

**Report about a collaborative
Israeli-German project
on metacognition**

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Deutsch-Israelische
Projektkooperation DIP



Federal Ministry
of Education
and Research



Project DIP-D4.2
**Metacognition: A Window to the
Conscious and Unconscious
Determinants of Behavior**

**For more information about the
project please see**

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The Project

A collaborative effort involving several teams from Israel and Germany to combine insights from both Cognitive Psychology and Social Psychology.

Metacognition serves as a common ground for understanding the intricate interplay between unconscious and conscious processes as they affect judgment and behavior.

Metacognition: Explicit or Implicit?

"How does [the work on implicit memory] relate to questions about metacognition? After agreeing to write this chapter, we went through a long period thinking the answer was "it doesn't". As the deadline for the chapter drew near, we became more creative (desperate?) in our analysis, and have now arrived at the position that metacognition and implicit memory are so similar as to not be separate topics".

(Kelley & Jacoby, 1996)

Metacognition: Explicit or Implicit?

“We understand the feeling-of-knowing judgment to be an explicit task and to rely on explicit knowledge. Indeed the judgment of what and how much you know about what you know or will know is a classic, almost definitional, explicit task... Because feeling-of-knowing judgments are explicit, it is unlikely that subliminal activation could affect these judgments.”

(Funnell, Metcalfe, & Tsapkini, 1996)

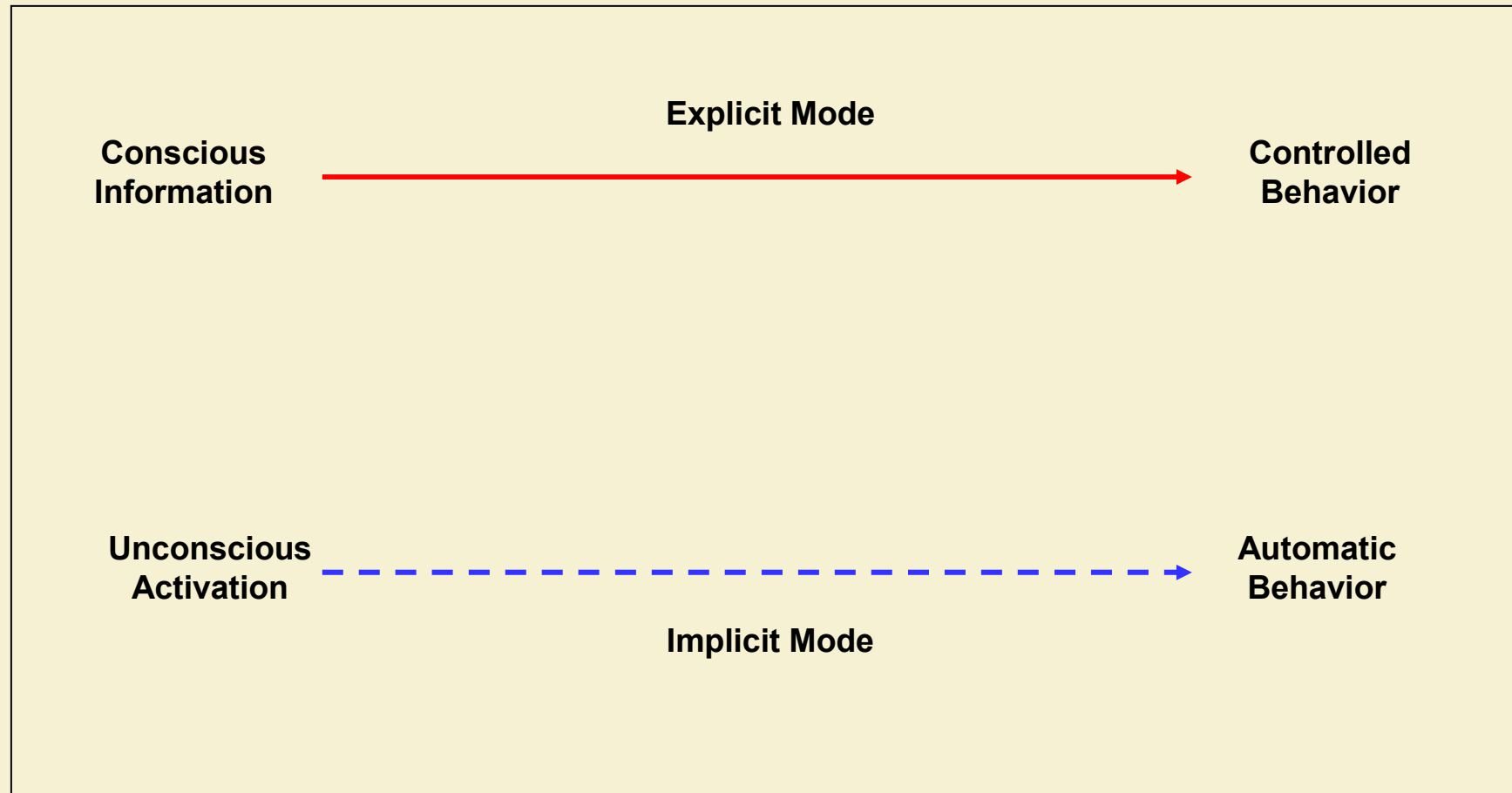
Metacognition: Explicit or Implicit?

