

# The Power of Presence in Socratic Teaching: The Effect of Substituting Videoconferencing for In-Person Classes

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The recent COVID-19 pandemic has prompted widespread substitution of video conferencing applications such as Zoom for live classes.<sup>1</sup> Although precipitated by public health concerns, this experience will likely have lasting consequences for legal education. The convenience and familiarity of videoconferencing will no doubt increase its use.<sup>2</sup> The extent of that use will depend largely on the pedagogical impact of videoconferencing on learning.

Although scholars have quantified that impact in various situations, it is unclear how their conclusions apply to the traditional law school class. For example, a study of short-term tasks conducted in a dedicated room with large screens may not say very much about a semester-long law school course delivered through laptops and operated from home. Such a course presents conditions different from those in a lab. More helpful will be studies focused specifically on legal education, but even those studies might not apply consistently throughout the curriculum.

Meanwhile, law teachers must decide how to use videoconferencing. This article offers a qualitative framework for thinking about this decision, one that considers constricted space, competing stimuli, and diminished sensory input. Although we cannot be completely certain of the magnitude, or perhaps even the direction, of these factors, they organize our thinking. Instructors can decide for themselves their importance for the content and objective of their courses. On the whole, however, the available evidence indicates that these qualities undermine presence, and with it, the goals of legal education.

This framework does not address other components of online learning, such as the use of asynchronous modules, which permit learners to proceed

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1. Kevin Carey, *Everyone Ready for the Big Migration to Online College? Actually No*, N.Y. TIMES (March 13, 2020).
2. Andrew Strauss, *Post Coronavirus: Legal Education Will Never Be the Same. Online Law School is Here to Stay*, NAT. JURIST (Apr. 10, 2020).

at their own pace and receive personalized feedback. Nor does it address the consequences of shifting the entire curriculum offline, which may or may not improve learning outcomes.<sup>3</sup> The focus here is on the narrow issue of substituting videoconferencing for live classes in a single course.

This article falls into four parts. It begins by describing the importance of presence in the Socratic classroom. Presence is essential to skills such as thinking like a lawyer, communicating with others, and behaving ethically. The article then considers the suitability of videoconferencing applications for teaching these skills. Constricted space, competing stimuli and diminished sensory input undermine the physical, mental and social dimensions of presence, thereby hampering the development of lawyering skills. Next the article considers whether teachers and students can adapt to videoconferencing, concluding that complete adaptation is unlikely because of inherent shortcomings of the medium. Finally, the article discusses how to use videoconferencing. The framework suggests the importance of incorporating face-to-face classes, particularly at the beginning of the semester, and that it might be helpful to disable chat features or occasionally substitute a telephone.

### The Importance of Presence in the Socratic Class

The American legal establishment has long privileged<sup>4</sup> live courses<sup>5</sup> utilizing the “Socratic method,” which is widely regarded as conveying the core of legal education.<sup>6</sup> The antithesis of the lectures offered in bar review courses,<sup>7</sup> the

3. On the plus side, employees who work at home are often more productive. Nicholas Bloom, et al., *Does Working from Home Work? Evidence from a Chinese Experiment*, 130 QUARTERLY J. ECON. 165, 169 (2015) (finding that working from home increased employee productivity thirteen percent over nine months), and the recent COVID-19 confinement might have improved students’ performance. T. Gonzalez et al., *Influence of COVID-19 Confinement on Students’ Performance in Higher Education*, 15(10) PLOS ONE (Oct. 9, 2020) (finding confinement improved student performance and attributing this improvement to better study habits). Extensive computer use, however, undermines well-being. K.C. Madhav et al., *Association Between Screen Time and Depression Among US Adults*, 8 PREVENTATIVE MED. REPS. 67 (2017) (finding higher duration of screen time associated with depression).
4. As a matter of theory, the privileging of face-to-face instruction can be challenged. Paul Dourish et al., *Your Place or Mine? Learning from Longer-Term Use of Audio-Video Communication*, 5 COMP. SUPPORTED COOP. WORK 33, 34 (1996) (questioning whether face-to-face communication is the appropriate baseline for evaluating mediated communication).
5. Adam Liptak, *Virtual Jurisprudence; Forget Socrates*, N.Y. TIMES (Apr. 25, 2004) (“We’re training professionals who deal with people as problem solvers who need skills of negotiation, counseling and advocacy . . . Most of us find it difficult to believe that that kind of training can be done solely in an online atmosphere.”) (quoting John A. Sebert, an American Bar Association official). *But see id.* (“Online distance education . . . may be a more cost-effective way to provide certain basic training . . .”) (quoting Professor Deborah L. Rhode).
6. Donald G. Marshall, *Socratic Method and the Irreducible Core of Legal Education*, 90 MINN. L. REV. 1, 2 (2005) (arguing that “the absolutely essential knowledge, thoughtways, values, habits, attitudes, and traditions” necessary to the practice of law are best taught through the Socratic method).
7. Liptak, *supra* note 5 (describing the online curriculum of Concord Law School as reminiscent of a bar review course, which did not use the Socratic method). “‘It’s so elitist to say, ‘No, no. you

method relies on dialogue, typically between teacher and student. Originally devoted to the analysis of appellate cases, the “Socratic method” has been extended to other active learning approaches, such as problem-solving and role-playing, which more explicitly address clients and their needs.<sup>8</sup>

