# Investigating the Effects of Various Types of T-Consciousness Fields at the Level of Temporal Subpopulations Derived from the Overall Population of DIP Resistors

Mohammad Ali Taheri[1], Pouria Yaghoubi Ali Abad[2], Nasrin Salimian[3], Farzad Ahmadkhanlou[4], Farid Semsarha[5*]

1. ScienceFact R&D Department, CosmoIntel Research Centre, Ontario, Canada
2. Faculty of Electrical Engineering, Iran University of Science and Technology, Tehran, Iran
3. Independent Researcher, M.Sc. in Statistics
4. Department of Mechanical and Aerospace Engineering, University of California, Irvine, Irvine, California, USA
5. Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran

* Corresponding author: Farid Semsarha Ph.D., Institute of Biochemistry and Biophysics (IBB), University of Tehran, P.O. Box: 13145-1384, Tehran, Iran
Tel.: +98-9121786577
Email: Semsarha@ut.ac.ir

DOI: https://doi.org/10.61450/joci.v4i17.212

## Abstract

Following the analysis of the two general timeframes—before and after treatment—and the assessment of statistical significance, the data were further examined by dividing them into twelve distinct time intervals. This included: (I) The external control group, with all twelve intervals serving as controls (the first six labeled *Control 1* and the latter six as *Control 2*), and (II) the T-Consciousness Field (TCF) groups, where the first six intervals represent the control phase and the second six intervals reflect the influence of a specific TCF. For each TCF, analyses included the frequency distribution of recorded values and paired comparisons of voltage and entropy (both minimum and Shannon) across the intervals. As in the previous section, nine components were randomly selected from the total number of treated samples for each TCF. The mean voltage, minimum entropy, and Shannon entropy were calculated across all twelve intervals. The results indicate that the application of TCFs consistently led to an increase in voltage across the resistors—a statistically significant and repeatable effect. Additionally, a general decreasing trend in both minimum entropy and Shannon entropy was observed over time in the TCF-treated samples. This suggests a reduction in randomness and noise within the recorded voltage values, implying a shift toward greater order and predictability in the system under the influence of TCFs.

**Keywords**: T-Consciousness Fields, Electrical Properties, 10kΩ DIP Resistor, Population Analysis, Uncertainty, Minimum Entropy, Shannon Entropy

## Introduction

In the previous section, the authors examined changes in voltage, minimum entropy, and Shannon entropy across both control populations and those exposed to T-Consciousness Fields (TCFs). However, to achieve a more precise and comprehensive comparison between control and test samples, it is essential to consider the temporal effects of TCF treatment.

As previously reported, TCFs can exert varying effects on dosimetric chips across different time intervals (Taheri et al., 2023). Building on this insight, the current section focuses on data obtained from the overall DIP resistor population, with a particular emphasis on how these effects evolve over distinct time intervals.

## 1- External Control Analysis

(Readings at twelve-time intervals without applying T-Consciousness Field)

### 1-1- Analysis of Voltage Output Distribution in the Circuit

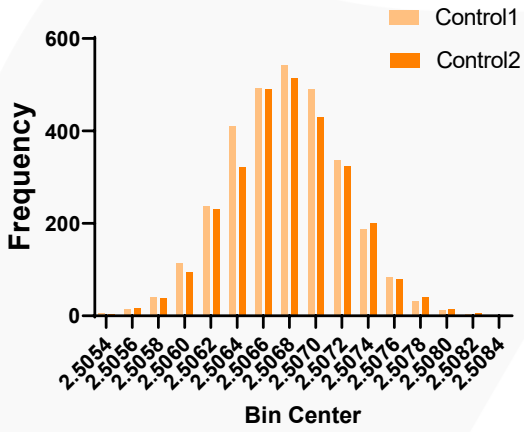


Figure 1. Frequency distribution of voltage values in Control 1 and Control 2

As shown in Figure 1, the frequency distribution of the control samples (Control 1 and Control 2) shows a slight shift toward higher voltage values in the Control 2 samples (the second set of six time intervals). However, this trend is not statistically significant, as indicated by the data presented in Table 1 of the previous study.

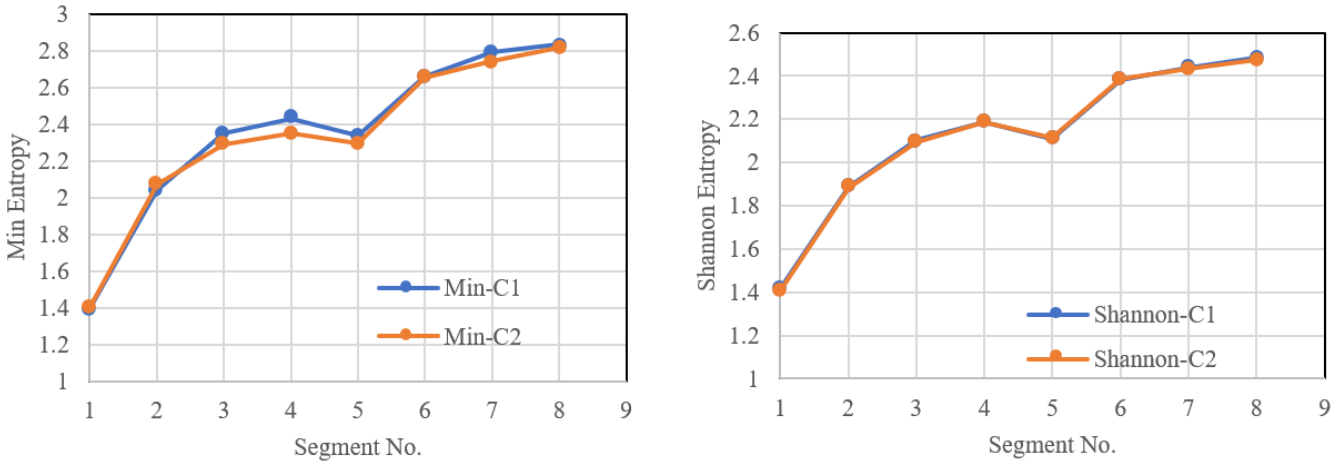


Figure 2. Display of changes in Minimum Entropy (left) and Shannon Entropy (right) in external control samples, comparing the first six-time intervals (C1) and the second six-time intervals (C2), based on the increased number of resistors studied in the population.

As shown in Figure 2, from a population-level perspective, Shannon entropy remains consistent across all selected resistor samples in both control groups. In contrast, minimum entropy exhibits more variability: with the exception of the four-resistor sample—where *Control 2* (the second set of six time intervals) shows a tendency toward lower values—minimum entropy remains closely aligned across the other selected resistor groupings.

## 1-2 - Analysis of Voltage Changes at Different Time Intervals in Control 1 (C1) and Control 2 (C2) Samples

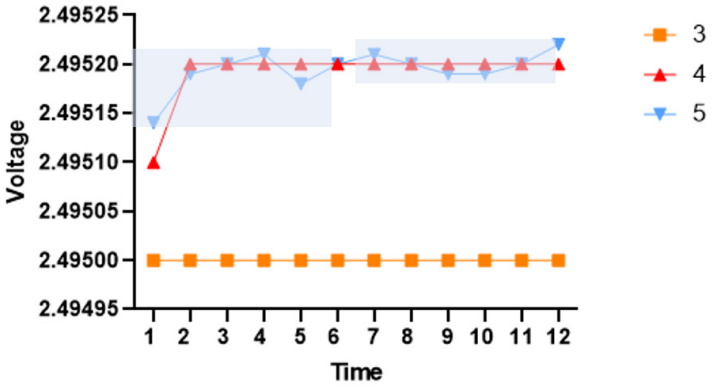


Figure 3. Changes in the average values across the six subpopulations derived from the two external control populations. T1-T6 represent Control 1 samples, and T7-T12 represent Control 2 samples. The average values are plotted with three, four, and five decimal places. Blue boxes represent the coverage of the recorded values in both control and test (TCF-treated) samples.

Based on the repeated measures analysis presented in Table 1, the observed voltage changes between the first and second six-time interval segments of the control samples appear to be random. This suggests that both segments—each representing control conditions without TCF application—exhibit variability that falls within the range of statistically insignificant changes, as expected.

