, then fell 27 °C back to the baseline in approximately 142 seconds.

The global course of the temperature change registered, as is shown in Fig. 1, may be observed in more detail. The rising phase could separate to three consecutive stages differing in the patterns of temperature change: a stage lasting ~30 seconds making a slow and small temperature rise of ~1 °C from the baseline, a stage lasting ~8 seconds making a fast temperature rise of ~22 °C with resolvable oscillations, and a stage lasting ~14 seconds making a saturating-limited temperature rise of ~4 °C. Likewise, the falling phase could split to four cascaded stages with differing patterns of temperature change: a stage lasting ~57 seconds making a near linear temperature reduction of ~15 °C overlaid with apparently small and un-damped oscillations, a stage lasting ~63 seconds making a temperature reduction of ~3 °C with a small and frequency-relaxed undamped oscillation, a stage lasting ~19 seconds making a temperature drop of ~6 °C with a small oscillation, and a stage lasting ~3 seconds making a temperature drop of ~3 °C to the baseline.

The thermal response of any system depends upon the rate of heat transferred into the system by external

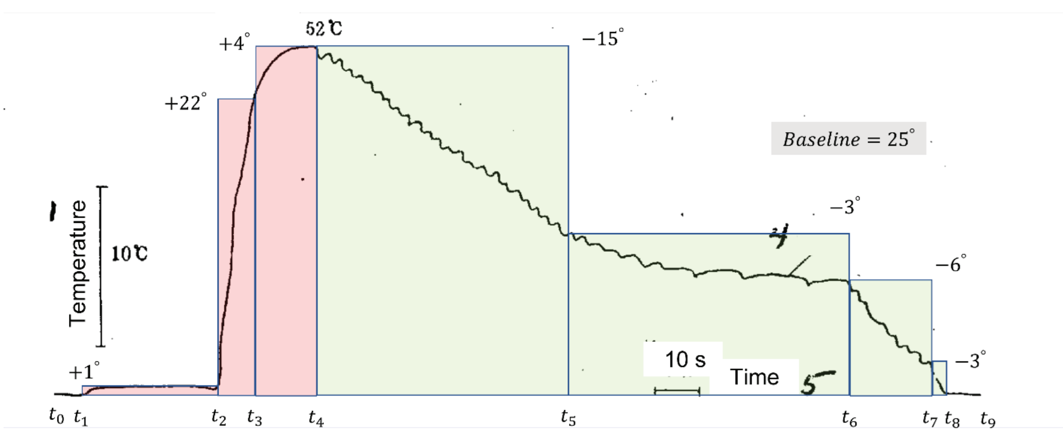

Figure 1. The course of temperature change reproduced from the open-accessed document of [1], with the Chinese words replaced and covered by English translation. The shaded areas mark the zones wherein the temperature deviated from the baseline. The phase of temperature rising from the baseline of 25° to 52° seems to have consisted of three stages, one of small increase with oscillation, one of fast increase with oscillation, and one of saturating increase with no oscillation. The phase of the temperature falling from 52° to the baseline of 25° seems to have consisted of four stages, one of near-linear reduction with undamped oscillation, One of reduction a saturating pattern overlapped with amplitude undamped but frequency-stretched oscillation, and two of fast reduction with undamped oscillation.

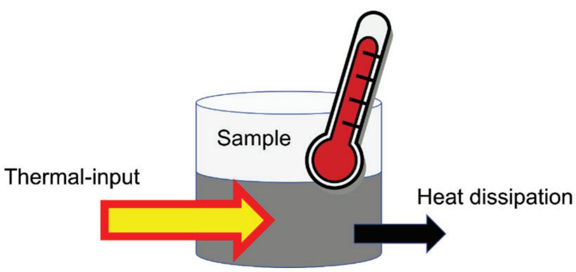

Figure 2. Simple model of the thermal energy change of a non-adiabatic object. The thermal input actively applied by an external source increases the temperature of the object, while the heat dissipation by the object passively interacting with the environment reduces the temperature.