Although the Socratic method can be abused,<sup>9</sup> at its best, it develops cognitive, social and ethical skills. One is “thinking like a lawyer,” which is more than merely acquiring substantive knowledge.<sup>10</sup> Lawyers participate in the development of the rules, standards and norms that comprise law. Another skill is communicating with judges, clients, and adversaries.<sup>11</sup> The class initiates students into the profession. A final skill is empathizing with, and caring about, others. The best lawyers have a deep understanding of their clients. In its original version, the Socratic method instilled cooperation,<sup>12</sup> and more recent client-centered variations deepen the connection to others.<sup>13</sup>

All these skills require presence, which supports engagement. Awareness paves the way for active participation. The skills develop along a spectrum, beginning with “low road” largely unconscious sensory experiences to “high road” abstract conscious thought.<sup>14</sup> Mental processing moves from transitory sensory memory to more deeply encoded long-term memory which facilitates the use and handling of materials.<sup>15</sup> Thus, thinking like a lawyer begins with knowing legal materials and then critiquing them or adapting them to other circumstances. Similarly,

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actually have to go to law school to be a lawyer’ . . . . But it’s true. [Concord is] an online bar review course, but the bar exam does not test the complete set of skills it takes to be a lawyer.”  
*Id.* (quoting John S. Katzman, chairman and chief executive, of the Princeton Review).

8. *See, e.g.*, Jamie R. Abrams, *Reframing the Socratic Method*, 64 J. LEGAL EDUC. 562 (2015).
9. The method can be used to intimidate students, foster vicious competition, erode morality, and reinforce hierarchy. *See, e.g.*, Duncan Kennedy, *Legal Education and the Reproduction of Hierarchy*, 32 J. LEGAL EDUC. 591, 593, 604 (1982).
10. Jeannie Suk Gersen, *The Socratic Method in the Age of Trauma*, 130 HARV. L. REV. 2320, 2347 (2017) (“[T]he ‘live performance’ aspect of [the Socratic method] in which students reason verbally in class is really practice in the process of interpreting, making, and doing law.”).
11. *Id.* at 2346 (“Speaking in class - and being put on the spot - with regularity is an essential part of preparing students for careers in which they will need to speak and reason in real time, in both formal and informal settings. It is wrong to think these skills are relevant only to litigation or court. Myriad professional contexts, including ordinary meetings, presentations, and discussions of varying stakes, require these skills.”).
12. *Id.* at 2345 (“The Socratic method itself has highly collaborative qualities that professors can make use of by putting students in active and productive dialogue with each other.”); Phillip E. Areeda, *The Socratic Method (SM) (Lecture at Puget Sound, 1/31/90)*, 109 HARV. L. REV. 911, 917 (1996) (describing Socratic method as “cooperative.”).
13. Gersen, *supra* note 10, at 2346 (describing practice of adding other active learning to increase collaboration).
14. DANIEL GOLEMAN, *SOCIAL INTELLIGENCE* 84 (2006) (presenting the spectrum of social intelligence skills). “[E]mpathic accuracy builds on listening and primal empathy; all three enhance social cognition. And interpersonal awareness . . . provides the foundation for social facility,” which includes self-presentation and influence. *Id.* at 91.
15. Fergus I.M. Craik, *Levels of Processing, Past, Present . . . and Future?*, 10 MEMORY 305 (2002).

communication begins with attention<sup>16</sup> and simple listening and evolves into assertive speaking.<sup>17</sup> Likewise, moral intuitions begin with sensing subtle social clues, which provide the basis for empathy and concern for others.<sup>18</sup>

### The Suitability of Videoconferencing for Teaching Core Skills

Videoconferencing applications contain a handy bundle of ancillary features that can enhance the traditional classroom. Participants may be able to see one another better, especially in large classes. Voting and chat features may permit wider participation, particularly by shy students. Classes are easily recorded for future reference. These functions could, however, be incorporated into a classroom without moving online, with cameras, clickers, texting, or even selective use of the application itself.

The unique issue raised by the recent shift to virtual learning is the suitability of videoconferencing as a replacement for live classes, with or without supplementary features. On that issue, reliance on videoconferencing has three effects that tend to undermine physical, mental, and social presence,<sup>19</sup> and accordingly, cognitive and social skills.<sup>20</sup>

The first and most obvious effect is constricted space, which undercuts physical presence. Such space is less demanding. Conducting class on camera encourages poor posture and sloppy dress. Participants can easily slump back passively and just listen. During the recent shutdown, my daughter has been snuggling in bed in her PJs with her dog during her college Spanish class.