Table 1. Comparison of Voltage Values in the Twelve-Sample Groups

| Tests of Within-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| | Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Time | Sphericity Assumed | 4.144E-8 | 11 | 3.767E-9 | 1.296 | .238 |
| | Greenhouse-Geisser | 4.144E-8 | 1.893 | 2.189E-8 | 1.296 | .298 |
| | Huynh-Feldt | 4.144E-8 | 2.383 | 1.739E-8 | 1.296 | .298 |
| | Lower-bound | 4.144E-8 | 1.000 | 4.144E-8 | 1.296 | .284 |
| Error(Time) | Sphericity Assumed | 2.878E-7 | 99 | 2.907E-9 | | |
| | Greenhouse-Geisser | 2.878E-7 | 17.041 | 1.689E-8 | | |
| | Huynh-Feldt | 2.878E-7 | 21.446 | 1.342E-8 | | |
| | Lower-bound | 2.878E-7 | 9.000 | 3.198E-8 | | |

Table 2. Wilcoxon Analysis Comparing Control 1 and Control 2 Data

| Test Statistics[a] | |
|---|---|
| | mean2 - mean1 |
| Z | -1.172[b] |
| Asymp. Sig. (2-tailed) | .241 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

According to the data in Table 2, there is no significant difference in voltage changes between the first and second sets of six time intervals within the population. However, as shown in the paired analysis in Table 3, the overall trend in voltage changes follows a sinusoidal pattern—characterized by alternating increases and decreases—which is particularly evident during the first six control intervals, especially between intervals 2 and 6.

Table 3. Data for values with a 5% significance threshold in the paired voltage analysis across the twelve different segments.

| (I) Time | (J) Time | Mean Difference (J-I) | Sig.[b] |
|---|---|---|---|
| 2 | 4 | 1.921E-5* | **.041** |
| 4 | 5 | -2.806E-5* | **.023** |
| 5 | 6 | 1.947E-5* | **.021** |
| 5 | 12 | 4.028E-5* | **.010** |

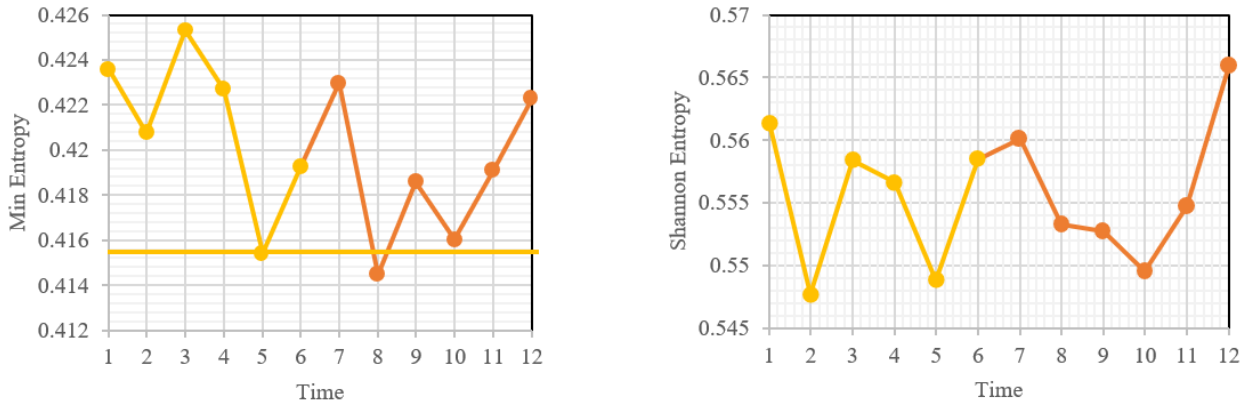


Figure 4. Graph showing changes in minimum entropy (left) and Shannon entropy (right) in control samples 1 and 2. None of the changes between segments are statistically significant according to their paired analysis.

**Summary of the twelve-sample control population (external control)**

The voltage changes between the two general control populations—representing the first and second sets of six time intervals—are not statistically significant, and the fluctuations in voltage values follow a sinusoidal pattern. Similarly, comparisons across the twelve time intervals reveal no significant changes in either minimum entropy or Shannon entropy values.

## 2. Analysis of the Population Related to the Effects of T-Consciousness Field 1

### 2-1. Analysis of the Distribution of Output Voltage Values in the Circuit

The first step in analyzing the test sample population involved examining the frequency distribution of the circuit's output voltage values, comparing the control and test groups. The corresponding chart is presented in Figure 5.

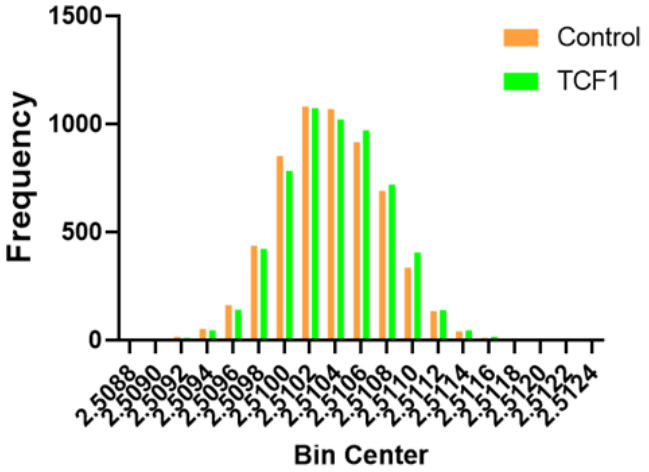


Figure 5. Frequency distribution of voltage values in the control and test samples of T-Consciousness Field 1 (TCF1).

As shown in Figure 5, the frequency distribution of both control and test samples follows a Gaussian pattern. However, the test samples exhibit a noticeable shift toward higher voltage values—a trend that is statistically significant, as indicated by the data in Table 1 of the previous study. Figure 6 illustrates the trends in minimum entropy and Shannon entropy as the population size increases from one to nine randomly selected treated components, compared to the corresponding pre-treatment selections.

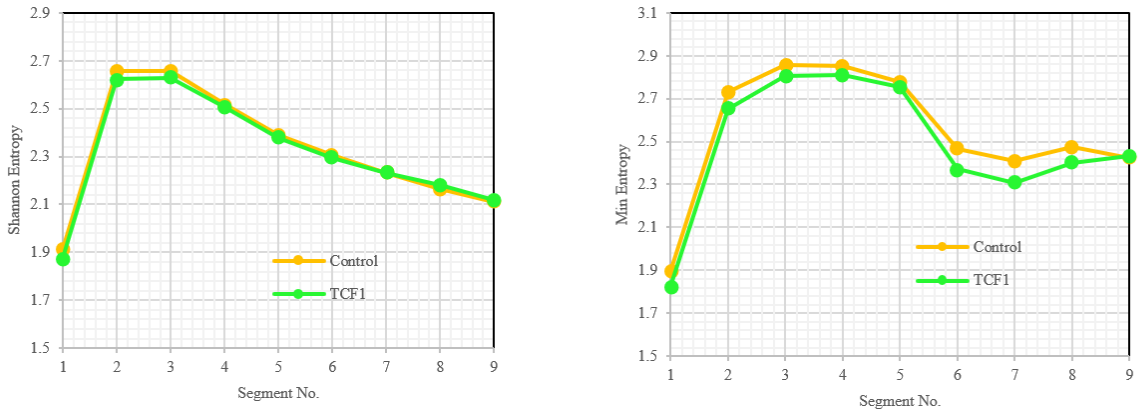


Figure 6. Changes in minimum entropy (left) and Shannon entropy (right) in the nine samples treated with T-Consciousness Field 1 (TCF1), compared to their corresponding control.

In the population analysis, a clear decrease in minimum entropy compared to the control is observed when fewer than nine components are analyzed. A similar trend is seen with Shannon entropy, which shows a noticeable reduction in the test samples at the two- and three-component levels relative to the control. The comparison using nine components provides a more robust basis for detecting potential differences between the control and test populations.

## 2-1 - Analysis of Voltage Changes in Different Time Segments of Control (Pre) and Test (Post) Samples

In this section, the average voltage values recorded for each reading of the control and test samples—rounded to three, four, and five decimal places—are presented and illustrated in chart shown in Figure 7.

