

The Symptoms, Dimensions, and Causes of PTSD: Implications for Practice and Court

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Who We Are

- ◆ Association for Scientific Advancement in Psychological Injury and Law: A society (www.asapil.net)
- ◆ *Psychological Injury and Law* (PIL): Our journal (springer.com)
- ◆ For mental health professionals and legal professionals working together



Contents

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PTSD as a Psychological Injury

- ◆ Posttraumatic Stress Disorder (PTSD) is one of the major psychological injuries, which collectively refer to psychological conditions that might arise after an event at claim, and then lead to legal or related action in court and other venues (such as for tort, in worker compensation, at the VA (Veteran's Administration) for military veterans, and in cases involving other disability actions).
- ◆ Aside from PTSD, psychological injuries include other actionable conditions, especially chronic pain and mild traumatic brain injury (mTBI).

Confounds

- ◆ Pre-existing stressors and psychopathology that lead to an index PTSD also could result in the resultant condition lasting more than might be expected.
- ◆ At the other extreme, another type of complication concerns issues such as symptom exaggeration or overreporting, negative impression management or response bias, and feigning and outright malingering.

Gray Zone

- ◆ Evidence of outright malingering should not present major challenges to the forensic PTSD assessor.
- ◆ But what of gray zone cases, the possibility of less concerning attribution of a cry for help or relating any exaggeration to psychopathology, and so on?

The DSM-5 and Its Complaints

- ◆ Lilienfeld and Treadway (2016) considered that the DSM (as well as the ICD) diagnostic approach suffers from “anomalies.”
- ◆ For example, the DSM-5 uses scientifically-arbitrary cut-offs for its categories.
- ◆ In addition, its categories can be expressed too heterogeneously.

The DSM-5 and Its Complaints

- ◆ Further, they allow for too much comorbidity.
- ◆ Lilienfeld and Treadway (2016) also noted that the DSMs generally have too many wastebasket categories (e.g., not otherwise specified).
- ◆ They do not allow for a linear medical model of etiology to disease to treatment.

The DSM-5 and Its Complaints

- ◆ That being said, for these authors, the solution does not necessarily lie in specifying the neurobiological bases of disorder, as in the RDoC project (Research Domain of Criteria; Insel, Cuthbert, Garvey, Heinssen, Pine, Quinn, Sanislow, & Wang, 2010).
- ◆ The RDoC deemphasizes the psychosocial (social, cultural) influences in the etiology of mental disorder, and so its emphasis on biocentric, endophenotypic research will not be that successful.

More DSM-5

- ◆ McNally (2016) referred to the expanding empire of psychopathology due to diagnostic expansion.
- ◆ For example, the definition of trauma is ambiguous, and nontraumatic stressors seem capable of eliciting PTSD.
- ◆ As with psychopathology, in general, which has had difficulty establishing valid boundaries between normality and disorder, traumatology research is experiencing a bracket creep that is expanding its domain, which is taking place due to societal mechanisms at play.

PTSD in the ICD-11

- ◆ For the ICD-11, PTSD will be organized around a core set of six symptoms arranged into three clusters (Brewin, Lanius, Novac, Schnyder, & Galea, 2009; Kliem, Kröger, Foran, Mößle, Glaesmer, Zenger, & Brähler, 2016).
- ◆ ICD-11 researchers proposed that the PTSD diagnosis should focus on re-experiencing (flashbacks, nightmares); avoidance (internal, external); and heightened sense of threat/ arousal (hypervigilance, exaggerated startle).

CPTSD in the ICD-11

- ◆ As for CPTSD, receiving a diagnosis for this form of PTSD would add three more symptom clusters: affect dysregulation, negative self-concept, and interpersonal disturbances, with one symptom needed from each (Cloitre, Garvert, Brewin, Bryant, & Maercker, 2013).
- ◆ Miller et al. (2014) argued that the DSM-5 already encompasses the range of symptoms needed to cover those of CPTSD.

PTSD in the DSM-5

- ◆ The 20 symptoms of PTSD in the DSM-5 are itemized in Table 1 (as well as the two PTSD dissociation subtype symptoms).
- ◆ Table 1 also indicates how the DSM-5 PTSD symptoms are placed within the four symptom clusters in the DSM-5.
- ◆ Also, it indicates their placement in competing models that have been supported in the research.

What Are PTSD's Clusters or Dimensions?

- ◆ The cluster structure of DSM-5 PTSD symptoms has been subject to empirical investigation using Confirmatory Factor Analysis (CFA) that shows that the four-cluster model in the DSM-5 might be supported to some extent (see Table 1), but less than other ones.
- ◆ Armour, Tsai, Durham, Charak, Biehn, Elhai, and Pietrzak (2015) even found a **seven-factor solution** (replicated by Wang, Zhang, Armour, Cao, Qing, Zhang, Liu, Zhang, Wu, Zhao, and Fan (2015a)).

What Are PTSD's Clusters or Dimensions?

- ◆ Young (2015a) reviewed these models, and even proposed an eight-cluster model,
- ◆ with the eighth one involving the dissociative subtype in the DSM-5 that is displayed by a minority of trauma survivors.

Table 1 Item Mapping of DSM-5 PTSD Symptoms on Various Models of DSM-5 PTSD Clusters/ Dimensions/ Factors (4-8), with Core Symptoms Indicated

DSM-5 Symptom	DSM-5 (4)	Dysphoric (4)	Dysphoric arousal (5)	Externalizing behavior (6)	Alternate Dysphoria (6)	Hybrid (7)	Dissociation Subtype (8)	Core/ Noncore
1. Intrusive memories	RI	RI	RI	RI	RI	RI	RI	C
2. Recurrent nightmares	RI	RI	RI	RI	RI	RI	RI	NC
3. Dissociative reactions/ flashbacks	RI	RI	RI	RI	RI	RI	RI	NC
4. Heightened emotional reactivity to signals	RI	RI	RI	RI	RI	RI	RI	NC
5. Physiological reactivity to reminders	RI	RI	RI	RI	RI	RI	RI	NC
6. Avoids reminders (thoughts/ feelings/ memories)	Av	Av	Av	Av	Av	Av	Av	NC
7. Avoids external reminders	Av	Av	Av	Av	Av	Av	Av	C
8. Inability to recall important	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Dys	Neg. Aff	Neg. Aff	NC

Table 1 Item Mapping of DSM-5 PTSD Symptoms on Various Models of DSM-5 PTSD Clusters/Dimensions/ Factors (4-8), with Core Symptoms Indicated

aspects (“amnesia”)								
9. Persistent heightened negative beliefs	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Dys	Neg. Aff	Neg. Aff	NC
10. Persistent self/ other blame	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Dys	Neg. Aff	Neg. Aff	NC
11. Persistent negative emotional state	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Dys	Neg. Aff	Neg. Aff	C
12. Marked loss of interest	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Anh	Anh	Anh	NC
13. Detachment	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Anh	Anh	Anh	C
14. Restricted positive affect	Neg. ACM	Dys	Neg. ACM	Neg. ACM	Anh	Anh	Anh	NC
15. Irritability/ anger	Alt. Ar	Dys	Dys. Ar	Ext. B	Ext. B	Ext. B	Ext. B	C
16. Reckless/ self-destructive	Alt. Ar	Dys	Dys. Ar	Ext. B	Ext. B	Ext. B	Ext. B	NC
17. Hypervigilance	Alt. Ar	Alt. Ar	Anx. Ar	Alt. Ar	Anx. Ar	Anx. Ar	Anx. Ar	NC
18. Exaggerated startle	Alt. Ar	Alt. Ar	Anx. Ar	Alt. Ar	Anx. Ar	Anx. Ar	Anx. Ar	C
19. Difficulty concentrating	Alt. Ar	Dys	Dys. Ar	Dys. Ar	Dys	Dys. Ar	Dys. Ar	NC
20. Sleep disturbance	Alt. Ar	Dys	Dys. Ar	Dys. Ar	Dys	Dys. Ar	Dys. Ar	C
21. Depersonalization	NA	NA	NA	NA	NA	NA	Diss	C
22. Derealization	NA	NA	NA	NA	NA	NA	Diss	NC

Table 1 Item Mapping of DSM-5 PTSD Symptoms on Various Models of DSM-5 PTSD Clusters/Dimensions/ Factors (4-8), with Core Symptoms Indicated

- ◆ *Note.* The factors are indicated in brackets; RI = Re-experiencing/ Intrusion; Av = Avoidance; Neg. ACM = Negative Alterations in Cognitions and Mood; Alt. Ar = Alterations in Arousal and Reactivity; Diss = Dissociation Subtype; Dys = Dysphoric; Neg. Aff = Negative Affect; Anh = Anhedonia; Ext. B = Externalizing Behavior; Anx. Ar = Anxious Arousal; Dys. Ar = Dysphoric Arousal; C = Core; NA = Not Applicable; NC = Noncore
- ◆ *Note.* Young (2015a) added the eighth dimension for the PTSD subtype to the seven of the hybrid model, with depersonalization the core symptom (not derealization).

