

Advanced Software, applied with the Polygraph technique, is useful to interpret electrochemical signals, emitted from Superior Plants (Gymnosperms), during the Depatterning procedure, with the aim to alter the biophysical state, of the same vegetal, and interpret elaborations through a procedure of reverse engineering

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DOI: <http://doi.org/10.38177/AJBSR.2022.4405>



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Article Received: 11 November 2022

Article Accepted: 16 December 2022

Article Published: 24 December 2022

ABSTRACT

Background: Plant organisms, in addition to electrochemical communication, which occurs both between plants belonging to the same species and between plants belonging to different species, are also supposed to communicate through other means, defined by the discipline known as Plant Neurobiology. Acting with the method called Depatterning, defined by the Canadian psychiatrist D.E. Cameron, and used as a Reverse Engineering procedure, the aim is to cancel the "consciousness" of the vegetable, to understand if they are in possession of the same consciousness.

Methods: A plant organism, *Dracaena fragrans*, was connected to a digital polygraph, in order to monitor its parameters and, successively, doses of a psychotropic compound such as N, N-Dimethyltryptamine (N, N-DMT), and electrical impulses supplied by a Tesla coil. By interfacing directly with the plant, through direct questions, and waiting for the computerized re-elaboration of the answer, data relating to Plant Depatterning were obtained.

Results: The computerized processing of the alteration of the responses provided by the polygraph (vegetable connected to the polygraph), with respect to the control condition, has made it possible to define the significance of the effect of both the psychotropic compound and the electrical discharges, in the alteration of the same responses.

Conclusions: Based on the interpretation of the data obtained, it is possible to affirm the positive effect of the Depatterning procedure, in the alteration of the biophysical state of the plant.

Keywords: Artificial intelligence; Depatterning; Plant neurophysiology; Polygraph; Primary perception.

INTRODUCTION

Plants or plant organisms are the oldest cellular life forms present in our world. It states "cellular life forms" as in Systematics, there are also acellular life forms such as Viruses, which enter the Aciyota Domain. Appeared in the form of Cyanobacteria, therefore unicellular, about 3,5 billions of years ago, before the continental drift and in the presence of the only great ocean called Panthalassa, they rapidly transformed the Physico-chemical conditions of ocean waters, introducing oxygen and metabolizing the Carbon dioxide, through a series of organic reactions, carried out through chlorophyll photosynthesis. These reactions have also allowed the creation of trophic chains, also called food chains, with primary producer organisms such as plants at the base. The transition from aquatic to earthly life, for vegetables, took place with the appearance of pioneer plants, with absent stems but with a great

capacity to store water, such as Mosses (*Bryum argenteum*), Sphagnums / Peat moss (*Sphagnum flexuosum*) and Liverworts (*Lunularia cruciata*), defined Bryophytes. Subsequently, the Pteridophytes appeared as: Ferns (*Pteridium aquilinum*), Horsetails (*Equisetum arvense*) and Lycopods / Clubmoss (*Lycopodium clavatum*). The first ferns, which appeared between the end of the Triassic and the beginning of the Jurassic (defined as geological periods in the history of the Earth), had a tall trunk. The superior plants, equipped, among other things, with tall stems, appeared since the Late Jurassic, at the beginning of the Mesozoic period, about 180-190 millions of years ago, quickly colonized the emerged lands, such as Angiosperms, increasing the content of oxygen in the atmosphere of the Earth of the Jurassic period. In fact, throughout the Jurassic period, we witnessed the appearance of colossal life forms, in terms of size, both among plants and among animal species, such as dinosaurs, especially Sauropods, or long-necked herbivores such as *Diplodocus*. The reason was essentially due to the high amount of oxygen present in the atmosphere, completely different from the current level. This oxygen was obviously produced by plant organisms that were colonizing the world more and more, understood as both emerged and submerged lands. In fact, also the creatures that inhabited the abyss enjoyed large dimensions, due to the oxygen dissolved in the water, such as the *Liopleurodon*, an aquatic dinosaur, predator, of dimensions comparable to those of a Blue Whale (*Balaenoptera musculus*), much larger, therefore compared to *Plesiosaurus* or *Elasmosaurus*, other predatory aquatic dinosaurs, with long neck.

