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# Methylenedioxymethamphetamine is a connectogen with empathogenic, entactogenic, and still further connective properties: It is time to reconcile “the great entactogen—empathogen debate”

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## Abstract

Science on methylenedioxymethamphetamine (MDMA) and MDMA-like substances is faced with the unique situation that this class of psychoactive agents is referred to with two basic names for its effects on the mind: empathogens and entactogens. Empathogen usually refers to the prosocial, empathetic, and openness properties of MDMA, while entactogen usually refers to the introspective and self-awareness properties of this substance. We review the origin and usage of the two terms, and also review recent findings that support that MDMA is an empathogen and an entactogen. Mostly no specified reasons can be detected whether research groups employ the term “entactogenic,” “empathogenic,” both, or neither, in their publications. A case is made that the use of two basic names for the effects on the mind for the same class of psychoactive substances is not warranted because a holistic principle underlies empathogenic and entactogenic properties of MDMA: an intense feeling of connection. Entactogenic characterizes being deeply connected to oneself, and empathogenic being deeply connected to others. We therefore suggest the name *connectogen* as the new basic name for the mind effects of MDMA and MDMA-like substances, a term having the connotation of *producing a joining together/producing a connection*. Thus, MDMA is basically a connectogen with at least the two major connective properties: entactogenic (intrapersonal) and empathogenic (interpersonal). Furthermore, first evidence shows that MDMA might also have further connectogenic properties such as a strong sense of connection with the here-and-now, the body, the world, and with spiritual principles. Finally, we compare connectogenic properties of MDMA with connectogenic properties of classic psychedelics, and lay out some future research in this regard.

## Keywords

MDMA, empathogen, entactogen

As is the case with any class of psychoactive substances, also 3,4-methylenedioxymethamphetamine (MDMA) and MDMA-like substances can be classified either chemically and pharmacologically or with regards to its effects on the mind. Chemically, MDMA is an amphetamine. Pharmacologically, MDMA is an indirect sympathomimetic which produces its subjective effects mainly via the release of serotonin (Hysek et al., 2012; Liechti et al., 2000), norepinephrine (Hysek et al., 2011; Simmler et al., 2011), and oxytocin (Atila et al., 2023). In terms of its effects on the mind, MDMA is mainly termed an entactogen or empathogen. This article is about how to best classify MDMA for its effects on the mind. We start off by tracing the history of the terms “empathogen” and “entactogen.”

Some forty years ago, at a conference in 1983, the late psychologist Ralph Metzner proposed a new name for psychoactive agents like MDMA or MDMA-like substances such as 3,4-methylenedioxymethamphetamine (MDA):

I’d like to suggest the name “empathogenic.” Empathogenic means “empathy generating.” Everyone I’ve mentioned this name to thinks it is a good one. These drugs don’t produce visions as LSD [lysergic acid diethylamide] does. They don’t produce multileveled thinking or objectivity toward your mind as LSD and the psychedelics do. They generate a

profound state of empathy for self and other in the most general and profound terms. A state of empathy where the feeling is that the self, the other, and the world is basically good, is all right. This state can be referred to as the ground of being, the core of our being, a still point of our being. Then individuals using these substances in therapy can look at their own problems from the standpoint of stillness and empathy. They are able to do change work on themselves very rapidly,

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compared to ordinary therapy. (Metzner, 1983 cited in Eisner, 1993: 33–34)

In a journal article 3 years later, the medicinal chemist David Nichols—although he initially co-created the term “empathogenic” together with Metzner (Passie, 2023: 243)—proposed another name for MDMA or MDMA-like substances: “entactogen” (Nichols et al., 1986: 2011). In another publication of the same year, Nichols then furthermore explicitly argued that this term should be preferred over the term “empathogenic”:

The term “empathogen” has been suggested as a name for drugs such as MDMA. However, this term was rejected for several reasons. First of all, MBDB [N-methyl-1-(1,3-benzodioxol-5-yl)-2-butanamine] or MDMA do more than simply generate empathy, the connotation of the term. Second, people invariably dislike hearing the word “pathogen,” which clearly stands out when empathogen is pronounced. Because it was felt that these drugs probably had their greatest value as adjuncts to psychotherapy, a designation was sought that would be acceptable to psychiatric patients. It seemed that the effect of these drugs was to enable the therapist—or patient—to reach inside and deal with painful emotional issues that are not ordinarily accessible. Just as the word “tact” has the connotation of communicating information in a sensitive and careful way so as to avoid offense, it seemed that the Latin root of this word, *tactus*, would be appropriate as part of the term. Addition of the Greek roots *en* (within or inside) and *gen* (to produce) created the term “entactogen,” having the connotation of *producing a touching within*. (Nichols, 1986: 307–308)