Adapted from Young (2015a)

Table 1 Item Mapping of DSM-5 PTSD Symptoms on Various Models of DSM-5 PTSD Clusters/ Dimensions/ Factors (4-8), with Core Symptoms Indicated

Table Note

This table indicates the different models of how the 20 DSM-5 PTSD symptoms, along with the two symptoms of the dissociative subtype, organize into clusters/ dimensions/ factors. The DSM-5 uses a four-cluster model related to splitting the DSM-IV's avoidance/ numbing cluster. But there are other four-, five-, six-, and even seven-factor models. The DSM-5 four-cluster model has been found to fit the data according to CFA (confirmatory factor analysis), but typically the other models fit better. Also, the seven-factor one is gaining currency related to any other. Finally, Young (2015a) added an eighth cluster involving the dissociative subtype.

PTSD Reliability

- ◆ That being said, despite ostensible demonstration of the validity of the DSM-5 PTSD symptoms and diagnosis, in Young (2013, 2016a), the version of the DSM-5 used to establish its reliability was the draft one of 2010 and not the final one (which is discussed in detail later on).
- ◆ The ramifications of this methodological inconsistency for establishing the reliability of the DSM-5 PTSD symptoms/ structure cannot be underestimated.

PTSD Validity

- ◆ Furthermore, I argued that the changes in the DSM-5 for its list of criteria for PTSD risk opening further the civil floodgates of its use inappropriately in court.
- ◆ That said, the DSM-5 was not meant to be a forensic document and, therefore, it is its users who must be forensically responsible in using it.

Easy to Malingering

- ◆ As for the civil arena, in which malingering for monetary gain might take place, some PTSD symptoms would be easy to coach, to malingering, or to otherwise take advantage of.
- ◆ For example, even if it not the case, once coached or otherwise be party to deception, it would be relatively easy to indicate that one has nightmares, flashbacks, startles, avoidance, numbing, anger, extremes in emotions and thoughts, poor sleep, poor concentration, and so on.

Poor Science for DSM-5 PTSD?

- ◆ Senior scholars have criticized the changes made to the DSM-5, advocating for use of the DSM-IV instead (Hoge, Yehuda, Castro, McFarlane, Vermetten, Jetly, Koenen, Greenberg, Shalev, Rauch, Marmar, & Rothbaum, 2016).
- ◆ The authors indicated that the scientific review process that led to the changes in the DSM-5 was nonsystematic and its interpretation selective.

Better Science?

- ◆ The changes of the clinical criteria were complex and altered meaning, for example, in the rewording “restricted range of affect” as “persistent inability to experience positive emotions.”
- ◆ In response, Friedman, Kilpatrick, Schnurr, and Weathers (2016) indicated that changes were made in the DSM-5 only with “strong” empirical support.
- ◆ They called for more research in order to make further changes to the DSM PTSD criteria.

Functionality not Diagnosis is Critical in Court

Comment

- ◆ On the other hand, forensic psychologists need to establish the functional impacts of the trauma response to roles at issue, such as in work, study, or care giving.
- ◆ The diagnoses ascribed to evaluatees in an assessment do not inform the functional impacts themselves and they are merely a short hand for ease of communication.

Functionality

Comment

- ◆ It is the symptom complex itself deriving from the event at issue in relation to the demands of the roles involved that speak to the primary forensic task in trauma evaluations, not the diagnosis of PTSD nor any other disorder in isolation or in combination.
- ◆ By itself, the diagnosis of PTSD, or any trauma reaction, cannot address functionality, disability, and the short and long term global prognoses after an event at issue forensically.

Heterogeneities

- ◆ The heterogeneity in symptom configuration in PTSD has been compounded by its increase from 17 to 20 symptoms from the DSM-IV to the DSM-5.
- ◆ Galatzer-Levy and Bryant (2013) had estimated that there are over 600,000 ways PTSD can be expressed in the DSM-5.

Heterogeneities

- ◆ This adds to the complexity of PTSD symptom heterogeneity and its relation to multifactorial causality (e.g., Young, Lareau, & Pierre, 2014).
- ◆ Young et al. (2014) noted that PTSD and its major comorbidities increase exponentially the number of combinations in symptom expression possible over individuals to over one quintillion.

Causality

- ◆ Causal models of behavior are multifactorial and biopsychosocial, and these types of models apply to PTSD, as well.
- ◆ I have developed a multilevel systems model of psychopathology, including PTSD, which involves three levels – a top-down psychological construct one, a bottom-up symptom connection one, and a middle one involving symptom appraisal (after Frewen, Schmittmann, Bringmann, & Borsboom, 2013)

Endophenotype

- ◆ Young (2016b; citing Gottesman & Shield, 1972, 1973; Gottesman & Gould, 2003) defined an endophenotype as
- ◆ either one or a group of components in the pathway from distal genotype to psychiatric mental disorder.

Figure 25.1 An Essentialist Model of Symptoms/ Signs (S) and Clusters

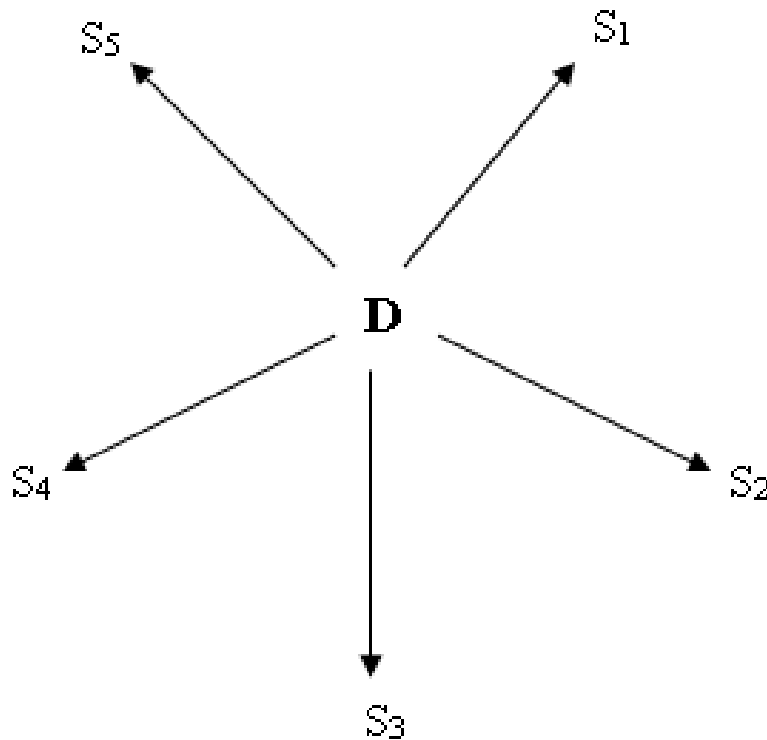


Figure Caption

In an essentialist model of a psychiatric disorder (D), an essence is responsible directly and causally for its critical signs and symptoms (S).

Adapted from Kendler et al. (2011).