The real revolution took place in the Middle Jurassic, about 150 million years ago, with the appearance of flowering plants, the Gymnosperms, which gave way to a whole new series of intraspecific and interspecific interactions. One of the most famous is represented by the forms of entomophilic pollination, in which it is the Insects, existing for at least 400 million years before the Bryophytes, to help the higher plants in their reproduction, and to transport the pollen, no longer entrusted only to the wind, in wind pollination. The main difference between Entomophilous and Anemophilous Pollination lies in the algorithmic logic of pollen dispersion, whose logical-mathematical sequence of operations/steps begins at the point of release and final term in contact with the receiving vegetable. Air currents of different nature, laminar and turbulent wind motions, rapidly spaced out, further increase the number of variables and factors involved in pollen reception. Beyond a certain threshold of number of variables it will give you a stochastic predominance of the number of pollen particles that will reach their destination, moreover, producing a result. All of this is calculated without considering the cross section between the single pollen particle and the appendage of the receiving plant. With a certain analogy, it is possible to define the "journey" of the sperm cells up to the meeting with the oocyte [30]. Obviously, there is a greater regularity of pollen transport, in the presence of a vector such as insects (Entomophilous pollination) [31]. Pollination entrusted to the wind (Anemophilous) is mainly quantitative in nature, even if, recent statistical-mathematical models, highlight an operational logic, with different chemical-physical characteristics of the air currents, according to the latitude [32, 33]. One of the most peculiar characteristics of plant organisms is that they have developed forms of chemical and sensory interaction with the surrounding environment. These interactions occur both for the aerial portion of the plant, i.e., the one that rises from the ground, and for the underground portion, represented by the roots, in which there is a whole universe of direct and chemical connections with the soil, with organisms, and with other roots. A characteristic example is represented by the Amazon Rainforest, where there are at least 500 billions of plants, each with a complex root

system. Throughout the last century, a new generation of scientists has approached the world of plants with a new approach, in order to determine how plants, communicate with each other, with the surrounding environment, and with the animal world. Surely, among the characters that should be counted most is Luther Burbank, who, with training that stopped at the level of Higher Education, developed 800 strains of new plants including fruits, flowers, seeds, and herbs, among which, a famous variant of cactus without thorns. His operating methodology did not include the use of cutting-edge equipment but reflected the attention, care, respect and love he had for these plants. In many interviews, he gave he stated that his main secret was that he could talk to plants while he worked with them and/or made new grafts [1-5].

Undoubtedly one of the most striking examples of interaction-reaction between plants and animal organisms is represented by the *Mimosa pudica*, a vegetable in which, the only delicate touch on the external surface of the leaves, produces a closure of the same [6]. In the wake of the Burbank studies but with a completely different approach, which made use of technological tools, there was the famous CIA analyst and interrogation expert, Cleve Backster. He can be defined as the first to have created a connection between technology and the plant world and is counted among the founders of the discipline known as Biopsychocybernetics. In his first experiment, Backster decided to connect his polygraph (lie detector) to a vegetable and discovered, to his surprise, that the needle responded, giving signals as if there was a connected subject. On the strength of these first results, Backster decided to extend the experiments, placing two plants, of the same species, close to each other and connecting the polygraph to only one of the two. A group of five subjects was also chosen whose one was chosen that he would have had to rage on the vegetable not connected to the polygraph. Subsequently, the conque subjects were made to stop in front of the vegetable not connected to the polygraph, until the "culprit" was reached. For all those who had not raged on the first vegetable, the second, connected to the polygraph, did not show the minimum output signal as the polygraph trace remained constant. Upon arrival of the "guilty" subject, the connected vegetable began to produce a pattern that quickly went off-scale. What had happened? Had the vegetable identified in that subject the author of the killing of the first plant? [7-12]. Backster is counted as the discoverer of the so-called Primary Communication and his experiments were along the lines of those already carried out in 1900 by the Indian biologist, physicist, and botanist Jagadish Chandra Bose. Some of his experiments concerned the study of the electrical spasm that was generated at the end of the life of plants [13-18]. Starting with Cleve Backster, the technology applied to plants has further refined and, at the turn of the 70s of the last century a French physicist and musician, Joel Sternheimer, introduced a completely new concept regarding a newborn discipline but one that would have been destined to take notable steps forward, namely Plant Biosensing.

Sternheimer assumed that each single molecular species possessed its own bio-resonance frequency or Brownian motion frequency, as introduced by Albert Einstein, and that, with the aid of particular, very sensitive instruments, it could be registered. Therefore, he recorded the frequencies of the twenty basic amino acids and of the five nucleotides (also counting Uracil as a substitute for Thymine in the RNA) and at that point, he had an intuition: comparing the bio-resonance frequencies of the molecules with the musical notes they had similarities, however, with only seven basic musical notes it was not possible to cover the entire series of molecules, which were in total 25. The problem was solved by considering the harmonics of these notes, i.e., multiples and/or submultiples of the

note itself. At that time, the frequencies of the molecules were associated with harmonics, with minimal deviation. It was therefore possible to convert a gene sequence (nucleotides) and/or protein (amino acids) into musical notes. Once the sequence was composed, what would have happened if it had been sent to a vegetable? Sternheimer realized that, if a vegetable was lacking in a particular protein and, by sending the musical sequence, corresponding to this protein, as sound, at the level of the vegetable itself, it was possible to obtain a more luxuriant growth. This discovery paved the way for the conception of Molecular Memory, which was later taken up by numerous research groups [19-24].

