

12<sup>th</sup> International Conference on  
**Central Nervous System**

October 07, 2022 | Webinar

**Keynote Forum**



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## Margaret D Weiss

Cambridge Health Alliance, USA

### A paradigm for targeting functional impairment as an outcome in Attention-Deficit / Hyperactivity Disorder

Although functional impairment is required for a diagnosis in the DSM 5, the time frame and definition of functional impairment is ambiguous. We present a conceptual review clarifying the difference between functional impairment as a stable trait representing strength or disability in various domains, and functional impairment as secondary to emotional or behaviour problems, which is a state sensitive to change with treatment intervention. Functional impairment as a measure of treatment outcome includes both change from baseline and status at the endpoint of treatment. When using a validated measure of function, functional improvement can be defined as the percentage of patients who achieve the Minimal Important Clinical Difference (MCID) and functional remission as the percentage of patients who normalize at treatment endpoint. True treatment remission should be defined as both symptomatic and functional remission.

#### Recent Publications

1. Weiss, M.D.; Stein, M.A. Measurement-Informed Care in Attention-Deficit/Hyperactivity Disorder (ADHD). *Child Adolesc Psychiatr Clin N Am* 2022.
2. Weiss, M.D. A Paradigm for Targeting Functional Impairment as an Outcome in Attention-Deficit/Hyperactivity Disorder. *Brain Sciences* 2022, 12, 1014.
3. Tarakcioglu, M.; Caliskan, Y.; Kadak, M.; Aliyev, N.; Aksoy, U.; Tufan, A.; Gundogdu, O.; Memik, N.; Weiss, M. Is Functional Improvement Always Correlated with Symptomatic Improvement in Children With Attention-Deficit/Hyperactivity Disorder Managed with Oros Methylphenidate? A Prospective Open-Label Naturalistic Follow-Up Study. *Psychiatry and Clinical Psychopharmacology* 2020, 30, 128-135, doi:10.5455/pcp.20200526011248.

#### Biography

Margaret D. Weiss, is currently the Director of Clinical Research in Child Psychiatry at Cambridge Health Alliance, Cambridge MA. She has specialized in diagnosis, treatment and research in ADHD and other neurodevelopmental disorders in all age groups. She received her MD and Fellowship in Psychiatry from McGill University and her PhD in the History of Science from Harvard University. Weiss has published over 150 articles relating to these topics. Weiss is known for her research demonstrating that melatonin is a safe and effective treatment for initial insomnia in ADHD. She is the author of the Weiss Functional Impairment Rating Scale, a widely used measure translated into 22 languages. She is on the advisory council of the Canadian Attention Deficit Disorder Resource Alliance, and the board of the American Professional Association for ADHD and Related Disorders.

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## André Mainville

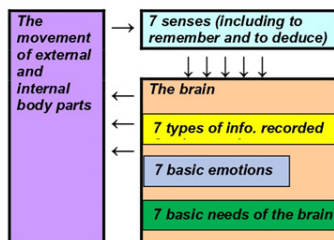
Laval University, Canada

### A complete scientific theory to understand the brain, neurons and intelligence based on linking senses, emotions, basic needs for the brain and the seven types of info recorded in the brain

**Statement of the Problem:** Few years ago, even after the introduction of international brain projects, some neuroscientists were publishing that progress at understanding the brain was slow at best, and new ideas would be welcome. Here, we present a Theory describing how the brain processes information at the level of neurons, axons and dendrites. This will help understanding biology. The Theory solves this by explaining the relation between the senses, the emotions, the basic needs of the brain, and the seven types of information recorded by the brain.

**Methodology:** At birth, the brain is almost empty of information. While it is unknown in what format the brain stores images and sounds, it does record them. Assuming a neuron (or group of neurons) records an image of “mommy” and a second neuron the sound “mommy”, a dendrite between the two neurons links both the information. This explains the small inner voice we all possess. When we see “mommy”, the inner voice mentions « mommy » because of the dendrite. When we hear the sound « mommy » the brain finds it and displays internally the image of mommy. This allows our understanding. The Theory writes this relation like this: IF (IF image of mommy THEN PLEASURE 10) EQUALS (IF sound « mommy » THEN PLEASURE 10) THEN PLEASURE 10. The Theory also demonstrates how the neurons build Automatisms. Here’s an example in an abbreviated format: IF sound « bend the elbow » EQUALS Send and record electricity a, b, c, ... to activate muscles A, B, C, ... to bend the elbow THEN PLEASURE 10.

**Conclusion & Significance:** Never have we seen a document like here explaining in a complete way, using simple equations like above, how the brain functions allowing free will, autonomy and enough intelligence to survive.



**Figure 1:** The flow along which the information is processed by the brain requires only three types of decisions called DT1a, DT1b and DT2. DT1a manages neuron content, DT1b manages dendrites and DT2 responds to emotions in order to move external and internal body parts. Emotional response samples are IF SURPRISE THEN search in the brain, IF ANGER THEN send electricity to move limbs, IF FEAR THEN send electricity to move more muscles like screaming, IF DISTRESS THEN flow tears.

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## Recent Publications

1. Mainville A (2022a) Understanding Intelligence, a Scientific Theory. 165 pages, Gatineau, Quebec, Canada.
2. Mainville A (2022b) Building a General Artificial Intelligence, 180 pages, Gatineau, Quebec, Canada.
3. Mainville A (2017) Creating Emotional Artificial Intelligence, 197 pages, on Amazon, Gatineau, Quebec, Canada.

## Biography

André Mainville, PhD in Geosciences from Ohio State University, USA and Applied Mathematics from Université Laval, Quebec, Canada. He has expertise in scientific research, scientific modelling, computer programming, database management and team management. His interest in understanding human nature, the brain, psychology, evolution and many sciences has brought him at wanting to computerize intelligence and understanding how intelligence and the brain function. It became obvious that the brain can only be intelligent enough to survive (1) if it is connected to Senses (using neurons as it is on humans), (2) if each little information recorded is linked to an Emotional Label to decide if the info is useful or undesirable. IF hearing «  $1 + 1 = 3$  » THEN ANGER at level 1. The brain responds by Anger because it had learned by repetition the following Valorized Information: IF «  $1 + 1 = 2$  » THEN PLEASURE 10.

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