AMERICAN PSYCHOLOGICAL ASSOCIATION

APA RESOLUTION on the Protection of Neural and Cognitive Data

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The intersection of human behavior and technology is experiencing rapid transformation as new forms of direct-to-consumer software and wearable devices collect expanding amounts of data (European Parliamentary Research Service, 2024; Yuste et al., 2021; Yuste et al., 2017). For example, a smart watch may collect biometric data like heart rate and rhythm to draw inferences about a person's sleep quality and subsequent cognitive status, while a virtual reality system may collect information about eye movement and pupillary response to draw conclusions about a person's ability to remain focused on a particular task or their reaction to specific stimuli. Among newer technological developments, a specially designed headband or headphones might collect neurophysiological data (i.e., EEG) for use in a noninvasive brain-computer interface (Jones, 2024). A high-tech pair of glasses (Heath, 2024; Meta, 2024; Stein, 2024) might collect eye gaze and pupillary responses to gather information about (a) where a person's attention is focused (e.g., Salvi et al., 2015; Servais et al., 2023a, 2023b) in order to present specific stimuli on an augmented reality screen on the glasses or via sound, or (b) how a person's mind reacts to specific stimuli presented in the glasses (Castillon et al., 2024; Chartier et al., 2024; Nahari et al., 2019). Decades of research in cognitive psychology and cognitive neuroscience suggest that these data, when taken together, can provide insights into a person's mental state (Bixler & D'mello, 2016; D'mello et al., 2013), neural and cognitive processes (Annerer-Walcher et al., 2020; Haji-Abolhassani & Clark, 2014; Hutt et al., 2024; Mills et al., 2021), psychological health (Akshay et al., 2023; Asha et al., 2024; Jyotsna et al., 2023; Kröger et al., 2020), and subconscious and unexpressed thoughts or intentions (Bednarik et al., 2012; Konkoly et al., 2024; Salvi et al., 2015; Servais et al., 2023a, 2023b); they can even determine a person's identity (Kröger et al., 2020). These data can also be used to inform models of artificial intelligence (AI) and the various technologies that use AI (Asha et al., 2024), including in ways that can enable AI to close the loop between *measured* neural data and *interventions* into neural and cognitive processes (Abiri et al., 2019; Horowitz et al., 2023; Molina-Cantero et al., 2021), potentially altering a person's mental state before they are even aware that the intervention is happening (Cassano & Vahedifard, 2022; Kim et al., 2024; McKendrick et al., 2015; Stewen, 2023). While the interface between these types of data and AI has enormous potential to benefit humanity and improve human quality of life, APA believes this type of data is highly sensitive and individuals should have a basic right to their mental privacy.

For the purposes of this resolution, "protection of neural and cognitive data" refers to a person's right to safeguard against the uninformed collection and potential misuse of the person's biometric and neural information commonly used to infer underlying cognitive processes or as markers directly leading to a mental or behavioral health status or diagnosis. This type of data, able to be measured from wearable technology, may include brain electroencephalography (EEG), pupillometry, eye movement and eye gaze patterns, galvanic skin responses, and heart rate measurements, though is not limited to these examples. Any type of data measurable from wearable or portable devices that can be used to infer mental states, events or processes that would traditionally be considered private to the person (i.e., subject to the person's discretion to disclose through speaking, language, or other form of intentional communication) would fall into this category of protection. People should have the right to control their neural and cognitive data and the information about their mental states and processes that can be derived from it, as well as to consciously choose which aspects of their mental world or existence they would like to disclose to others (Paz, 2021). Historically, humans have used their language capability for this, deciding what to overtly speak, type, write, or communicate and what to keep mentally private. Being able to consciously control which aspects of one's internal thoughts, feelings, and rich mental life get put out into the world is a fundamental human right: the right to mental privacy.

The collection of these deeply intimate data raises concerns about the mental privacy of users whose data are collected, as well as ethical uses of these data. Legislatures in some states, including Colorado and California, have begun to enact laws protecting the privacy of these data from unwarranted disclosure (Witley, 2024). Psychologists, as experts in the fields of cognitive psychology, neuroscience, and cognitive and behavioral health, have a particular interest in outlining clear guardrails for the responsible collection and ethical use of these types of data. In the areas of clinical psychological practice and human subjects research (Cockerton et al., 2024), these types of data are currently protected under HIPAA protections and the Belmont principles used by Institutional Review Boards (IRBs), respectively. Moreover, these protections, as well as the Standards in the APA Code of Ethics, provide clear guidelines for obtaining consent and ensuring confidentiality in clinical psychological practice and human subjects research. The concern is that everyday device

technology use involving the types of data referred to in the previous paragraphs fall outside of these established protections.

WHEREAS recent technological innovations and legislative efforts raised the importance of establishing new standards for the protection of mental data, recognizing the sensitive nature of such information and the potential risks associated with its misuse; and

WHEREAS the American Psychological Association (APA) is committed to upholding the highest ethical standards in the collection, storage, and use of neural and biometric data commonly used as markers for a mental or behavioral health status or diagnosis; and

WHEREAS the APA recognizes the importance of staying abreast of technological developments and ensuring that its policies and practices align with current legal standards and ethical considerations for the use of these data in research and treatment;

THEREFORE, BE IT RESOLVED that the APA Council of Representatives:

1. Endorses the principle that mental privacy must be considered among other privacy protections.
2. Commits to reviewing and updating APA policies and guidelines to ensure they reflect the highest standards for the protection of mental privacy.
3. Commits to keep APA members informed about legal and ethical issues related to mental privacy and to incorporate best practices in their professional activities.
4. Supports ongoing research and dialogue within the psychological community to address emerging challenges and opportunities related to mental privacy protections.
5. Advocates for the development of legislation that provides comprehensive mental privacy protections.

BE IT FURTHER RESOLVED that the APA will:

1. Establish a working group of behavioral health, cognitive psychology, neuroscience, and AI experts to monitor and advise APA and APA Services on policy developments that may require legislative and regulatory response.
2. Collaborate with other professional organizations, policymakers, and stakeholders to promote the ethical use of mental data and robust protection of mental privacy.
3. Consider the creation of resources and training for APA members on best practices for mental privacy protection.

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