Coming to the present day, independent research groups and / or belonging to academic institutions continue their research on Plant Biosensing, increasingly approving the discourse on Plant Neurobiology, a concept introduced by the Italian botanist Stefano Mancuso. With his experiments, Mancuso laid the foundations for the understanding of how a system of uptake of external stimuli by a vegetable can be associated with the plausible presence of a complex organization comparable to a vegetable nervous system [25-28]. Independent researchers such as the Italian sociologist Valerio Sanfo, founder, and director of the Popular University A.E.ME.TRA. (<http://www.valeriosanfo.it/>), based in Turin, Italy, and the philosopher Oberto Airaudi (<https://www.damanhur.foundation/falco-oberto-airaudi/>), creator and founder of the community Damanhur (<https://www.damanhur.foundation/>), known worldwide, have conducted experiments with the aim of being able to demonstrate the response of plants, in interaction with the surrounding environment. The threshold of the introduction of Biopsychocybernetics in these experiments is with the Depatterning protocol, formulated by the Canadian psychiatrist Donald Ewen Cameron at the turn of the 60s of the last century. In his protocol he has administered a combination of: electroconvulsive therapy, barbituric drugs for a treatment of schizophrenia. Theory was that remotion of consciousness and erasing of a part of experiential memory was one method for patients to forget their condition and start again with a new learning. This has been the first protocol in which has been discovered that a combination of Pharmacology and physical treatment, with electric current, was able to produce an erasing of memory [29]. In this experiment, the same procedure is performed on plants, to demonstrate the presence of possible consciousness, through a procedure of reverse engineering and alteration of the functional state of the vegetal.

■ MATERIALS AND METHODS

The assembly diagram of the equipment basically consists of these components: As subject plants, two specimens of the *Dracaena fragrans* species were chosen and, as stimulation tools, 10 ml of a solution of N,N-Dimethyltryptamine (N,N-DMT), with the concentration of 0,6 mg/ml, obtained as alcoholic extraction in steam current, carried out on plants as: *Banisteropsis capii* and *Psychotria viridis* (Figure 1b) Moreover, it has been used one laptop ACER ASPIRE 7540 G, 17,8'', connected with USB Polygraph, with a 2.5 Gb Minimum RAM, a Minimum Processor Speed of 1.5 GHz, and a Minimum Hard Drive Space of 20 Gb (Figure 1b, 1c). The system was directly supplied with artificial intelligence software (automatic learning software), with complex signal reprocessing capabilities, and equipped with SAPS technology, i.e., Algorithmic Reprocessing of Signals or Software System for Inductive Modeling. The purpose of this experiment was to induce a loss of the presumed vegetable conscience using a combination of external impulses such as 10 ml of a psychotropic solution of N,

N-DMT (0,6 mg/ml) (Figure 1b) and electrical impulses, having 20,000 Volts of DDP and 0.025 Amperes, applied sequentially, that is 5 cycles of 10 seconds each (Figure 1d). The preliminary experiment aimed to ask the vegetable a series of control questions before treatment. The alleged loss of consciousness on the part of the vegetable would be highlighted by an increase in the inconsistency of the responses, in the treatment experiment, compared with the initial control experiment. The figures shown below (not enumerated, as an identification series) show the assembly diagram of the equipment and the plants used.

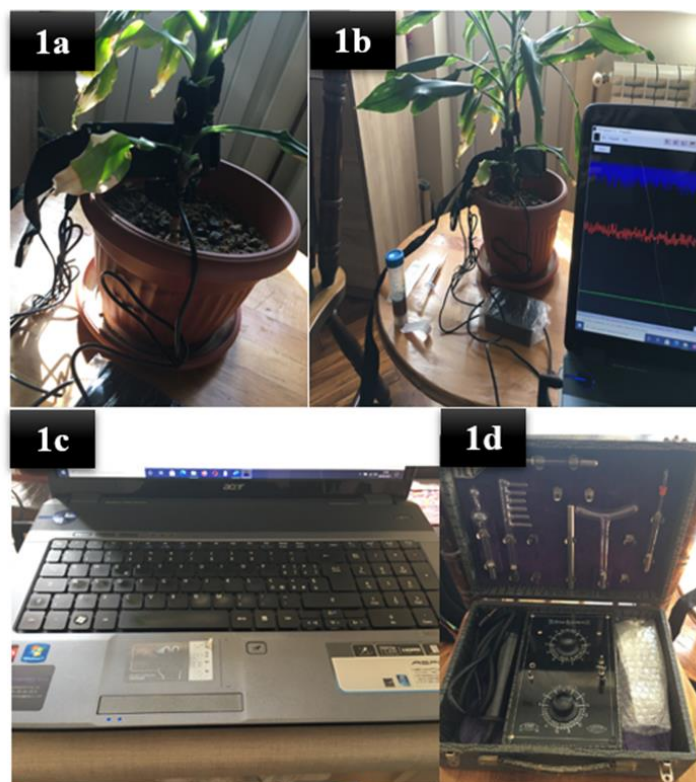


Figure 1 (1a, 1b, 1c, 1d). Representation of the assembly diagram of the experiment: **1a**, the *Dracaena fragrans* plant used for the experiment, connected to the electrodes of the polygraph apparatus, **1b**, view of part of the computer, of the polygraph, of the tube containing the N, N-DMT solution and of the vegetable, **1c**, computer keyboard, **1d**, control panel of the electrical apparatus used for electroconvulsive stimulation