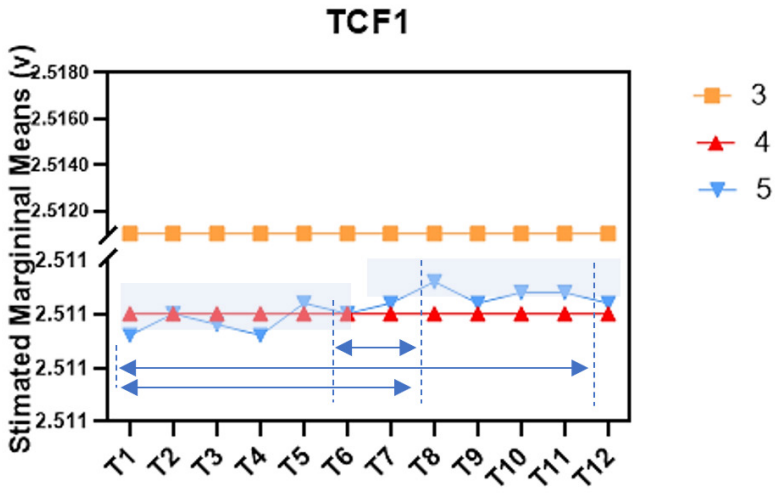


Figure 7. Average Changes in Six Subpopulations from the Control and Test Groups; T1-T6 represent the control samples, while T7-T12 represent the test (TCF-treated) samples. The average values are plotted with three, four, and five decimal places. Blue boxes highlight the recorded values in both control and test samples. Significant differences between the beginning and end points of the test, along with their boundaries, are indicated by dashed lines and arrows, as shown in the data from Table 6.

Based on the results presented in Table 4, the average voltage across the measurements **does not follow a random trend.** A significant increase in voltage values is observed beginning from the seventh time segment, indicating a systematic change overtime.

Table 4. Comparison of Voltage Values in the Twelve Samples

**Tests of Within-Subjects Effects**

Measure: MEASURE_1

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| factor1 | Sphericity Assumed | 2.466E-8 | 11 | 2.242E-9 | 2.051 | .033 |
| | Greenhouse-Geisser | 2.466E-8 | 4.210 | 5.857E-9 | 2.051 | .106 |
| | Huynh-Feldt | 2.466E-8 | 9.468 | 2.604E-9 | 2.051 | .042 |
| | Lower-bound | 2.466E-8 | 1.000 | 2.466E-8 | 2.051 | .190 |
| Error(factor1) | Sphericity Assumed | 9.616E-8 | 88 | 1.093E-9 | | |
| | Greenhouse-Geisser | 9.616E-8 | 33.677 | 2.855E-9 | | |
| | Huynh-Feldt | 9.616E-8 | 75.743 | 1.270E-9 | | |
| | Lower-bound | 9.616E-8 | 8.000 | 1.202E-8 | | |

As shown in Figure 7, displaying the data to three or four decimal places yields similar outcomes, consistent with findings from the previous study. However, when the data is presented to five decimal places, distinct changes become apparent. As indicated in Table 5, these differences are statistically supported by the Wilcoxon test for T-Consciousness Field 1, revealing a significant difference between the control and TCF-treated populations.

Table 5. Wilcoxon Analysis for Comparison of Control and Test Data

| Test Statistics[a] | |
|---|---|
| | Mean2 - Mean1 |
| Z | -2.547[b] |
| Asymp. Sig. (2-tailed) | .011 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

As shown in Table 6, no significant differences are observed between the internal control points (non-significant results are not included in the table). However, significant differences emerge when comparing control points 1, 2, 4, and 6 with points 7, 8, 10, 11, and 12. Notably, point 8—the second time point during the test phase—shows a significant difference compared to all control points except for points 3 and 5.

Table 6. Data on Values with a 5% Significance Threshold in the Paired Analysis of Voltage Values Across Twelve Different Sections

| Time (I) | Time (J) | Mean Difference (J-I) | Sig.[b] |
|---|---|---|---|
| 1 | 8 | 4.766E-5* | **.021** |
| 1 | 12 | 2.659E-5* | **.033** |
| 2 | 8 | 2.865E-5* | **.022** |
| 4 | 7 | 3.458E-5* | **.024** |
| 4 | 8 | 5.593E-5* | **.007** |
| 4 | 10 | 4.235E-5* | **.013** |
| 4 | 11 | 4.232E-5* | **.010** |
| 6 | 8 | 3.473E-5* | **.042** |

## 3-2. Analysis of Entropy Variations Across Different Time Intervals in Control (Pre) and Test (Post) Samples

Since the change in data distribution reached statistical significance at the fifth decimal place (as shown in Figure 7), the authors conducted a further analysis of Shannon entropy and minimum entropy derived from the data distribution (Figure 8). The significance of pairwise differences between time intervals was also assessed for both types of entropy. As presented in Table 7, statistically significant differences (p-value < 0.05) were observed only in minimum entropy. In contrast, fluctuations in Shannon entropy did not reach statistical significance.

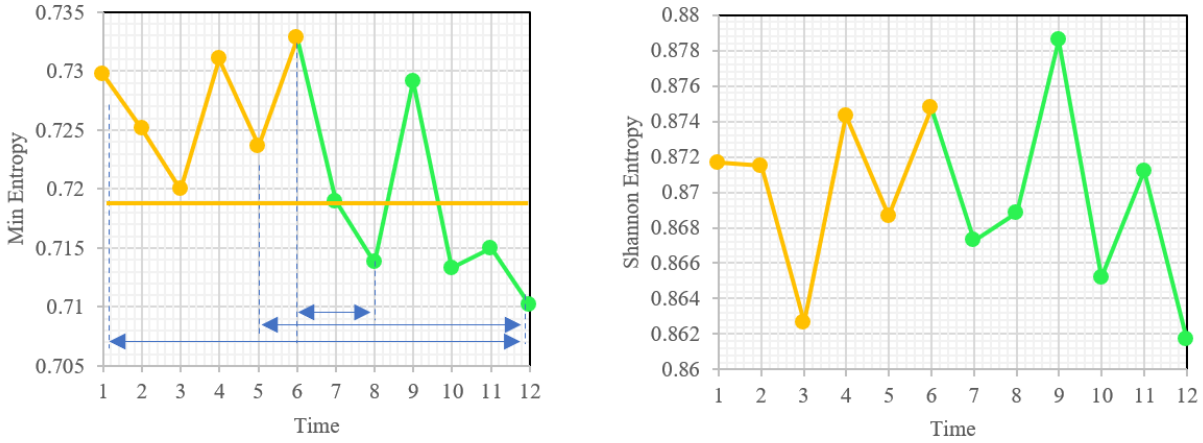


Figure 8. Graph of changes in minimum entropy (left) and Shannon entropy (right) in control and test samples treated with T-Consciousness Field 1. Some significant changes (based on the data in Table 7) are highlighted with comparison arrows, and the horizontal orange line indicates the lowest minimum entropy value in the control samples.

Table 7. Pairwise Comparison of Minimum Entropy Between Data Points in Figure 8 (Left). Samples 1–6 correspond to the control group, while samples 7–12 represent the test group.

| (I) Time | (J) Time | Mean Difference (I-J) | Std. Error | Sig.[b] |
|---|---|---|---|---|
| 1 | 8 | .016* | .007 | **.040** |
| 2 | 12 | .015* | .006 | **.050** |
| 4 | 10 | .018* | .007 | **.042** |
| 4 | 12 | .021* | .006 | **.007** |
| 6 | 8 | .019* | .004 | **.003** |
| 6 | 12 | .023* | .006 | **.007** |
| Based on estimated marginal means | | | | |
| . The mean difference is significant at the .05 level. | | | | |
| b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments). | | | | |

Based on the analysis of Figure 8 and Table 7, the following conclusions can be drawn regarding the impact of T-Consciousness Field 1 on entropy values:

1. No statistically significant differences are observed among the six control time intervals, indicating consistency and equivalence across all control samples.

2. Statistically significant differences (p-value $< 0.05$) are found between the control and test samples, as well as among the test time intervals themselves. This suggests that entropy values vary not only between the control and test groups but also within the test phase over time.

3. A consistent onset of entropy reduction is observed beginning at time point 7, marking the transition from control to test conditions.