"Given that feeling of knowing, like strategy selection, tends to be thought of as the essence of metacognitive strategy, it is important to defend our claim that this rapid feeling of knowing is actually an implicit process rather than an explicit process... The decision making process involves rapid and automatic flow of activation rather than slow and controlled decision making about discrete features in the environment."

(Reder & Schunn, 1996)

Our Proposal: (Koriat, 2000)

Two modes of behavior



Automatic effects on behavior

Priming	Effect
Subliminal prior presentation of a photograph of one of two confederates with whom the Ss later interacted	Increased expression of agreement with that confederate
Presentation of achievement- related words	Increased the time Ss continued to work on a task after the experimenter signaled to stop
Activation of the elderly stereotype	Increased the time it took Ss to walk down the hall when the experiment was over
Priming with fast or slow animal names (cheetah, snail)	Same
Pictures of the elderly	Slower lexical decisions
Subliminal presentation of happy/angry faces	Pouring & drinking more/less a flavored drink
Presentation of assertiveness- related words	Increased Ss' tendency to interrupt the experimenter

(Data from : Bargh, *in press*; Bargh, Barndollar & Gollwitzer, 1993a; Bargh, Chen & Burrows, 1996; Bargh, Gollwitzer & Barndollar, 1995; Bornstein, Leon & Gallay, 1987; Dijksterhuis & Bargh, 2001; Winkielman et al., 2002).