In what the newsletter of the Multidisciplinary Association for Psychedelic Studies (MAPS) titled the “great entactogen—empathogen debate” (Multidisciplinary Association for Psychedelic Studies, 1993: 47), Metzner then gave his reasons why he thinks that the term “empathogenic” should be preferred over the term “entactogenic”:

In my admittedly biased opinion “entactogens” is a kind of meaningless term: “touching within” doesn’t really tell you anything about this class of drugs, and it certainly doesn’t distinguish them from “psychedelics” or “entheogens.” Plus it ignores the single most obvious and striking aspect of MDMA experiences, which is the relatedness, the feeling of connectedness or communion with others, that ability to feel what others feel—in short the “empathic” resonance that is evoked. Which is the main reason why it proved to be such an outstandingly valuable therapeutic tool. (Metzner, 1993a: 43)

Nichols in turn replied that “perhaps a need may exist to draw a distinction between the properties of the drug that make it pleasurable and those that make it valuable for medical/therapeutic uses . . . I still feel that it [entactogen] is to be preferred over empathogen, at least when discussing it in a legitimate scientific or medical context” (1993: 47). Up to today Nichols holds on to his view that he finds the term “empathogenic” “undesirable” (Nichols, 2022: 3). The late Metzner was more tolerant in his views in that he stated that some “will use ‘entactogenic’ as they wish . . . For my part, I shall continue to use ‘empathogenic’”

(Metzner, 1993b: 49). Furthermore, Metzner also made clear that for him the term “empathy” can not only relate to the interpersonal realm but also the intrapersonal realm (the realm intended to be targeted with the word “entactogenic”), as he stated that MDMA or MDMA-like substances “generate a profound state of empathy for self and other”; (Metzner, 1983 cited in Eisner, 1993: 33), an “empathic understanding of self and others” (Metzner, 2012: XX). As neither Metzner’s nor Nichols’ arguments convinced the majority of the research community to unequivocally prefer one term over the other, the legacy that the “great entactogen—empathogen debate” has left behind up to this day is the scenario described by Metzner above: some use one term, others the other. Thus, in order to describe the subjective MDMA experience some contemporary publications use the term “empathogen” only (except perhaps for a random mentioning of the other term) (e.g., Hysek et al., 2014; Molla et al., 2023; Monson et al., 2020; Schmid et al., 2014; Straumann et al., 2023; Wardle and de Wit, 2014), some “entactogen” only (e.g., Adam et al., 2024; Feduccia and Mithoefer, 2018; Mitchell et al., 2023; Oehen and Gasser, 2022), and some use both terms (Eisner, 1993; Holze et al., 2020: 462; Kargbo, 2022: 1543; Passie, 2023; Vizeli et al., 2022). Additionally, some publications use neither of these two terms (e.g., Maples-Keller et al., 2022; Mithoefer et al., 2011, 2018)—and this can even be the case, when the very subject of the research is the subjective MDMA experience where both empathogenic themes such as “improved relationships and social skills” and entactogenic themes such as “improved self-awareness” are identified (Barone et al., 2019: 201–204). Finally, sometimes the meaning of the term “entactogenic” is extended to also refer to empathogenic properties of MDMA—for example, calling the substance an “entactogen that . . . promotes openness and prosocial behavior” (Mitchell et al., 2023: 2474) or a “prototypical entactogen defined by its prosocial effects” (Adam et al., 2024: 2). In general, in journal publications when either the term “empathogenic” or “entactogenic” or both of them are (or none of them) are used, the choice of one term over the other (or the choice to not use any of these two terms) is not explained. In contrast, book publications on MDMA are usually more explicit about the use of the terms. For instance, both the late psychologist Bruce Eisner in his book “Ecstasy: The MDMA Story” and the research psychiatrist Torsten Passie in his book “The History of MDMA” embrace and use of both terms, arguing that MDMA fosters both interpersonal (“empathogenic”) and intrapersonal (“entactogenic”) aspects (Eisner, 1993: 51 + 73; Passie, 2023: 245).