Figure 25.2 An Nonessentialist Model of Symptoms/ Signs (S) and Clusters

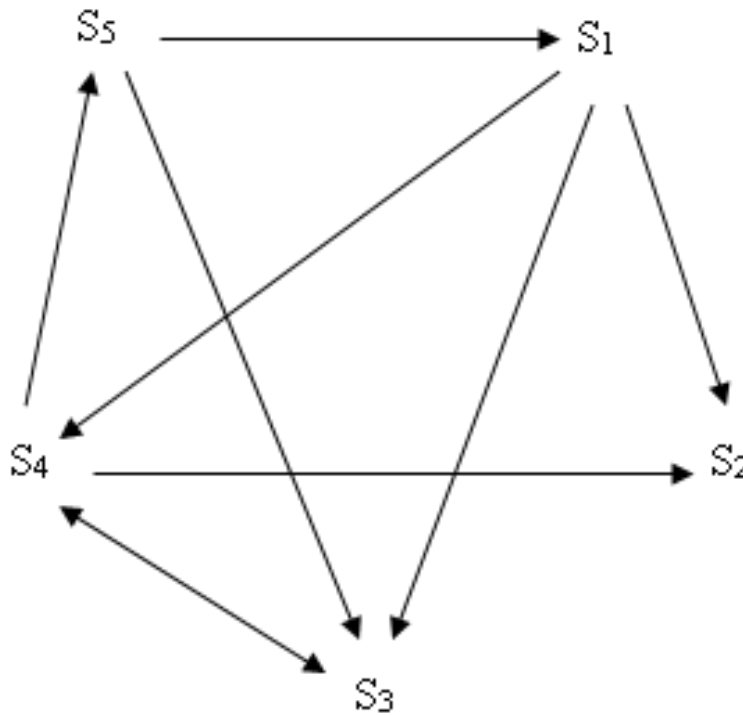


Figure Caption

The individual clinical features are causally interrelated to one another but not to a putative latent, organizing universally-labeled disorder that is responsible for them. The clusters could organize such that one symptom (set) causes (an)other(s).

Adapted from Kendler et al. (2011)

Networks

Young (2015b)

- ◆ Partly in reaction to the complexity of working with long lists of symptoms, researchers using the symptom network approach to PTSD are attempting to discern how symptoms coordinate into nodes and their relations, referred to as edges.
- ◆ Also, they seek the centrality of symptoms in networks, such as in measures of betweenness.

Networks

Young (2015b)

- ◆ The approach statistically is quite different than that of CFA, which focuses on underlying constructs.
- ◆ In network approaches, the nodes and edges are the foci, and symptoms themselves in their networking create and influence each other outside of any putative underlying construct.

Networks

Young (2015b)

- ◆ In the network approach, symptoms covary, or couple variably, and affect each other through feedback loops, homeostatic relations, and so on, allowing sensitivity to individual differences in symptoms, and so on, allowing sensitivity to individual differences in symptom expression and their causality.

Networks

Young (2015b)

- ◆ For example, an episode of PTSD would follow a course related to symptom nodes in the network “turning on” and “transmitting their activation” to nodes connected to them.

Networks

- ◆ McNally et al. (2014) presented a network approach to the symptoms of PTSD.
- ◆ They concluded that a questionnaire study of survivors of a 2008 Chinese earthquake, with over 360 respondents.
- ◆ They used a translated version of the PCL [Posttraumatic Checklist – Civilian, Weathers et al. (1993); Mandarin Chinese version, Li et al. (2010)].

Networks

- ◆ The questionnaire is keyed to the DSM-IV.
- ◆ According to the questionnaire, 38% met the criteria for probable PTSD (5 years after the earthquake when the data were gathered).
- ◆ The data showed that with exclusions of results at $r \leq 0.30$, strong associations become more evident, for example, for hypervigilance and startle and also avoidance of thoughts and activities (about the trauma and associated with it, respectively).

Networks

- ◆ Numbing and dissociation symptoms were strongly linked (loss of interest in enjoyable activities; feeling distance from others, respectively).
- ◆ Finally, nightmares, flashbacks, and intrusive memories related to the trauma were tightly linked.
- ◆ The authors noted that these various symptom linkages appear related to the three DSM-IV symptom clusters of hyperarousal, avoidance/numbing, and re-experiencing, respectively.

Networks

- ◆ However, other symptom linkages did not conform to these DSM clusters – those of startle-concentration problems, and anger-concentration problems.
- ◆ Other results included that concentration networking indicated that two re-experiencing symptoms were not connected to the others (physiological reactivity, feeling upset at reminders), but quite connected to each other.

Networks

- ◆ Centrality calculations showed that a highly central symptom concerns perceiving the future as foreshortened.
- ◆ Overall, the authors concluded that hyper-vigilance, future foreshortening, and sleep appear predominant symptoms in PTSD symptom network analysis, with multiple symptom linkages involved, including some not previously considered.

Networks

- ◆ To conclude this section of the paper, I note that in Young et al. (2014), I attempted to show how a network model of PTSD symptoms could distinguish primary (core), secondary, and tertiary ones.
- ◆ That work indicates that network thinking can be applied to mental disorder in multiple ways.

Modeling

- ◆ In models of symptoms and mental disorder relations, one set of models concerns higher-order (latent variable) constructs (e.g., PTSD) that cause or influence in a top-down manner the lower-order manifest symptoms and their clusters (which in turn might be an intermediate level of influence on symptoms).

Modeling

- ◆ In contrast, according to network models, cluster/symptom interactions cause their pattern of expressions and the term associated with mental disorder (e.g., PTSD) is a representation of the symptoms and their interactions rather than being a causal influence on their manifestation.

Modeling

- ◆ The micromoment approach to symptom connectivity at times $t - 1$, t , $t + 1$, etc., could inform these models in complementary ways.
- ◆ For example, patients might have a more powerful symptom at any one time among their suite of symptoms, or one symptom might lead the way at any one moment in bringing a subthreshold one to disorder (and perhaps disability).

Modeling

- ◆ As yet, there is no clear integrative model of how any one symptom might become primary in these senses at any one moment.
- ◆ The symptom complex of the patient is crucial, as are symptom linkages over individualized patterns, or the network of nodes/ edges (relations) expressed by the patient over time.

Modeling

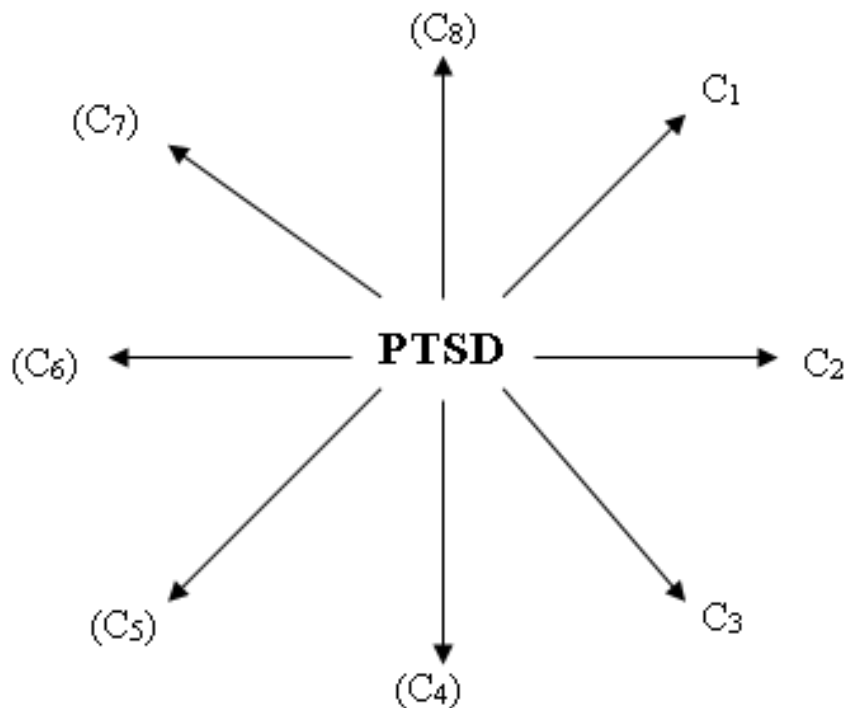
- ◆ Based on this approach, the clinician might develop individual mappings of the dynamic evolution of symptoms over sessions and apply individualized approaches to intervention and treatment.