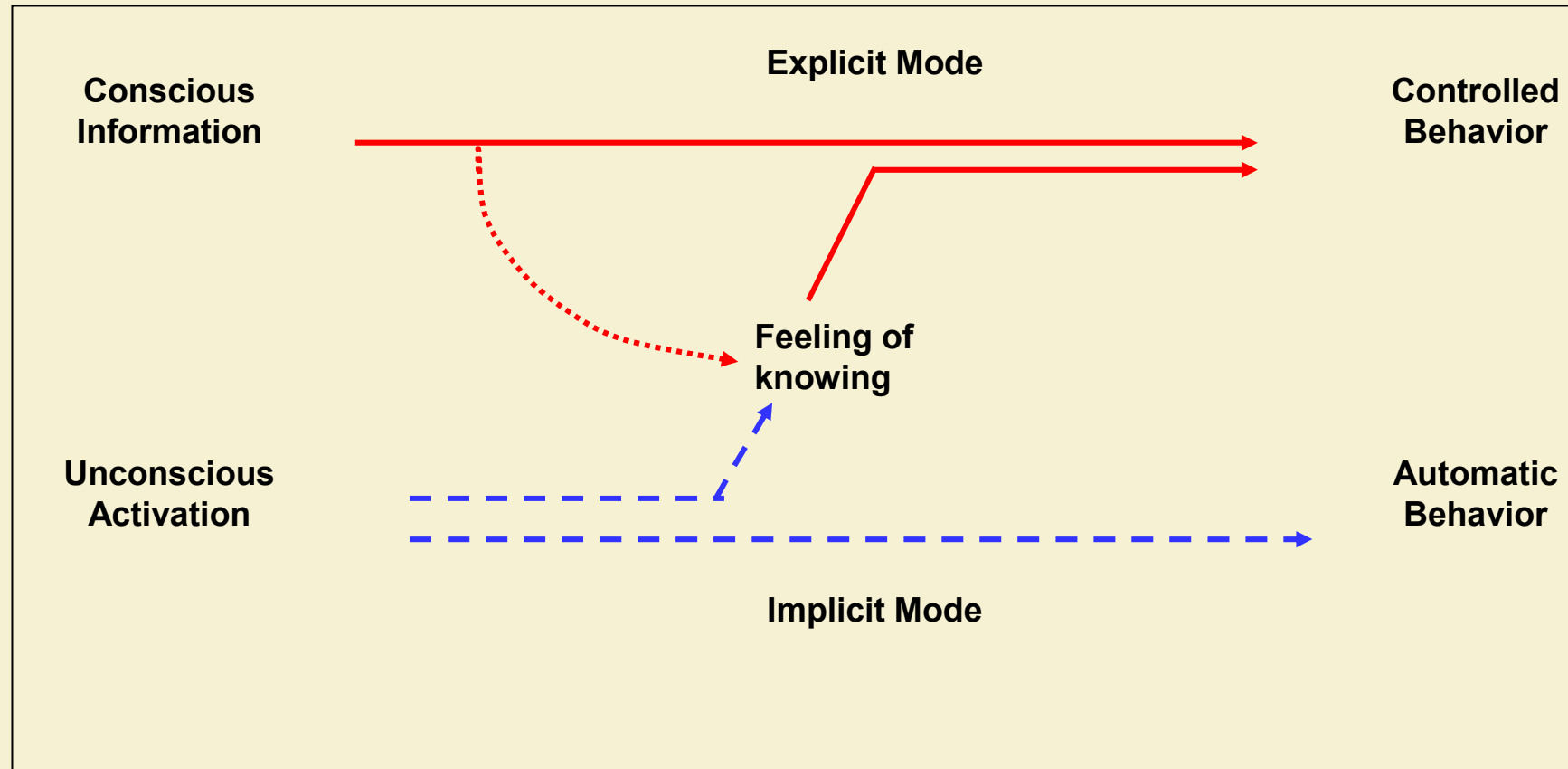
Automatic effects on behavior

“We argue that goal-directed action can be triggered directly by environmental stimuli, without the need of conscious involvement. Given a specific set of situational features, an individual may behave in ways he or she did not consciously choose or intend or may not be aware of the reasons for that behavior at the time.”