source or internal generation that takes additional energy, and the rate of heat dissipation of the system to its environment. The dynamic patterns of the temperature changes as were registered in Fig. 1, the stages of rising and falling phases combined, could not be accounted for by local means of energy source or generation and the rates of passive heat-transfer that must have existed between the test object and its environment [2]. The difficulty of reconciling the temperature changes as were registered with the existing frames of physics has made the reported phenomenon unexplainable without resorting to anomalous faculty or fraud. However, it must be noted that the test-object was a volume of aqueous body, to which heat-transfer principles shall enable quantifying the effect on the temperature of the body when resulted from a given pattern of energy or heat actively introduced into the object-body and a known rate of heat dissipation by the object-body into the environment. This shall be true and practiced, regardless of whatever the root cause of the energy source might have been and whatever rate of heat-transfer could have become, in explaining the measured temperature changes of the aqueous body. This is especially important, considering the potential implication if such an experiment could be understood, even partially. By analyzing the heat-transfer or thermodynamics courses that may be congruent with the temperature changes of the test object, it may be plausible to minimize the unknown factors pertinent to the controls of that experiment to only those with psichophysical manifestation.

METHODS

Simple Single-Compartmental Model of the Thermodynamics of the Test Object

This section presents a simple model of the temperature change of the test object using a single-compartmental model as is conceptualized in **Fig. 2**. For a non-adiabatic system, the net difference between the rate of the heat generated in (or actively produced into) the system and the rate of the heat passively dissipated from the system to the environment, contributes to the change of the temperature of the system scaled by the heat capacity of the system. By treating the test object as a compartment, i.e., the change to its internal energy is instantaneously distrusted throughout the entire volume, a simple model of the rate of thermodynamic change is obtained as the following:

$$C_v \frac{dT(t)}{dt} = -K_{diss} \cdot \Delta T(t) + P_{in}(t) \tag{1}$$

Where C_v is the constant-volume heat capacity [J, [J · kg^{-1} · K^{-1}], T(t) is the absolute temperature [K], dT(t)/dt is the differential change of the temperature T(t) over a time-interval of dt, K_{diss} is the lumped rate constant of the passive heat transfer or dissipation to the environment [J kg^{-1} · K^{-1} · s^{-1}], $\Delta T(t) = T(t) - T_0$ is the temperature change from a previous value of T_0, and $P_{in}(t)$ is the rate of heat generation from an external source [J · kg^{-1} · s^{-1}j] that becomes the thermal input to the system.

Since $d\Delta T(t) = dT(t)$, we have from Eq. (1):

$$C_v \frac{d\Delta T(t)}{dt} = -K_{diss} \cdot \Delta T(t) + P_{in}(t) \tag{2}$$

Note that the ratio between the heat capacity C_v and the rate contrast K_{diss} carries a unit of time therefore it effects a time-constant of the following:

$$\tau = \frac{C_v}{Kdiss} \tag{3}$$

$$\frac{d\Delta T(t)}{dt} = -\frac{1}{\tau} \cdot \Delta T(t) + \frac{1}{K_{diss}\tau} P_{in}(t) \tag{4}$$

It is straightforward to obtain from Eq. (4) the transfer function between the active thermal input and the resulted temperature change as follows

$$H(s) = \frac{1}{K_{diss}} \cdot \frac{\frac{1}{\tau}}{s+\frac{1}{\tau}} \tag{5}$$

Equation (5) specifies a low-pass response characterized by a cut-off angular frequency of $1/\tau$ and a pass-band gain of $1/K_{diss}$.

