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**SOCRATIC MEDITATION
AND EMOTIONAL SELF - REGULATION:
HUMAN DIGNITY IN A TECHNOLOGICAL AGE**

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*This essay proposes that Socrates practiced various spiritual exercises, including meditation, and that this Socratic practice of meditation was habitual, aimed at cultivating emotional self-control and existential preparedness. Contemporary research in neurobiology supports the view that intentional mental actions, including meditation, have a profound impact on brain activity, neuroplasticity, and help engender emotional self-control. This impact on brain activity is confirmed via technological developments, a prime example of how technology benefits humanity. Socrates attains the balanced emotional self-control that Alcibiades describes in the **Symposium** because of the sustained mental effort he exerts that directly impacts his brain and his emotional and philosophical life. The essay concludes that Socratic meditative practices aimed at manifesting true dignity as human beings within the complexities of a technological world offer a promising model of self-care worthy of embracing today.*

PHILOSOPHY AND TECHNOLOGY

The tension between philosophy and technology has a long history. Indeed, one of the earliest formulations of the philosophical mistrust of technological development occurs in Plato's *Phaedrus*. There, Socrates warns Phaedrus that the craft of writing will prove detrimental to the human capacity to remember and recollect essential truths about the cosmos (Plato 1997: 274d-275c). One might rightly ask: What, then, does the possibility of meditative practices in the Socratic dialogues, and contemporary claims concerning the influence of meditation on brain activity, have to do with transhumanism and implications of technology regarding human dignity,

and the very notion of what it means to be human? There are two related points. The first concerns our rapidly expanding understanding of the neurological impact of meditation. Many different traditions that have endured for centuries--Yoga practitioners in ancient India, Christian monks in the Egyptian desert, and Greek philosophical schools, particularly those associated with the Pythagorean and Parmenidean traditions--contain the idea that meditative practices are a key part of a larger system of beliefs and practices that free the self from bondage and lead to a wise and happy life, indeed to a truly human life.

Most contemporary super-meditators (even Christians) utilize practices that go back to ancient Buddhist and Hindu practices. The ancient Greek meditators may have had some awareness of Eastern religious thought. Technology, for instance the invention of MRI machines, allows one to see what is happening in the brain when people meditate. This research suggests that persons who have spent years practicing meditation have stronger focus and attentive skills, improved memory, and different brain activity when compared to the novice meditator, or non-meditator. The primary purposes of meditation in these various traditions include overcoming external distractions, focusing the mind toward what is essential, and gaining control over one's passions. The technology associated with contemporary neurobiological research suggests that these meditative practices deliver on their promises to help human beings maintain their dignity in a variety of complex situations. Furthermore, technology can demonstrate how different forms of meditation affect the brain differently, and thus help refine the meditative practices to achieve certain ends.

The second point of connection between technology, transhumanism, and Socratic use of meditation is related to the first: the goal of meditative practices is to transcend the prosaic human experience and achieve all that the human being is truly capable of accomplishing. As Socrates states in the *Phaedo*: "Every seeker of wisdom knows that up to the time when philosophy takes it over his soul is a helpless prisoner, chained hand and foot in the body . . . philosophy takes over the soul in this condition and by gentle persuasion tries to set it free" (1997: 82e-83a). Again, in the *Symposium*, Socrates says that when the philosopher "looks upon beauty's visible presentment," he "will be quickened with the true, and not the seeming, virtue . . . And when he has brought forth and reared this perfect virtue, he shall be called the friend of god, and if ever it is given to man to put on immortality, it shall be given to

him" (1997: 210a-212b). Philosophy is about becoming a certain kind of person, liberated from the chains of ignorance and impulsive desire, and freed to love and pursue the good, indeed, to achieve a kind of immortality. As Pierre Hadot intimates, "the real problem (for Socrates) is therefore not the problem of knowing this or that, but of *being* in this way or that way" (2002: 29).

Socrates wishes to persuade his interlocutors to become less concerned with what they *have* (and surely these possessions include propositional knowledge), and more concerned with becoming "as good and as wise as possible," as he emphasizes in the *Apology* (1997: 36c). Put differently, the practice of philosophy calls us to become a certain kind of person who is no longer pushed to and fro by the winds of aimless amygdala-generated desire, but free to align oneself through the use of the prefrontal cortex with higher values and ends. However, this liberation requires what Hadot calls spiritual exercises, defined as those "practices which could be physical, as in dietary regimes, or discursive, as in dialogue and meditation, or intuitive, as in contemplation, but which were intended to effect a modification and a transformation in the subject who practiced them" (2002: 6). According to Hadot: "The philosopher teacher's discourse could also assume the form of a spiritual exercise, if the discourse were presented in such a way that the disciple, as auditor, reader, or interlocutor, could make spiritual progress and transform himself within" (2002: 6). This task of self-transformation involves an intimate awareness of the emotional dimensions of our experience, as well as the intellectual ones, so that we will not be unduly swayed by emotional response to stimuli. Socrates both alludes to, and engages in, these practices in a number of dialogues such as the *Phaedo*, *Symposium*, *Crito*, *Republic*, and *Theaetetus*.

Peter Kingsley (1995) believes that the Western philosophical tradition contains its own unique spiritual practices that should be understood on their own terms. Put broadly, Kingsley describes this Western wisdom tradition in these terms: "They were called 'the wise' because their wisdom verged on the divine; because they were able to see beyond the surface and behind appearances; because they were able to interpret oracles and dreams and the riddles of existence" (1999: 27). Kingsley argues that these thinkers clustered around Pythagorean communities, and later influenced Parmenides and his spiritual and philosophical practices as well. Parmenides and his followers practiced a particular kind of meditation called incubation: "They would lie

down in an enclosed space. Often it was a cave. And either they'd fall asleep and have a dream or they'd enter a state described as neither sleep nor waking--and eventually they'd have a vision" (Kingsley 1999: 80). While Kingsley sees Socrates' and Plato's approach to philosophy outside the scope of these practices, one might disagree. Put briefly, Kingsley regards Plato as having engaged in patricide against "father Parmenides," and that Plato engaged in a deliberate obfuscation of these practices in the dialogues (1999: 45). However, there is substantial evidence in the Platonic dialogues, including Socratic meditative practices, that should lead Kingsley to regard Socrates and Plato as friends of philosophy as a spiritually meditative practice rather than its primary foes. Socratic meditation is an important, though often overlooked, part of that spiritual tradition. An exploration of Socratic meditative practices and contemporary research on the effects of meditation on the brain are relevant to the present discussion of transhumanism and technology.