The Model

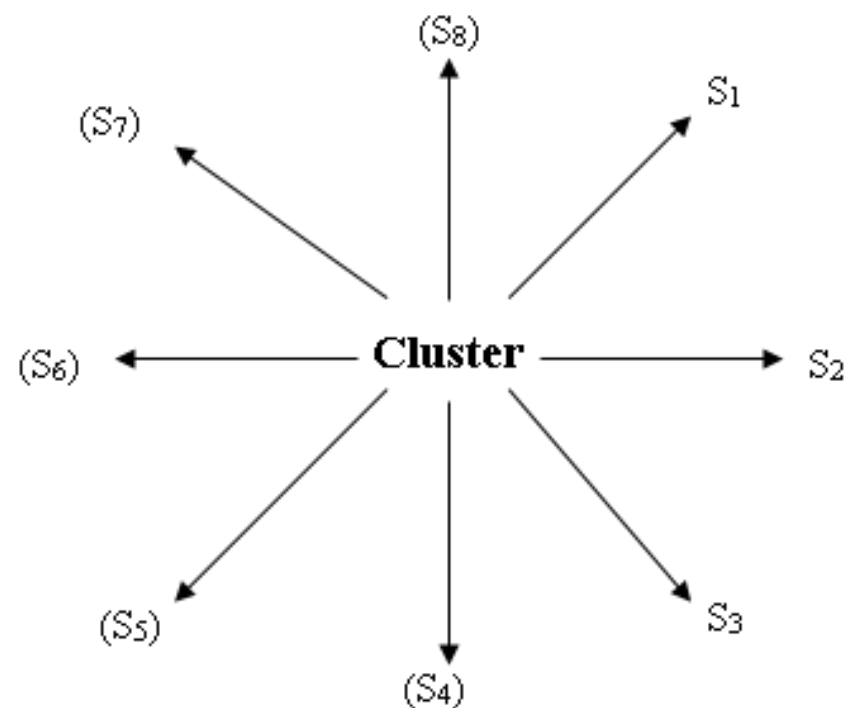
- ◆ Figures 2 and 3 depict the difference between the latent variable/ psychological construct model of the relationship between PTSD and its clusters/ symptoms and the symptom-interactive or network model.

Figure 2 A Latent Variable Construct (Top-Down) Causal Model of PTSD Symptoms (S) and Clusters (C)

(A) Across Clusters



(B) Within Clusters



From Young (2015b)

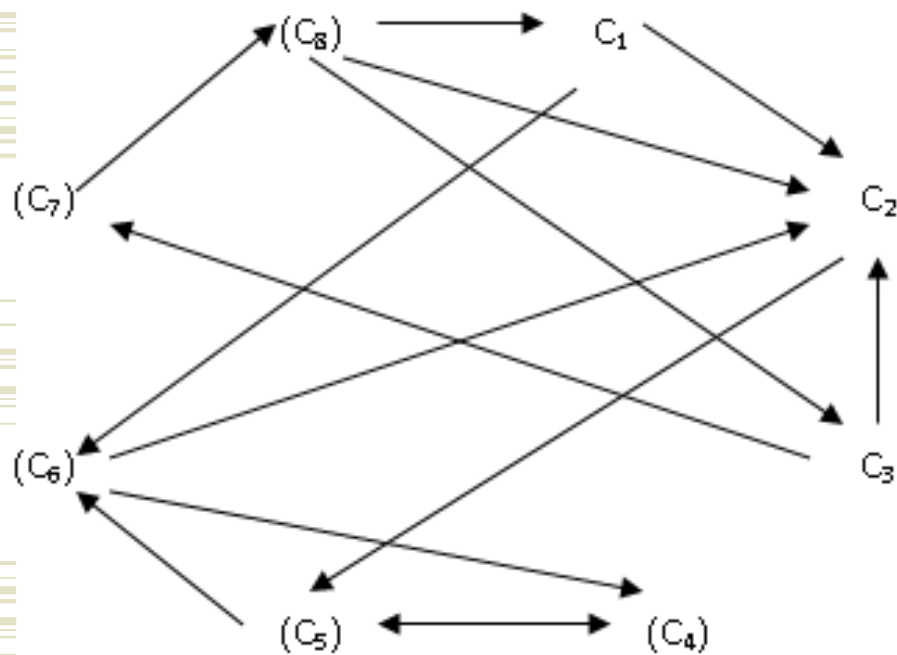
Figure 2 A Latent Variable Construct (Top-Down) Causal Model of PTSD Symptoms (S) and Clusters (C)

Figure Caption

(A) Across clusters, (B) within clusters. In latent variable or construct models of psychological phenomena, an “essential” underlying psychological entity, trait, characteristic, or superordinate attribute is considered as a valid higher-order behavioral reality that is not caused by or conditioned by the lower-order behaviors/symptoms associated with it but, to the contrary, conditions or causes in a top-down manner how they are manifested (in context, over time/development). Mental disorders might have several clusters and each can be characterized as a quasi-dependent sub-disorder that conditions/causes its associated symptoms. In this model, individual differences derive from the overarching construct involved and not from the manifested symptoms themselves, which merely reflect, in their patterns, the higher-order individual differences involved.

Figure 3 A Symptom-Interactive (Bottom-Up) Causal Model of PTSD Symptoms (S) and Clusters (C)

(A) Across Clusters



(B) Within Clusters

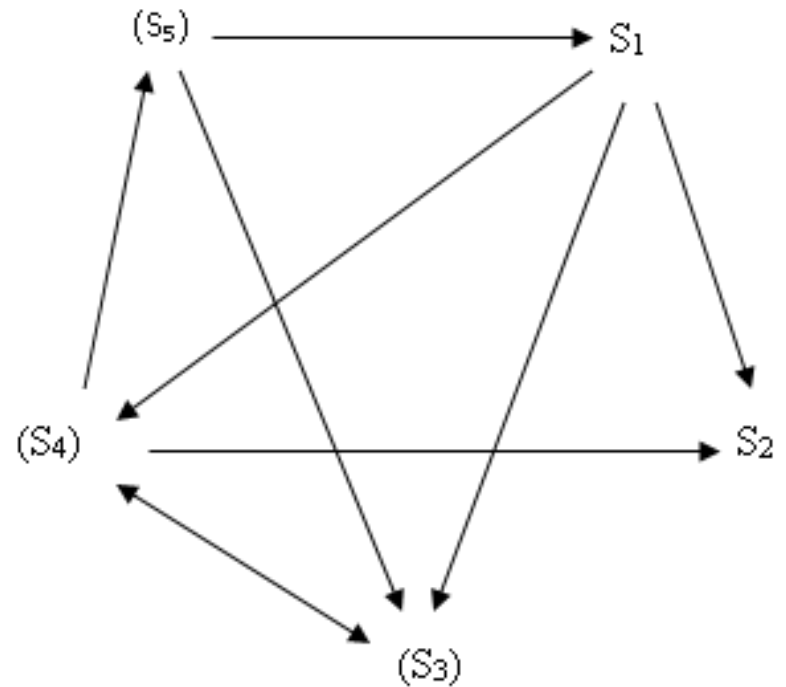


Figure 3 A Symptom-Interactive (Bottom-Up) Causal Model of PTSD Symptoms (S) and Clusters (C)

Figure Caption

(A) Across clusters, (B) within clusters. In “non-essentialist” system-interactive or behavior/symptom network, connective models, behaviors/symptoms interact amongst themselves and constitute the cause of the pattern of behaviors/symptoms expressed. For example, if sleep is poor, other symptoms might be exacerbated. Individual differences in behavior/symptom expression derive from the behavior/symptom interactions in context (and over time/development). There is no higher-order “essential” (latent) psychological variable, construct, entity, trait, characteristic, or attribute that influences the behavior/symptom interactions. If terms relating to these levels of behavior are used in this model, it is only to represent the interactions and not as a factor that causes or influences them. In this regard, behaviors/symptoms in interaction do so at a level that is bottom-up rather than top-down.

The Model

- ◆ Figures 4 and 5 present a genuine hybrid reflective and formative model of causality over mental symptom and disorder.
- ◆ For any one construct or cluster, there is not only influence/creation downward to symptoms but also feedback upward from symptom interactions to construct/cluster.