The experiments with *Dracaena fragrans* constitute a further level of advancement as regards the research on the presumed existence of vegetable consciousness. This presupposes the existence of a sort of complex nervous system of the vegetable itself, not only that, the purpose of the experimentation was to be able to eliminate the consciousness of the vegetable through the use of a technique based on an alcoholic solution of N, N-DMT, highly psychotropic substance and application cycles of high potential difference current, provided by a Tesla Transformer, at 20,000 Volts, but low electrical intensity, i.e. 0.025 Amperes. The electrical application took place for 5 cycles lasting 10 seconds each, whose secondary circuit of the Tesla Transformer was placed in contact with the stem of the vegetable (*Dracaena fragrans*). Once again, the operator asked direct and vocal questions to the vegetable, in order to subsequently interpret the answers and differentiate them between the control sample, free from treatment with an alcohol solution of N, N-DMT, and cycles of electrical emission and the treated sample, where both procedures were present. The type of questions that were asked was highly specific, such as: "Do you

have Awareness of You?", "Do you know what Consciousness is?", "Do you feel alive?", "Can you recognize yourself?", "Are you aware that are we carrying out this experiment to remove your consciousness?". Obviously, the last question would have been asked only if the answer to the previous ones, that is, "Are you aware of yourself?" and "Do you know what Consciousness is?" had been affirmative and confirmed by the instrument software.

RESULTS

This experimental phase has aim to remove the presumed consciousness that the vegetable possesses. This is to understand if it was possible to establish a new type of consciousness, in the plant itself, in order to ensure that plants can develop completely new functions without having to resort to genetic manipulation, but, only, through a sort of hypnosis of the type chemical and electrical. The procedure described here incorporates the applied techniques, defined by Depatterning, a term coined for the first time by the Canadian psychiatrist Donald Ewen Cameron. The procedure consists of the combined use of electrical stimuli, generated by an apparatus for electroconvulsive therapy and psychotropic compounds, such as barbiturates such as Alfentanil, and/or Sufentanil, capable of inducing a hypnagogic state. The conviction of Dr. Cameron, following his experiments carried out at the Montreal Hospital, made it possible to highlight how this technique was effective in inducing not only a loss of consciousness but a cancellation of the experiential memory, shortly and in the long term. Since the results obtained on the plants have highlighted the existence of a possible form of consciousness, also of an experiential type, we proceeded with the Depatterning treatment, performed on the vegetable, using as a hypnagogic compound, 10 ml of an alcoholic solution of N, N-DMT, at 0,6 mg/ml of concentration, obtained from *Banisteropsis capii* and *Psychotria viridis* plants, combined with an electroconvulsive treatment performed with a Tesla transformer and applying five cycles of electric current, at the DDP of 20,000 volts, for ten seconds each.

- Control Experiment (CTRL), without treatment:

Table 1. Protocol of questions, asked directly to vegetal, and subsequent elaboration of answers, given by computer elaboration, of a Control state

Questions	Answer of operator	Software's elaboration
Are you alive?	Yes	Lie
Do you have consciousness of yourself?	Yes	Lie
Do you have conscience that we are in one experiment?	No	Undetermined
Do you know that I will try to remove your conscience?	No	Undetermined
Do you know that I will use electric discharge, on you, for five seconds, each time?	Yes	Undetermined

Do you know that I will use some potent hallucinogenic drug on you?	No	Lie
Do you know that will be your similar organism that will observe that?	Yes	Undetermined
Do you know that my aim is to discover if really exist conscience of plants?	No	Truthful