The Response of the Single-Compartmental System to Step and Sinusoidal Inputs

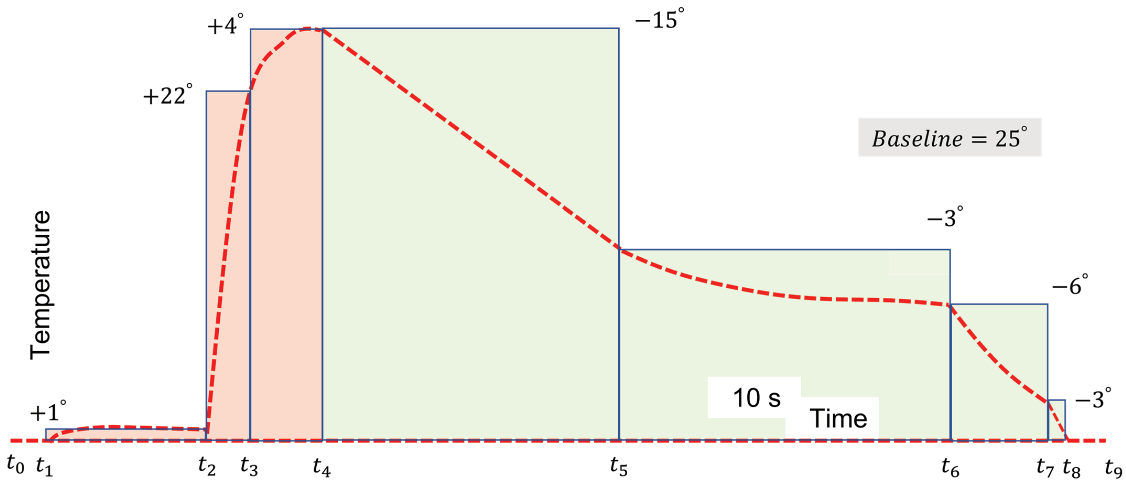

Figure 3. Hand-emulated trace of temperature change based on Fig. 1. The shaded areas are the same as those in Fig. 1. The hand-sketch only captured the global pattern of the change in each of the shaded segments. Overlaying the hand-sketched trace on simulated traces allowed gross-examination of the quality of the simulation reconstructions of the temperature change.

Now let's examine two simple functions of the rate of heat generation as the input to the system. We consider a constant rate of external heat generation of the following:

$$P_{in}(t) = A_{step} \cdot u(t) \tag{6}$$

Where A_{step} is the amplitude of the rate of heat generation per weight [J $\cdot kg^{-1} \cdot s^{-1}$], and $u(t)$ is the Heaviside function. The transfer function of Eq. (5) will respond to this input with the following output:

$$\Delta T(t) = \frac{A_{step}}{K_{diss}}\left[1 - exp\left(-\frac{1}{\tau}t\right)\right]u(t) = A_{step}\frac{\tau}{C_v}\left[1 - exp\left(-\frac{1}{\tau}t\right)\right]u(t) \tag{7}$$

This is a first order "charging" curve with a time constant of $\tau = C_v/K_{diss}$ and a saturation value of $A_{step}\ \tau/C_v$ which becomes the saturated change of the temperature. Denoting the measured saturated change of temperature as A_{pc} [°C], we have

$$A_{step} = \frac{A_{DC}}{\tau} C_v \tag{8}$$

We then consider an external heat generation that oscillates as the following:

$$P_{in}(t) = A_{sinu} \cdot cos(\omega t) \cdot u(t) \tag{9}$$

Where A_{sinu} is the amplitude of the oscillation [J $\cdot kg^{-1} \cdot s^{-1}$], and ω is the angular frequency of the oscillation. The transfer function of Eq. (5) will respond to this input with the following complete output:

$$\Delta T(t) = \left\{-\frac{A_{sinu}}{K_{diss}} \cdot \frac{1}{\sqrt{1+(\omega\tau)^2}} \cdot exp\left(-\frac{1}{\tau}t\right) + \frac{A_{sinu}}{K_{diss}} \cdot \frac{1}{\sqrt{1+(\omega\tau)^2}} \cdot cos\left[\omega t - tan^{-1}(\omega\tau)\right]\right\} \cdot u(t) \tag{10}$$