Figure 4 Integrative Causal Symptom-Construct Model in Mental Disorder

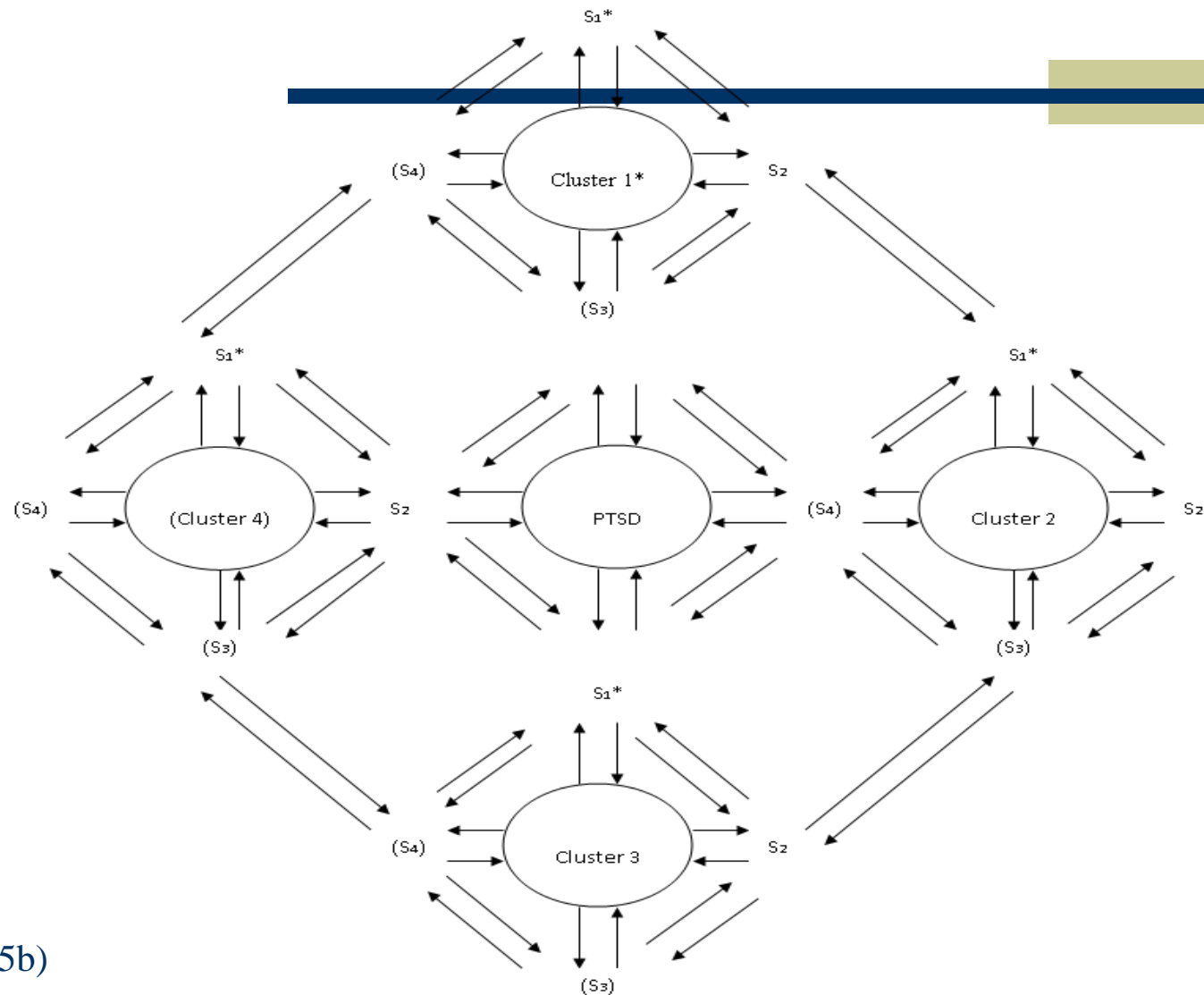


Figure 4 Integrative Causal Symptom-Construct Model in Mental Disorder

Figure Caption

The figure depicts the relationship between symptoms and mental disorder (or a symptom cluster of one) as dynamically reciprocal in causation. The mental disorder constitutes an underlying, higher-order level in the patient's mental state symptoms, while the symptoms interact at lower levels of the system, with both the top-down and bottom-up influences dynamically influencing each other in context and over time. Note: the parentheses indicate that PTSD might have only three clusters (as in the DSM-IV), and a cluster might have only two symptoms. Of course, depending on the disorder involved either might have more items (i.e., clusters or symptoms, respectively). Of the clusters in any mental disorder, for their symptoms, it would be beneficial to specify which ones are core/primary. For the model presented in the figure, these could be the first clusters or symptoms that are specified by the asterisks.