4. In the analysis of minimum entropy, significant changes compared to the controls first appear at interval 8 and persist through the final interval (12), indicating a sustained effect of the T-Consciousness Field.

5. A statistically significant difference is observed when comparing the initial minimum entropy value (time interval 2) and the later control values (intervals 4 and 6) with the final test sample (interval 12).

**Summary of the Impact of T-Consciousness Field 1**

In summary, the significant impact of T-Consciousness Field 1 on changes in mean voltage values is confirmed at a precision of five decimal places. As the decimal precision of the recorded average voltage increases from three to five digits, a statistically significant trend in voltage changes emerges between the control and test groups. The most pronounced differences are observed at the eighth test interval (the second time point under treatment), which shows statistically significant deviations from five of the six control intervals.

Additionally, a significant trend is observed in minimum entropy values—an indicator of output randomness. A notable reduction in minimum entropy is found when comparing both the early and late control intervals with the corresponding test intervals (specifically intervals 8 and 12). This decrease in entropy suggests that T-Consciousness Field 1 reduces the randomness of the system's outputs, thereby indicating a measurable and structured influence exerted by the field.

## 3. Examination of the Population for Studying the Effects of T-Consciousness Field 2

### 3-1. Aiming to Reduce Voltage (TCF2-D)

#### 3-1-1. Analysis of the Output Voltage Distribution in the Circuit

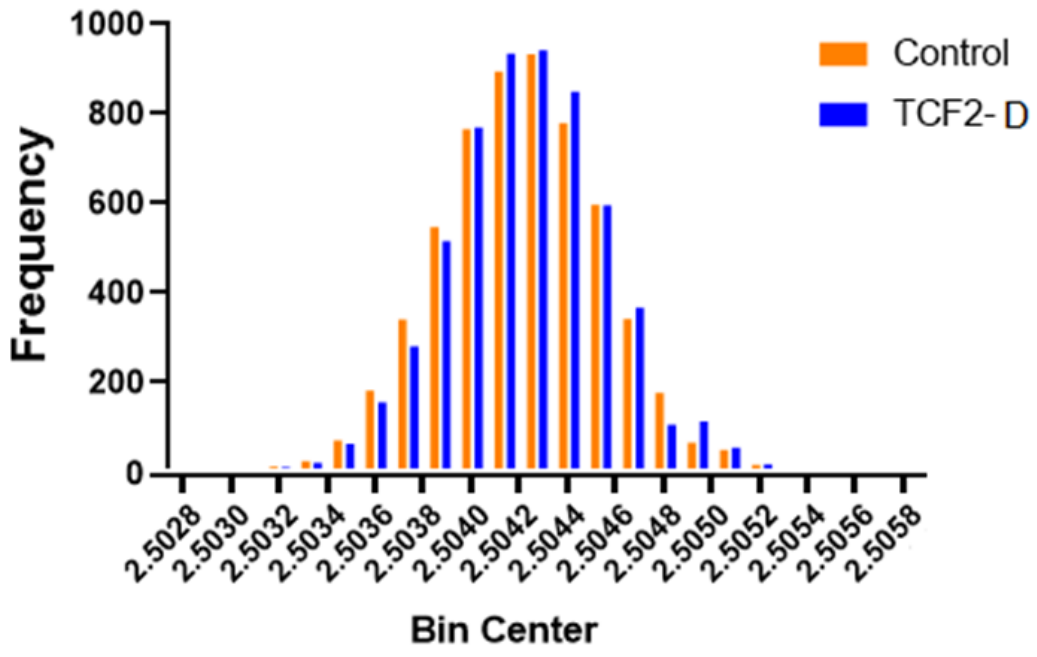


Figure 9. Frequency Distribution of Voltage Values in Control and Test Samples of T-Consciousness Field 2-D

As illustrated in Figure 9, the frequency distribution demonstrates a noticeable shift toward higher voltage values in the test samples compared to the control samples. This trend is statistically significant, as supported by the data presented in Table 1 of the previous study. Furthermore, Figure 10 depicts the changes in both minimum entropy and Shannon entropy as a function of the number of selected components, up to the nine reference pieces analyzed in this research. These entropy trends provide further insight into the evolving structure and predictability of the system under the influence of the T-Consciousness Field.

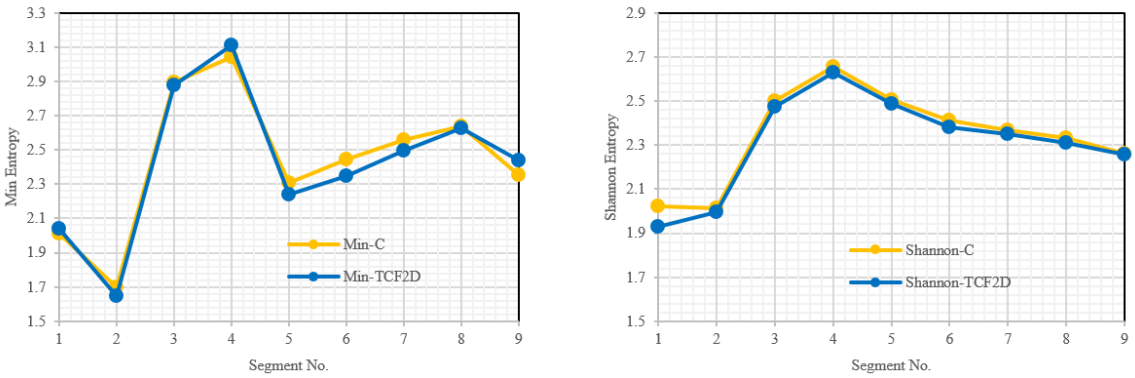


Figure 10. Changes in minimum entropy (left) and Shannon entropy (right) across the nine pieces of the T-Consciousness Field 2-D treatment sample compared to the control.

As shown in Figure 10, for the selected sample size in this study (consisting of nine components, represented by the final data point), the minimum entropy is notably higher than that of the control group, whereas the Shannon entropy remains relatively unchanged across the samples.

### 3-1-2- Analysis of Voltage Changes at Different Time Intervals for Control (Pre) and Test (Post) Samples

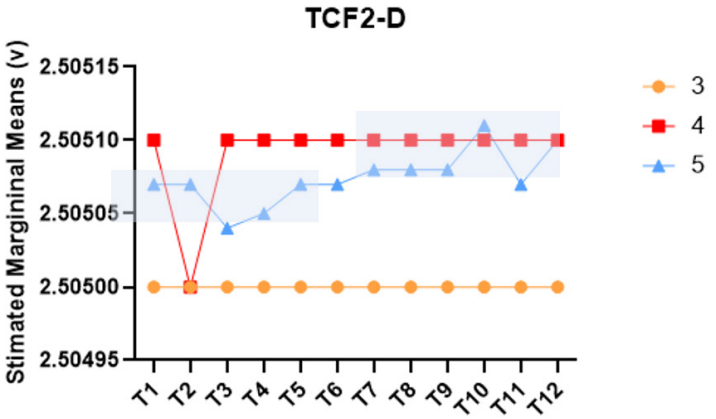


Figure 11. Changes in the mean values across six subpopulations from both the control and test populations; T1-T6 represent the control samples, and T7-T12 represent the test samples. The mean values are plotted with three, four, and five decimal places. The blue boxes represent the range of the read values in the control and test samples.

Initially, the assumptions of normality and sphericity were assessed, and since neither assumption was violated, the statistical method was deemed appropriate and subsequently applied. According to the results presented in Table 8, the average voltage across the various measurements does not exhibit a random trend. Instead, a statistically significant change in mean voltage over time was observed, with the significance level reaching the 10% threshold.