Equation (10) represents an exponentially damping value overlaid on a steady oscillation that becomes the measured oscillating change of the temperature. Denoting the measured amplitude of the temperature oscillation as A_{AC} [°C], we have:

$$A_{sinu} = C_v \frac{A_{AC}}{\tau} \cdot \sqrt{1 + (\omega\tau)^2} \tag{11}$$

Should the input be the linear combination of the two types specified by Eqs. (6) and (9), respectively, the resulting response will be the linear combination of the two patterns specified by Eqs. (7) and (10), respectively. And the steady-state temperature change in responding to that combination of the inputs shall manifest both a global change and an oscillating component. Identifying the global change and the oscillating component shall allow estimating the respective levels of step-input and the amplitude of the oscillating input, using Eqs. (8) and (11).

Gross Assessment of the Model-Data Fit Based on the Global Patterns

Examining the model-data fit requires access to the raw data. However, a digital format of the raw data of the temperature change as is depicted in Fig. 1 is unavailable. To facilitate the examination of the model output against the data of Fig. 1, an alternative strategy was implement-

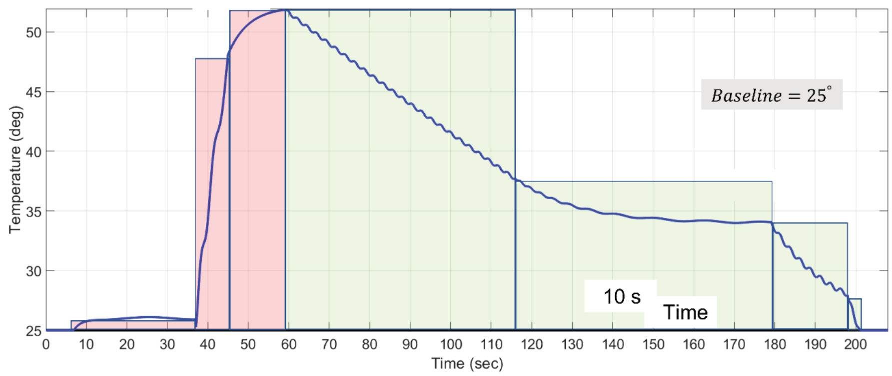

Figure 4. The estimated time-course of the temperature change. The shaded areas are the same as those in Fig. 1.

ed. The global course of the temperature patterns was hand-sketched along the traces of Figure 1 using computer mouse, by disregarding the oscillating patterns due to the resolution limitation of hand-sketching as shown in Fig. 3. The hand-sketching was tried many times until the lower and upper levels of a characteristic segment matched the respective levels on the figure. The time-lapse and the temperature change of each characteristic segment were estimated by referencing to a horizontal bar-scale representing a time-duration of 10 seconds and a vertical bars-scale marking a temperature change of 10 °C. The number of oscillations were also approximated for the pertinent segments. The estimated time-lapses and temperature changes of a total of 9 arbitrarily sectioned stages are given in Table 1.

For those sections manifesting relaxation (chirping) of the oscillating frequency, the frequency was given an exponentially-reducing time-variance with respect to the frequency at the beginning of the local segment as the following:

$$\Delta\omega = \eta \cdot \omega_0 \cdot exp(-2\pi f_\omega t) \quad (12)$$

Where η is the total relative change of the frequency scaled over the base (beginning) frequency of the segment, and $f_\omega \bar{A}$ [1/s] is a rate of the change of the frequency, or the ramping frequency.

RESULTS

The Estimated Course of Temperature Changes

The course of the temperature changes as estimated according to the methods detailed heretofore is shown in Fig. 4. Figure 4 has included the same 7 shaded areas as in Fig. 1 to visualize the global match of the model output with the data of Fig. 1.