But what, precisely, is meant by Socratic meditative practices? Plato's *Symposium* contains two accounts of Socrates going into a trance state. The first occurs when Socrates withdraws into his own thoughts and lags behind his companion, Aristodemus, on their way to Agathon's house. Socrates stands silently, alone with his thoughts, unwilling to enter the party despite several invitations (1997: 174d-e). Much later in the dramatic action, Alcibiades offers a second account of Socrates in another trance. Alcibiades tells his fellow symposiasts about a day during the Potidaea campaign of the Peloponnesian War when Socrates stood stark still from early morning until the next morning, "puzzling on some problem" (1997: 200d). One may infer that in his moments of silence Socrates is engaging in meditative practices that can be better understood in light of recent research in neurobiology.

Though the descriptions of this Socratic silent activity are minimal, spiritual exercises are alluded to in the dialogues, in addition to moments where Socrates is engaged in meditation. This indicates that Socrates engaged in spiritual practices--particularly meditative practices--habitually. Second, these trances are best understood as a meditative practice aimed at achieving emotional self-control. This view is supported by evidence from the dialogues in addition to the *Symposium*, including references to Socratic silence in the *Phaedo*, the discussion of the soul's highest activity in the *Phaedo*, and a harmony model of the self-comportment articulated in the *Republic*. Finally, contemporary research in neurobiology supports the view that intentional mental actions, including meditation, have a profound impact on brain

activity, neuroplasticity, and help engender emotional self-control. Thus, Socrates attains the balanced emotional self-control that Alcibiades describes because of the sustained mental effort he exerts that directly impacts his brain and his emotional and philosophical life.

INTERPRETING THE TEXTUAL EVIDENCE

Three aspects of these passages in the *Symposium* are of considerable philosophical significance. First, there are descriptions of Socrates' trance states. Second, they reveal how Socrates himself describes the results of these states. By Socrates, we mean Socrates the dramatic character in the dialogue that Plato creates, and not the historical Socrates. Third, exploring the results of contemporary research on the neurological effects of meditation expertise sheds further light on how Socrates' experiential states shape his interactions with others.

Apollodorus, the narrator of the *Symposium*, relates that Aristodemus meets Socrates on his way to Agathon's party: "One day he ran into Socrates, who had just bathed and put on his fancy sandals--both very unusual events. So he asked him where he was going, and why he was looking so good" (1997:174a). Socrates invites Aristodemus along. After some disagreement about the appropriateness of his invitation, Aristodemus agrees: "With these words, they set out. But as they were walking, Socrates began to think about something, lost himself in thought, and kept lagging behind. Whenever Aristodemus stopped to wait for him, Socrates would urge him to go on ahead" (1997: 174dee). Apollodorus notes several important things about Socrates' behavior. He is in the company of another person. He is walking. He begins to think about something, though Apollodorus does not report the content of Socrates' thought process. He also does not even say that the conversation stimulates Socrates' thought. Indeed, it appears that Socrates starts to think about something else while having a conversation with Aristodemus. Socrates becomes lost in thought and lags behind, which suggests Aristodemus is in no way a part of the experience. At least in the initial stages of this experience, Socrates is not so lost in thought that he cannot move or speak. He can still urge Aristodemus to go ahead to Agathon's party.

Aristodemus follows Socrates' prompting. He arrives at Agathon's house, alone and uninvited. Agathon graciously assures Aristodemus that he

is glad Socrates invited him along, but wonders where Socrates is: "But where is he?" (1997:175a). He sends a slave to look for Socrates. Apollodorus observes: "Then another slave entered and said, 'Socrates is here, but he's gone off to the neighbor's porch. He's standing there and won't come in even though I called him several times'" (1997:175a). In this passage, Socrates is capable of movement—at least enough where he makes it to the neighbor's porch. But again, he simply stands there. It is unclear if "won't come in" means that he did give some response to the slave, or that he did not respond at all. As with Aristodemus earlier, the slave makes repeated attempts to get him out of this state. Whatever is happening in the experience is important enough to Socrates that he continues his practice despite repeated attempts to get him out of the experience.

Agathon continues his attempts to bring Socrates to the party. He listens to the slave's report that Socrates will not come inside despite calling him several times (1997: 175a). Then, he tells his slave to bring Socrates in anyway: "Go back and bring him in. Don't leave him there" (1997:175a). At this point, Aristodemus intervenes. Apollodorus narrates: "But Aristodemus stopped him. 'No, no,' he said. 'Leave him alone. It's one of his habits: every now and then he just goes off like that and stands motionless, wherever he happens to be. I'm sure he'll come in very soon, so don't disturb him; let him be'" (1997:175a-b). Aristodemus' role has changed. In the opening passage, Aristodemus seems uncomfortable with Socrates' practice. Now, he claims to be an authority on Socrates' behavior. From his testimony, one learns that Socrates habitually engages in this behavior. Aristodemus describes it as "going off," and refers to him as "standing motionless." Aristodemus also notes that the experience does not last long. From these initial descriptions of Socrates' behavior, one may infer the following about this Socratic practice: It is habitual, but not constant. He goes off somewhere or becomes lost in thought. He stands motionless. It does not matter where he is. Also, it does not last long.

