

An Amateur Qualitative Study of 48 2C-T-7 Subjective Bioassays

Casey Hardison

"Chance favors the prepared mind."
—Alexander Fleming

THIS IS AN AMATEUR QUALITATIVE STUDY of 2C-T-7, a fairly novel entheogenic compound that has been used in a limited context as an adjunct in psychedelic psychotherapy since 1986.¹

It was chance that at a rare international gathering of pharmacophiles and entheogen aficionados, in a relaxed tropical conference setting, I noticed a number of individuals subjectively bioassayed 2C-T-7. I recognized this as an opportunity to further the understanding of 2C-T-7 through anecdotal experiential accounts and to lend credibility to the scientific methodology of the subjective² bioassay. Transforming insight into action, I prepared and administered a written survey. What follows is a summary of the experiences noted by 48 individuals who willingly did ingest 2C-T-7.

Understanding

The subjective bioassay is probably the oldest of all scientific techniques and is no different than smelling or tasting something to determine if it is spoiled. In regards to putative entheogenic and/or therapeutic compounds, the subjective bioassay involves the consumption of a compound and then the notation of the effects experienced subjectively by an individual. The use of the subjective bioassay is probably most notably demonstrated by Dr. Arthur Heffter's pioneering 1897 systematic pharmacological study of mescaline, the active alkaloid of the peyote cactus *Lophophora williamsii*.³

Created by Dr. Alexander Shulgin, 2C-T-7 is properly known as 2,5-Dimethoxy-4-(n)-propylthiophenethylamine.⁴ 2C-T-7 is a phenethylamine compound like mescaline and MDMA. On the common nomenclature of 2C-T-7, Dr. Shulgin states:

I made up the 2-carbon name for a lot of these compounds because they were the 2-carbon homologues of several amphetamines that I had already made and had found to be active. Compounds such as DOM, DOET, DOB, DOI, Aleph-2 and Aleph-7, for example, all have the amphet-

amine skeleton and thus show a 3-carbon chain. They are the 3-carbon prototypes, so when I made a number of new compounds without the alpha-methyl group, they were properly phenethylamines containing a 2-carbon chain. And I named them that way, accompanied with a leading letter or element from the 3-carbon code name. Thus these became 2C-D, 2C-E, 2C-B, 2C-I, 2C-T-2 and 2C-T-7. The "T" was a reminder that there was a thio-group (a sulfur atom) in the molecule [vide supra Note 1].

Many of these compounds have been found to be useful and as adjuncts in psychotherapy, especially MDMA, 2C-B, 2C-E, 2C-T-2 and 2C-T-7.⁵ It is an opinion of many involved with psychedelic psychotherapy that a therapist has "no business" conducting psychotherapy with a psychoactive compound that has not been subjectively bioassayed by the therapist.

On questioning Dr. Shulgin about the use of these compounds as follow-ups to MDMA in psychotherapy, Dr. Shulgin replied:

The compound that has been most frequently used that way has been 2C-B. The argument used here is that the action of MDMA is to bring about an opening of some of the emotional barriers of the

patient, then with that aspect of the mental state being acknowledged the action of the short term acting psychedelic allows something to be done with it. So it is not really a booster, but really a second and separate session that usually ties quite comfortably with the first session. It is as if the first (the MDMA) shows where the wound is, and the second (the 2C-B or 2C-T-7) allows the healing to start.

Dr. Shulgin further stated that of most of his effective trials, "generally plus-threes were with doses of 20 to 25 milligrams"⁶ [vide supra Note 1]. The participants of this study ingested between 25 to 45 mg of 2C-T-7.

Methods

Using my background in Biochemistry, Botany, and Medical Anthropology, I generated the survey intending that it be as generic as possible, yet still capture what I subjectively recognized to be essential information—mainly dosage, duration, and the generalized effects of 2C-T-7. The survey was distributed to individuals who would accept it and 48 responses were returned. No formal protocol was followed, as this was an impromptu study.