16. DANIEL GOLEMAN, *FOCUS: THE HIDDEN DRIVER OF EXCELLENCE* 119 (2013) (“Attention to context lets us pick up subtle social cues that can guide how we behave. Those who are attuned in this way act with skill no matter what situation they find themselves in.”).
17. *See, e.g.*, ROBERT BOLTON, *PEOPLE SKILLS: HOW TO ASSERT YOURSELF, LISTEN TO OTHERS, AND RESOLVE CONFLICTS* 33 (1979) (beginning training in assertive communication with physical attention, followed by attentive silence, and then reflection back).
18. DANIEL GOLEMAN, *EMOTIONAL INTELLIGENCE* 105 (2006) (describing Martin Hoffman’s view that “the roots of morality are to be found in empathy”); Martin L. Hoffman, *Empathy, Social Cognition, and Moral Action*, in *HANDBOOK OF MORAL BEHAVIOR AND DEVELOPMENT, VOLUME I: THEORY* 275 (William Kurtines & Jacob L. Gewirtz, eds. 1991).
19. These aspects parallel the performative, cognitive and relationship definitions of presence found in the scholarly literature, *see, e.g.*, AMY CUDDY, *PRESENCE* 24 (2015) (describing presence as the “state of being attuned to and able to comfortably express our true thoughts, feelings, values and potential” and describing presence as present moment awareness); JOHN SHORT, ET AL., *THE SOCIAL PSYCHOLOGY OF TELECOMMUNICATIONS* 65 (1976) (defining social presence as the “degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships”).
20. Jeremy N. Bailenson, *Nonverbal Overload: A Theoretical Argument for the Causes of Zoom Fatigue*, 2(1) *TECH. MIND & BEHAVIOR* (2021), <https://assets.pubpub.org/3xtduwvl/21614092702823.pdf> (attributing Zoom fatigue to eye gaze at close distance, cognitive load, an all-day mirror, and reduced mobility); *Business Meetings: The Case for Face-to-Face*, *FORBES/INSIGHTS* (2009), [https://www.forbes.com/forbesights/StudyPDFs/Business\\_Meetings\\_FaceToFace.pdf](https://www.forbes.com/forbesights/StudyPDFs/Business_Meetings_FaceToFace.pdf) (reporting that business executives find that face-to-face meetings offer fewer distractions and better ability to read body and facial expressions, along with more complex thinking and stronger relationships).

Expansive posture alters perceived power,<sup>21</sup> which facilitates presence,<sup>22</sup> and with it, thinking,<sup>23</sup> connection, and empathy.<sup>24</sup> Thus, studies have shown that such “power poses” facilitate thought<sup>25</sup> and self-presentation,<sup>26</sup> and that even formal attire improves attention.<sup>27</sup>

The second effect is the abundance of competing stimuli that intrude upon mental presence. Human attention is limited<sup>28</sup> and easily overtaxed.<sup>29</sup> While some students may experience fewer distractions sitting alone at home in front of a computer than in a live class, many will not, especially those with limited technology and little personal space. It is easy to get caught up in maintaining the internet connection and handling household responsibilities.<sup>30</sup> Furthermore, even if these are managed, shifting to virtual learning necessitates continual use of a computer, a notoriously distracting device,<sup>31</sup> which many professors ban in the classroom.<sup>32</sup> A computer creates the temptation to engage in other activities, or take learning shortcuts. An uncomfortable silence intended for reflection can be short-circuited by a simple click in search of a “quick answer.” Even a disciplined student can find her mental processing challenged by relying on a single device for participating in class, taking notes, and accessing online texts. All these distractions interfere with deep learning. Even if the same information is recalled, the ability to adapt and apply it in different circumstances