How does Aristodemus know that Socrates engages in this practice habitually? The opening lines of the *Symposium* indicate that Aristodemus used to follow Socrates around all the time. Apollodorus notes that he was "one of the worst cases at that time" (1997: 173c). If so, it seems likely Aristodemus would be in a position to report on Socrates' behavior to Agathon who seems to accept Aristodemus' authority, at least momentarily. In the *Symposium*, Apollodorus reports that:

So they went ahead and started eating, but there was still no sign of Socrates. Agathon wanted to send for him many times, but Aristodemus wouldn't let him. And, in fact, Socrates came in shortly afterward, as he always did—they were hardly halfway through their meal. Agathon, who as it happened, was all alone on the farthest couch, immediately called: "Socrates, come lie down next to me. Who knows, if I touch you, I may catch a bit of the wisdom that came to you under my neighbor's porch. It's clear you've seen the light. If you hadn't, you'd still be standing there" (1997: 175d).

Aristodemus successfully protects Socrates. His prediction that the trance would not last long proves correct. Socrates appears and Agathon greets him enthusiastically. From Agathon's description, one may gather additional details about what might be occurring during this experience. Agathon calls it "a bit of wisdom." He exclaims that Socrates has "seen the light." He also attests to Socrates' commitment to the experience, noting that surely Socrates would not come back in if he had not attained the insight he was seeking. Though Agathon seems to respond positively to Socrates' experience, it is also clear that he has little understanding of how to achieve this sort of insight himself. Apollodorus recounts that:

Socrates sat down next to him and said, "How wonderful it would be, dear Agathon, if the foolish were filled with wisdom simply by touching the wise. If only wisdom were like water, which always flows from a full cup into an empty one when we connect them with a piece of yarn—well, then I would consider it the greatest prize to have the chance to lie down next to you. I would soon be overflowing with your wonderful wisdom. My own wisdom is of no account—a shadow in a dream—while yours is bright and radiant and has a splendid future" (1997: 175e).

Socrates corrects Agathon's misconception. He does not dispute that it is wisdom he is after or that it provides "light." But he disputes the mode of transmission of this meditative insight. The insight he gains is not something he can readily share with Agathon. Socrates offers some detail about what he sees during this experience. He says it is like a shadow in a dream. This is a curious statement. What is knowledge of a dream like? Often, the knowledge gained is fleeting. Often, we do not remember the dream for very long upon waking. The transitory nature of dream memory makes what we learn through the experience quite elusive. What is a shadow in a dream like? A shadow of a dream would seem more elusive still. It is a dream within a dream.

However, this line of interpretation does not accord with Socrates' experience of dreams, and their interpretation in the *Crito*. Socrates' knowledge from his dream is detailed and quite specific. He has no difficulty describing its contents to Crito: "I thought that a beautiful and comely woman dressed in white approached me. She called me and said, 'Socrates, may you arrive at Fertile Phthia on the third day'" (1997: 44c). Though Crito thinks the image is strange, Socrates has no difficulty interpreting its meaning for Crito: "But it seems clear enough to me" (1997: 44d). This discontinuity with the dream experience described in the *Crito* suggests that what occurs in this experience in the *Symposium* is different from a dream, despite the fact that Socrates describes it as dream-like. Perhaps Socrates means that the dream-like insight contains some hidden truth that needs to be interpreted, but unlike the *Crito*, Socrates does not offer an interpretation to the symposiasts. It is also curious that Socrates says it is of no account. Surely, he does not mean that the knowledge is worthless. Perhaps he simply means he lacks the words for it. He does not have a *logos* to describe it. Pierre Hadot mentions that contemplation studies indicate that thinking can continue after discursive language has ceased and, specifically, that philosophical activity can and does sometimes continue when discourse has ended (2002: 5).

Patañjali underscores the use of chanting OM as an effective means of stilling the fluctuations of the mind (Bryant 2009: YS 1.28). However, even these linguistic practices are ultimately aimed at training the mind to reach beyond the limits of linguistic experience. For example, later in *The Yoga Sūtra*, Patañjali describes the meditator as moving beyond even the subject/object distinction, or duality itself (Bryant 2009: YS 2.48). There are also examples in the Christian Monastic tradition, such as the Jesus Prayer: "Jesus, Son of God, have mercy on me, a sinner." While the prayer has cognitive-linguistic content, the aim is to move beyond the cognitive content to deeper knowledge of the self and the divine. Socrates describes the results of his experience as shadowy, dream-like, and elusive.

The second description of Socrates' trance state in the *Symposium* adds to our understanding of what Socrates might be experiencing. Though Aristodemus reports that Socrates' trances are habitual, there is only one other sustained description of them in the Platonic corpus, in the same dialogue when another uninvited guest, Alcibiades, appears at the party. A great deal takes place before Alcibiades arrives. The symposiasts each give their speeches in praise of love. Phaedrus describes love as a great god, and argues

that love stimulates lovers to great actions for the sake of their beloveds (1997: 178e). Pausanias articulates two forms of love, the noble and the base (1997: 180e). Eryximachus expands the understanding of love to a force undergirding the cosmos (1997: 188d). Aristophanes offers comic relief as he articulates a vision of love as the search for our missing half (1997: 192e). Agathon presents his self-aggrandizing account of love as a beautiful young god, while Socrates refutes Agathon (1997: 198a, 199d-201c). Socrates reports his conversations with the great priestess Diotima, who taught him about love and many other things (1997: 201d-212c). Just as Aristophanes is getting ready to respond to how Socrates alluded to his own speech (1997: 212c), Alcibiades arrives at the gate.

Alcibiades' appearance at the party adds a great deal of emotionality to the scene. He breaks in with a large drunken party, "accompanied by the shrieks of some flute-girl" (1997: 211d). Alcibiades, "very drunk and very loud," demands to see Agathon. Apollodorus reports that "he was half carried into the house by the flute-girl and some other companions" (1997: 212d). The symposiasts eagerly invite him in. They seem quite ready for a break from the philosophical direction Socrates' speech has taken. Alcibiades explains it would be improper to praise anyone else in Socrates' presence. He gives a speech in praise of Socrates as his contribution to the speeches in praise of love. Alcibiades recounts his attempts to seduce Socrates, and his own experiences serving with him in the bloody Potidaea campaign of the Peloponnesian War:

One day, at dawn, he started thinking about some problem or other; he just stood outside, trying to figure it out. He couldn't resolve it, but he wouldn't give up. He simply stood there, glued to the same post. By midday, many soldiers had seen him, and quite mystified, they told everyone that Socrates had been standing there all day, thinking about something. He was still there when evening came, and after dinner some Ionians moved their bedding outside, where it was cooler and more comfortable (all this took place in summer), but mainly in order to watch if Socrates was going to stay out there all night. And so he did; he stood on the very same spot until dawn! He only left next morning, when the sun came out, and he made his prayers to the new day (1997: 220d-e).