Table 8. Comparison of Voltage Values in the Twelve-Sample Groups.

| Tests of Within-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| | Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Time | Sphericity Assumed | 3.163E-8 | 11 | 2.875E-9 | 1.798 | .066 |
| | Greenhouse-Geisser | 3.163E-8 | 4.858 | 6.510E-9 | 1.798 | .138 |
| | Huynh-Feldt | 3.163E-8 | 11.000 | 2.875E-9 | 1.798 | .066 |
| | Lower-bound | 3.163E-8 | 1.000 | 3.163E-8 | 1.798 | .217 |
| Error(Time) | Sphericity Assumed | 1.407E-7 | 88 | 1.599E-9 | | |
| | Greenhouse-Geisser | 1.407E-7 | 38.867 | 3.621E-9 | | |
| | Huynh-Feldt | 1.407E-7 | 88.000 | 1.599E-9 | | |
| | Lower-bound | 1.407E-7 | 8.000 | 1.759E-8 | | |

Table 9. Wilcoxon Analysis: Comparison of Control and Test Data.

| Test Statistics[a] | |
|---|---|
| | mean2 - mean1 |
| Z | -1.955[b] |
| Asymp. Sig. (2-tailed) | .051 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

The results of the Wilcoxon test further indicate a statistically significant difference in the average voltage before and after the intervention, with a p-value of 0.051—meeting the 10% significance threshold. Notably, the lowest recorded voltage among the test samples occurred at time interval 11, with values closely approximating those of the control group. This outcome is consistent with the intended effect of the T-Consciousness Field applied in this phase of the study.

Table 10. Data related to values with a 5% significance threshold in the paired analysis of voltage values across twelve different time intervals.

| (I) Time | (J) Time | Mean Difference (J-I) | Sig.[b] |
|---|---|---|---|
| 3 | 5 | 4.381E-5* | **.012** |
| 3 | 9 | 4.771E-5* | **.046** |
| 3 | 10 | 6.636E-5* | **.003** |
| 3 | 12 | 5.720E-5* | **.006** |
| 4 | 10 | 4.835E-5* | **.010** |
| 4 | 12 | 3.919E-5* | **.025** |

As shown in Table 10, the statistically significant points correspond to the voltage drop observed in the control group (specifically at intervals 3 and 4) and in selected intervals of the test group (notably intervals 9, 10, and 12).

### 3-1-3- Analysis of Changes in Entropy Values Across Different Time Intervals of Control (Pre) and Test (Post) Samples

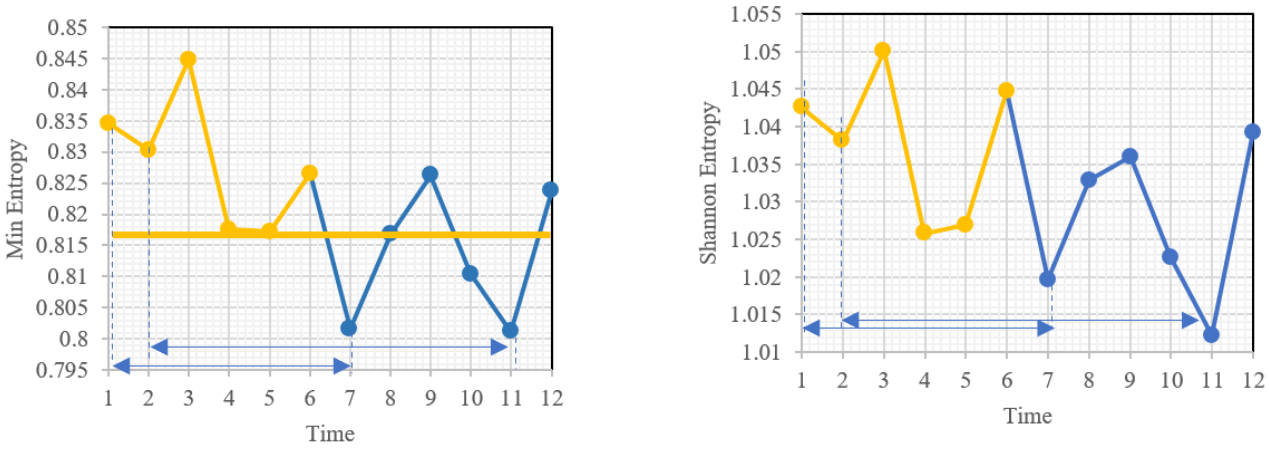


Figure 12. Graph of changes in minimum entropy (left) and Shannon entropy (right) in control and test samples treated with T-Consciousness Field 2-D. Some significant changes (based on the data in Table 11) are highlighted with comparison arrows, and the horizontal orange line indicates the lowest minimum entropy value in the control samples.

Table 11. Pairwise Comparison of Minimum Entropy and Shannon Entropy Between Points of the Graph in Figure 11. Points 1-6 represent control samples, and points 7-12 represent test samples.

| (I) Time | (J) Time | Mean Difference (I-J) | Sig.[b] |
|---|---|---|---|
| 1 | 7 | .033* | **.040** |
| 2 | 11 | .029* | **.023** |
| 3 | 7 | .043* | **.021** |
| 9 | 11 | .025* | **.033** |

ased on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Based on the data from Figure 12 and Table 11, the following key findings can be drawn:

A statistically significant reduction in minimum entropy is observed between control point 1 and test point 7 (the onset of the test), as well as between control point 2 (early control) and test point 11 (toward the end of the test phase). These reductions reflect the initial impact of the T-Consciousness Field (TCF) and its continued influence as the test progresses.

A significant decrease in Shannon entropy between control point 1 and test point 7 highlights a marked reduction in system uncertainty at the beginning of the test phase, indicating an early and measurable effect of the applied TCF.

Test point 11 exhibits the lowest Shannon entropy value, suggesting the greatest reduction in informational uncertainty. This finding aligns with the observed minimum in average voltage at this time point, consistent with the intended voltage-reducing effect of the specific TCF employed in this part of the study.

**Summary of the Impact of T-Consciousness Field 2-D**

The influence of T-Consciousness Field 2-D on the system's behavior was evaluated by analyzing changes in mean voltage and entropy measures across twelve time intervals. At a 10% significance level (p-value = 0.051), results indicate a statistically significant difference in mean voltage between control and test groups, confirming the field's impact on voltage values. As with T-Consciousness Field 1, but to a lesser extent, increasing the decimal precision of the voltage data from three to five decimal places reveals this significant trend, underscoring the field's subtle but measurable effect.

Additionally, this section demonstrates that T-Consciousness Field 2-D exerts a notable influence on minimum entropy, a proxy for output randomness. A significant reduction in minimum entropy is observed when comparing the first interval of the control group to the beginning of the test phase (time interval 7), suggesting a decrease in randomness beginning at the onset of treatment.

Unlike the results seen with T-Consciousness Field 1, both minimum and Shannon entropy show statistically significant reductions in this case when comparing early control and test intervals. This indicates not only a shift away from randomness but also a substantial reduction in uncertainty during the early stages of the test phase.

Furthermore, time interval 11—corresponding to the later stages of the test—shows the lowest voltage value among the test intervals and a marked decrease in both entropy measures, aligning with the intended effects of the applied TCF. This reinforces the field's ability to induce controlled, non-random behavior in the system over time.