21. CUDDY, *supra* note 19, at 147 (“Expansive, open body language is closely tied to dominance across the animal kingdom.”).
22. *Id.* at 124 (perceptions of powerlessness foster obsessive post-event processing).
23. *Id.* at 128-29 (describing research in which power primed subjects processed information more abstractly and showed more creativity).
24. *Id.* at 127-28 (describing studies in which people primed for power were more forgiving and more likely to praise others).
25. *Id.* at 219 (describing study showing that power poses facilitated integrating fragmentary pictures into a whole).
26. *Id.* at 270 (describing study in which power poses improved interview performance).
27. *Id.* at 224-26 (describing study in which wearing a lab coat improved attention span, particularly when subjects were told it was a doctor’s coat).
28. GOLEMAN, FOCUS, *supra* note 16, at 9 (“Attention is a limited capacity.”).
29. *Id.* at 19 (discussing how seven chunks, plus or minus two, has been long been believed to be the upper level of attention, although some cognitive scientists now say that four is the upper limit).
30. Duta Mustajab et al., *Working from Home Phenomenon as an Effort to Prevent COVID-19 Attacks and Its Impacts on Work Productivity*, 4 INT’L J. APPLIED BUS. 13,18 (2020) (observing that many employees working at home experience technical and social distractions).
31. GOLEMAN, FOCUS, *supra* note 16, at 17-18 (2013) (“The bombardment of texts, videos, images and miscellaneous of messages we get online seems the enemy of the more full understanding . . . which requires sustained concentration and immersion in a topic rather than hopscotching from one to another.”).
32. See, e.g., Kevin Yamamoto, *Banning Laptops in the Classroom: Is It Worth the Hassles?*, 57 J. LEGAL EDUC. 477 (2007); Nancy G. Maxwell, *From Facebook to Folsom Prison Blues: How Banning Laptops in the Classroom Made Me a Better Law School Teacher*, 14 RICHMOND J.L. & TECH. 4 (2007).

is impaired.<sup>33</sup> Distraction also undermines our ability to communicate and empathize with others.<sup>34</sup>

A third effect is diminished quantity and quality of sensory input, which undermines social presence,<sup>35</sup> and perhaps mental presence as well. Human beings are highly sensitive to nonverbal clues, which provide the basis for the unconscious mimicry underlying easy, everyday interaction. In this way, social presence supports fluency, the ease of tasks like turn-taking and message confirmation, as well as rapport, which assists in self-presentation<sup>36</sup> and empathy.<sup>37</sup> Social presence also seems important to academic achievement, although the studies on this question are mixed.<sup>38</sup> Videoconferencing freezes, blurs, and delays nonverbal clues, thereby undermining presence and learning. Seeing one's own image creates stress.<sup>39</sup> Mental resources are depleted as our minds try to make sense of confusing signals. The classroom discussion becomes stilted and uncomfortable.

The bottom line of all these effects is distress. As has been the case with computer use generally,<sup>40</sup> the transition to videoconferencing leaves us more vulnerable to sadness and anxiety. Constricted posture weakens resistance to negative emotion.<sup>41</sup> Distractions interfere with the absorption of attention that fosters "flow," the state of mind that experiences enjoyment.<sup>42</sup> Lack of social

33. Karin Foerde et al., *Modulation of Competing Memory Systems by Distraction*, 103 PNAS 11778 (2006).
34. GOLEMAN, FOCUS, *supra* note 16, at 103 ("The ingredients of rapport begin with total shared focus between two people, which leads to an unconscious physical synchrony, which in turn generates good feeling. Such a shared focus with the teacher puts a student's brain in the best mode for learning.").
35. See, e.g., Zehui Zhan & Hu Mei, *Academic Self-Concept and Social Presence in Face-to-Face and Online Learning: Perceptions and Effects on Students' Learning Achievement and Satisfaction Across Environments*, 69 COMPUTS. & EDUC. 131 (2013) (finding that face-to-face students experienced significantly higher social presence than did online students); Ronald E. Rice, *Media Appropriateness: Using Social Presence Theory to Compare Traditional and New Organizational Media*, 19 HUM. COMMUN. RESCH. 451, 479 (1993) (finding face-to-face meetings to be the most appropriate medium for organizational activities).
36. GOLEMAN, FOCUS, *supra* note 16, at 116 ("In job interviews . . . if the applicant moves in synch with the interviewer (not intentionally - it has to occur naturally as a by-product of brain synchronization), she's more likely to be hired.").
37. *Cf. id.*, at 98-99 ("Our circuitry for empathy was designed for face-to-face moments. Today, working together online poses special challenges for empathy.").
38. See, e.g., Zhan & Mei, *supra* note 35 (describing studies that show positive relationship between social presence and academic achievement and those that did not).
39. Bailenson, *supra* note 20 (concluding that "it is likely that a constant 'mirror' on Zoom causes self-evaluation and negative effect").
40. See e.g., Madhav et al., *supra* note 3.
41. CUDDY, *supra* note 19, at 125-27 (finding feelings of power provide a buffer against negative emotions).
42. MIHALY CSIKSZENTMIHALYI, FLOW: THE PSYCHOLOGY OF OPTIMAL EXPERIENCE 48, 53 (1990).

presence leaves us dissatisfied.<sup>43</sup> The experience has left teachers exhausted<sup>44</sup> and students upset.<sup>45</sup> The overall effect reduces well-being,<sup>46</sup> and, with it, social connection and, quite possibly, academic performance.<sup>47</sup>

Studies directly comparing videoconferencing with face-to-face communication have not been quite so bleak as the above analysis. Many of them show comparable learning outcomes.<sup>48</sup> There is reason, however, to doubt their application to the law school context. First, these studies are often conducted in dedicated rooms with large screens,<sup>49</sup> which essentially controls for postural and distraction effects. Furthermore, the learning objective may be quite different. Large lecture courses may lack the critical thinking and performative aspirations of the Socratic class. Face-to-face interaction may be more important for those