Figure 5 replicates the course of the temperature change of Fig. 4 by also including the amplitude and the polarity of the targeted saturated total temperature change that is needed to make the recorded change over the given duration of time. Figure 5 also included the parameters fitted for each segment in an individual frame. Within each set of the parameters, $\bar{A}$ represents A_{step} of Eq. (6), and $\tilde{A}$ represents A_{sinu} of Eq. (9), The subscript of the parameter corresponds to the stage over which the associated set of parameters have been assessed for.

The stage of a small temperature rise of 1 °C over 30

Table 1. The Time-Lapses and Temperature Changes of a Total of Nine Arbitrarily Sectioned Stages

Section	Duration (seconds)	Ending time (seconds)	Temperature change (°C)	Ending temperature (°C)	Oscillating?
1	7	7	0	25	No
2	30	37	1	26	Maybe
3	8	45	22	48	Yes
4	14	59	4	52	Yes
5	57	116	-15	37	Yes
6	63	179	-3	34	Yes
7	19	198	-6	28	Yes
8	3	201	-3	25	Maybe
9	7	208	0	25	No

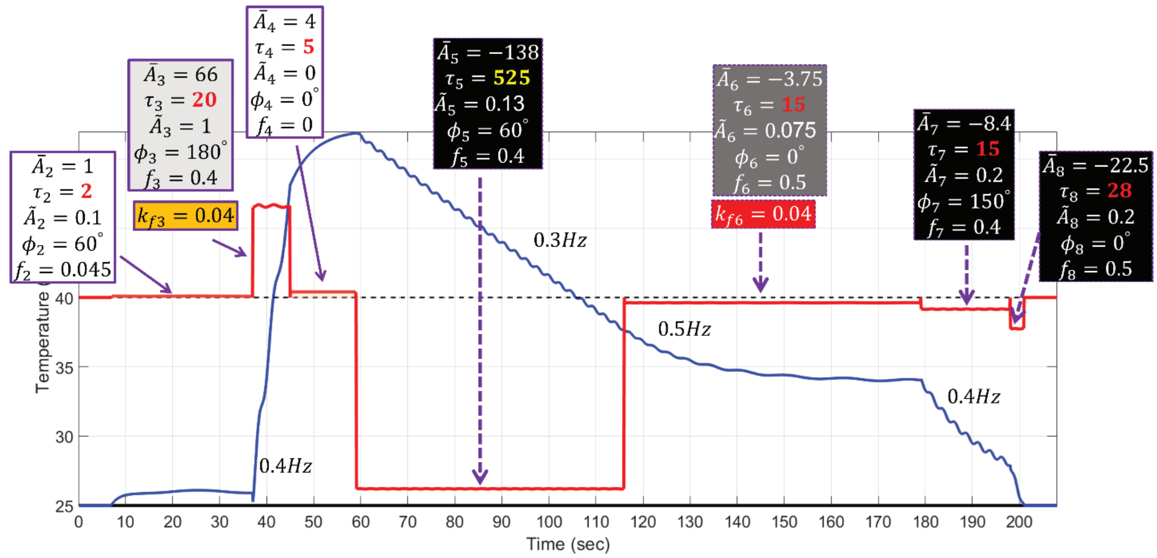

Figure 5. The reconstructed course of temperature changes overlayed with the corresponding courses of the targeted saturation-level change. The framed parameters were the numbers used in the model for producing the traces in each corresponding segment of temperature change.

seconds was fitted with a step change having a saturated temperature increase of 1 °*C* responded by a time-constant of 2 seconds. Adding a small oscillation pattern having an amplitude of 0.1 °*C* , a frequency of 0.045 Hz, and a beginning phase of 60° made that segment of trace grossly resembling the corresponding section of Fig. 1. The stage of a large temperature rise of 22 °*C* over 8 seconds was fitted with a step change having a saturated temperature increase of 66 °*C* responded by a time-constant of 20 seconds. Adding a small oscillation pattern having an amplitude of 1 °*C* , a frequency of 0.4 Hz, a beginning phase of 180°, and a ramping frequency of 0.04 Hz made that segment of trace grossly resembling the corresponding section of Fig. 1. The stage of a moderate temperature rise of 4 °*C* over 14 seconds was fitted with a step change having a saturated temperature increase of 4 °*C* responded by a time-constant of 5 seconds. No oscillation pattern was added to make that segment of trace grossly resembling the corresponding section of Fig. 1.