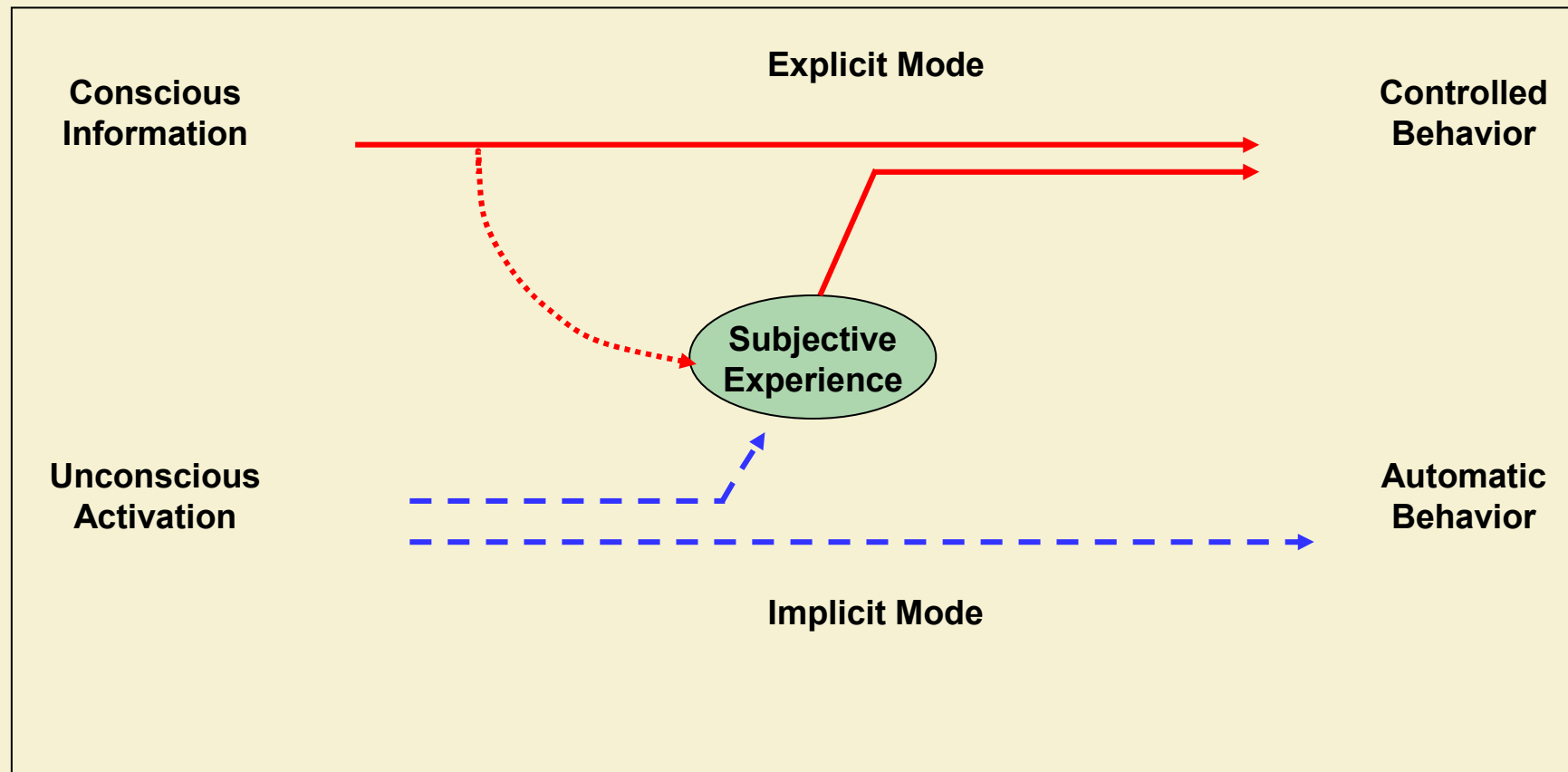
(Bargh & Gollwitzer, 1994)

The crossover model

(Koriat, 2000)



The crossover model of subjective experience



The unique nature of the crossover mode

1. The process that uses subjective experience as the basis for behavior has no access to the process that has shaped subjective experience in the first place.
2. Subjective experience is informative in the sense that it represents a summary statement of a variety of pieces of information that are not accessible to consciousness
3. Because the basis of subjective experience is inaccessible to consciousness, the information it conveys is endowed with the quality of direct sensation and a sense self-evident validity.

**The heart has its reasons of which reason
knows nothing**

Blaise Pascal (1660/1942, p.182)