**3-2- Request for Voltage Increase (TCF2-I)**

**3-2-1- Analysis of Voltage Distribution in the Circuit's Output**

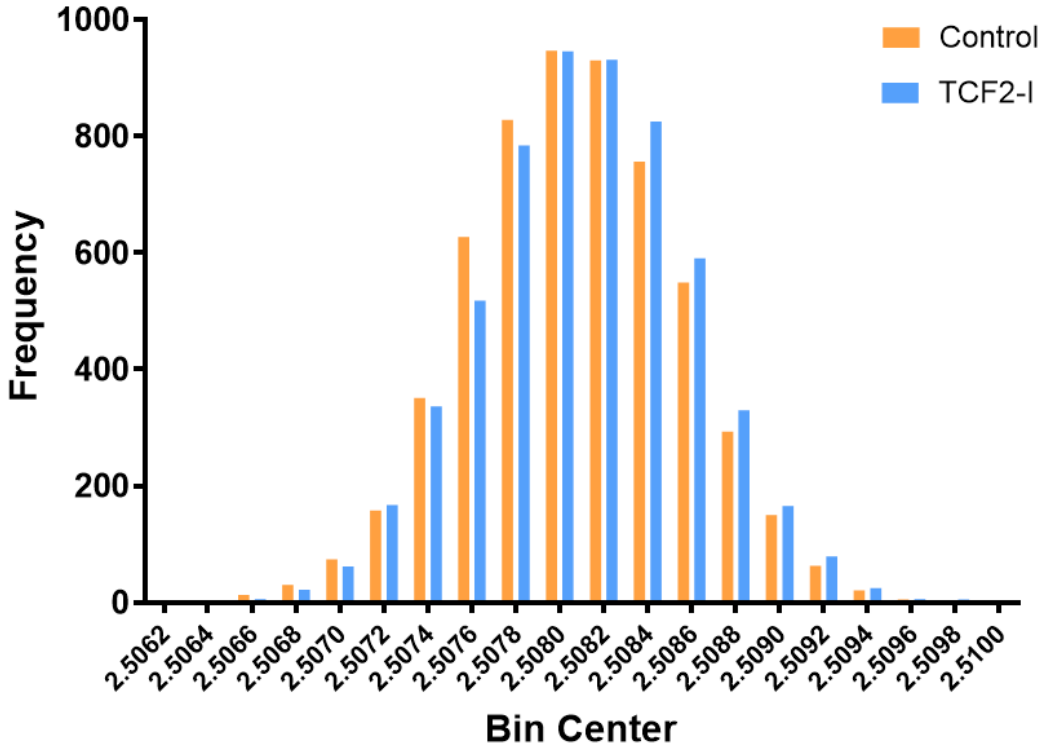


Figure 13. Frequency Distribution of Voltage Values in Control and Test Samples of T-Consciousness Field 2-I.

As illustrated in Figure 13, the frequency distribution of voltage values reveals a tendency toward higher voltage readings in the test samples compared to the control group. This upward shift is statistically significant, as supported by the data presented in Table 1 from the previous study.

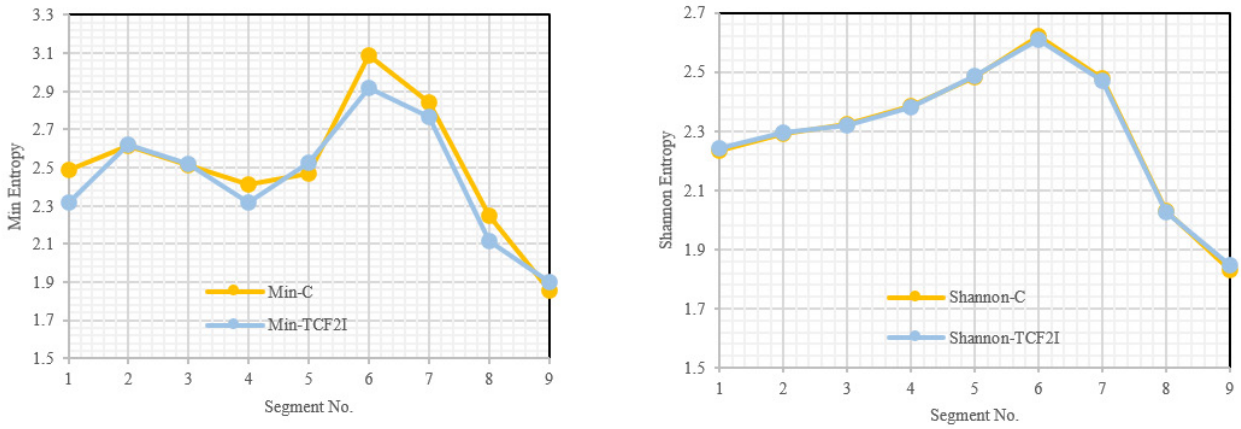


Figure 14 . Changes in minimum entropy (left) and Shannon entropy (right) in the nine segments of the T-Consciousness 2-I treated sample compared to its control.

As shown in Figure 14, although Shannon entropy exhibits a high degree of correlation across most of the selected segments, the minimum entropy in the test samples is consistently lower than that of the control samples. Across the nine segments selected for this study, this pattern indicates a clear dominance of reduced minimum entropy within the test population.

### 3-2-2- Analysis of Changes in Voltage Values Across Different Time Intervals of Control (Pre) and Test (Post) Samples

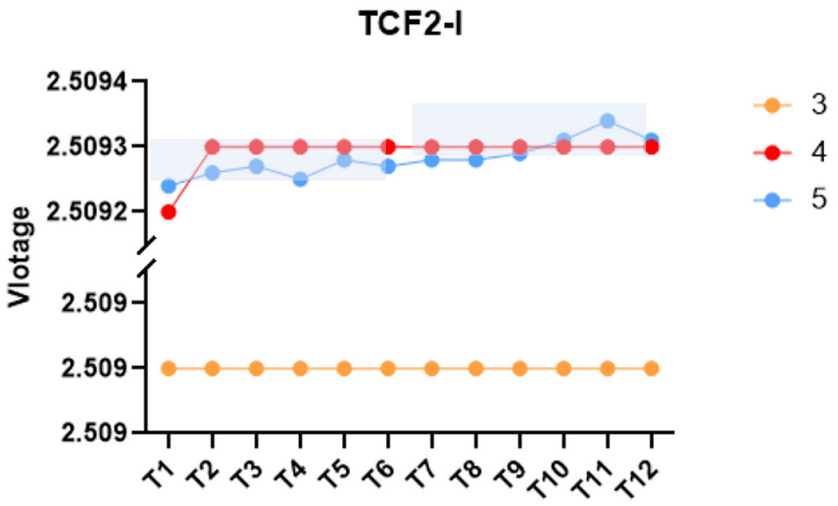


Figure 15. Changes in the averages of the six subgroups obtained from each of the control and test populations. T1-T6 represent the control samples, and T7-T12 represent the test samples. The average values are plotted with three, four, and five decimal places. The blue boxes represent the coverage of the recorded values in both the control and test samples.

Initially, the assumptions of normality and sphericity were tested, and neither was rejected. Therefore, the corresponding statistical method was deemed appropriate and applied. Based on the results presented in the subsequent tables, it is evident that the average voltage across various measurements does not follow a random trend. A statistically significant change in the average voltage over time was observed, indicating a systematic effect rather than random variation.

Table 12. Comparison of Voltage Values in Twelve-Sample Groups.

| Tests of Within-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| | Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Time | Sphericity Assumed | 6.818E-8 | 11 | 6.198E-9 | 3.645 | .000 |
| | Greenhouse-Geisser | 6.818E-8 | 4.095 | 1.665E-8 | 3.645 | .014 |
| | Huynh-Feldt | 6.818E-8 | 8.926 | 7.638E-9 | 3.645 | .001 |
| | Lower-bound | 6.818E-8 | 1.000 | 6.818E-8 | 3.645 | .093 |
| Error(Time) | Sphericity Assumed | 1.496E-7 | 88 | 1.700E-9 | | |
| | Greenhouse-Geisser | 1.496E-7 | 32.761 | 4.567E-9 | | |
| | Huynh-Feldt | 1.496E-7 | 71.408 | 2.095E-9 | | |
| | Lower-bound | 1.496E-7 | 8.000 | 1.870E-8 | | |

Table 13. Wilcoxon Analysis Comparing Control and Test Data

| Test Statistics[a] | |
|---|---|
| | mean2 - mean1 |
| Z | -2.073[b] |
| Asymp. Sig. (2-tailed) | .038 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

The results of the Wilcoxon test indicate a significant difference in voltage before and after the intervention (p-value = 0.038). An overall increasing trend is observed in the test samples, with time point 11 showing a dominant effect, consistent with the intended influence of the applied field in this part of the study.

Table 14. Data comparing different time segments, using a 5% significance threshold in paired voltage value analysis. Notably, time point 11 was compared with other segments to assess the impact of the field over time.

| (I) Time | (J) Time | Mean Difference (J-I) | Sig.[b] |
|---|---|---|---|
| 1 | 11 | 8.522E-5* | **.015** |
| 2 | 11 | 7.363E-5* | **.010** |
| 3 | 4 | -2.043E-5* | **.039** |
| 3 | 11 | 6.878E-5* | **.017** |
| 4 | 11 | 8.922E-5* | **.010** |
| 5 | 11 | 5.772E-5* | **.002** |
| 8 | 11 | 5.615E-5* | **.017** |
| 9 | 11 | 5.267E-5* | **.003** |

As shown in Table 14, five of the six control segments show a significant difference from test segment 11. The increase observed in segment 11 is substantial enough that even the preceding test segments (8 and 9), despite showing increases themselves, still differ significantly from it.

