

Review of: "Network Neuroscience and Translational Medicine: A Case for Abandoning Case Controlled Studies of Posttraumatic Stress Disorder"

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Explain vs Understand: toward an integrated study of psychopathology.

Weems (2023) in his article sustains that methods based on case control (i.e., cases meeting criteria for a diagnosis compared with healthy persons) are prevalent in the study of mental illness. He suggests that translational neurosciences can use their methods to assure diagnoses more correspondent to the complexity and variability of pathologies, e.g. post-traumatic stress disorder (PTSD).

Mental pathology is correlated to the synchronized activation of multiple and regionally disparate areas of the brain. "The heterogeneity of mental illness - just in the presentation of meeting diagnostic criteria within specific disorders - combined with the complexity of human brain systems suggests that a mental disorder cannot be directly mapped to any one individual region or even multiple regions ... there is not a common cause to all the symptoms or the symptoms that cause the disorder. Network neuroscience combined with network models of mental illness fosters the science of mental health by a fundamental appreciation of the heterogeneity in cause and expression" (Weems, 2023, pp. 4-5).

The dysfunctionality in the co-activation of the brain structures, and the connectivity between nodes, can be reliably assessed in individual pathways sustaining the mental disease in the specific person.

The way to actualize network neuroscience's potential for mental disorders would be to assess their expression and intensity in the specific cases, using instruments fine-grained (for symptom level), and psychometrically reliable and valid (Weems, 2020).

After using detailed symptom measures for the diagnosis, longitudinal studies and evaluations of interventions are requested to discover and contrast the effects of many interacting factors on the cause and the expression of symptoms.

While the problem is correctly posed, this conclusion need some integrative comments.

Pathological symptoms, like PTSD, are explainable not only with nomothetic descriptions and quantification but also with an idiographic understanding.

For this aspect, I refer to the phenomenological approach to psychic pathologies, which - according to Jaspers (1913) - has not only to explain (*erklären*) symptoms, but to understand (*verstehen*) the different ways of experience – particularly

those characterized by stress, conflict, guilt, depression - a specific mode to be-in-the-world, and to live the personal life.

A naturalistic view of unhealthy persons, aiming at 'objectivating' their brain networks (using modern neuroscientific techniques) is useful but not sufficient.

The phenomenological approach in psychiatry (Binswanger, 1923, 1963) has to "learn" about the unique situations of disease overcoming rigid causality schemas, and applying a non-linear approach. On this methodological ground, an appropriate therapeutic design can be planned, aimed at modifying both the brain network alterations and the dysfunctional meanings sustaining the pathology.

Rollo May, editor of the outstanding book published in 1969 after the symposium on "Existential psychology", with the participation of Allport, Feifel, Maslow and Rogers, wrote that the term 'existentialism' was not aimed to resume an old philosophical theory for psychologists, but was the trial to know the person experiencing reality in its fluency, different from 'essence', the typical object of scientific systematic investigation.

Phenomenology is not a method, but a general attitude toward pathology, focusing on the existence at an idiographic level, differing from the nosographic, diagnosis based on nomothetic criteria.

Also in this approach, case-control methods are not appropriate, but anyway, the contribution of neuroscience is needed and useful.

The phenomenological researchers suspend their pre-judicial knowledge (based on the categorical nosography) to allow things to show themselves in their true being (Ray, 1994). "Let the facts speak" may be the keyword for a modern hermeneutic model of psychopathological processes. It is now possible to accept a new phenomenology, which incorporates into psychological science the empirical methods – including data from neuroscientific analysis and psychometric assessment – with their reliable instruments.

But the multiplicity of empirical data collected might still not be useful for gathering, or indeed capturing, the essence of what is being searched for. Clinical researchers can impose their expectations and meanings upon what they are seeing: they read the data according to their filter (e.g., the labels of categorical diagnoses), ignoring what the data really might say. Many instances of this nomothetic approach can easily be found in the literature on psychopathology - including PTSD, determined by the differential impact of stressors like disasters, war, abuse, etc. on the cognitive and emotional background of the specific person.

An integrated way is to let the data (neural, cognitive, behavioral, relational) emerge, but at the same time to drive their organization toward the discovery of meaning, and understanding - more than explaining and categorizing - the uniqueness of the patient's way of living and suffering.

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