Survey Questions

Empirical questions included: Did you ingest 2C-T-7? How many other 2C-T-7 bioassays have you completed? Did you consume any other synergistic or antagonistic compounds during your 2C-T-7 bioassay? What quantity of 2C-T-7 did you ingest? Are you male or female? What is your body weight? What is your age? Subjective questions included: What were your dietary habits in the last 72 hours? What was your mindset before consumption of 2C-T-7? What was your mindset during your bioassay of 2C-T-7? What was your mindset after your 2C-T-7 bioassay, especially upon waking after sleep? How were your clarity of thought, movement and energy levels affected by ingestion of 2C-T-7? What length of time was required to begin noticing effects of the 2C-T-7? How many hours after ingestion did you notice peak effects of the 2C-T-7? What was the duration of your peak experience? Was there anything missing that would have contributed and made a difference for you? Were there any awe-inspiring moments of primary importance and will you please share them?

Medical Anthropology takes account of the belief system or cosmology of the individual when determining therapeutic efficacy,⁷ hence I attempted to obtain a greater understanding of the role that "mindset" plays in entheogenic experiences, especially in regards to the therapeutic potential of 2C-T-7.

Results

Forty-eight individuals, 13 female and 29 males and four who did not specify gender, ages 24 to 73, from various cultural paradigms, did willingly ingest 2C-T-7. The mean age of males was 44 years and of females 42 years. Thirty-three individuals reported having no previous experience with 2C-T-7. Twelve individuals reported having completed one to 15 previous bioassays.⁸ The dose of 2C-T-7 consumed ranged from 25 mg to 45

mg in males and 25 mg to 33mg in females with dosages ranging from 0.3mg/kg to 0.6mg/kg.

The length of time required for participants to begin noticing the effects of 2C-T-7 ranged from 15 minutes to four hours with most people reporting from one to two hours. The number of hours after ingestion of 2C-T-7 that peak effects were noted ranged from one to six hours with most reporting between two to four hours. The duration of peak experiences ranged from one to five hours with most reporting between two to four hours. Four people noted that they did not understand the use of the word "peak." Several volunteered the total duration of their bioassay, which ranged from 8 to 18 hours with a median around 12 hours.

Other compounds, antagonistic or synergistic, consumed by 16 participants during their experience, included: Marijuana (11), 90 mg Dihydrocodeine and Valium (2), Beer (1), cocaine (1), flower essences (1).

Set before ingesting 2C-T-7

The responses to questions about state of mind before ingesting 2C-T-7 included such statements as: OK, normal, baseline, centered, fine, up, good, positive, happy, heartfelt, open, clear, receptive, relaxed, willing, interested, curious, stimulated, attentive, connected, eager, anxious, anticipation, apprehension, concerned, nervous, scattered, tired, varied, confused, down, muddy. Notable exceptions were: "Rife with anticipation." "Minimal haunting by my usual demons." "Eager to try but anxiety about dosage." "Concerned about effects of 'speed' content due to my heart condition."

Set during the experience

The participants noted similar declarations in response to questions about mindset during their 2C-T-7 bioassay. Some notable exceptions were: "Extraordinarily free roaming, very lucid and philosophic." "Complete and utter bliss, incredible, cosmic, and extremely grateful." "General sense of well being, I had many insights, catharsis early on." "Some emotional periods, feeling sad and disoriented." "Became emotional, got in touch with a sorrow in my heart which led me to a place of love."

Participants reporting of the effects of 2C-T-7 on clarity of thought, movement, and energy levels stated: "Clarity of thought somewhere between MDMA and LSD." "At 3-hour mark I had to interact with straight people and negotiate a business exchange, no problem as long as I focused my concentration." "Some difficulties in focusing my thoughts, clear but disoriented." "I moved in an easy coordinated manner while hiking and climbing." "Clarity uncaged, crystalline thoughts, movements like an animal, confident and energetic."

The most often reported physical disturbance was general nausea/upset stomach (7), other exceptions noted include: Headaches (4) including one mention of a migraine lasting into the next morning; Muscle tension (3); Extreme nausea (3); Abdominal Cramping (1); Tachycardia (1); Adrenal Pain (1). When asked, "was

there anything missing that would have contributed and made a difference for your experiences," most responded "no," however a few participants made statements exemplified by: "It was perfect, I couldn't find anything wrong," "Something to help with queasiness." "Something was missing but I don't know what it was." "Lack of physical discomfort." "Perhaps, more?"

