

(a) Much higher voltages are utilized. For example, the Thymatron DG utilizes up to 500 volts; the MECTA SR/JR, up to 444 volts; the new Medcraft up to 325 volts; and the Elcot MF-1000 up to 500 volts. Compare this to between 120 volts maximum for the oldest sine wave models and 170 volts maximum for modern SW devices.

(b) Constant current and continually increasing voltages are properties of all modern BP devices. Constant current means that the current never fluctuates or descends. This unique feature of BP devices is accomplished by higher and increasing voltages, a characteristic not found in SW devices. The constant lower voltage in the latter results in gradually decreasing currents. Just as the resistance of a wooden wall can eventually slow down and overpower an electric drill, so the human skull gradually slows down current. Modern BP devices maintain a constant current of about one ampere throughout the full four to six seconds it is emitted, making these devices the most powerful in ECT/EST history.

The tremendous energy output of modern BP devices (see footnote 15), the best measure of the machine's potential destructiveness, is a well-kept manufacturer's secret. The modern day BP devices are more than four times as powerful as the older SW devices, and about two and a half times as powerful as modern day SW devices. In fact, today's "new and improved" BP device is over eight times more powerful than the original Cerletti-Bini device renowned for permanent memory loss and upon which Wilcox and Liberson attempted to improve. Modern day BP devices have not been shown to be cognitively advantageous to SW devices in any modern study, and the few studies which have claimed cognitive advantages with modern day BP could not be replicated by other researchers (see Squire and Zou-zounis, 1986; Weiner, Rogers, and Davidson, 1986a, 1986b).

Conclusion

Contrary to the claims put forth by the four manufacturers of EST devices, the evidence reviewed in this paper clearly shows that the majority of EST

the manufacturers. For SW devices, the formula is: joules = volts x current x duration, or joules = current squared x impedance x duration. For BP devices, the formula is: joules = volts x current x (hz x 2) x wave length x duration, or joules = current squared x impedance x (hz x 2) x wave length x duration. All four manufacturers utilize the latter in lieu of the former formulas, deriving the 100 joule maximums for their BP machines. Utilizing the former formulas, however, which give us non-theoretical amounts, we find that the Thymatron DG BP is capable of emitting 250 joules or watts of electricity; the MECTA SR/JR BP models, 256 joules; the Medcraft B-25 BP, 273 joules; and the Elcot device even more. Compare these energy emissions with the following typical analogy: the standard SW device can light up a 60 watt light bulb for up to one second. (Modern SW devices can light up a 100 watt light bulb for up to one second.) Modern BP devices can light up the same 60 watt light bulb for up to four seconds.

recipients report damage as a result of EST. EST recipients — whether or not they report memory loss — do, in fact, sustain actual permanent memory loss, averaging at least eight months, as a result of the procedure.

Modern day BP devices are not "lower current" machines, as most proponents claim. Through electrical compensation, they equal SW devices in every respect, and emit far greater energy. The results of studies claiming cognitive advantages using modern day BP over SW have not been replicated. Any advantage of the original BP device has been attenuated in modern day devices.

Hundreds of studies conducted between 1940 and 1965 (Corsellis and Meyer, 1954; Hartelius, 1952; Heilbrunn and Weil, 1942; McKegney and Panzetta, 1963; Quandt and Sommer, 1966) demonstrating brain damage have been criticized as "old." However, since that time, the machines have only become more powerful. Thus few studies are "old" or irrelevant.

Most experts agree that current, and not convulsion (APA, 1992; Breggin, 1979, pp. 114, 122; Dunn et al., 1974; Sutherland et al., 1974) is responsible for long-term memory loss and severe cognitive dysfunction. Von Meduna's "therapeutic convulsion" is a myth, convincingly disconfirmed by early minimal stimulus convulsion experiments. Memory dysfunction and the "therapeutic" effect — which appear to be products of electricity — may well be inextricably related.

All four manufacturers continue to claim their devices are convulsive therapy devices. Nevertheless, because some of the Wilcoxon principles of the past are being rediscovered today, and because the efficacy of threshold convulsions is questionable (APA Task Force, 1990, pp. 28, 86, 94), a few BP manufacturers and researchers who collaborate with the manufacturers have gained enough confidence to call for even more powerful electrical devices — under the unsubstantiated claim that BP suprathreshold dosages of electricity are safer than SW suprathreshold dosages (Glenn and Weiner, 1983, pp. 33-34; MECTA, 1993, pp. 13, 14; Sackheim, 1991). For instance, Gordon (1980) rediscovered the adequateness of grand mal convulsions administered at low electrical dosages. Gordon (1982) later reiterated that high doses of electricity cause irreversible brain damage. Unaware of the lost history, Gordon suggested using minimal stimulus machines to induce convulsions. Deakin (1983) responded that minimal stimulus machines would be misguided, alluding to Robin and De Tissera's (1982) important double-blind study which demonstrated that current is the factor in ECT efficacy — not convulsions.¹⁶ Sackheim, Decina, Prohovnik, Portnoy, Kanzler, and Malitz (1986)

¹⁶Ex-lobbyist Diann'a Loper, who suffers from severe grand mal epilepsy as a result of EST, worked on the passage of S.B. 205 in Texas. Her neurologist John Friedberg called Diann'a's seizures the worst he had witnessed. Even so, I noted Diann'a never suffered extensive long-term memory loss as a result of her seizures, but she had side effects exactly like those

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ECT: Sham Statistics, the Myth of Convulsive Therapy, and the Case for Consumer Misinformation

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This paper emphasizes that, contrary to the claims of ECT experts and the ECT industry, a majority, not "a small minority," of ECT recipients sustain permanent memory dysfunction each year as a result of ECT. The paper exposes the convulsion hypothesis, upon which ECT is allegedly based, as mythological. Finally, through hidden and comparative electrical parameters, it exposes the extreme destructive power of today's "new and improved" ECT devices.

The purpose of this paper is threefold: to identify misleading or false information on memory damage disseminated by electroconvulsive/electroshock therapy (ECT/EST) device manufacturers as well as by the American Psychiatric Association (APA); to provide historical and mathematical proof that convulsive therapy is a myth; and to show that modern ECT/EST devices are much more powerful, not less powerful, than ECT/EST devices of the past.

ECT is the passage (for 0.1 up to 6 seconds), usually from temple to temple through the frontal lobes, of electric current, for the purpose of inducing "therapeutic" grand mal convulsions. Follow-up studies about the effects of ECT in which recipients themselves evaluate the procedure are both rare and embarrassing to the ECT industry. The outcomes of these studies directly contradict propaganda regarding permanent memory loss put forth by the four manufacturers of ECT devices in the United States (Somatics, MECTA, Elcot, and Medcraft), upon whom physicians and the public rely for information, much as the public relies upon pharmaceutical companies for information on drugs.

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