The contemporary empathogen/entactogen terminological situation is observed by Passie: “Today, neither term is dominant in scientific circles, and after entactogen became the preferred technical term in science, empathogen is on the rise again after more empirical findings have uncovered the empathogenic effects of MDMA” (2023: 244). Indeed, while quite a number of quantitative studies exist that support the empathogenic (e.g., “prosocial,” “openness”) properties of MDMA (e.g., Hysek et al., 2014; Kamilar-Britt and Bedi, 2015; Schmid et al., 2014; Wardle and de Wit, 2014), the entactogenic properties of MDMA have thus far mainly been reported with qualitative or qualitative-like material—for instance with anecdotal reports (Eisner, 1993: 51–73) or with testimonials from individuals suffering from post-traumatic stress disorder (PTSD) reporting on their MDMA experiences, as found in qualitative studies (Barone et al., 2019) or in media coverage (Nuwer, 2022, 2023b).

So does science on MDMA or MDMA-like substances simply have to live with the unique situation that the same class of psychoactive agents will be referred to with two basic names? We think not. The use of two basic names for the same class of substances would only make sense if one could not identify an underlying principle for the two psychological phenomena that these terms stand for. Thus, we concur with Eisner:

So it can be seen that gregarious, extroverted, empathogenic Adam [MDMA] has an inward [entactogenic] side. Just as the tendency of MDMA to enhance interpersonal contact can be used, so can the introspective dimension of the experience. Although it is convenient to divide the experience, it must be emphasized that the experience with MDMA is a holistic event. Therapeutic effects reported are based on both internal and external change. (Eisner, 1993: 73)

But what could this “holistic” principle be that Eisner says underlies both the empathogenic and entactogenic properties of MDMA? This is a question for which Eisner provides no clear answer, but we think that the science journalist Rachel Nuwer, who also wrote a book on MDMA (Nuwer, 2023b), hit the nail on the head when she wrote in a recent time article:

When you talk to people who have been through MDMA-assisted therapy as part of a clinical trial, or who have sought out the treatment underground, a common theme emerges: connection. Many people say that under the influence of MDMA they feel intensely connected to themselves and to others—sometimes for the first time in their lives. (Nuwer, 2023b)

Although Nuwer herself makes no such terminological link—also not in her book when discussing the terms “empathogens” and “entactogens” (Nuwer, 2023a: 41)—it is apparent that her “connected to themselves” refers to the entactogenic property of MDMA and her “connected . . . to others” to the empathogenic property of MDMA. Thus, Eisner’s holistic principle underlying both the entactogenic and empathogenic experience can be proposed to be an intense feeling of connection—a feeling that can establish itself on an interpersonal (empathogenic) as well as on an intrapersonal (entactogenic) level. An individual suffering from PTSD told her therapist during the acute MDMA phase with a voice close to tears: “Wow. Oh this is so great . . . Annie, Annie! Our fears are dancing between us. They are making art . . . Oh God. That’s so healing!” (The Doctors, 2014: 0.38). In examples like these, we can see that the feeling of connection can also simultaneously encompass entactogenic and empathogenic aspects, as the treated individual is at the same time connected to her fears (entactogenic) as well as to the fears of the therapist (empathogenic)—thus her “our fears are dancing between us” is an entactogenic/empathogenic dance.

It is time to reconcile what MAPS has once termed “the great entactogen/empathogen debate” (Multidisciplinary Association for Psychedelic Studies, 1993: 47). The underlying principle of the entactogenic and empathogenic state is an intense feeling of connection. We therefore suggest the new name *connectogen* to characterize and capture this underlying holistic experience of MDMA. This substance is basically a connectogen with at least the two major connective properties: entactogenic (intrapersonal)

and empathogenic (interpersonal). Etymologically, our newly suggested basic name for the subjective experience of MDMA or MDMA-like substances—connectogen—combines the Latin verb *conecto* (join together) with the Greek root *gen* (produce), having the connotation of *producing a joining together/producing a connection*.<sup>1</sup>

Does MDMA have further connective properties besides the intrapersonal and the interpersonal one? In comparison, classic psychedelics have been shown to be able to occasion a feeling of connection over a number of themes, and so far a connection to a “rebooted/opened up/switched on” mind, to the senses, to the self (entactogenic), to others (empathogenic), to the world, and to a spiritual principle have been proposed in psilocybin and/or LSD studies (Stocker et al., 2024; Watts et al., 2017, 2022). And indeed, in MDMA experiences collected by Eisner, we find examples of MDMA-occasioned experiences for each of these connective themes, as well as the additional theme “connected to the body” (Eisner himself did not analyze the MDMA reports or report summaries in terms of the concept of connection):

CONNECTED TO A “REBOOTED/OPENED UP/SWITCHED ON” MIND “Five subjects reported clear cognition or enhanced presence of mind” (Eisner, 1993: 53 citing Greer & Tolbert, 1986: 320–321)

CONNECTED TO THE SENSES “Skin surfaces and hair feel incredibly soft (a feeling that persists well beyond the 4h)” (Eisner, 1993: 88)