In continuation, the stage of a near-linear large temperature reduction of 15 °*C* over 57 seconds was fitted with a step change having a saturated temperature change of -138 °*C* responded by a long time-constant of 525 seconds. Adding a small oscillating pattern having an amplitude of 0.13 °*C*, a frequency of 0.4 Hz, a beginning phase of 60° made that segment of trace grossly resemble the corresponding section of Fig. 1. The stage of a small temperature dropping of 3 °*C* over 63 seconds was fitted with a step change having a saturated temperature change of -3.75 °*C* responded by a time-constant of 15 seconds. Adding a small oscillating pattern having an amplitude of 0.075 °*C*, a frequency of 0.5 Hz, a beginning phase of 0°, and a ramping frequency of 0.04 Hz made that segment of trace grossly resemble the corresponding section of Fig. 1. The stage of a moderate temperature dropping of 6 °*C* over 19 seconds was fitted with a step change having a saturated temperature change of -8.4 °*C* responded by a time-constant of 15 seconds. Adding a small oscillating pattern having an amplitude of 0.2 °*C*, a frequency of 0.4 Hz, and a beginning phase of 150° made that segment of trace grossly resemble the corresponding section of Fig. 1. The stage of a small temperature dropping of 3 °*C* over 3 seconds was fitted with a step change having a saturated temperature change of -22.5 °*C* responded by a time-constant of 28 seconds. Adding a small oscillation pattern having an amplitude of 0.2 °*C*, a frequency of 0.5 Hz, and a beginning phase of 0° made that segment of trace grossly resemble the corresponding section of Fig. 1.

The amplitude parameters specified in the frames of the segments are the A_{DC} of Eq. (8) and A_{AC} of Eq. (11). By considering the fitted τ and ω in respectively Eqs. (8) and (11), the actual input level of A_{step} and A_{sinu} are deduced, by scaling over C_v. The resulting magnitudes of A_{step} and A_{sinu} are plotted in Fig. 6, after scaling 10 times more and added to a baseline of 25 to make it convenient for visual comparison. The trace of the temperature changes is kept as the reference of the time-course. The solid-line marked rectangles correspond to A_{step} of Eq. (6) and the dashed-line profile containing two damping traces corresponds to A_{sinu} of Eq. (9).

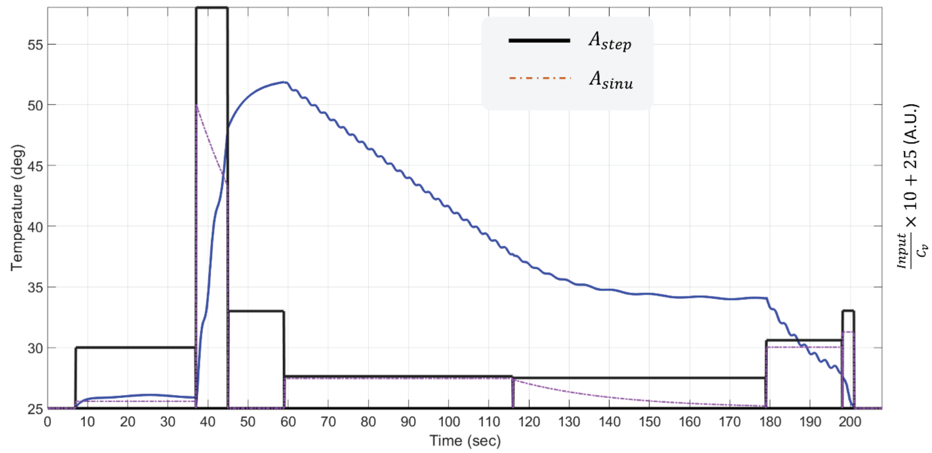

Figure 6. The reconstructed course of temperature changes overlayed with the same shaded areas as those of Fig. 1. The framed parameters were the numbers used for producing the traces in each segment.