Figure 5 The Interaction of Top-Down and Bottom-Up Emergent Circular Causality

a) Emergent Bottom-Up Circular Causality

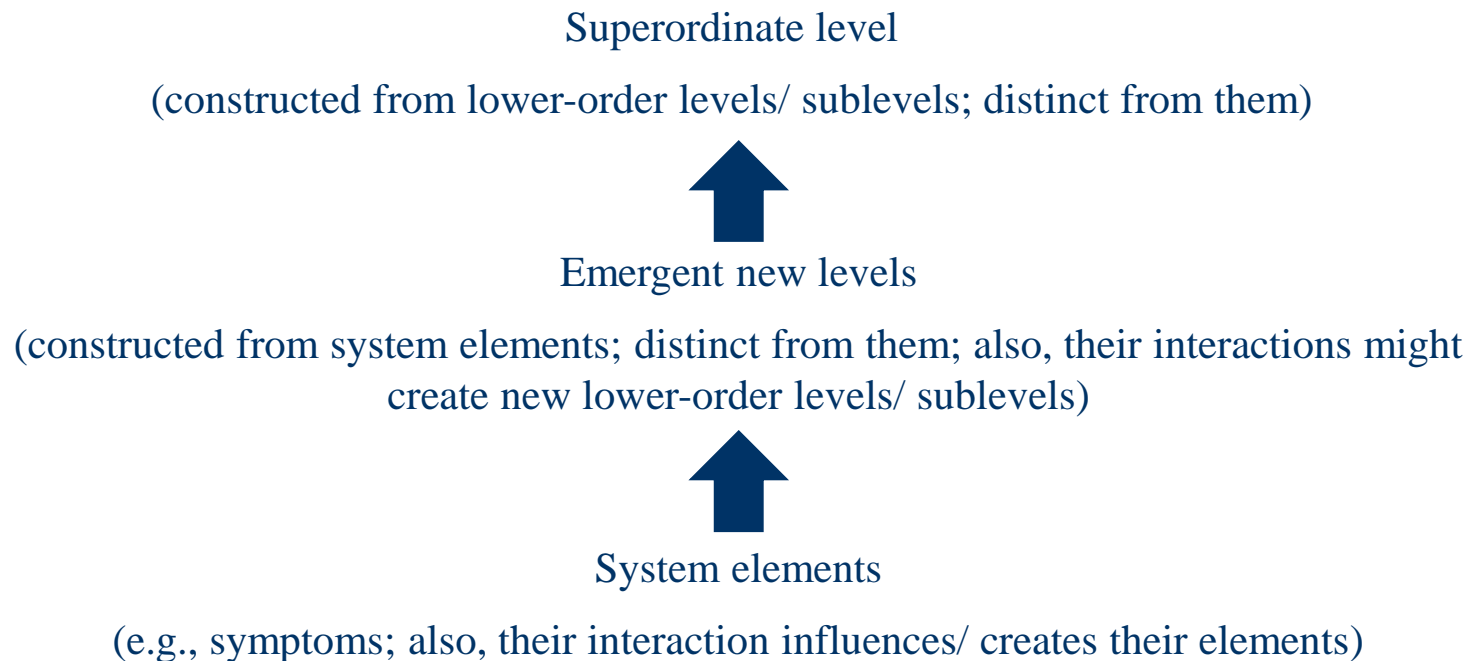


Figure 5 The Interaction of Top-Down and Bottom-Up Emergent Circular Causality

b) Emergent Top-Down Circular Causality

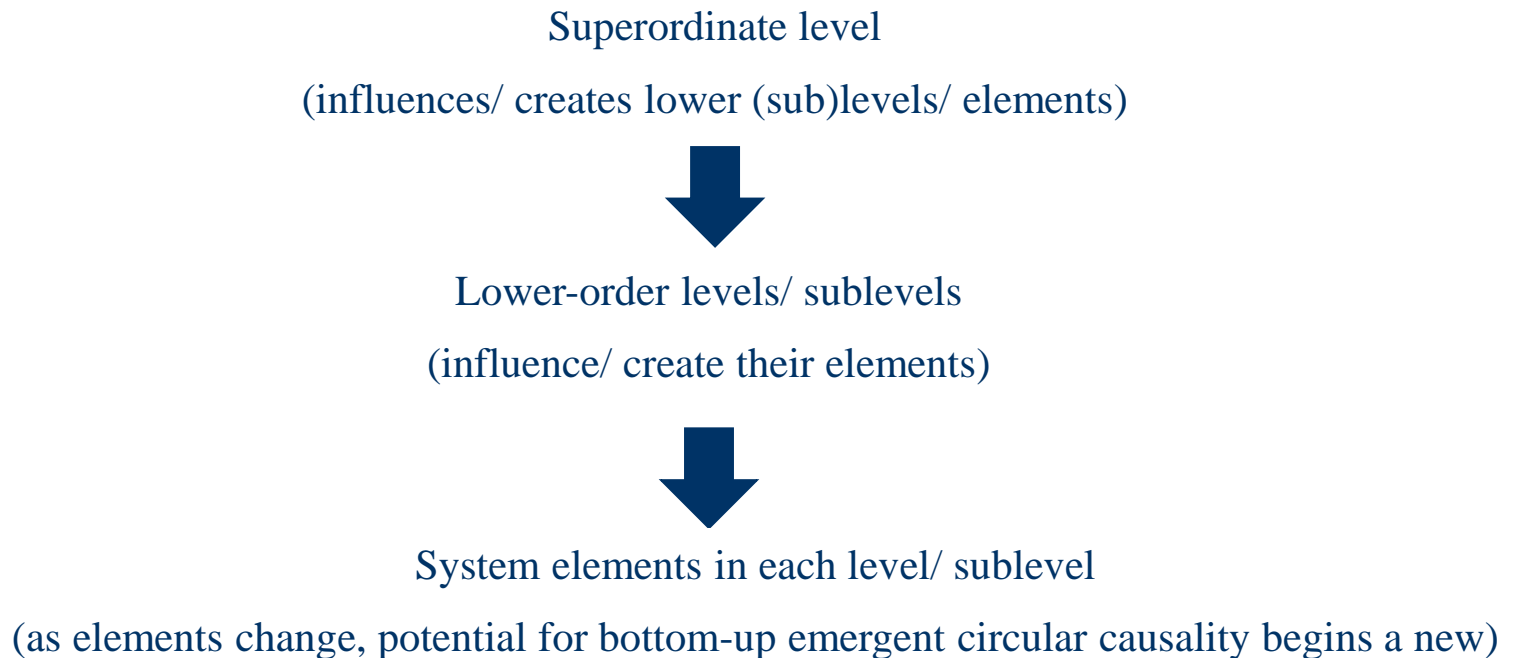


Figure 5 The Interaction of Top-Down and Bottom-Up Emergent Circular Causality

Note: (1) Configuration/pattern changes possible, too, within and between (sub)levels. (2) Bottom-up and top-down causal processes work together reciprocally in system causality.

Figure Caption

(A) Emergent bottom-up circular causality, **(B)** emergent top-down circular causality. The figure illustrates the dynamic interaction of bottom-up and top-down processes both within and across levels in a system, including the possibility of emergence of new symptoms, levels, and sublevels. It also indicates the change of patterning or configuration possible within and between levels in the system dynamics involved. Briefly, as system elements (e.g., symptoms) or levels/sublevels interact, they might influence/create their configuration/ patterning, expression, or even de novo emergence. This process may occur both through movement from lower to higher levels in the level hierarchy involved (bottom-up), or from higher to lower levels (top-down), or reciprocally in both ways. In essence, the figure clarifies that, in system function, bottom-up processes work both within and between levels, as do top-down processes.

The Model

- ◆ Moreover, these top-down and bottom-up models function at multiple intermediary levels (intermediate, superordinate) and the interactions can take place not only horizontally (among symptoms; among levels/sublevels; and their configurations/patterns) but also vertically (downward or upward over (sub) levels).

The Model

- ◆ Therefore, causality does not reside in one nexus node, level, element, element (sub)set, construct, or multiple aspects of these constituents of the symptom and disorder but in all the rich dynamical systemic interactions and reciprocal influences among them.
- ◆ Symptoms have causal effects on each other but constructs have causal effects on them.

The Model

- ◆ Constructs, such as mental disorder, are not ephemeral, reducible entities to symptoms, but emergent, irreducible entities that can affect and even initiate the symptoms.
- ◆ They reflect dynamical system characteristics, and can take on a life of their own at higher-order levels of a system.

The Model

- ◆ Perhaps they are not directly observable, but their role can be inferred and the mechanisms that bring them about are increasingly understood.
- ◆ In short, emergence is a common construct in systems theory, but in my approach to it, circular causality constitutes an important driving mechanism in emergence (Lewis, 2005).

The Model

- ◆ That is, as system levels interact with one another, new ones can emerge at higher orders, and they can become overarching and overriding drivers of behavior and symptom expression (Young, 2011, Young, 2016a).

The Model

- ◆ Specifically, I had written in Young (Young, 2011) that in “circular emergence” different levels of systems can form and integrate, with higher-order ones gaining degrees of freedom through their flexibility even as their degrees of freedom are constrained through the intercoordinations involved.



The Model



- ◆ Also, I noted that activation/inhibition coordination can serve as the critical mechanism in stabilizing systems, in keeping them at the cusp of change, and in recreating equilibrium after they change.



New Innovations in Testing and Therapy



Table 2 PTSD in Valid and Invalid Cases

Valid	Invalid
Diagnosis DSM (ICD)	Perhaps conversion NA; Disorder/ factitious disorder
Functionality All sources of information	Perhaps NA, because of inconsistencies
Treatment Evidence-supported	Might wasn't to help with exaggerations, too
Causality – From event at issue [to disorder (symptom)] to dysfunctionality/ impairment/ disability	Query feigning, patient biases, malingering
System Influences. Query litigation distress	Query attorney coaching

Table 2 PTSD in Valid and Invalid Cases

Table Note

This table indicates the differences for valid and invalid cases in major aspects of PTSD cases. These topics include: diagnosis, functionality, treatment, causality, and system influences.

- a) **Diagnosis.** Invalid PTSD cases include outright malingering and cases where conversion disorder, factitious disorder, and related diagnoses might apply, depending on the full range of symptoms.
- b) **Functionality.** Mental health workers examine not only for diagnosis but also for the functional effects of symptoms, e.g., on work role, home, and childcare. In invalid cases, functionality effects cannot be related to PTSD and its criterion A stressor.
- c) **Treatment.** People with PTSD are responsive to evidence-supported treatments, such as exposure therapy. In invalid cases, there are no treatment plans or perhaps they deal with the alternate disorders and even exaggeration.

Table 2 PTSD in Valid and Invalid Cases

Table Note

d) Criterion A in PTSD specifies the external event (traumatic stressor) that induced the posttraumatic reaction. In assessment, the mental health worker needs to show how the symptoms of PTSD relate to the event and how they affect functionality/role, including whether there is impairment/ disability. The mental health worker is attuned to exaggerations and fabrications related to these causal issues.

e) The worker also is attentive to the effects of the system on the patient, both in terms of exacerbating stress in valid cases or teaching what to say (dishonesty) to get benefits in invalid ones.