43. See, e.g., Charlotte N. Gunawardena & Frank J. Zittle, *Social Presence as a Predictor of Satisfaction Within a Computer Mediated Conferencing Environment*, 11 J. DISTANCE LEARNING 8 (1997) (finding strong relationship between social presence and learner satisfaction).
44. Susan D. Blum, *Why We're Exhausted by Zoom*, INSIDE HIGHER ED (Apr. 22, 2020), <https://www.insidehighered.com/advice/2020/04/22/professor-explores-why-zoom-classes-deplete-her-energy-opinion>; Kate Murphy, *Why Zoom Is Terrible*, N.Y. TIMES, (Apr. 29, 2020), <https://www.nytimes.com/2020/04/29/sunday-review/zoom-video-conference.html> (describing teachers' experiences).
45. Greta Anderson, *Feeling Shortchanged*, INSIDE HIGHER ED (Apr. 13, 2020), <https://www.insidehighered.com/news/2020/04/13/students-say-online-classes-arent-what-they-paid> ("College students say the online instruction they are getting in the wake of the coronavirus is not the education for which they paid."); Matt Krupnick, *Online Higher Education Isn't Winning Over Students Forced Off Campus by the Coronavirus*, THE HECHINGER REP. (Mar. 26, 2020), <https://hechingerreport.org/online-higher-education-isnt-winning-over-students-forced-off-campus-by-the-coronavirus/>.
46. MARTIN E.P. SELIGMAN, *FLOURISH* 16, 20 (2012) (stating that positive emotion, engagement, and relationship, along with meaning and accomplishment, are the elements of well-being).
47. Well-being may increase hope. C.R. Snyder et al., *The Will and the Ways: Development and Validation of an Individual-Differences Measure of Hope*, 60 J. PERSONALITY & SOC. PSYCH. 570 (1991), which in turn improves performance, Kevin L. Rand et al., *Hope, But Not Optimism, Predicts Academic Performance of Law Students Beyond Previous Academic Achievement*, 45 J. RSCH. IN PERSONALITY 683 (2011).
48. See, e.g., Katherine R.M. Mackey & David L. Freyberg, *The Effect of Social Presence on Affective and Cognitive Learning in an International Engineering Course Taught via Distance Learning*, 99 J. ENG'G EDUC. 23, 32 (2010); Sarah Carr, *Online Psychology Instruction is Effective, but Not Satisfying, Study Finds*, 46 CHRON. HIGHER EDUC. A48 (2000).
49. See, e.g., Mackey & Freyberg, *supra* note 48, at 24 (using special technology suites for videoconferencing).

goals.<sup>50</sup> Finally, the studies still show that such interaction improves efficiency, collaboration, and perceived learning.<sup>51</sup>

### The Limits of Adaptation

Over time, users will adapt to videoconferencing.<sup>52</sup> Teachers can speed the process by requiring that students find a quiet place, act professionally, actively participate, show a full face on video, maintain eye contact, and use big gestures.<sup>53</sup> Self-conscious students can “hide self view.” Complete adaptation, however, is not possible. Human beings are hard-wired for physical environments,<sup>54</sup> and sheer willpower cannot completely close the gap. Dictating conduct is more obtrusive and less effective than providing an environment in which the desired behavior occurs automatically without thought.<sup>55</sup>

Thus, many of the shortcomings of videoconferencing are inherent to the medium. Even with deliberate adjustments in posture, the available space is simply more impoverished. Sitting in front of a laptop diminishes physical engagement.<sup>56</sup> Participants cannot move freely. The teacher cannot stand and walk