Here, Alcibiades offers a fuller description of Socrates' activity in these silent moments. As in the example reported by Apollodorus, Alcibiades tells the symposiasts that Socrates starts thinking about some problem. He stands

outside in the presence of other people during the experience. Alcibiades also emphasizes Socrates' commitment to the experience: despite the difficulty of solving the problem, "he wouldn't give up." In this context, Socrates seems to have transcended time. Alcibiades emphasizes this aspect of the experience by noting that it starts and ends at dawn. The references to the movements of the sun show Socrates' commitment to the task. Alcibiades mentions six times Socrates standing motionless. Unlike the previous experience, Alcibiades and the soldiers do not disrupt Socrates. They see Socrates as something of a spectacle. But they do not disturb him. They give him the space to have his experience. Given their response to Socrates, it is a fuller representation of the experience than in the earlier description where both Aristodemus and Agathon's slaves interrupt him numerous times (1997:174e-175b). This may explain a significant dissimilarity between this account and Aristodemus' report, namely, the length of time that Socrates engages in this silent practice. Aristodemus reports that Socrates' moments of "going off" do not last long. Here, Socrates' stands stark still over the course of an entire day.

Alas, Alcibiades offers no insight into Socrates' own understanding of the experience. He does not report how Socrates characterizes the wisdom he received. Alcibiades mentions that Socrates prays at the beginning of the new day, and goes about his regular activities. As a result, some speculation is involved in ascertaining precisely what Socrates is experiencing during this time. That Alcibiades mentions Socrates' prayer places this meditation practice in a spiritual context. But what is Socrates actually experiencing in these trance states? Is he communing with the divine or seeing the good itself? Is he simply absent-minded, following in the philosophical footsteps of Thales, who fell into a ditch while looking at the stars? Surprisingly, there is little treatment of Socrates' trance state in the secondary literature. Those who speculate about its philosophical importance typically suggest that Socrates is experiencing a vision of the beautiful itself. Thus, Scott claims that Socrates is experiencing the highest levels of Diotima's ladder of love when he stands and thinks for prolonged periods of time. Elizabeth Belfiore simply regards him as deeply engaged in the process of thinking (2012: 113). At the opposite end, Waddington (1992) suggests that Socrates' trances are a consequence of dissociative phenomena occurring during intense and prolonged stimulation.

There are two other references to Socrates' silent activity in the *Phaedo*. After reporting Socrates' discussion of the importance of philosophers becoming detached from the body to the extent possible, Phaedo tells his

audience that: "When Socrates finished speaking there was a long silence. He appeared to be concentrating on what had been said, and so were most of us" (1997: 84c). Later, after it seems that most of the arguments for the immortality of the soul have failed, Phaedo again reports that: "Socrates was silent for a long time, lost in thought" (1997: 95e). In the *Phaedo*, Socrates faces a highly charged emotional situation, namely, his own death, and the emotional reactions of his family and closest students in response to his pending demise. It is clear that most are overcome with emotion. Indeed, Apollodorus wails and laments like a woman through the whole dialogue, and his actions cause all the others to break down as well (1997: 177d). Socrates' own comportment in the face of death stands in stark contrast to their behavior. It is possible that what Socrates experiences during these moments of silence helps him face his situation with equanimity and grace, with his human dignity intact.

Phaedo offers a few tantalizing clues about what Socrates might be experiencing during these moments of silent meditation. On this last day, they discuss the soul and its ultimate fate, and what the soul does at the highest levels of its philosophical experience. Socrates offers a description of the activity of the soul in the *Phaedo*: "But when the soul investigates by itself it passes into the realm of what is pure, ever existing, immortal and unchanging, and being akin to this, it always stays with it whenever it is by itself and can do so; it ceases to stray and remains in the same state as it is in touch with things of the same kind, and its experience then is what is called wisdom" (1997: 79d). This sounds very much like what some contemporary neuroscientists call open monitoring meditation. In this practice, one cultivates the ability to maintain a calm and still state of mind while continuously monitoring one's experience of each moment (Lutz 2008: 163). It seems likely that Socrates has a similar experience of open monitoring meditation during the two trance states reported in the *Symposium*. But what, precisely, does this mean, and what effect does it have on the one who experiences it?

SPIRITUAL EXERCISES IN THE PLATONIC DIALOGUES

The passages where Socrates is apparently in a trance may actually be periods of meditation. Spiritual exercises such as meditation fit well into the larger Socratic project, which is largely about becoming a fully realized human being. As Hadot points out: "When Socrates said that virtue is knowledge, he was not using 'knowledge' to mean pure, abstract knowledge of the good.

Rather, he meant knowledge which chooses and wants the good--in other words, *an inner disposition in which thought, will, and desire are one*" (2002: 65; emphasis added). But how does one achieve such inner disposition? Surely not by merely engaging in philosophical discourse about propositional truth claims, though one may agree with Hadot that philosophical discourse is an essential part of the Socratic project. Cultivating a unified inner disposition--what Søren Kierkegaard calls purity of heart--requires practices alongside discourse. Plato clearly believes that philosophy is a way of life, one that requires more than just discourse. Hadot recalls that:

In his *Seventh Letter*, Plato declares that if we do not adopt this way of life, life is not worth living Plato alludes to this kind of life when he evokes the figure of his disciple Dion of Syracuse. It consists in "setting more store by virtue than by pleasure," in renouncing the pleasures of the senses, in observing a specific diet, and in "living every day in such a way as to become master of oneself as much as possible" certain spiritual practices, which have left many traces in many passages in the dialogues, were in use in the academy (2002: 66).