CONNECTED TO THE BODY “I felt I was really beginning to be in touch with my body” (Eisner, 1993: 82)

CONNECTED TO SELF (entactogenic) “I honestly feel that I was given a rare opportunity to look inside myself and to gain a profound understanding of who I really am” (Eisner, 1993: 88)

CONNECTED TO OTHERS (empathogenic) “I realized I loved my wife. It was an enormous feeling, it just filled my chest” (Eisner, 1993: 35)

CONNECTED TO WORLD “I felt a strong connection with space and the planets. I was part of them” (Eisner, 1993: 83)

CONNECTED TO A SPIRITUAL PRINCIPLE “In many ways yesterday [MDMA experience] was a spiritual experience. I am moved by my love and by my connections with God” (Eisner, 1993: 93)

Such initial evidence from MDMA reports clearly seems to suggest that the connective capacities of MDMA may at least at times go beyond the intrapersonal and interpersonal realms. Thus, we propose to use the term “connectogen” also for further connective MDMA experiences, should future research be able to establish that such other-than-intrapersonal/interpersonal connective experiences can also be occasioned regularly with MDMA or MDMA-like substances. Furthermore, it is of course possible that although connective experiences of classic psychedelics and MDMA or MDMA-like substances might be characterized under the same basic connection theme (such as “connected to the senses”), the experiences within the same basic

connection theme might still differ across the two substance classes—for instance the above-cited “skin surfaces and hair feel incredibly soft” might be a typical sensory experience for MDMA, while classic psychedelics might occasion other or somewhat other sensory-connective experiences, for instance a sensory experience where “everything [I touched] felt like it did when I was a kid” (Watts et al., 2017: 530).

So one task of future psychometric work will be to empirically establish whether there are differences between the connectogenic properties of MDMA and classic psychedelics (and possibly also methamphetamine, which has shown some empathogenic properties in a recent study; Molla et al., 2023). In classic psychedelics, experiencing connectedness is quite strongly correlated with experiencing the self-world-dichotomy-transcending mystical experience of oneness (Stocker et al., 2024: 91). In contrast, the mystical experience of oneness is only occasioned weakly in MDMA when compared to LSD (Straumann et al., 2023, Supplement: 13). Therefore, the sense of connection in classic psychedelics is possibly more associated with self-transcendent, transpersonal realms, whereas in MDMA the sense of connection might often be experienced with an intact sense of self, and more in the here-and-now than in transcendent realms. Eisner’s citing of the late psychiatrist Claudio Naranjo seems to be in line with this view: “Claudio Naranjo, in a personal correspondence, characterized this peak [of MDMA and MDMA-like substances] as ‘earthly paradise in comparison to the heavenly paradise of LSD and hallucinogens of that category’” (Naranjo cited in Eisner, 1993: 69). Overall, many psychoactive experiences (besides the ones already mentioned) are usually only weakly pronounced in MDMA or MDMA-like substances when compared to classic psychedelics, such as transcendence of time and space, sense of sacredness, ineffability, noetic quality, spiritual experience, insightfulness, disembodiment, impaired control and cognition, and anxiety (Straumann et al., 2023: 1844 + Supplement: 5). In contrast, we are not aware of many often-reported psychoactive properties of MDMA that could not be captured under the overall theme of connection. For instance, besides the already above-listed MDMA connective themes, the often reported MDMA-occasioned “complete [mental] stillness” (e.g., Eisner, 1993: 52) could be viewed as being entactogenically connected to deeper level of oneself—to a level that is beyond an inner-speech dominated ego. Similarly, the also often reported occasioned experience by MDMA or MDMA-like substances in “which the moment that is being lived becomes intensely gratifying” (Naranjo, 2013: 71) could be viewed as being deeply connected to the present moment—to the “eternal now” as the late psychiatrist Claudia Naranjo used to call it (Naranjo, 2013: 69). Thus, if the therapeutic goal is to induce a sense of connection that is situated within the here-and-now and/or within the autobiographical realm without wanting to enter transpersonal or potentially more confrontational realms, then MDMA might be the first connectogen of choice for such therapeutic goals (cf. Oehen and Gasser, 2022). In conclusion, it seems to make sense to basically characterize MDMA or MDMA-like substances as connectogens, as this new name not only reconciles the entactogen—empathogen debate—but also encourages us to conduct future research into still further potential connective properties of this intriguing class of psychoactive substances.

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## Note

1. For easier and more immediate recognition of this connotation, we anglicize the Latin part of the new term by using a double n (connectogen instead of “conectogen”).

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