The interpretation by the software and the subsequent re-elaboration of the summation of the interpretations, in order to be able to trace a guiding thread, was very complex, starting with the control condition (Table 1), which served as a calibration curve for the subsequent experimentation. To the first question, Are you alive? At the generation of the answer Yes, the software gave, as a result of processing, a negative answer, evidently since the plant was still placed in a state not ready to receive the test and this could be in accordance with the concept of experiential memory of plants. The second question, in accordance with the previous one, Are you aware of yourself? To the answer Yes, the software has again provided a negative reworking result, which is in accordance with the previous statement, according to which, the vegetable, not feeling alive, cannot be aware of itself. The third question gave a first interesting result because, by asking, Are you aware that we are in an experiment? To the answer given No, the software has provided an indeterminate result, probably deriving from the fact that the vegetable is starting to acclimate with the new condition to which it is subjected, which again refers to the concept of experiential memory. The fourth question is a sort of threshold at which experiential memory can be determined, also due to the change in the quality of the interpretations. It asks: Do you know that I will try to remove your conscience? To the answer No, the software has once again provided an indeterminate answer as we believe that the vegetable is in the process of processing the condition in its surroundings and this can also be translated into a form of pause from the temporal point of view, as it takes time to be able to process a specific condition and take root in the situation of a given moment in space and time. The fifth question can be interpreted as the end of the pause phase, in which, it is asked, Do you know that I will apply an electric current, on you, for five seconds each time? Also in this case, to the answer Yes, the software has returned processing with an indeterminate result, in which we assume that the vegetable is still in the processing phase of the condition. In fact, the transition between the fifth and sixth questions marks a sort of awareness on the part of the vegetable, in fact, when asked, Do you know that I will use a powerful hallucinogenic drug on you? The answer << No >>, the software has provided a reworking which is a lie, as it seems that the vegetable has become aware of its condition. This answer is very important for the interpretation of the data. The seventh question is asked: Do you know that there will be a similar one who will observe all this? To the answer given, Yes, the result of the computerized re-elaboration was indeterminate and this would allow us to identify that experiential learning takes time and is performed in stages, also for the recognition of one's fellowmen, in a given situation. Finally, the question is asked, Do you know that my purpose is to

determine whether consciousness exists in plant organisms? To the answer given No, the software has provided Positive / Affirmative processing, in which the vegetable is unaware that we are running an experiment to determine vegetable consciousness. The question is, is the fact that the vegetable possesses a consciousness a necessary and sufficient condition to understand that an experiment is being carried out to determine if it has a consciousness?

- Treatment with 10 ml of alcoholic solution of N, N-DMT (Dimethyltryptamine):

The vegetable *Dracaena fragrans* was inoculated, with a hypodermic syringe, 10 ml of alcoholic solution of N, N-Dimethyltryptamine (N, N-DMT) directly into the stem and we waited 10 minutes for the substance to circulate in the xylem and phloem vessels (carrying raw sap and processed sap) of the vegetable itself.

Table 2. Protocol of questions, asked directly to vegetal, and subsequent elaboration of answers, given by computer elaboration, of a state with a treatment with psychotropic compound N, N-DMT

Questions	Answer of operator	Software's elaboration
Do you know that I am injecting on you N, N-DMT?	No	Undetermined
Do you feel yourself alive?	Yes	Lie
Do you feel that you have a conscience?	Yes	Undetermined
Do you feel good?	No	Undetermined

The processing provided by the software has made it possible to obtain an important result in terms of behavioral modulation, since the processing of the answers provided automatically by the operator, after having vocally posed the vegetable question, not only made it possible to establish a logical succession and not only to confirm the fact that the vegetable could be endowed with a form of will, but that it is possible to modulate this behavior through the use of psychotropic/hypnagogic compounds. The effect of N, N-DMT (Table 2) highlighted how the vegetable was in an altered state, compared to the previous control condition, in which nothing had been administered. Indirectly and by completing a syllogism, if a compound with a psychotropic action is administered to a vegetable and the latter reacts by inducing an alteration of the responses, it is because the vegetable possesses a form of consciousness.

To the first question, You know I'm inoculating you with the N, N-DMT? and to the answer No, the software provided indeterminate processing. This could assume a complex interpretation since, an invasive event such as an injection should be registered, even by a vegetable and, instead, the answer was indeterminate, as the vegetable could already be affected by the effects of the compound, that, we recall, we waited ten minutes after inoculation, before proceeding with the polygraph test. To the second question, Do you feel alive? The automatic answer was Yes, however, the result of the complex computerized processing was Lie, as we assume that the vegetable was already in an altered state, therefore outside the physiological conditions; for this reason, this reply was produced. The third question is one of the most important of all the experimentation: Do you feel you have a conscience? At

the automatic answer Yes, the result of the processing was indeterminate. The vegetable, being in a state of alteration, is no longer able to recognize its identity and its space-time configuration in the surrounding environment. The fourth question constitutes a sort of repetition of the second, in which, we ask: Are you okay? To the automatic reply No, the result was again indeterminate. This could derive from the fact that the alteration of the state of consciousness no longer allows one to experience one's own sensations. The results obtained here are in full agreement with the experimental hypothesis that a psychotropic compound also has an action at the plant level, if it is not produced by the plant itself.

- Treatment with the electroconvulsive procedure, with Tesla device:

The experiment in question involved applying the electrodes, called spark gaps, at the output of the secondary circuit, in contact with the plant, placing them in nine different points of the stem and inside the plant tissue for about 2-3 mm. There was therefore a perforation of the tissue of the stem itself so that the current flow could reach the xylem and phloem vessels and therefore, be transmitted, as homogeneously as possible, in all portions of the vegetable. The apparatus consisted of a Tesla coil, with an output DDP from the secondary circuit of about 20,000 Volts (with a spark of about 2 cm in length) and an intensity ranging from 0.01 to 0.025 Amperes. The spark was continuous as the primary circuit was continuous and not hammer-like. In that case, there would have been a discontinuous spark. Treatments have been 5, in total, with a duration, for each treatment, of 10 seconds.