The few passages where Socrates is in a trance state are not the only ones that allude to spiritual exercises. Hadot cites Paul Rabbow, who argues that the dialogues allude to different spiritual exercises. At the end of *Timaeus*, Socrates states that "he who has been earnest in the love of knowledge and of true wisdom, and has exercised his intellect more than any other part of him, must have thoughts immortal and divine, if he attains truth . . . he will be perfectly happy" (1997: 90c). Socrates goes on to indicate that this person will achieve a kind of harmony with the universe and assimilation to the deity. Surely, this practice is contemplative in nature, with similarities to practices in traditional hatha yoga and Christian monks like Evagrius Ponticus.

For example, the *Yoga Sūtras* state emphatically that when the fluctuations of mind cease, the seer (that is, the soul) abides in its own true nature (Bryant 2009: YS 1.3). Other *sūtras* attest to the beneficial effect of stilling the fluctuations of the mind, so that one attains "freedom from all disturbances" (Bryant 2009: YS 1.29). One gains "cheerfulness, one-pointedness, sense control, and fitness to perceive the self," and the "highest control of the senses" (Bryant 2009: YS 2.41, 2.55). Evagrius speaks of the mystical union between humanity and God: "How much more then is this not the case with the intelligible sea, which is infinite and unchangeable, namely God the Father? When minds flow back to him like torrents into the sea, he

changes them all completely into his own nature, color and taste. They will no longer be many but one, in his unending and inseparable unity, because they are united and joined with him" (Linge 2000: 546). This union with the divine requires spiritual exercises that engender purity of heart, since the reflection "is only possible for those who have been purified in some measure . . . whereas the impure have no insight" (Linge 2000: 561).

Several practices aimed at stilling the vicissitudes of excessive emotionality are alluded to in the *Republic*. Perhaps the most important is in Book IX, where Socrates mentions that many of our most terrible and savage drives are revealed to us in our dreams. Socrates states that the healthy and temperate person has "awakened his rational powers," collected himself in meditation, and moderated his appetites, and that this person is most likely to be free of "lawless visions" (1997: 571-72). Once again, there are parallels in Evagrius as well as in the later monastic writer, St. John Climacus. In the *Praktikos*, Evagrius states that: "The proof of *apatheia* is that the *nous* begins to behold its proper gentle radiance; that it remains tranquil in the presence of visions during sleep; and that it looks at matters calmly" (Tugwell 1987: 5). For Evagrius, *apatheia* is achieved through various spiritual exercises, including fasting, keeping watch over one's thoughts, and meditation. These are all practices passed down through the philosophical schools to the Christian monastic tradition, another good reason to assume that Plato had something similar in mind.

Hadot mentions Evagrius and his inheritance of philosophical practices (2002: 249-50). One need not even maintain a strong development between Platonic and Christian practices to consider Socrates' practice in these terms. Kingsley's research into incubation techniques of the ancient Greeks may offer one possible explanation of what Socrates is doing. *In the Dark Places of Wisdom*, Kingsley describes the practice: "You would do absolutely nothing. You'd just have to surrender to your condition. You would lie down as if you were dead; wait without eating or moving, sometimes for days at a time. And you'd wait for the healing to come from somewhere else, from another level of awareness and another level of being" (1999: 80). While there is a significant difference between Socrates standing and lying down in a cave, Kingsley's insight is still helpful. His insight seems particularly relevant when one considers that incubation took place within the context of Apollo worship, and all the references to Socrates' activity occur in dialogues filled with abundant references to Apollo.

A well-known Platonic spiritual exercise occurs in the *Phaedo*. On the day of his execution, Socrates engages in philosophical conversation with his closest friends on the topics of the soul, death, and immortality. The discussion of the exercise of death begins with the topic of liberating the soul from the body. Socrates asks: "And does purification not turn out to be what we mentioned in our argument some time ago, namely, to separate the soul as far as possible from the body and accustom it to gather itself and collect itself out of every part of the body and to dwell by itself as far as it can both now and in the future, freed, as it were, from the bonds of the body" (1997: 67d)? Socrates makes the reason for this liberation clear a few moments earlier when he avers that "only the body and its desires cause war, civil discord and battles, for all wars are due to the desire to acquire wealth, and it is the body and the care of it, to which we are enslaved" (1997: 66c). The body and its desires cause the self great hardship if the self is controlled by its desires, and not vice versa. The philosopher will never achieve autonomy and the unification of the self so long as its aimless desires are in control rather than its true self, that is, the intellect.

So, how does the philosopher achieve control over one's desires? Socrates tells Simmias and Cebes: "I'm afraid that other people do not realize that the one aim of those who practice philosophy in the proper manner is to practice for dying and death," and later remarks that "it would be ridiculous for a man to train himself in life to live in a state as close to death as possible, and then to resent it when it comes" (1997: 64a, 67d). The reason for such training is clear: "the soul reasons best when none of these senses troubles it, neither hearing, nor sight, nor pain nor pleasure, but when it is most by itself, taking leave of the body and as far as possible having no contact or association with it in its search for reality" (1997: 65c). Socrates suggests that knowledge comes when the self does not allow any of the senses to intrude upon the process of thinking: he will most accurately "grasp that thing itself which he is investigating," and "come closest to the knowledge of it" (1997: 65e). There is a strong connection between training for death, withdrawing from the senses, and meditation. By "training for dying and death," Socrates clearly means being able to think without one's bodily appetites and desires constantly begging for attention and interruption of the thought process. One way that the Stoics and Christian monks in the desert accomplished this was by placing skulls in their cells. More important, they also meditated, focusing on breathing and maintaining attention on a chosen object or idea. On the notion of breathing techniques, Hadot states that "the idea of the soul as breath

is enough to allow us to suppose the existence of such techniques. It may be that the Platonic exercise which consisted in concentrating the soul, which is usually dispersed throughout all parts of the body, ought to be understood from this perspective" (2002: 181). Along these lines, Jeffrey Gold suggests that the eschatological myth that occurs at the end of *Phaedo* is best understood as a symbolic representation of "a meditation technique that appears to involve moving hot and cold energy up and down the spinal column through the *cakras* (energy centers)" (1996: 24). Gold argues that this breathing technique has close parallels to yoga, and that this is the main spiritual exercise that Socrates is recommending to achieve liberation of the soul and the unification of the self.