50. See, e.g., Zhan & Mei, *supra* note 35, at 132 (“Certain kinds of courses or knowledge do not require a rich sharing environment.”); Lothar Muhlbach et al., *Telepresence in Videocommunications: A Study on Stereoscopic and Individual Eye Contact*, 37 HUMAN FACTORS 290 (1995) (assuming that current teleconferencing was not adequate for difficult negotiations, delicate topics, and informal or complex negotiation); Pio Enrico Ricci Bitti & Pier Luigi Garotti, *Nonverbal Communication and Cultural Differences: Issues for Face-to-Face Communication over the Internet*, in FACE-TO-FACE COMMUNICATION OVER THE INTERNET: EMOTIONS IN A WEB OF CULTURE, LANGUAGE, AND TECHNOLOGY 81, 91 (Arvid Kappas & Nicole C. Kramer, eds. 2011) (“Laboratory tests have shown that when the long-distance communication by videoconference implies cooperative processes centered on relatively simple tasks, it is quite effective; however, when complex negotiations are in progress with interlocutors chasing contrasting objectives, videoconferences are more problematic.”).
51. See, e.g., Mackey & Freyberg, *supra* note 48 at 23 (noting how face-to-face classes improved affective learning); Jill M. Purdy et al., *The Impact of Communication Media on Negotiation Outcomes*, 11 J. INT’L CONFLICTS MGMT. 162, 182 (2000) (observing that “face-to-face bargaining was more time efficient than video-conferencing and it better facilitated the communication of collaborative intent”); Laura A. Hambley et al., *Virtual Team Leadership: The Effects of Leadership Style and Communication Medium on Team Interaction Styles and Outcomes*, 103 ORGANIZATIONAL BEHAV. & HUMAN DECISION PROCESSES 1, 16 (2007) (finding that face-to-face teams had more constructive interaction than videoconference teams).
52. See generally Dorrie DeLuca et al., *Adaptations that Virtual Teams Make so that Complex Tasks Can Be Performed Using Simple E-Collaboration Strategies*, 2 INT’L J. E-COLLABORATION 64 (2006).
53. Michele DeStefano, *Legal Levers in a Virtual World: Teaming Online to Do Different Things Differently*, INT’L BAR ASS’N, <https://www.ibanet.org/article/E3B9D903-A667-4901-B05E-82DA1DDB3D8D> (last visited May 23, 2022).
54. Ned Kock, *The Psychobiological Model: Towards a New Theory of Computer-Mediated Communication Based on Darwinian Evolution*, 15 ORGANIZATIONAL SCI. 327 (2004).
55. See generally RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH AND HAPPINESS (2008).
56. CUDDY, *supra* note 19, at 229 (describing study showing that working on small devices reduced assertiveness).

around the room.<sup>57</sup> and the student is glued to the screen in a way that precludes the small shifts that promote alertness.<sup>58</sup> Even the perception of others as larger images on a screen hampers performance,<sup>59</sup> and the use of videoconferencing itself may convey symbolic clues signaling a lack of importance.<sup>60</sup>

Videoconferencing also leaves little space for outside interaction. Participants log in and out at scheduled times. They do not linger before or after class, or encounter one another in the hallways. This makes it more difficult to contact teachers or form study groups. Even if a student is on site for other activities, fewer opportunities arise for the informal, impromptu conversations that convey important knowledge from the course.<sup>61</sup>

Similarly, competing stimuli will remain. Even if distractions are carefully managed, home offers potentially more distractions than in a dedicated space like a classroom. The operation of the computer hovers in the periphery of attention. Even in the absence of actual interruptions, conditioned mental associations will undermine concentration. The home has many associations beyond study, as does technology. For example, the mere presence of one's cellphone reduces available cognitive capacity.<sup>62</sup> Ironically, self-conscious efforts, like big gestures, to adjust to videoconferencing can add to the cognitive burden.<sup>63</sup>

Finally, sensory input is necessarily limited. Improved technology and exaggerated gestures go only so far. There are limits to what can be captured on a single two-dimensional screen. Missing is the ability to vary focal range. Headshots cannot capture subtle clues like breathing patterns<sup>64</sup> or gross ones like larger body language. True eye contact is impossible. If we look at the screen, our partner cannot see our eyes. If we look at the camera lens, we cannot

57. *Id.* at 245 (noting speaker movement is more engaging for the audience).

58. Bailenson, *supra* note 20, at 4 (observing that “[T]here are a number of studies showing that locomotion and other movements cause better performance in meetings.”).

59. *Id.* at 3 (describing study in which subjects assigned tall avatars negotiated better deals).

60. See, e.g., Linda Klebe Trevino et al., *Understanding Managers' Media Choices: A Symbolic Interactionist Perspective*, in ORGANIZATIONS AND COMMUNICATIONS TECHNOLOGY 71 (Janet Fulk & Charles Steinfield eds., 1990).

61. Bitti & Garotti, *supra* note 50, at 9 (noting videoconferencing lacks the opportunity for informal interaction which often provides significant information); Liptak, *supra* note 5 (What is missing [from online education] is a lot of intangibles you just can't quantify . . . Just to walk into a faculty member's office and let the conversation go every which way. You lose that ambience.”) (quoting Professor Arthur R. Miller).

62. Adrian F. Ward et al., *Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity*, 2 J. ASS'N FOR CONSUMER RSCH. 140 (2017).

63. *Cf.* Kock, *supra* note 54, at 333 (suggesting that decreases in naturalness of a computer-mediated medium increase the cognitive effort to complete a task).