Table 3. Protocol of questions, asked directly to vegetal, and subsequent elaboration of answers, given by computer elaboration, of a state with treatment with an electroconvulsive procedure

Questions	Answer of operator	Software's elaboration
Do you know that I am applying for electrical discharge?	Yes	Truthful
Do you feel that you have a conscience?	Yes	Lie
Do you know who are you?	No	Truthful
Did you feel an electric discharge?	No	Truthful
Have I applied electric discharge ten times, on you, at ten different points?	Yes	Lie

The experimental results reported here confirm the theory of Depatterning, according to which, it is possible to induce an altered state of consciousness, followed by removal of the experiential memory in the short and long-term following the combined action of electroconvulsive treatment (Table 3) and psychotropic-hypnagogic compound. The results obtained on the plant *Dracaena fragrans* also made it possible to demonstrate that the Depatterning procedure is also applicable at the plant level. After the application of the electric current, the result

was obtained in perfect agreement with the experimental hypothesis of Depatterning mentioned above. To the first question, after the electroconvulsive treatment cycles, do you know that I am applying an electric current/discharge? To the answer is Yes, the computerized processing has given a positive result, since it seems that the vegetable is aware that a potential difference, moreover, high is being applied. To the second question, is, Do you feel you have a conscience? To the answer Yes, the software provided a negative answer, as this represents the most important result of the entire experiment, the vegetable after having undergone inoculation with the psychotropic/hypnagogic compound and treatment with electroconvulsive treatment cycles, does not he feel he has more of a form of conscience, which converts the effectiveness of the Depatterning procedure also towards plants. The third question is just as important as the second, in that, after asking, Do you know who you are, and, the answer, No, the software has provided a positive processing result, as the vegetable has lost consciousness of itself. and, conceivably, its configuration in the surrounding environment. The last two questions represent a kind of internal control, as it was asked, respectively, Do you feel the electric current? and, Did I apply electric current to you, ten times, in ten different places? Respectively, the responses were, No and Yes, whose processing of the responses were Affirmative and False. The vegetable no longer feels the electric discharge; however, it is aware that a difference in potential has been applied five times and not ten times.

DISCUSSIONS

The Depatterning procedure, applied by the Canadian psychiatrist D. E. Cameron, had the aim of "depersonalizing" a psychotic-schizophrenic subject, through a combined effect of psychotropic compounds, which indicated a lability of consciousness and, the subsequent application of an electroconvulsive treatment, completed the effect, wiping out much of a subject's short- and long-term memory.

The interpretation of the data deriving from the alteration of the biometric parameters of the plant organism has made it possible to identify a certain pattern and a certain logic in the alteration. During the recording of the control parameters, in the absence of any form of treatment, the dynamics/sequentially of the responses and their typology could be interpreted as the fact that the plant organism needed time to be able to acclimate to the condition. A few moments after the administration of the psychotropic preparation, based on a solution of N, N-Dimethyltryptamine, the first alterations began to be highlighted, especially to questions such as << Do you feel you have a conscience? >> and << Do you feel ok? >> the processing of both answers gave an "Indeterminate" result. We do not have a real term of comparison between the questions posed during the control state and during the state of administration of the psychotropic preparation, however, the real comparison occurs between the state of administration of the psychotropic preparation and the following one of application of the electroconvulsive procedure. In both conditions the same question was asked, namely: << Do you feel you have a conscience? >> During the administration of the psychotropic preparation, the elaboration of the previous answer << Yes >>, provided an "Indeterminate" type result, and, during the state of administration of the electroconvulsive procedure, the elaboration of the previous answer << Yes >>, returned a result of "Lie". The change could derive from the fact that the alteration of the biophysical state of the plant could be due to a combination of an effect between a chemical procedure (psychotropic compound) and a physical procedure (electroconvulsive procedure). The hypothesis is that the N, N-DMT induced an initial state of numbness, producing the result "Indeterminate" in the elaboration of

the answer to the question of whether the vegetable felt it had a conscience. Once the psychotropic preparation "prepared the effect", the electroconvulsive treatment "completed the effect" by inducing a definitive alteration. In fact, when asked if the vegetable felt he had a conscience, the elaboration of the initial answer << Yes >> was "Lie". In this case, the definitive alteration had taken place in the plant, which could be hypothesized and rewritten as a "total rejection of consciousness" to advance a supposition. Based on a comparison between the Depatterning method, applied on a human level and on a vegetable level, assisted by a comparison of the re-elaborations of the answers, a certain parallelism can be deduced, above all between the role of the effects of the psychotropic compound, of the preparator, and of the treatment electroconvulsive, actuator. Therefore, through the reasoning of Reverse Engineering, applied to a syllogism, if the Depatterning procedure, applied at a vegetable level, has a parallelism with the Depatterning applied at a human level, which is used for depersonalization, through the removal of memory levels, it is possible to hypothesize that even plants possess a form of memory.

