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Replication Attempt: No Development of pH or Temperature Oscillations in Water Using Intention Imprinted Electronic Devices

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Abstract—Researchers have offered preliminary evidence that human intention can be captured in a simple electronic device or Intention Imprinted Electronic Device, (IIED). The IIED device is purported to influence the pH of water and create periodic oscillations. The present experiment attempts to replicate these results in collaboration with the original experimenters Dibble and Tiller in a university laboratory setting. This replication attempt failed.

Keywords: intention—pH—water—temperature

Introduction

Researchers (Dibble & Tiller, 1999, 1997; Tiller et al., 1999) have presented evidence that intention imprinted electronic devices (IIEDs) interact and influence the pH of water. They reported changes of 0.5 to 1.0 pH units and pH oscillations of different periods. The present study is an attempt to replicate this previous work in collaboration with the original experimenters Dibble and Tiller at our university laboratory.

Equipment and Procedures

Procedures are similar to the original work (Dibble & Tiller, 1999, 1997; Tiller et al., 1999). All equipment, IIEDs, Faraday cages, sensors, meters and water were provided by Dibble and Tiller and are identical or similar to the original set of experiments (Dibble & Tiller, 1999; Tiller et al., 1999). The IIED devices have been described in detail elsewhere (Dibble & Tiller, 1999, Tiller et al., 1999). Our laboratory computers were used to transfer the data.

Two IIED devices were used one charged with an intention to create periodic pH oscillations and one not charged. The charging intention was performed in the same manner and by the same four individuals as in the initial experiments (Dibble & Tiller, 1999, 1997; Tiller et al, 1999). The device was then wrapped in Al-foil and stored in an electrically grounded Faraday cage by Dibble and Tiller. The device not ''charged with intention'' was stored in a steel case and Faraday cage. The storage material and procedures were designed and implemented by

Dibble and Tiller to insure isolation of the devices from each other and environmental electromagnetic influences. Dibble and Tiller (1999) and Tiller et al. (1999) did not include a steel cage. The devices were shipped separately as in the initial set of experiments and hand delivered to our University laboratory.

Equipment was tested and run in our laboratory's offices. A temperature probe was found faulty and replaced. The testing and running of the equipment in our laboratory environment occurred for 62 days. According to Tiller and colleagues (1999) the location for the research must be "conditioned" in this first phase of the experiment, this involves turning on an intention charged IIED in the research environment. In the second phase the IIEDs continue to be turned on and are evaluated for periodic oscillations in pH. The addition of a third Faraday cage was discussed and Dibble and Tiller provided the additional equipment.

As part of the second phase, one Faraday cage without a device (A) serving as a control was placed one meter from a Faraday cage with an "intention charged" (B) device in the laboratory. A Faraday cage with a non-charged device (C) was placed 5 meters away to serve as an additional control in our laboratory. Including an non-intention uncharged device, an intention charged device and no device present conditions follows earlier work (Dibble & Tiller, 1999).

As in the initial set of experiments, a scientific quality electrochemistry meter instrument recorded pH levels and temperature from sensor-probes in the water continuously (Dibble & Tiller, 1997). The pH meters compensated automatically for changes in temperature. The present experiment used Denver Model 225 IIE meter while Dibble and Tiller (1999) used an Accumet 50 and 150 meters (Fisher Scientific, 1997). Water was purified and provided by Dibble and Tiller. Calibrations involved the same buffers as the initial set of experiments and were performed or supervised in person by Dibble and Tillers' technician, (except two calibrations which were supervised over the telephone). Calibration of A and B did not include changing the water. Calibration of C included adding and changing water as in the original experiments (Dibble personal communication, 11/18/99). Information from the pH meter was downloaded to a desk-top computer and recorded at sample intervals of one/minute while the original experiment involved a sample interval that ranged between one and three minutes (Dibble & Tiller, 1997).

Results

It was difficult to obtain a stable baseline in the conditioning phase of the experiment (Figure 1a). During the second phase of the experiment, no significant oscillations were found in temperature or pH. Dibble analyzed all the data and created all the graphs and reported that no effect was seen (Figures 1a, 1b, 1c, and 2). Dibble notes (3/17/2000 personal communication) ". . . . our research with the conditioning IIED's has not been as robust as we had grown to expect from use of the other devices. We have seen only small effects so far using those particular devices [conditioning] like the one we gave you" [in the

present experiment], (brackets added for clarification). These conditioning IIED's have an intention to create periodic oscillation patterns in the pH, a result found in the original experiments (Tiller et al., 1999; Dibble & Tiller, 1997). They do not involve an IIED with an intention to specifically increase or decrease pH as in the initial studies (Tiller et al., 1999; Dibble & Tiller, 1997).

There was no varying of pH with temperature and no periodic pH oscillations or temperature oscillations observed as shown in Figures 1a, 1b, 1c and 2. Figure 2 shows the typical results for Faraday cages A and B for 72 hours. A is the Faraday cage without a device, B is the Faraday cage with a intention charged device. Data is shown in hours for 10/1/99 to 10/4/99 and no significant oscillations of pH or temperature changes were found.