64. CUDDY, *supra* note 19, at 191 (describing study showing that breathing like another person is at least as strong as mirroring facial expressions for transmitting emotions).

see theirs. Full face video distorts the facial size and prolongs the length of the view, creating the sense that everyone is staring at you.<sup>65</sup>

## Using Videoconferencing

### *Incorporating Face-to-Face Classes*

The above framework, which considers the effect of constricted space, competing stimuli and diminished sensory input, can inform our use of videoconferencing. On the whole, these factors diminish physical, mental, and social presence. Thus, the framework suggests that a face-to-face live meeting is generally a superior medium for conducting the Socratic class.<sup>66</sup> Even predominantly online courses would benefit from some face-to-face meetings. Such meetings foster the social presence crucial to learning<sup>67</sup> and establish the trust necessary to successful teamwork.<sup>68</sup> Face-to-face classes are most important early in the semester,<sup>69</sup> when they can establish a foundation of rapport that can sustain later online sessions.<sup>70</sup>

65. Bailenson, *supra* note 20, at 4 (concluding that “it is likely that a constant ‘mirror’ causes self-evaluation and negative effect”).
66. The case weakens if the class is socially distanced. Proximity matters, and interactions among colleagues decline sharply with distance. Cf. Thomas J. Allen, *Architecture and Communication among Product Development Engineers*, 49 CAL. MGMT. REV. 23, 26 (2007) (showing the probability of communication sharply declining as the distance between workstations increases). A computer headshot might provide more input than the sight of a person many yards away, and, even if prudent, wearing a mask hampers communication, Elizabeth Preston, *In an Era of Face Masks, We’re All a Little More Face Blind*, N.Y. TIMES (Aug. 31, 2020), <https://www.nytimes.com/2020/08/31/health/covid-masks-face-blindness.html> (describing studies showing that wearing masks impedes our ability to recognize others), obscures much facial expression, PAUL EKMAN, *EMOTIONS REVEALED* 95-96, 134-35, 160-61, 183, 205 (2003) (observing that many muscles expressing emotions are near the nose and mouth), and hampers speaking and listening.
67. See, e.g., Jungjoo Kim et. al., *Investigating Factors that Influence Social Presence and Learning Outcomes in Distance Higher Education*, 57 COMPUTS. & EDUC. 1512, 1518 (2011) (concluding that “it is important to accumulate students’ social presence enough to reach to the critical mass so that it has a direct effect on their learning experience”).
68. See, e.g., Charles Handy, *Trust and the Virtual Organization*, 73 HARV. BUS. REV. 40, 46 (1995) (arguing that “trust needs touch”); Joe Nandhakumar, *Virtual Teams and Lost Proximity*, in VIRTUAL WORKING: SOCIAL AND ORGANIZATIONAL DYNAMICS, 46, 46 (Paul Jackson, ed. 1999) (finding that personalized trust relationships established through face-to-face interactions and socialization are essential for continuous virtual teamworking); Sirkka L. Jarvenpaa & Dorothy E. Leidner, *Communication and Trust in Global Virtual Teams*, 10 ORG.. SCI. 791, 791 (1999) (concluding that “global virtual teams may experience a form of ‘swift’ trust, but such trust appears to be very fragile and temporal”).
69. Luis L. Martins, et al., *Virtual Teams: What Do We Know and Where Do We Go from Here?*, 30 J. MGMT., 805, 816 (2004) (“It has been suggested that a face-to-face meeting during the initial ‘courtship’ period of a virtual team’s life cycle helps create trust in the team”); Diane L. Coutu, *Trust in Virtual Teams*, 76 HARV. BUS. REV. 8 (1998); Jim Suchan & Greg Hayzak, *The Communication Characteristics of Virtual Teams: A Case Study*, 44 IEEE TRANSACTIONS ON PRO. COMM’NS 174, 184 (2001) (“Members indicated that the [in-person] kickoff was critical in transforming the group into a team.”).
70. Brian Parkinson & Martin Lea, *Video-Linking Emotions*, in FACE-TO-FACE COMMUNICATION 100, 100 (finding delays in videoconferencing less problematic if between friends).

A caveat to this conclusion is that physical, mental and social presence do not always move in tandem. Constricted space and diminished sensory potentially reduce competing stimuli. A slumped posture focused on a single device might enhance concentration and mental presence. In choosing between face to face classes and videoconferencing, however, it seems unlikely that such enhanced concentration will tip the overall balance toward the latter. For one, it is doubtful whether attending to a highly distracting device increases overall mental presence in a class. For another, the loss of physical and social presence may well outweigh any marginal increase in concentration in the Socratic class, given its emphasis on active participation. In choosing between live classes and videoconferencing, then, it seems the more realistic the better.

#### *Limiting Channels of Communication*

In designing the virtual course, however, less realism might be better.<sup>71</sup> Here, the gain in mental presence from limiting sensory input<sup>72</sup> might outweigh any loss in social presence. Thus, counterintuitively, it might be beneficial to eliminate a channel of communication. One obvious candidate is the chat feature. The negative effect of screen banners is widely acknowledged,<sup>73</sup> and running a chat simultaneously with oral class discussion might be a net minus. The diminished mental presence resulting from writing and reading messages might exceed the benefits of any additional social presence.