This understanding of spiritual exercises in the dialogues sheds remarkable light on passages from the *Symposium* and *Phaedo*. Socrates was clearly committed to the philosophical life understood as liberation from aimless desire and the goal of knowledge of the good, the beautiful, and the true--knowledge that chooses and wants those qualities--and a unified, autonomous self. These profound changes in self-comportment are not achieved merely through cognitive assent to propositions, but through the transformation of the self that requires profound emotional control. Sustained periods of focused breathing, close attention to one's thoughts or simple maxims, and divesting oneself of physical pleasures, are all exercises to help achieve these goals, exercises that Socrates clearly mentions and practices. As Hadot indicates, "the passages in the *Symposium* that describe the long periods in which Socrates stood still and reflected upon himself, without moving or eating" were "an *askesis* of the body and of thought--a divestment of the passions in order to accede to the purity of the intelligence" (2002: 67).

EFFECTS OF MEDITATION ON NEUROLOGICAL ACTIVITY

A recent flurry of research in neurobiology and psychology focuses on various forms of emotion regulation and the impact of intentional mental acts on neurological activity. One of the most ancient and well-documented methods for regulating one's emotions is meditation, defined as "a family of complex emotional and attentional regulatory strategies developed for various ends, including the cultivation of well-being and emotional balance" (Lutz 2008: 163). Furthermore, meditation is a cognitive activity that helps the agent regulate one's emotions in part by developing the skill of sustained attention. The assumption of many ancient religious and philosophical schools

of thought is that a flourishing or well-lived life is one where the self is in tune with reality--both the internal self and the external world. This "being in tune" with reality means seeing reality as it actually is, and not as construed by the self's false perceptions, that is, thoughts and emotions that falsely represent the world (including the self) to the self. The ability to pay close attention to one's inner life and experiences, or to a particular object or task, helps the self to have a clearer view of reality as well as a calmer, more relaxed, state of being.

Contemporary researchers like Antoine Lutz and colleagues describe two styles of meditation: (1) "Focused Attention (FA) meditation, entails the voluntary focusing of attention on a chosen object;" and (2) "Open Monitoring (OM) meditation, involves non-reactive monitoring of the content of experience from moment to moment" (2008: 163). One may conjecture that Socrates has some proficiency at both styles of meditation. He demonstrates an amazing ability to focus his attention on a problem for a sustained period of time (which in turn gives him the ability to filter out such negative stimuli as Agathon's sexual advances or the prospect of an unjust death sentence), and he demonstrates profound awareness of his own emotional states as well as the emotional states of those around him. Both of these forms of meditation are intentional, take years of practice to master, increase the practitioner's ability to both control or suppress emotions and focus attention on a particular task, and are accompanied by neurological changes. Furthermore, they seem to function like other skills since they are more difficult for the intermediate meditator than an expert. Finally, due in part to the fact that an expert meditator can focus attention and regulate emotions without the amount of neurological activity it takes an intermediate meditator to do the same, preliminary research suggests that there are deep and enduring neurological changes that result from long-term meditation practice.

There is mounting evidence that meditation changes brain activity and even structure. First, one need not be a lifetime practitioner of meditation in order for the practice to bear neurological fruit. In one study, researchers taught subjects with no prior meditation training or experience a practice called Kirtan Kriya that integrates breathing, verbalized sound, and movement (Newberg & Waldman 2009). In this variation, the practitioner consciously regulates one's breath, repeats certain sounds, and subsequently touches the thumb to the fingers while repeating the sounds. This repetitive movement and verbalization help keep the mind focused. One subject the researchers

called Gus illustrates the benefits of this method. At the beginning of the experiment, the researchers performed a baseline scan of the brain while Gus was resting, as well as while he tried the technique for the first time. Gus (and other participants) were then instructed to practice for twelve minutes a day for eight weeks, and then the researchers performed the same brain scans. In Gus' post-training baseline (resting) scan, there was increased neural activity in the prefrontal cortex and the anterior cingulate (an area associated with emotion regulation and social awareness, *inter alia*). In the post-training meditation scan, there was increased activity in the PFC and AC, but also in the cerebellum and basal ganglia. Further, Gus demonstrated "enhanced abilities in memory recall, concentration, and verbal fluency," as did all the other subjects (2009: 33).

In a study not involving meditation, but that still demonstrates the affect that cognitive practices can have on the brain, half the subjects were taught how to juggle and were given three months to practice, while the other half acted as controls (Draganski 2004: 311-12). The researchers used a whole-brain MRI and found that "these individuals show a transient and selective structural change in brain areas . . . associated with the processing and storage of complex visual motion" (2004: 11). Further, the juggler group showed a significant change in grey matter, while the controls did not, indicating that the change was the result of learning the new ability. While this is not a case of meditation, it demonstrates the existence of neuroplasticity and, more important, that certain kinds of cognitive tasks and meditative practices can affect neural activity and mental ability after a very short time, as little as eight weeks.

Other studies point to the ways that meditation alters brain activity and even neural circuitry. In a study examining the neurological anatomy of meditation practitioners, pronounced group differences indicating larger gyrification in meditators were evident: "Gyrification (the pattern and degree of cortical folding) is an important cerebral characteristic related to the geometry of the brain's surface" (Luders 2012: 6). Positive correlations between gyrification and the number of meditation years were pronounced in the right anterior dorsal insula, among other areas. This is significant, since Damasio and others suggest that "the anterior insula may constitute a 'hub' for autonomic, affective, and cognitive integration" (2012: 7). Meditators (including Socrates) demonstrate a profound ability to self-regulate emotions and engage in sustained cognitive tasks without being distracted. The larger

gyrification may be partially responsible for this ability. Another study indicates that meditation can increase immune function in practitioners. In this study, subjects with no prior meditation experience were vaccinated after an eight-week meditation program. The subjects who participated in the meditation program showed less negative affect, and a “significantly greater rise in antibody titers” than the controls (Davidson 2003: 566).