CONCLUSIONS

On the basis of the data obtained, on the parallelism of the effect between the Depatterning procedure performed at a human level and the Depatterning performed at a vegetable level, it is possible to state that the combination between the chemical treatment (N, N-DMT) and the physical treatment (treatment electroconvulsive) induce a state of functional, biophysical alteration of the plant organism, which, on the basis of the same parallelism reported in the Discussion, can be traced back to the hypothesis according to which a plant could be endowed with a form of memory. The Reverse Engineering procedure, applied in this experimentation, allowed to lay further foundations for this hypothesis, on the existence of a form of memory and consciousness of vegetable organisms. To confirm this data, there will be a repetition of the experimentation, with the introduction of further variables and more rigid control mechanisms to be applied during the procedure.

ACKNOWLEDGMENTS: Authors and co-authors would like to thank members of the BDORT Center team in Belgrade, not mentioned as direct participants of the research and we also want to declare the absence of conflicts of interest during the execution of all the research and application work.

Declarations

Source of Funding

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing Interests Statement

The authors declare no competing financial, professional, or personal interests.

References

- [1] Luther Burbank. Half-hour experiments with plants. P.F. Collier & Son company. EPUB Edition, New York.
- [2] Luther Burbank. Plant Breeding. How plants are trained to work for man. Volume I, Eight Volumes, Illustrated, Prefatory Note by David Starr Jordan P.F. Collier & Son company. EPUB Edition. New York.
- [3] Luther Burbank. Grafting and Budding. How plants are trained to work for man. Volume II, Eight Volumes, Illustrated, Prefatory Note by David Starr Jordan P.F. Collier & Son company. EPUB Edition. New York.

- [4] Luther Burbank. Fruit Improvement. How plants are trained to work for man. Volume III, Eight Volumes, Illustrated, Prefatory Note by David Starr Jordan P.F. Collier & Son company. EPUB Edition. New York.
- [5] Luther Burbank. Small Fruits. How plants are trained to work for man. Volume IV, Eight Volumes, Illustrated, Prefatory Note by David Starr Jordan P.F. Collier & Son company. EPUB Edition. New York.
- [6] Hermann Schildknecht. Über die Chemie der Sinnpflanze Mimosa pudica L. Mit 22 zum Teil farbigen Abbildungen. Vorgelegt in der Sitzung vom 10 juni 1978. Springer Verlag Berlin Heidelberg New York 1978. ISBN-13: 978-3-540-09290-2. DOI: 10.1007/978-3-642-46402-7. e-ISBN-13: 978-3-642-46402-7.
- [7] Silvia Perotto, František Baluška. Signaling and Communication in Plant Symbiosis. ISSN 1867-9048 E-ISSN 1867-9056, ISBN 978-3-642-20965-9 E-ISBN 978-3-642-20966-6, DOI 10.1007/978-3-642-20966-6, Springer Heidelberg Dordrecht London New York. Library of Congress Control Number: 2011938275, Springer-Verlag Berlin Heidelberg 2012.
- [8] J. Benjamin Miller and Giles E.D. Oldroyd. The Role of Diffusible Signals in the Establishment of Rhizobial and Mycorrhizal Symbioses. DOI 10.1007/978-3-642-20966-6. Springer Heidelberg Dordrecht London New York.
- [9] František Baluška, Soumya Mukherjee, Akula Ramakrishna. Neurotransmitters in Plant Signaling and Communication. ISSN 1867-9048 ISSN 1867-9056 (electronic). Signaling and Communication in Plants, ISBN 978-3-030-54477-5 ISBN 978-3-030-54478-2 (eBook), <https://doi.org/10.1007/978-3-030-54478-2>, Springer Nature Switzerland AG 2020.
- [10] František Baluška, Soumya Mukherjee, Akula Ramakrishna. Neurotransmitters in Plant Signaling and Communication. ISSN 1867-9048 ISSN 1867-9056 (electronic). Signaling and Communication in Plants, ISBN 978-3-030-54477-5 ISBN 978-3-030-54478-2 (eBook), <https://doi.org/10.1007/978-3-030-54478-2>, Springer Nature Switzerland AG 2020.
- [11] František Baluška, Velemir Ninkovic. Plant Communication from, an Ecological Perspective. ISSN 1867-9048 e-ISSN 1867-9056, ISBN 978-3-642-12161-6 e-ISBN 978-3-642-12162-3, DOI 10.1007/978-3-642-12162-3, Springer Heidelberg Dordrecht London New York, Library of Congress Control Number: 2010923084, Springer-Verlag Berlin Heidelberg 2010.
- [12] James D. Blande, Robert Glinwood. Deciphering Chemical Language of Plant Communication. ISSN 1867-9048 ISSN 1867-9056 (electronic), Signaling and Communication in Plants. ISBN 978-3-319-33496-7, ISBN 978-3-319-33498-1 (eBook), DOI 10.1007/978-3-319-33498-1. Library of Congress Control Number: 2016947068. Springer International Publishing Switzerland 2016.
- [13] J.-C. Bose. Sur la réponse électrique de la matière vivante et animée soumise à une excitation. - Deux procédés d'observation de la réponse de la matière vivante. HAL Id: [jpa-00240632](https://hal.archives-ouvertes.fr/jpa-00240632). <https://hal.archives-ouvertes.fr/jpa-00240632>. Submitted on 1 Jan 1902.
- [14] Sir Jagadis Chunder Bose. Plant Autographs. and their revelations. Longmans, Green and CO. LTD. 39 Paternoster Row, London, E.C. 4, New York, Toronto, Calcutta, Bombay and Madras, 1927.
- [15] Sir Jagadis Chunder Bose. The Motor Mechanism of Plants. Longmans, Green and CO. London, New York, Toronto, 1928.