Figure 7 displays the magnitudes of A_{step} and A_{sinu} over the 9 segments, of which 7 were associated with temperature deviations from the baseline. The values of A_{sinu} over A_{step} amount to a modulation depth of a maximum of 94%, and a cross-correlation coefficient of 0.95.

DISCUSSION

The temperature change of any mundane object when exposed to a conventional source of heat transfer that does not change the chemical composition of the object is common knowledge or experience. That common experience or knowledge is rigorized by the textbook physics governing simple heat-transfer processes: the rate of the rising or falling of the temperature of the object depends upon two factors, (1) the rate of the amount of heat transferred into or generated within the object and (2) the rate of the amount of heat lost to the environment. When translated to a model of heat-transfer, the rate of the amount of heat of a non-adiabatic object lost to the environment determines the time constant of the change of the temperature of the object, regardless of the heating or cooling process. A faster response of the object-system due to more rapid heat dissipation with the environment will make both the temperature rise and temperature drop happen faster. Should the thermal input or the total dose of energy of thermal conversion be strong enough, the temperature of the object-system will rise to saturation. And if the thermal input is removed or reduced due to natural or forced cooling, the temperature will drop at a time-prorated change the same as the change happening to the rising phase when exposed to a steady-source of thermal input. Therefore, given a FIXED experimental condition under conventional physical configuration, the rate of the amount of heat transferred into or generated within an object may be controllable, but the rate of the amount of heat lost to the environment shall remain fixed. This will dictate that all rising or falling phases of the object's temperature change must have the same time-constant of the first-order response if described by the single-compartment, at a fixed boundary of the object when interfacing with its environment. In other words, a variation of the time constant of an object in its heat-transfer with its environment is incongruent with a conventional non-adiabatic system.

When it concerns the test-object of the referred document, the only temperature change that could have happened to the object due to physical source could be a slow temperature rise by the bodily heat transferred

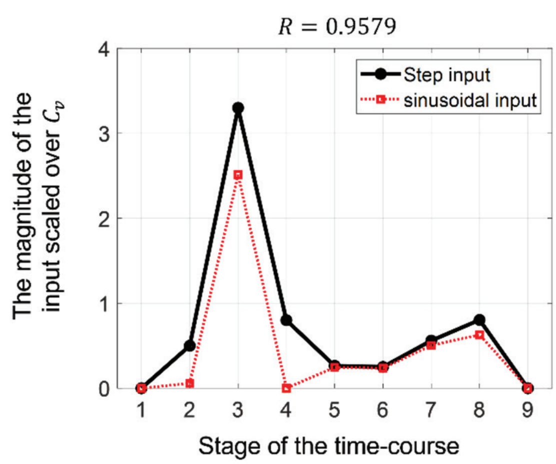

Figure 7. The magnitudes of the step-input and oscillation input used in fitting the temperature changes in all 9 stages.

through the holding hand of the subject of the claimed psi-cho-physical faculty. However, once set, the temperature should not deviate from the set value in the absence of any known exterior source of heat transfer. On the other hand, should there be an exterior source of heat transfer producing heat into or extracting heat from the said test-object, the rate of the temperature change shall be accounted for by the same time constant of the rising or falling phases. And it may be in the sense of the much different rates of the temperature changes over the multiple phases of measurement that makes the reports of the referred document difficult to be placed in a normal physical perspective.