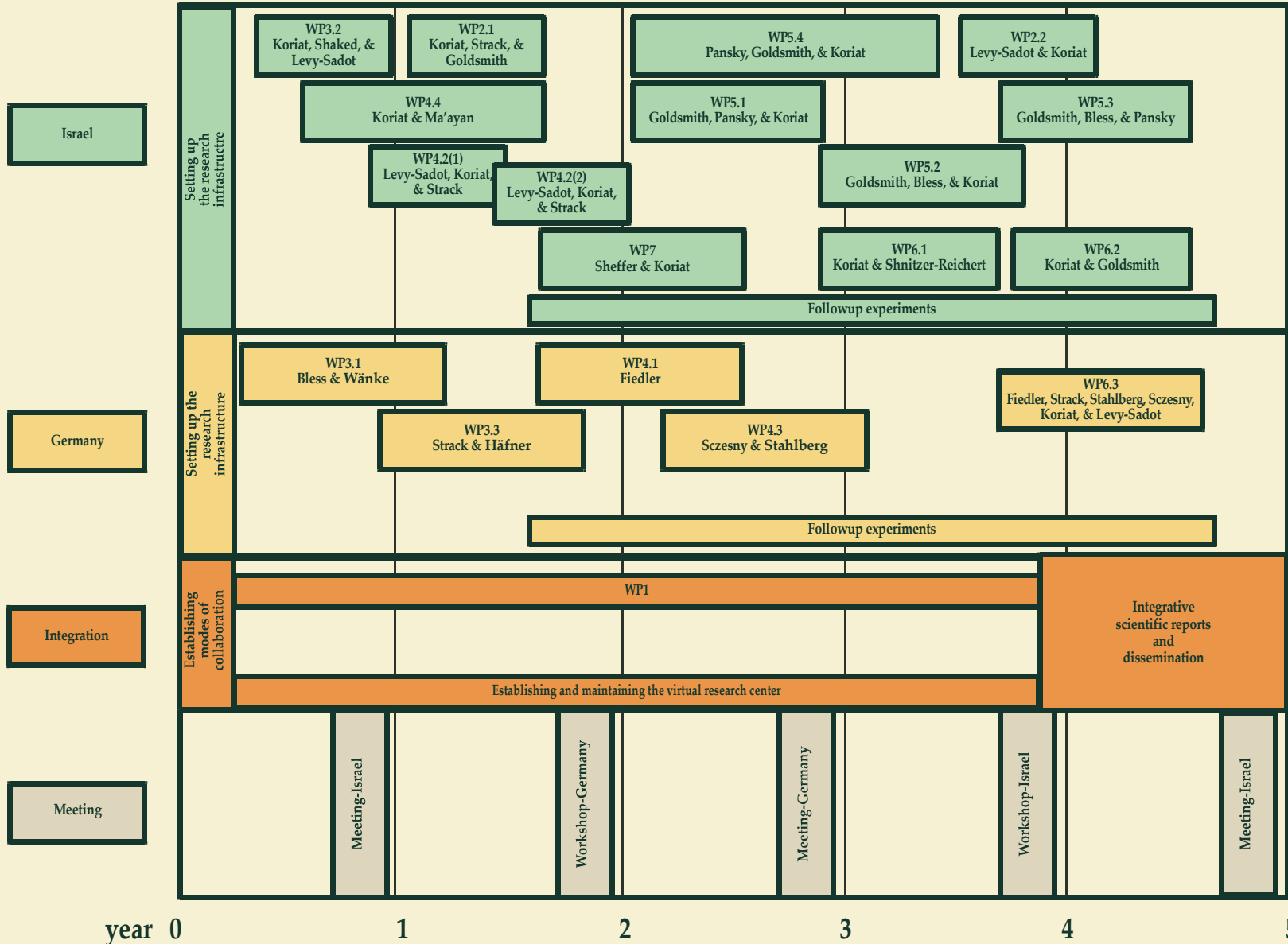
**A man of intelligence feels what others can
only know**

Montesquieu (1892, p.135)

The organization of the project

Project DIP-D4.2

Metacognition: A Window to the Conscious and Unconscious Determinants of Behavior



Work Packages (WPs)

WP1:

To extend the cross-over model of subjective experience to other types of subjective experience, such as noetic, affective and perceptual experiences.

WP2:

To distinguish between metacognitively-mediated and unmediated effects on behavior.

- In the mediated, crossover mode, unconscious factors shape subjective experience, which then guides controlled action.
- In the unmediated mode, unconscious factors are assumed to influence both subjective experience and actual behavior, automatically and in parallel.

Work Packages

WP3:

To identify the distinguishing characteristics of experience-based and information-based metacognitive judgments, and to specify the conditions under which each type of judgment dominates in affecting behavioral responses.

WP4:

To examine the interactions between explicit-controlled processes and implicit-automatic processes. How are explicit-controlled processes used to overcome implicit-automatic influences on behavior?

Work Packages

WP5:

To illuminate the causal role of subjective experience in guiding controlled action, and examine the advantages and disadvantages of basing one's behavior on conscious-explicit judgments.

WP6:

To develop efficient methods for educating subjective experience and its use in controlled action.

WP7:

To examine individual differences in metacognitive skills, their structure, and their relationship to cognitive performance.