A study on the neuroanatomical effects of meditation focused on the correlation between aging and volume of gray matter and attentional focus in meditators and non-meditators (Pagnoni & Cekic 2007). It examined thirteen experienced meditators and thirteen controls. Researchers report that “control subjects displayed the expected negative correlation of both gray matter volume and attentional performance with age,” however, “meditators did not show a significant correlation of either measure with age. The effect of meditation on gray matter volume was most prominent in the putamen, a structure strongly implicated in attentional processing” (2007: 1623). These findings are supported by other studies that demonstrate that as people age their cognition and memory are closely correlated with decreasing gray matter (Yasuyuki 2011). The Pagnoni study suggests that meditation practices help maintain healthy levels of gray matter, and allow the practitioners to maintain stronger overall attentional focus as they age. Since Socrates is allegedly seventy years old in *Phaedo*, the connection is highly suggestive.

Other findings are even more relevant to understanding Socrates’ silent trances. If our thesis is correct, then Socrates was a person who engaged in various spiritual exercises for many years, including, but not limited to, meditative practices. So, what neurological changes occur in practitioners with many years of meditative experience? In one study, experienced meditators (who practiced meditation for at least five hours a week for five years) were instructed to engage in a form of open-monitoring or mindfulness meditation, where they are to remain “in a quiescent state, receptive to any thoughts, emotions or sensations, but without any lingering on them, or allowing them to disrupt to the meditative state,” while being shown a series of positive, negative, and neutral pictures (Sobolewski 2011: 45). Their brain activity was measured using an EEG machine. When compared to control subjects with no prior meditation experience, the experienced meditators did not exhibit the neurological response to the negative pictures that the novices did. The differences in neurological activity led researchers to posit that “meditation practitioners either perceive adverse emotional stimuli in a

different way from non-meditators or regulate (inhibit) the emotional reaction to negative stimuli—while processing of positive stimuli remains unaltered (uninhibited) . . . (the) main source of this difference seems to involve frontal cortical regions” (2011: 165).

Another study examined the neural basis of “one-pointed concentration,” practiced to “strengthen attentional focus and achieve a tranquil state in which preoccupation with thoughts and emotions is gradually reduced” (Brefczynski-Lewis 2007: 11483). It compared expert meditators (10,000–54,000 hours of practice) with novices. All participants were asked to focus on a small fixed dot on a screen, while researchers interrupted them with distracting sounds, both while resting and while meditating. This study was designed to see what neural differences are evident in advanced meditators during meditation as well as rest. It might also identify different areas and systems in the brain that help sustain attention and guard against distraction. Some interesting results emerged. Both expert and novice meditators “activated a large overlapping network of attention-related brain regions,” more so during active meditation than rest (2007: 11483). Novice meditators showed activation in brain regions that correlate negatively “with performance in a sustained attention task” (2007: 11484). The study also examined the difference between experts with 10,000–24,000 hours of meditation (LHEM) and those with 37,000–53,000 hours (MHM). Experts with fewer hours (LHEMs) actually showed *more* neurological activity during meditation than those with more hours (MHMs). This suggests that sustained, focused attention is a skill that gets easier as the practitioner gets more proficient. In brief, the more proficient the meditator, the less effort it takes to engage in sustained attention, which makes it easier for the advanced meditator to engage in simultaneous tasks such as monitoring and dismissing distractive stimuli.

Another important neurological difference seen in expert meditators is less activation in the amygdala during focused attention meditation. This is not due to expert meditators simply ignoring distracting stimuli, because auditory processing regions “were more significantly activated to sounds in the practitioners compared with controls” (Lutz 2008: 165). Expert meditators are quite aware of the stimuli, but they are not distracted by them. In an untrained meditator, the amygdala (the seat of such emotions as fear and anger) is suppressed by cortical regions such as the right ventrolateral prefrontal cortex (Lieberman 2007: 421). This suggests that “concentration meditation leads to a partial ‘deautomatization’ of mental processes that shape and interpret

perceptual stimuli” (Lutz 2008: 165). Thus, substantial practice in attention-focused meditation allows the practitioner to cultivate the neurological ability to limit the automatic reactions that the amygdala normally initiates. This ability allows the practitioner to focus on a chosen task, and more easily dismiss valence-laden stimuli.

Looking at the relationship between meditation, conceptual processing, and distraction, researchers identified a default network that consists of “a set of brain regions that are metabolically active during wakeful rest and consistently deactivate in a variety of demanding tasks” (Pagnoni 2008: 1). This default network appears functionally linked to the stream of thoughts most people experience in the absence of goal-directed activity, what many meditative practices address through, for instance, disciplined regulation of attention, bodily posture, and breathing techniques: “In regions of the default network, meditators displayed a BOLD response related to semantic processing that was characterized by a reduced post-stimulus tail compared to control subjects” (2008: 3). Thus, experienced meditators could go from meditating to engaging in a cognitive task, and once they were finished with the task their brain activity returned to levels *lower* than the average default network levels of the controls. Researchers postulate that this is due to the ability of the experienced meditator to refocus attention on their breath after engaging in a cognitive task. The controls, on the other hand, returned to normal levels of neurological activity that translates into a stream of (potentially distracting) thoughts rather than a calm, focused meditative state. These studies suggest that meditative practices engender attentional focus, the ability to identify and dismiss distracting stimuli, and produce both immediate and enduring neurological changes.

SOCRATIC SELF-COMPORTMENT AND CONSCIOUSNESS

Belfiore claims that: “When engaged in thinking, Socrates turns inward, paying no attention to Aristodemus (174d4-7) or to his fellow soldiers at Potidaea (220c1-d5), and does not reveal the subject of his thoughts” (2012: 113). This may not be quite true. While we are not told specifically what Socrates is thinking about or trying to accomplish, there is textual evidence in the *Symposium* implying that Socrates is engaged in an intentional action with a specific aim during these experiences. In all instances, Socrates is puzzling about something, and returns to the plane of existence of the original puzzle. These meditative interludes allow Socrates to hone his attentional skills and

prepare himself to face potentially negative emotional stimuli. Indeed, Socrates’ opening comment in the *Symposium* about his unusual appearance suggests a level of preparation. Socrates attends to his appearance so that “beauty might match beauty” (1997: 174b). Would it not make sense that he also engage in inner preparation to meet the upcoming task just as he attends to outer physical preparation to match the unusual circumstance? In fact, the very first sentence of the *Symposium* suggests that preparation is an underlying motif of the dialogue. Apollodorus begins the whole account telling an unnamed friend that he is “not unprepared” to offer the account of the speeches on love (1997: 172a).

