
Plan Overview

A Data Management Plan created using DMPonline

Title: CANNABODIES: Modelling the Influence of Cannabinoids on the Embodied Mind

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Project abstract:

The world is in the midst of a cannabis craze. After decades of criminalization, cannabinoids such as tetrahydrocannabinol (THC) and cannabidiol (CBD) are suddenly everywhere – in new medicines, in the media, and even in food and cosmetics. But how do cannabinoids influence our brain and body? Much of what we currently know about these compounds comes from neurobiological studies of the endocannabinoid system in animals. Additionally, clinical research suggests that cannabinoids offer promising new treatments for mood and affective disorders, addiction, chronic pain and fatigue, and inflammatory illnesses. However, little is known about how these compounds influence the neural or embodied processes which underlie conscious feelings of emotion, pain, or motivation. This not only limits our ability to design effective cannabinoid-based treatments, but also to negotiate the rising influence of cannabis in our society. To address this gap, in this project I will develop a novel interoceptive self-inference framework which explains how cannabinoids alter the neural mechanisms underlying our embodied and affective selves. To do so, I will use a combination of computational modelling, neuroimaging, subjective measures, and physiological

recordings to map the influence of cannabinoids on brain-body interaction in four key psychological domains: interoception, emotion, motivation, and pain. This will enable me to reveal the computational mechanisms by which cannabinoids influence each of these domains. Further, by pooling data across all projects, I will deliver the largest single neuroimaging study of cannabinoid mechanisms to date. This project will answer questions such as: what is the computational basis of cannabinoid effects on brain and behavior? Do THC and CBD exert opposing or complementary effects on neural and visceral signals? What are the exact phenomenological effects of these drugs, and do they depend on idiosyncrasies in brain-body dynamics?

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CANNABODIES: Modelling the Influence of Cannabinoids on the Embodied Mind

Summary

Project Acronym

CANNABODIES

Project Number

948788

Provide a dataset summary

This DMP covers the data that will be acquired during the CANNABODIES project. NeuroFlux aims to uncover how the phytocannabinoid compounds THC and CBD influence decision-making, brain-body interaction, and interoception. The project is comprised of four core studies, each probing cannabinoid influences on a unique domain of decision making. Each study will generate a new dataset of physiological data and behavioral responses. Shared data will include, where possible, anonymized brain, physiological, and behavioral data. This will allow other groups to replicate all reported findings.

FAIR data and resources

1. Making data findable

We intend to provide metadata for all projects. We hope to follow DataCite metadata scheme <http://schema.datacite.org/> or <https://fairsharing.org/> which provides flexibility in our interdisciplinary research field. Task and analysis code will be provided via open-access public github repositories and linked to the data and metadata. We intend to provide data via the Open Science Framework and Zenodo, two public domain data sharing websites.

2. Making data openly accessible

We intend to make as much data as possible openly accessible. This will primarily entail behavioural responses and physiological time courses. We plan to deposit the data on

OSF repositories and provide all task and analysis code openly using GitHub repositories. These are openly accessible repositories and well established in the field.

3. Making data interoperable

We will share data using .csv format, a widely used data format compliant with open-access softwares. Metadata vocabularies will be specified to ensure the interoperability.

4. Increase data reuse

We intend to register our datasets at <https://b2share.eudat.eu/> and/or at open science framework. This will increase data re-use and findability.

5. Allocation of resources and data security

The targeted repositories are currently free of costs for users. This may change for long-term storage or in a changing financial situation. These repositories also provide the mechanisms for longterm storage and backup to prevent data loss. Costs will be estimated in case repositories will no longer be free of charge.