Therapeutic effect reported

Six participants declared therapeutic or healing effects and made these statements: "Very healing." "Gently wept a few times, good medicine." "Very gentle and therapeutic." "I reviewed and processed emotional issues." "Instantaneous awareness of programming." "Some deep emotional issues were addressed and resolved within myself."

Thirty-five participants, 26 males and nine females, stated that they would conduct 2C-T-7 subjective bioassays again. Seven said they would not and four did not respond.

Interpretation

I failed to ask the chronological question, "How many hours total did you notice the effects of the 2C-T-7? I thought the specific subjective question that would be most useful was, "Would you conduct research with 2C-T-7 again? If not, Why?" I realize now that the use of the word "research" instead of "bioassay" created a listening in the subjects that some did not understand or was incoherent with the intentions of their experience. Not one of the individuals who ingested or bioassayed 2C-T-7 knew they would later be asked to contribute to scientific research, subsequently becoming participants.

All of the reported experiences embodied both cognitive and physical subjectivity and individuality. The subjective responses of the participants illustrate beautifully the Sapir-Whorf hypothesis, which holds that speakers of a particular language must necessarily interpret the world through the unique vocabulary and grammar their language supplies. On this Sapir stated: "No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached. We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation."⁹

This was an international gathering with people from distinct societies with distinct language habits. When Gordon Wasson noticed the many distinctions for mushrooms that his Russian wife knew compared to the three available in his own English language, he asserted that these language distinctions represented a clue as to how religions are founded. So, taking this one step further; it is in semiotics or language that entities relate with one another, whether that language is electro-chemical charge or complex symbolic constructs. Cognition, the process of intuitive reasoning, exists in language, where all of human realities exist, and is thus the recognition of semiotic



Casey Hardison,
Pharmacophile and
Ethnopharmacognosist in training
University of Idaho
Biochemistry B.S. and
Botany B.S. Candidate
P.O. Box 9866
Moscow, Idaho, 83843
email: cre8love@yage.net

pattern. In other words, "It is all interpretation, and I don't even know that."

Not one person reported the same experience as another. This is the true blessing of the subjective bioassay. The subjective bioassay tells us that we must always take into account the differences in physiology and rates of molecular metabolism as well as rates of recognition of semiotic pattern. Indeed, we are all unique and one of a kind.

Suggestions for further research

Arthur Kleinman has argued that therapeutic efficacy boils down to a declaration either made by the sufferer or the healer that is listened to by the sufferer with credibility or faith. Therefore, a controlled qualitative study examining the ability of an individual's mindset or linguistic programming to create and cause the psychedelic experience would shed light on the nature of consciousness and its relationship in the therapeutic process. •

Acknowledgments

This would not have been possible without: The loving support of Kevin "K-Dog" Lovinghawk and his parents; MAPS and the Entheogenea: I am grateful for who you are and for your efforts, it is making the difference; My parents' genes and inspiration; A grant from TTN.

Notes and References

- 1 Shulgin, A.T. Personal communication April 2000, see also note 5.
- 2 Subjective has many definitions, which denotes the subjective explanations of the word subjective. This extends well to the assay of a chemical in that a subjective bioassay is unique to each individual organism's biochemistry and perspective of stimuli.
- 3 <http://www.heffter.org/Arthur.html> last checked May 6, 2000.
- 4 Shulgin & Shulgin (1991, 1998). *PiHKAL: A Chemical Love Story*. Berkeley, CA: Transform Press.
- 5 Stolaroff, M.J. (1994). *Thanatos to Eros: 35 years of Psychedelic Exploration*, Berlin: GAM-Media GmbH.
- 6 For an explanation of the 'plus' rating of subjective bioassay experiences see *PiHKAL* p. xxiv. in Note 4.
- 7 Csordas, T.J. & Kleinman A. (1996). The Therapeutic Process. In: *Medical Anthropology: Contemporary theory and method*, Rev. Ed. C.F. Sargent and T.M. Johnson (eds.). Connecticut: Praeger Publishers.
- 8 Five participants each reported one previous bioassay, two reported two previous bioassays, two reported three previous bioassays, and three reported six, seven and 15 previous bioassays respectively.
- 9 Sapir, E. (1929). "The Status of Linguistics as a Science" In E. Sapir (1958, p. 69), *Culture, Language and Personality* (ed. D. G. Mandelbaum). Berkeley, CA: University of California Press.