Conclusion and Discussion

The authors note that the pH of pure water may not be the best medium to test this condition/intention hypothesis. Although Tiller, Dibble, and Kohane (1999) have previously reported success with water as a medium, the pH of water can be difficult to control because small CO_2 changes in the environment can significantly influence pH. Therefore, slight changes in the CO_2 content of the air in equilibrium with the water could be responsible for the difficulty in obtaining a stable baseline during the conditioning period. Other experiments with IIEDs (Dibble & Tiller 1999, 1997; Tiller et al., 1999) involve changing the water often (as often as every 3 days for ongoing experiments, personal written communication, Dibble, 11/18/99) and may potentially be introducing an uncontrolled variable into the experimental design.

An experimenter effect (Wiseman and Schlitz, 1997) could be operating. In this study additional experimenters besides the original experimenters, Dibble and Tiller, attempted to replicate the results. Possibly, there is a specific associated environmental effect influencing the results in our university laboratory or likewise in Dibble and Tillers' original experimental sites. Tiller (personal communication, 8/14/00) has offered that even . . . . "just altering the position of the equipment" could have disturbed the conditioning effect.

Even though it is not clear what the mechanisms involved are, no changes or oscillations in pH or temperature oscillations were found with the intention imprinted electronic devices in our university laboratory. Recently, Jonas and Crawford (2003) have commented in a review of the literature on mental and spiritual healing that further research is recommended but "that mental intention has effects on non-living random systems and may have effects on living systems" (p. xix). In this particular experiment, there was no support for effects of mental intention (using IIEDs) on the pH oscillations of water in a university environment.

Note 1: Dibble and Tiller requested not to be co- authors on this paper. Tiller wished to be quoted as saying (personal communication, 4/18/03) "the effective

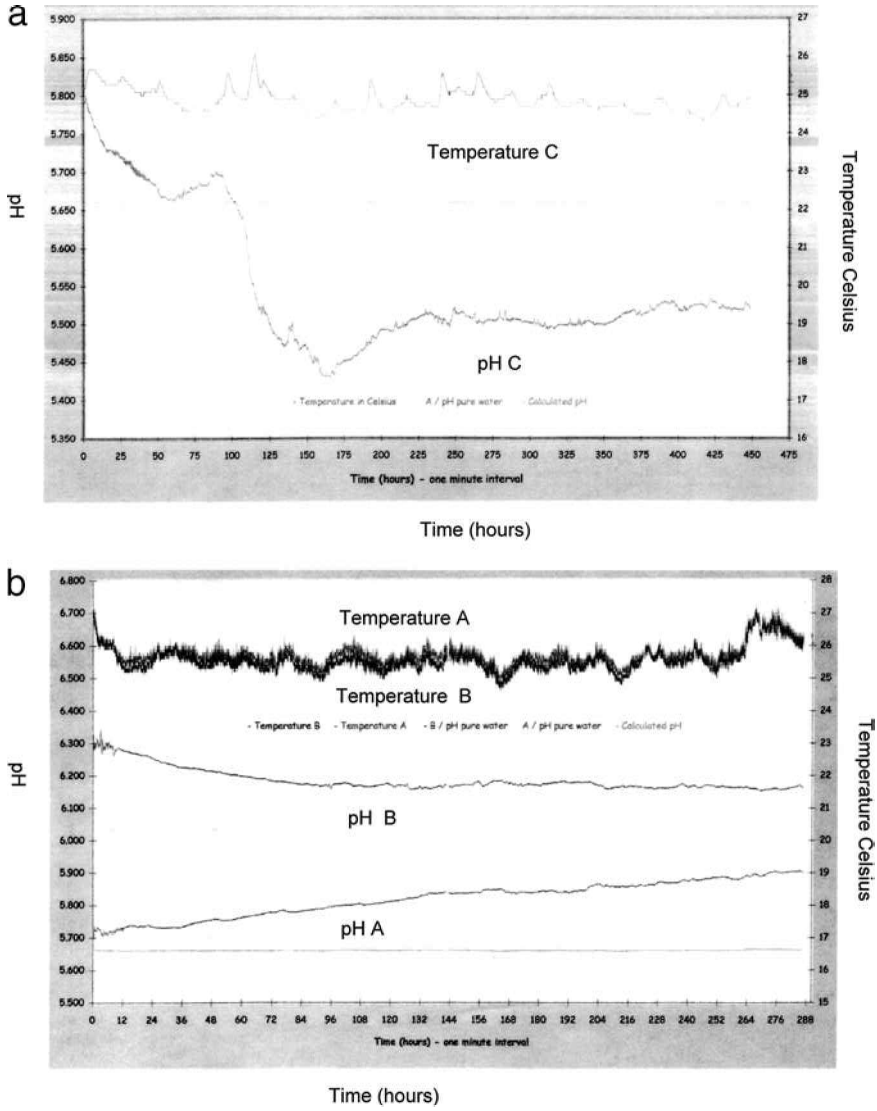

Fig. 1a. An example of a typical unsuccessful attempt to obtain a stable pH baseline. This example is taken from 8/5/99 to 8/25/99, representing 475 hours for Faraday cage C for a non-charged device.