From a Book Proposal (2016)

Table 3 Sample, Masked Items on Negative Response Bias Scales in the DAPS and TSI-2

DAPS PTSD Symptoms	TSI-2 PTSD Symptoms
I always see flashing green and blue men with my eyes closed	The memories of the trauma are so bad I go unconscious
I can go without sleep for 10 months	Since what happened to me, I do not have much memory of my life before it happened
I always want to go nude in public	When I concentrate since it happened, I have so much trouble that I forget where is my room
When I go blind 100% for more than a minute, I go deaf, too	Remembering what happened is so upsetting that I can't do simple things, like washing my hands or breathing
I always see flashing green and blue men with my eyes closed	The memories of the trauma are so bad I go unconscious

Table 4 Possible Improbable or Absurd Symptoms Associated with the DSM-5 Symptoms of PTSD

DSM-5 Symptoms	Possible Improbable or Absurd Symptoms
1. Intrusive memories	The event comes back spontaneously and unwanted, but only when I think about good things like vacations
2. Recurrent nightmares	I get nightmares about the event that are exactly as it happened down to the last detail, and only in red and green
3. Dissociative reactions/ flashbacks	I get flashbacks just like it's still happening to me, exactly as it happened, almost every day and in black and white
4. Heightened emotional reactivity to signals	Because each and every time I get even the slightest reminder of any kind of what happened, my anxiety goes so high; except on Sunday
5. Physiological reactivity to reminders	Each and every time I get even the slightest reminder of any kind of what happened, my heart rate and breathing go so fast that I hear them in my toes

Table 4 Possible Improbable or Absurd Symptoms Associated with the DSM-5 Symptoms of PTSD

DSM-5 Symptoms	Possible Improbable or Absurd Symptoms
6. Avoids reminders (thoughts/ feelings/ memories)	I am so afraid and panicky of what happened that I avoid thinking, feeling, and remembering in case it is triggered, but only when I see an animal live on TV
7. Avoids external reminders	I am so afraid and panicky of what happened that I avoid any and all reminders of people, places, and things in case it is triggered, but only when I see an animal live on TV
8. Inability to recall important aspects (“amnesia”)	I cannot recall important aspects of what happened even on days when my memory is perfect for everything else in my life
9. Persistent heightened negative beliefs	What happened makes me think, each and every day for most of the day, of only very negative thoughts, especially that every single pet suddenly deciding to bite their owners
10. Persistent self/ other blame	I’m so blameful since the event that, each and every day for most of the day, I think everyone is bad, and all of them especially deserve that venomous snakes bite them with their poison

Table 4 Possible Improbable or Absurd Symptoms Associated with the DSM-5 Symptoms of PTSD

DSM-5 Symptoms	Possible Improbable or Absurd Symptoms
11. Persistent negative emotional state	What happened makes me so emotional each and every day for most of the day, except when I am happy thinking that venomous snakes are biting bad people
12. Marked loss of interest	The event was so bad that each and every day for most of the day I have no positive interests at all, except when I am having nightmares
13. Detachment	The event was so bad that I feel detached not only from people who are around me in my personal life but also from my big body parts, such as my legs
14. Restricted positive affect	I cannot feel good with anyone because of what happened, except that I feel great reading about other people's accidents that were worse than mine
15. Irritability/ anger	I get so angry because of what happened to the point that some of my hair falls out each time my temper boils over

Table 4 Possible Improbable or Absurd Symptoms Associated with the DSM-5 Symptoms of PTSD

DSM-5 Symptoms	Possible Improbable or Absurd Symptoms
16. Reckless/ Self destructive	What happened to me was so bad that I am so self-destructive to the point that I go for days at a time without eating or drinking
17. Hypervigilance	What happened to me was so bad that, in the home, I keep looking for reminders or bad omens, but outside the home I do not do this so that I am not embarrassed
18. Exaggerated startle	What happened to me was so bad that, in the home, I keep having startle or gasping responses at reminders or bad omens, but outside home I do not do this so that I am not embarrassed
19. Difficulty concentrating	I cannot concentrate at all even on days when I understand perfectly what I am reading or listening to
20. Sleep disturbance	Because what happened to me was so bad, I can go weeks without sleeping even one hour

Table 4 Possible Improbable or Absurd Symptoms Associated with the DSM-5 Symptoms of PTSD

DSM-5 Symptoms	Possible Improbable or Absurd Symptoms
21. Depersonalization	Because what happened to me was so bad, I no longer feel that I am myself and, instead, I feel more like someone else, such as the mayor of our city or town, or my old teacher
22. Derealization	Because what happened to me was so bad, nothing ever seems real, even when I have a great meal at a restaurant and am laughing with people

From a test proposal, 2016; (some items changed)

Table 4 Possible Improbable or Absurd Symptoms Associated with the DSM-5 Symptoms of PTSD

Table Note

This table gives, for each of the 20 DSM-5 PTSD symptoms (and the 2 dissociative subtype symptoms), possible items for a malingered PTSD scale. I developed these items based on Rogers work (e.g., in the SIRS-2) on improbable or absurd symptoms indicative of feigned psychopathology. These items that I am suggesting are more directly reflective of PTSD than the equivalent items in the DAPS (Detailed Assessment of Posttraumatic Stress; Briere, 2001) and TSI-2 (Trauma Symptom Inventory, Second Edition; Briere, 2011), which of the type more related to testing for general psychopathology.

Table 1 Steps in Rejoining Joy After Trauma (or Major Stress)

Number	Name
0	Hardiness
1	Resilience/ Regulation
2	Resetting after Dysregulation
3	Returning (Dealing with Being Overwhelmed)
4	Recovery
5	ReGrowth

Table 1 Steps in Rejoining Joy After Trauma (or Major Stress)

Note. The table illustrates the steps in regaining equilibrium after a major trauma or stressor. Some people are hardy and they do not experience distress (0). Some show resilience or regulation where only a little effort is required to keep equilibrium (1). Others need only minor adjustments to reset back to equilibrium after dysregulation (2). Still others need much help because their experience is of being overwhelmed and they are in distress. Psychotherapy can help them (good coping and social support, too) (3). Continued movement toward returning to their prior psychological condition can take place, i.e., recovery (4). In some people, posttraumatic growth can be included in recovery. The person ends up meeting the challenge and is a better person for it. I prefer to call this stage one of “Regrowth” because generally people are already growing before the traumatic exposure happens.

Table 1 Steps in Rejoining Joy After Trauma (or Major Stress)

Note that the five levels in rejoining joy after trauma or major stress are consistent with the model that change takes place in the five-step sequence of coordination, hierarchization, systematization, multiplication, and integration. In this regard, resilience is like coordinating what one is and the trauma, while keeping the integrity of what one is (1). Resetting is like hierarchization because what one is takes precedence over the traumatic effects, and the dysregulation does not reach diagnostic threshold (2). Returning toward what one was prior to the trauma/ stressor is like systematization because the trauma effects are considered only one part of who one is (3). Returning to what one was is like multiplication because the parts kept intact about who one had been before the traumatic exposure regain their place over the affected parts of the person (4). Finally, in regrowth, the process conforms to an integration in every sense of the word.

From a book proposal, 2016.