A less obvious candidate is video, which could be eliminated by substituting a telephone for videoconferencing.<sup>74</sup> Use of a telephone might increase physical and mental presence.<sup>75</sup> It facilitates physical engagement by permitting

71. See, e.g., Kenneth A. Graetz, et al, *Information Sharing in Face-to-Face, Teleconferencing, and Electronic Chat Groups*, 29 SMALL GRP. RSCH. 714, 740 (1998) (“Tools that may be very effective for supporting some group tasks may be ineffective for supporting others, and, in some cases, may actually reduce group effectiveness.”).
72. See. Kock, *supra* note 54, at 340 (suggesting that a super-rich virtual reality increases cognitive effort compared to face-to-face communication).
73. See, e.g., Sam Seabrook & Chris Georgiades, *Text as Visual Distraction*, 2011 CHI (MAY 7-11, 2011) (ACM) (finding that adding text along the bottom of a picture grid reduced recall of the pictures by twenty-five percent); Moira Burke, et al., *High-Cost Banner Blindness: Ads Increase Perceived Workload, Hinder Visual Search, and Are Forgotten*, 12 ACM TRANSACTIONS ON COMPUT. HUM. INTERACTION 423 (2005).
74. Cf., Graetz, *supra* note 71, at 738 (finding that teleconferencing groups not only shared information and made decisions as well as face-to-face, they also had a more positive impression of their group).
75. Bailenson, *supra* note 20, at 4 (describing the sense that our listener is dedicating full attention during a phone call, even if we engage in minor physical activities).

standing<sup>76</sup> and movement,<sup>77</sup> and reliance on a single channel of communication focuses attention.<sup>78</sup>

To be weighed against these gains is the potential loss of social presence. High-quality, large-screen videoconferencing can improve interpersonal awareness compared with audio alone.<sup>79</sup> Low-quality video, however, with its distortions and time lag, may undermine trust and reduce mental presence as participants adjust for misleading physical clues. Furthermore, the intimacy of a closely held telephone, which conveys subtleties of breath and tone, might provide a richer sensory experience than videoconferencing.<sup>80</sup> Voice also might be more important than sight in natural communication.<sup>81</sup>

Thus, on balance, a telephone call may sometimes be preferable to videoconferencing. In small groups, audio-only seems sufficient for fluency, facilitating turn-taking and minimizing needless questions.<sup>82</sup> Accordingly, a telephone connection may be the better choice for holding office hours and conducting small meetings.<sup>83</sup>

### Conclusion

Compared with face-to face classes, videoconferencing suffers from constricted space, competing stimuli and diminished sensory input. On the whole, these effects undermine presence, and with it, the goals of a Socratic course: critical thought, effective communication and ethical behavior. This framework has

76. CUDDY, *supra* note 19, at 238 (standing at attention facilitates alertness and strength); *Id.* at 243 (advising not to sit in waiting rooms but to stand or walk instead).
77. *Id.* at 245 (movement is more engaging for the speaker); *Id.* at 247-48 (walking meetings improve mood, and lead to better communication, engagement and creative problem-solving).
78. See, e.g., Pamela J. Hinds, *The Cognitive and Interpersonal Costs of Video*, 1 MEDIA PSYCH. 283, 296 (1999) (interacting over audio-visual system requires more cognitive load than interacting over audio only); Owen Daly-Jones et al., *Some Advantages of Video Conferencing over High-Quality Audio Conferencing: Fluency and Awareness of Attentional Focus*, 49 INT'L J. HUM.-COMPUT. STUD. 21, 51-52 (1998) (participants reported that use of audio heightened ability to concentrate and increased objectivity compared with audio plus video).
79. Daly-Jones et al., *supra* note 78, at 53.
80. See Murphy, *supra* note 44 (“‘You can have a sense of hyper-presence on the telephone because of that coiled relationship where it feels like my mouth is right next to your ear, and vice versa,’ ... Provided you have a good connection...you end up hearing more: slight tonal shifts, brief hesitations and the rhythm of someone’s breathing. When it comes to developing intimacy remotely, sometimes it’s better to be heard and not seen.”) (quoting and paraphrasing interview with Sheryl Brahnam).
81. See, e.g., Kock, *supra* note 54, at 335 (evolutionary cost theory suggests that speech is more important than physical expression in natural communication); Mackey & Freyberg, *supra* note 48, at 23 (students reported that audio disturbances had greater negative impact on learning than video disturbances).
82. See, e.g., Daly-Jones et al., *supra* note 78, at 54 (concluding that an audio-only channel is sufficiently rich to coordinate fluent conversations).
83. Bailenson, *supra* note 20, at 4 (observing “that audio-only conversations suffer as groups become larger”).

important consequences for course design. It suggests that teachers should prioritize face-to-face instruction, particularly at the beginning of a course and that online sessions might benefit from forgoing chat and video features.