Fig. 1b. An example of no significant oscillations of changes in temperature or pH. This example is taken from 7/14/99 to 7/26/99, representing 288 hours. A is the Faraday cage without a device. B is the Faraday cage with an intention charged device.

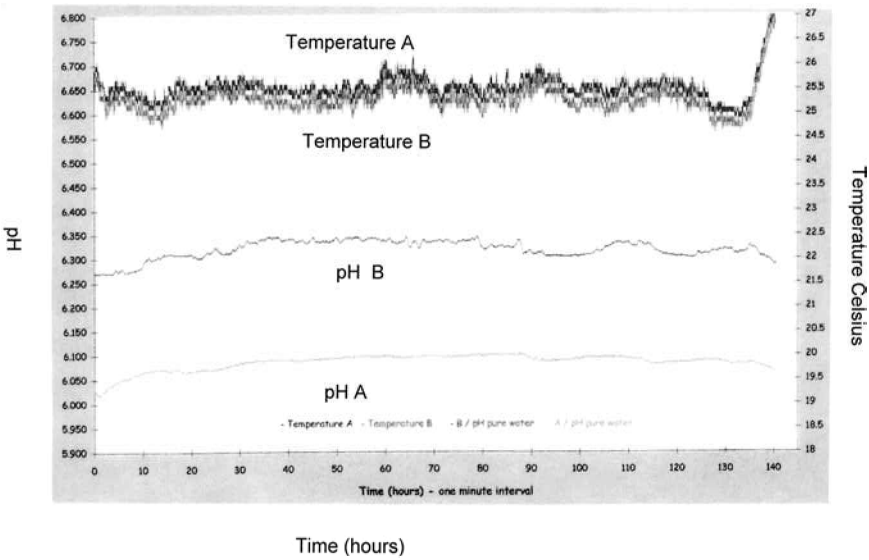

Fig. 1c. An example of no significant oscillations of changes in temperature or pH. This example is taken from 8/5/99 to 8/11/99, representing 140 hours. A is the Faraday cage without a device. B is the Faraday cage with an intention charged device.

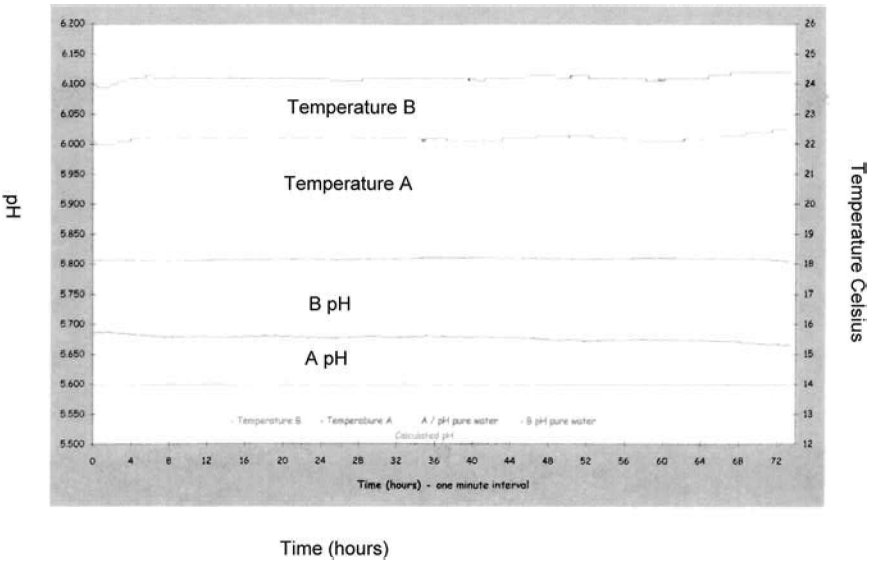

Fig. 2. An example of no significant oscillations of changes in temperature or pH. This example is taken from 10/1/99 to 10/4/99, representing 72 hours. A is the Faraday cage without a device. B is the Faraday cage with an intention charged device.

imprint intention time in an IIED is 3 months and your IIED [IIED used in the present experiment] was imprinted just before May 15, 1999 and delivered to you on May 26, 1999. Thus, your Figure 1 [1a, as well as 1b, 1c] should still be exhibiting some residual IIED effect in the space even in your fairly negative environment. Thus, the stabilization plateau of our Figure 6.1 [Tiller, Dibble, Kohane 2001, p. 233] was never achieved and, by the date of your Figure 2, your space was back to background. [brackets added for clarification].

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