Granted, Alcibiades describes Socrates as “thinking about some problem or another” (1997: 220c). This indicates that the experience has cognitive content. However, the problem could be existential, not merely theoretical. The dramatic situations in which the trances occur are highly emotionally charged. The first account of the trance occurs while Socrates is on his way to a party where many partygoers are erotically involved, and some are intent on seducing Socrates. While the symposiasts at the party give speeches on love, Socrates’ speech reportedly comes from Diotima. Notably, during his description of his conversation with Diotima in which she describes the ladder of ascent that begins with the love of beautiful bodies and culminates in the love of the good, Socrates loses focus (1997: 210a-e).

In order to grasp the good, the philosopher must be able to move beyond the love of sensible valence-laden objects such as beautiful bodies, and sustain one’s attention long enough to gaze upon the good. Socrates avers that he is unable to sustain his focus even in a conversation about the good, but surely this is not the case. Rather, it is meant to tell us what it takes to become good. It takes sustained attention and the ability to guard oneself against distractions. Later, when Alcibiades makes his entrance, he presents a clear vision of a person who has not moved beyond the love of beautiful bodies. He represents a false image of the good in juxtaposition to Diotima’s image of the beautiful itself that Socrates just uttered. Socrates must be prepared to withstand the sexual advances of Alcibiades and the others if he is to continue his quest for goodness. But Alcibiades’ speech about Socrates reveals more about the latter’s meditative practices and what they inculcate. Alcibiades describes the trance as occurring during war. In the *Charmides*, Socrates makes clear that the battle was severe, and there were many casualties (1997: 153a). Socrates sustains his attention in the middle of an extreme negative valence-laden

situation. Further, Alcibiades indicates that Socrates can withstand extreme cold, and can go without sleep (as his meditative state lasts through the night). Interestingly, Patañjali notes that the accomplished yogic meditator is unbothered by such dualities (Bryant 2009: II, 48). Alcibiades describes Socrates as an ascetic, yet a strange kind who can drink as much as he likes without getting drunk, enjoy fine food or go without eating, and go without sleep if needed. Socrates stays up all night at the party (he never gets drunk), and then simply gets up and goes on with his normal routine (1997: 222a).

The study on conceptual processing and attentional focus of meditation practitioners (Pagnoni 2008) has clear parallels to Socrates in the *Symposium* and *Phaedo*. Whether in the middle of war, a sexually charged social context, or awaiting his execution, Socrates is able to engage in a philosophically rich discussion among friends, but still needs moments (sometimes extended periods) where he can refocus attention and regain his composure. Whereas his friends and interlocutors are emotionally affected by the situation, Socrates is able to fully engage without being overcome by emotion. He is not carried away by the incessant flow of distracting thoughts and emotions. Surely, this is not due to simply being elderly or absent-minded. Rather, Socrates sustains his attention over long periods of time. He monitors potentially distracting stimuli and dismisses them without losing focus, and encounters situations with negative valence, and emerges unscathed. One surmises that this ability is due to Socrates using his times of meditation to focus his mind and prepare himself for the world. These practices serve as both a way to access the good and as a protective mechanism. The trances prepare Socrates for the complexities that he will encounter, and enable him to respond to those complexities without withdrawing from them. They offer him the ability to be *in* the world, but not *of* the world.

Plato's portrait of Socrates in these dialogues suggests that philosophical commitments alone are not all that one needs to follow the Socratic injunctions to "know thyself" and live an examined life. One may need to develop some meditative strategies as well. Technology offers exciting opportunities to enhance human flourishing. At the same time, technology presents many challenges in that it can become a dehumanizing force. This suggests the need to embrace therapeutic modes of self-care, whose efficacy can be established through technology as a means of battling the challenges to human dignity in the contemporary age, such as mass media, consumerism, the proliferation of personal computing devices, and the erosion of privacy.

Finding therapeutic means can create the space for the continued flourishing of humanity. Practices such as Socratic meditation offer humanity promising therapeutic options. Revisiting Socrates as depicted in the Platonic dialogues and new evidence due to emerging technologies provide a path to follow, manifesting true dignity as human beings within the complexities of a technological world.

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Review Essay

THE FUTURE OF INFORMATION TECHNOLOGY

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- Divining a Digital Future: Mess and Mythology in Ubiquitous Computing.** By Paul Dourish & Genevieve Bell. Cambridge, MA: MIT Press, 2011. Cloth. 248 p. \$32.
- The Techno-Human Condition.** By Braden R. Allenby & Daniel Sarewitz. Cambridge, MA: MIT Press, 2011. Cloth. 222 p. \$24.95.
- Turing's Cathedral: The Origins of the Digital Universe.** By George B. Dyson. New York: Pantheon Books, 2012. Cloth. 401 p. \$29.95.
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UBIQUITOUS COMPUTING

The trouble with the future--taken by itself--is that it is hard to talk about with much specificity, and this is a problem that particularly informs Paul Dourish and Genevieve Bell's *Divining a Digital Future*. The authors take up an interesting issue concerning Mark Weiser's 1991 observation that truly successful technologies get iterated out of sight in the sense that they transform old landscapes into wholly new environments, which then seem natural and inevitable. Weiser forecast the disappearance of the desktop computer, asserting that its then-remarkable capacities would soon be blended into the structures of everyday life--the walls of one's own home, for example. This prospect, which Weiser called ubiquitous computing or ubicomp, for short, was really more than a forecast. It was also a goal, a way of predicting and cashing in on the future by inventing it.

Weiser's ubicomp prediction, say the authors, is a mythology that has taken hold among futurists over the past two decades. There are similar, competing mythologies, but unlike some futurists, who thought only about new gadgets, Weiser proposed deep cultural reorientations to catalyze the