It is not the intention of this work to attempt to validate the results of the referred experiment in its entirety, because there was no additional information regarding the experimental conditions to enable that kind of validation. In virtue of the arguments above applying to a non-adiabatic system, what this work has intended to demonstrate has been that, if the experiment did happen as was reported, and the resulted temperature change of the test object was true as reported, which kind of thermal process, or the system of heat-transfer, could perhaps cause that kind of temperature changes as were reported. The conclusions that can be drawn are that all the reported changes of temperature could be explained in terms of a first-order response that is characteristic of a single-compartment system to an input that may contain a modulation. However, such a projection of the first-order response must be combined with a substantial variation of the time-constant of the responses over the multiple phases of the temperature changes. A variation of the time-constant of the response to an external input will not be congruent with a single non-adiabatic system of fixed physical configuration.

On the other hand, modeling the test-object to exert a first-order response only has made it possible to make the input of the system to be only one kind, that is a modulated input of various DC values having a depth of modulation that can go as low as 0% and as high as 94%. Reports of psychokinetic concerns such as the one reported in the declassified archive have always been extremely difficult, if not impossible to verify, because of reasons that congregate at the following two: (1) any efforts of mechanistic explanations will be stopped by the wall of physical principles that cannot be consolidated by the present understanding of space and time; (2) any efforts of replication are likely futile due to difficulty to replicate exactly the experimental conditions that also have to include the human subject. Any observations or reports of psychokinetic essence would unlikely be accountable unless some kind of consciousness awareness or attention or intention be taken into consideration. And any consciousness awareness must have an associated neuro-physiological states that in principle could be measured instrumentally, modeled analytically, and modulated experimentally. Should the input to the modeled single-compartment system of the text-object of the referred document be attributable, it must be initiated by or associated with the intention of the said subject of psi-cho-physical faculty. And that psi-cho-physical process may incur a correlative but short-lived neurophysiological state. The modeled low-frequency input of sub-Hertz modulation may suggest that, should the reported experiment be verifiable, the verification would be demanded to concurrently monitoring the neuro-electro-physiology of the test subject, to examine the time-stamped presence of a low-frequency patterns of the neuro-electro-physiology at the sub-Hertz range. Such a test, if can be rendered, would help determine the partial physical nature of the reported phenomenon documented by the declassified archive.

CONCLUSION

This work used a single-compartment model of heat-transfer to analyze the patterns of thermal energy production and dissipation associated with the test object that could have caused the temperature changes reported in an experiment in China appearing in the STAR GATE archive. A first-order low-pass transfer responses between a thermal-energy input and the temperature change is used as the basis of the analysis. The time-constant of the response characterizes the rate of thermal-energy dissipation, whereas the input determines the steady-state condition. For each of the 7 stages of the temperature changes occurring within the total duration of 208 seconds, the time-constant and other input parameters including DC amplitude, AC magnitude, frequency, starting phase, and a rate of frequency relaxation when needed are adjusted to make the estimated temperature change to globally resembling the corresponding reported trace. One rising stage and three falling stages revealed harmonic patterns of 0.4-0.5 Hz, suggesting neurophysiological connections. The DC and AC magnitudes of the sourced inputs over the stages with temperature change made a correlation coefficient of 0.95, and an AC/DC modulation-depth of as high as 94%.

Disclosures. The authors declare no conflicts of interest.

Data availability. Data underlying the results presented in this paper are not publicly available at this time but may be obtained from the authors upon reasonable request.

ACKNOWLEDGEMENTS

This manuscript is based upon a full-member workshop presented by the author to the Society for Scientific Exploration on May. 14, 2021. The author thanks the audiences of that workshop for their insightful discussions and encouragements. The author thanks Dr. Leping Zha for helping access the Chinese version of the referred document archived in the declassified STAR GATE files.

REFERENCES

STAR GATE archive, *Chinese Journal of Somatic Science, 1(5), 1991. (Approved for release 2000/08/10)*. https://ia801208.us.archive.org/1/items/CIA-RDP96-00792R000300040002-9/CIA-RDP96-00792R000300040002-9.pdf

Wu, Q., Tang, X., and Zhou, R. , (1991). Study of the phenomena of energy collection by the human body. *Chinese Journal of Somatic Science 1*(5), 19-23. (English Translation by CIA)