### 3-2-3 - Analysis of changes in entropy values at different time intervals of control (Pre) and test (Post) samples

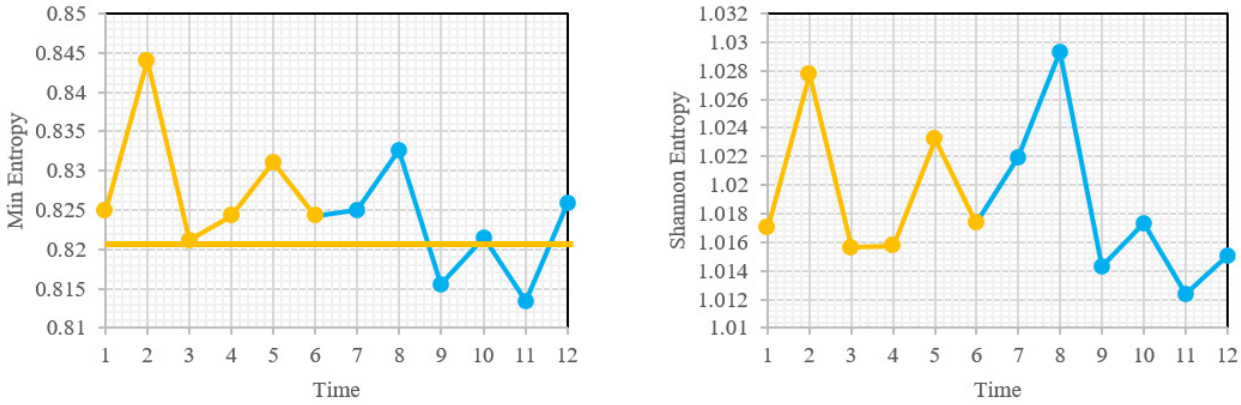


Figure 16. Graph of changes in minimum entropy (left) and Shannon entropy (right) in both control and test samples of T-Consciousness 2-I. The orange horizontal line denotes the lowest value of minimum entropy in the control samples.

Table 15. A pairwise comparison of minimum entropy values between different points on the graph is shown in Figure 16 (left). Points 1-6 represent the control samples, while 7-12 represent the test samples.

| (I) Time | (J) Time | Mean Difference (J-I) | Sig.[a] |
|---|---|---|---|
| 11 | 12 | .012* | **.020** |
| Based on estimated marginal means | | | |
| * The mean difference is significant at the .05 level. | | | |
| a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments). | | | |

As shown in Figure 16 and Table 15, the minimum entropy in the test samples at time point 11 shows a significantly greater decreasing trend (indicating reduced output uncertainty). This aligns with the observed voltage increase expected from the applied field, in contrast to the previous section (TCF 2), which required the opposite effect.

**Summary of the Effect of T-Consciousness Field 2-I:**

The effect of this field is evident in the average voltage, showing a marked increase at time point 11. A corresponding decrease in both minimum and Shannon entropy in the test samples emerges as a trend specifically at the same time point where the voltage change becomes apparent (time point 11). It is important to note that the results obtained from T-Consciousness Field 2 (TCF 2) differ from those of the previously examined fields, with this distinction being particularly pronounced due to the unique objective associated with TCF 2. According to Taheri's theory, T-Consciousness Fields can convey specific intentions or messages. The findings presented here offer empirical support for this theoretical proposition. Unlike the earlier fields where entropy reductions were observed early in the test intervals, TCF 2 is characterized by an initial increase in both minimum and Shannon entropy at time points 7 and 8, indicating a unique entropy response pattern that aligns with its distinct functional purpose.

## 4- Examination of the Population Related to the Effects of T-Consciousness Field 3

### 4-1- Analysis of the Distribution of Output Voltage Values in the Circuit

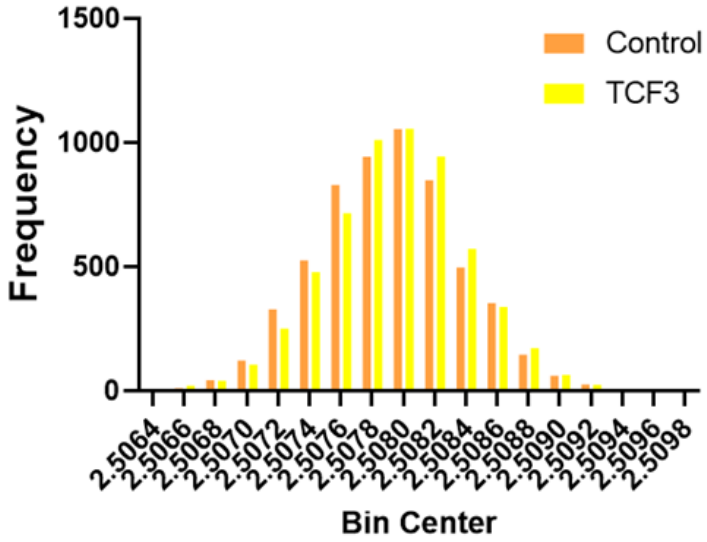


Figure 17. Frequency Distribution of Voltage Values in the Control and Test Samples of T-Consciousness Field 3 (TCF3)

As shown in Figure 17, the frequency distribution indicates that the test samples tend to exhibit higher voltage values compared to the control samples. This trend is significant according to the data in Table 1 from the previous study.

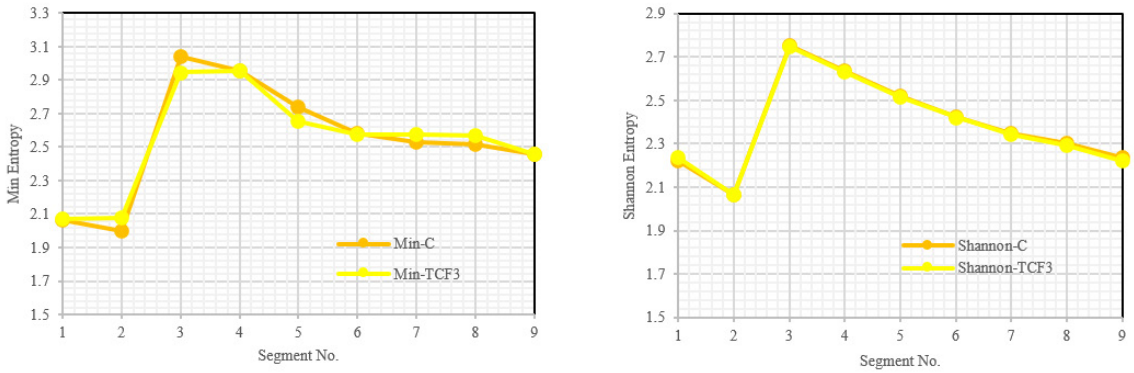


Figure 18. Changes in minimum entropy (left) and Shannon entropy (right) in the nine segments of the sample treated with T-Consciousness Field 3 (TCF3), compared to the control group.

As seen in Figure 18, from a population perspective, the minimum entropy in the test samples is higher than in the control group for all segments except segments 3 and 5. Shannon entropy shows a high level of conformity between the samples.

## 4-2 - Analysis of Voltage Changes at Different Time Intervals for Control (Pre) and Test (Post) Samples

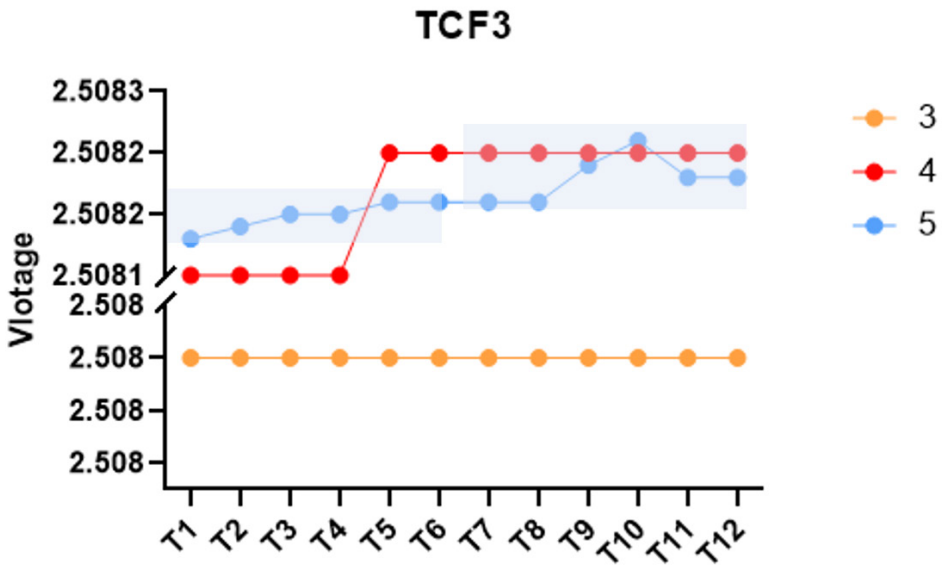


Figure 19. Changes in the mean values of the six subpopulations derived from both the control and test populations. T1-T6 represent the control samples, and T7-T12 represent the test samples. The mean values are plotted with three, four, and five decimal places. Blue boxes highlight the range of values observed in both the control and test samples.