- [16] Jagadis Chunder Bose. Comparative Electro-Physiology, a Physico-Physiological Study. Longmans, Green, and CO. 39 Paternoster Row, London, New York, Bombay, and Calcutta 1907.
- [17] Sir Jagadis Chunder Bose. Growth and Tropic Movements of Plants. Longmans, Green and CO. Toronto 1929.
- [18] Sir Jagadis Chunder Bose. The Nervous Mechanism of Plants. Longmans, Green, and CO. 39 Paternoster Row, London, New York, Bombay, and Calcutta 1926.
- [19] Joël Sternheimer, exposé au Colloque International "Louis de Broglie, Physicien et penseur", Ancienne Ecole Polytechnique, Paris, 6-7 novembre 1987; "Ondes d'échelle. I. Partie physique", pli à l'Académie des Sciences n° 17064 (juin 1992), ouvert en 1999.
- [20] Joël Sternheimer, "Procédé de régulation épigénétique de la biosynthèse des protéines par résonance d'échelle", brevet n° FR 92 06765 (1992), n° de publication 2691796, aujourd'hui délivré en France (13/7/95) et 16 autres pays (dont OAPI, Australie, Russie).
- [21] Joël Sternheimer, "Régulation épigénétique de la biosynthèse des protéines par résonance d'échelle", exposé à l'Académie des Sciences de Tokyo-Kanagawa (23/5/93). "Interactions non-locales dans l'expression des gènes", (extrait sur <http://www.ecoropa.org/>), 1997. <http://www.bekkoame.ne.jp/~dr.fuk/InterNonlocF.html>
- [22] Joël Sternheimer, in "Strong and weak interactions: present problems", 1966 International School of Physics 'Ettore Majorana', (ed. A. Zichichi), Acad. Press 1966, pp. 731 et suiv., 746-47, 752-53, 786-87, 800 (discussions avec S. Coleman, M. Gell-Mann et S. L. Glashow sur les masses des particules).
- [23] Joël Sternheimer, C. R. Acad.Sc.Paris 297, p.829, 1983 [Note présentée par André Lichnerowicz]; Séminaire de physique mathématique - A. Lichnerowicz, Collège de France (1984), reprod.in Rev. Bio-Math. 94, p.1, 1986. (Opérateur d'échelle exponentiel dans une dimension autonome vis-à-vis de l'espace-temps pour décrire les masses des particules, et sa déformation linéaire en quasi-échelle, rendant compte, par synchronisation, de la valeur de la constante observée par Schwinger; généralisation associée de l'équation d'ondes).
- [24] Joël Sternheimer, Le Cahier du Collège International de Philosophie 3, p. 180, Osiris, Paris (1987); "How ethical principles can aid research", Nature vol. 402, p. 576 (1999).
- [25] Monica Gagliano, Michael Renton, Nili Duvdevani, Matthew Timmins, Stefano Mancuso. Out of Sight but Not out of Mind: Alternative Means of Communication in Plants. PLoS ONE, 2012, Volume 7, Issue 5, e37382.
- [26] Stefano Mancuso. Measuring Roots An Updated Approach. ISBN 978-3-642-22066-1 e-ISBN 978-3-642-22067-8, DOI 10.1007/978-3-642-22067-8, Springer Heidelberg Dordrecht London New York, Library of Congress Control Number: 2011940210, Springer-Verlag Berlin Heidelberg 2012.
- [27] František Baluška, Dieter Volkmann, Andrej Hlavacka, Stefano Mancuso, Peter W. Barlow. Neurobiological View of Plants and Their Body Plan. Communication in Plants, F. Baluška, S. Manusco, D. Volkmann (Eds.), © Springer-Verlag Berlin Heidelberg 2006
- [28] Stefano Mancuso and Alessandra Viola. Brilliant Green: The Surprising History and Science of Plant Intelligence. Washington, DC: Island Press, 2015. Pp. 192.
- [29] Ewen Cameron, J. G. Lohrenz and K. A. Handcock. The Depatterning Treatment of Schizophrenia. Comprehensive Psychiatry. Official Journal of the American Psychopathological Association Vol.3, No.2 1962.