Initially, the assumptions of normality and sphericity were evaluated, and neither was rejected, thereby validating the application of the selected statistical method. As shown in Table 16, the average voltage across the various measurements does not exhibit a random pattern. Instead, a statistically significant change in mean voltage is observed over time, indicating a consistent temporal effect attributable to the experimental conditions.

Table 16. Comparison of Voltage Values in the Twelve-Sample Groups.

| Tests of Within-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| | Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Time | Sphericity Assumed | 5.448E-8 | 11 | 4.952E-9 | 2.895 | .003 |
| | Greenhouse-Geisser | 5.448E-8 | 3.772 | 1.444E-8 | 2.895 | .041 |
| | Huynh-Feldt | 5.448E-8 | 7.556 | 7.210E-9 | 2.895 | .010 |
| | Lower-bound | 5.448E-8 | 1.000 | 5.448E-8 | 2.895 | .127 |
| Error(Time) | Sphericity Assumed | 1.505E-7 | 88 | 1.711E-9 | | |
| | Greenhouse-Geisser | 1.505E-7 | 30.174 | 4.989E-9 | | |
| | Huynh-Feldt | 1.505E-7 | 60.444 | 2.491E-9 | | |
| | Lower-bound | 1.505E-7 | 8.000 | 1.882E-8 | | |

Table 17. Wilcoxon Analysis: Comparison of Control and Test Data

| Test Statistics[a] | |
|---|---|
| | mean2 - mean1 |
| Z | -1.599[b] |
| Asymp. Sig. (2-tailed) | .110 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

According to the Wilcoxon test results, there is no statistically significant difference in voltage before and after the intervention (p-value = 0.110).

Table 18. This table presents data with a 5% significance threshold from the paired analysis of voltage values across twelve time segments.

| (I) Time | (J) Time | Mean Difference (J-I) | Sig.[b] |
|---|---|---|---|
| 1 | 3 | 2.107E-5* | **.047** |
| 1 | 9 | 6.611E-5* | **.019** |
| 1 | 10 | 8.483E-5* | **.008** |
| 1 | 11 | 5.309E-5* | **.007** |
| 1 | 12 | 4.859E-5* | **.007** |
| 3 | 10 | 6.376E-5* | **.023** |
| 4 | 10 | 6.517E-5* | **.043** |
| 5 | 10 | 5.749E-5* | **.023** |
| 7 | 10 | 5.103E-5* | **.032** |
| 8 | 9 | 3.736E-5* | **.021** |
| 8 | 10 | 5.609E-5* | **.008** |

As shown in Table 18, a significant increasing trend is observed in the control group between time points 1 and 3. Additionally, point 1 exhibits a statistically significant difference from the final four segments of the test group (points 9–12). This trend is more pronounced in the test group, particularly at point 10, where most segments across both groups display significant deviations from this reference segment.

## 4-2 - Analysis of Changes in Entropy Values at Different Time Intervals of Control (Pre) and Test (Post) Samples.

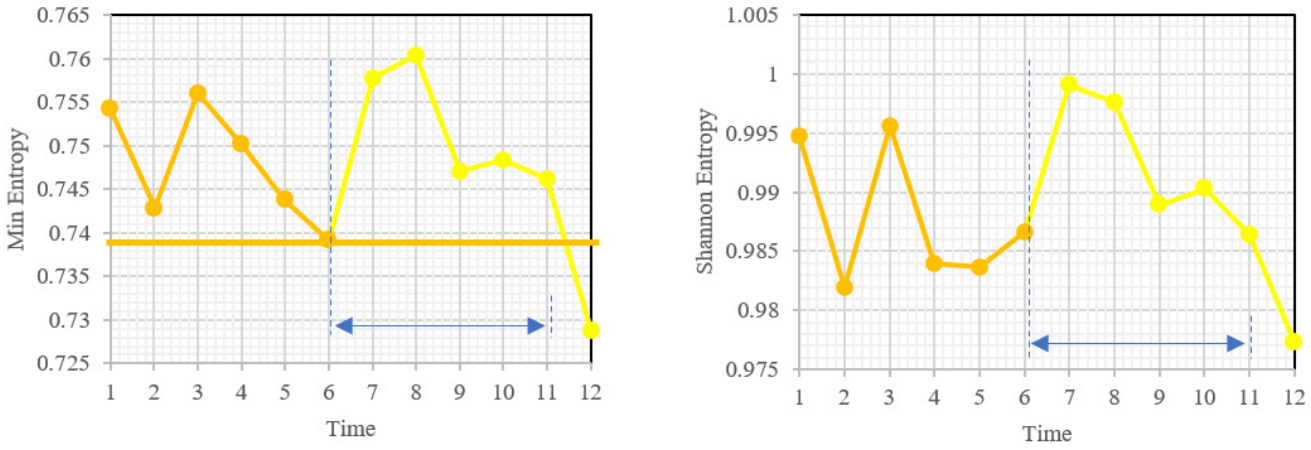


Figure 20. Graphs of Minimum Entropy (left) and Shannon Entropy (right) across time intervals for control (pre) and test (post) samples of T-Consciousness Field 3. Statistically significant changes (based on Table 19 data are marked using arrows, with the orange horizontal line indicating the lowest minimum entropy observed in control samples.

Table 19. Pairwise Comparison of Entropy Between Points in Figure 20. Samples 1–6 correspond to the control group, while samples 7–12 belong to the test group.

| | (I) Time | (J) Time | Mean Difference (J-I) | Sig.[b] |
|---|---|---|---|---|
| Min | 7 | 12 | -.029* | **.025** |
| Shannon | 7 | 12 | -.022* | **.028** |
| Based on estimated marginal means | | | | |
| *. The mean difference is significant at the .05 level. | | | | |
| b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments). | | | | |

By analyzing Figure 20 and Table 19, it is evident that the only significant and noteworthy changes in both entropy types occur between the beginning and the end of the test samples (points 7 and 12).

Unlike the first two T-Consciousness Fields in this study, which were associated with entropy reduction, the initial phase of the test for T-Consciousness Field 3 exhibits a notable increasing trend in both entropy types at time point 7. Following this, a gradual decrease in both entropy measures is observed in the test samples until time point 12, at which a significant difference from time point 7 emerges.

## Summary of the Effect of T-Consciousness Field 3

The influence of T-Consciousness Field 3 on the average output voltage of the circuit does not reach statistical significance regarding specific time intervals. However, when comparing overall trends between test and control groups, significant differences do emerge.

Notably, while no consistent time-point differences appear between control and test samples, the marked change at the onset of exposure to the field—reflected by increased entropy values—is significant. The most meaningful shift occurs between the beginning and the end of the test sequence, indicating that TCF3 affected the test samples without causing divergence across all time intervals compared to the control.

This outcome implies a persistent impact of the field over time, without producing abrupt or anomalous differences that would invalidate comparative trends.

## References

Taheri, M. A., Moslehi, A., Payervand, F., Ahmadkhanlou, F., & Semsarha, F. (2023). Experimental Evidence for Persistence of Taheri Consciousness Fields Effects (Memory Effect) on the Thermoluminescence Phenomenon. *The Scientific Journal of Cosmointel, 2*(11), 19–22. https://doi.org/10.61450/joci.v2i11.157