Figure 1 A Hierarchical Model of Trauma

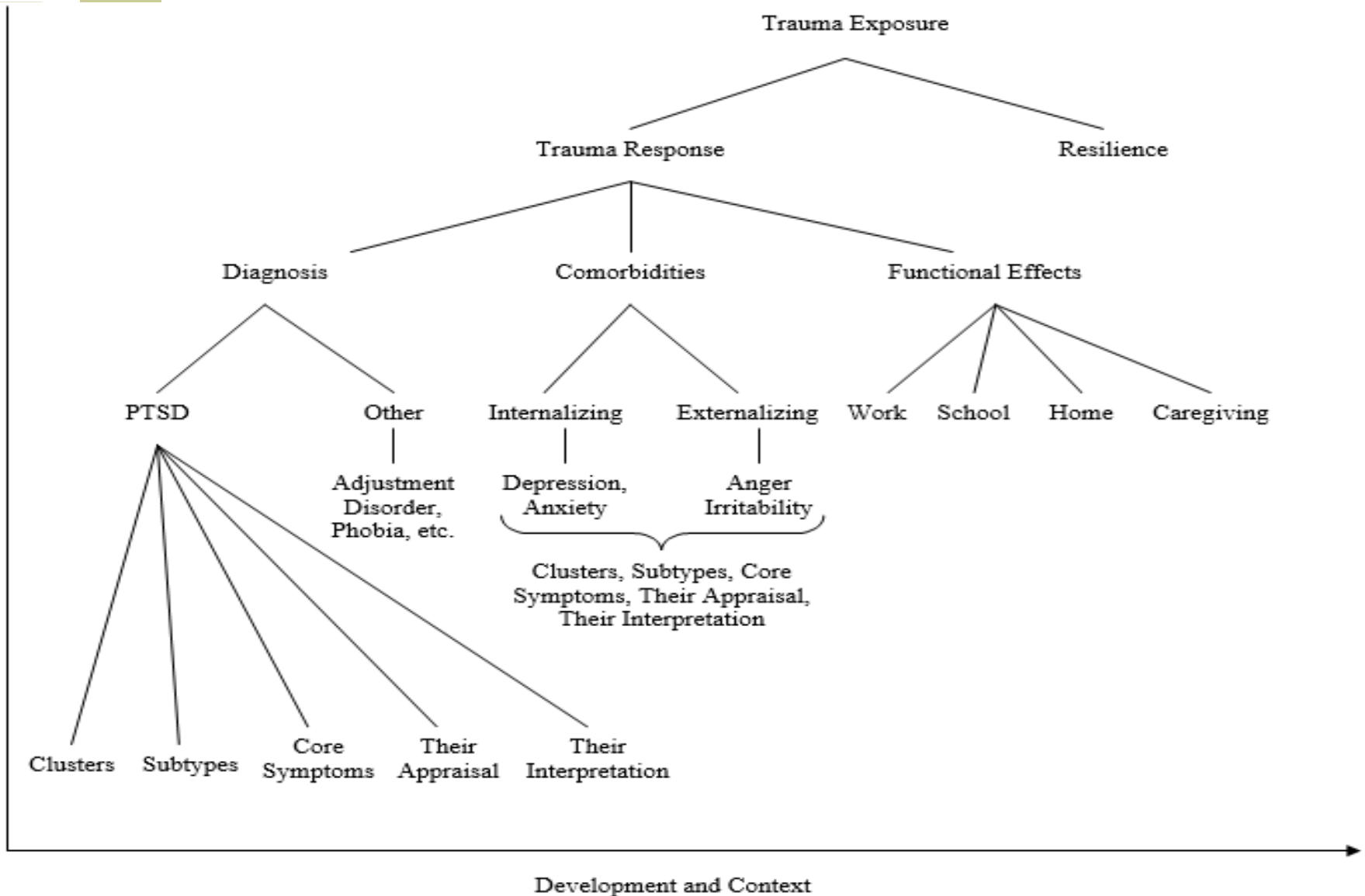


Figure 1 A Hierarchical Model of Trauma

Figure Caption

The figure illustrates that trauma reactions can be quite multiple and varied. They are complicated by different diagnoses, different comorbidities, different functional effects, and development and contextual factors. Nevertheless, a common approach would be to understand the symptoms elicited, how they are appraised by the person, and how they interact. This approach highlights core or primary symptoms over diagnoses and comorbidities in the trauma response, and how they dynamically interact. The resultant diagnoses are individualized (as well as their clusters and subtypes, if any).

From a book proposal, 2016.

Table 2 From Attention to Acceptance

Steps in Moving From Attention to Acceptance	Substeps in Each of the Steps
1. Attend	1. Zeroed in
2. Aware	2. Narrow
3. Appraise	3. Opened
4. Attune	4. Broad
5. Accept mindfully	5. Integrated



Table 2 From Attention to Acceptance

Note. The model indicates the steps in moving from a zeroed in focus to a full ranging attention that is indicative of mindful acceptance. There are five steps, each with five substeps. In each case, they follow the sequence of coordination, hierarchization, systematization, multiplication, and integration.

Table 3 Trans-Symptom Model of Mental Scanning



Normal	Problematic	Dysfunctional
Mental Scanning	Narrowed	Zeroed In
 Attention	Narrowed	Zeroed In
 Cognitive Filter	Narrowed	Zeroed In

Table 3 Trans-Symptom Model of Mental Scanning

Note.

The model illustrates the different levels of attention. It has higher-order cognitive filters that influence it, and it leads to lower-level mental processes as we scan or watch our mind and its workings. At all levels, we can behave with openness and the like or zero in, or narrow, unhealthily.

Table 4 Moving From Old Ways to Know Ways

Steps in Moving to New and “Know” Ways	Process Needed to Make the Moves
1. Old Way	1. Reactivity
2. Ask Why	2. Reflect
3. New Way	3. Responsibility
4. New Ways	4. Responsibilities
5. Know Ways	5. Re-responsibilities

Table 4 Moving From Old Ways to Know Ways

Note.

The table indicates that moving from old to new ways leads to an integration in which one feels more mature, present, etc. As old ways are discarded, replaced, or transformed (for better ways), the person needs to reflect and become more responsible. Once responsibility is genuinely undertaken (either as one behaves or as a goal), others can develop to the point that, in maturity, we rededicate ourselves each second to all of our responsibilities (i.e., work, family, society, etc.).

Figure 2 SEARCH: A Model of Empathic Responsibility to Self and Other

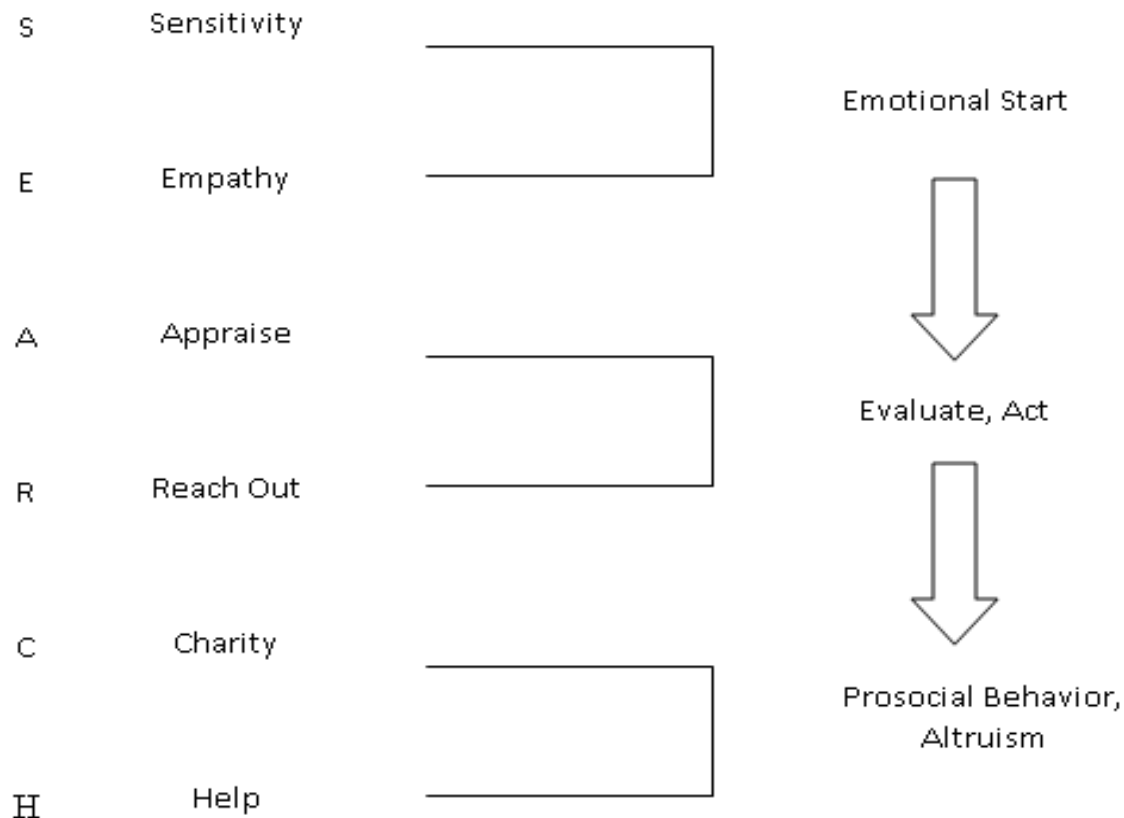




Figure 2 SEARCH: A Model of Empathic Responsibility to Self and Other



Figure Caption

The figure indicates a SEARCH model of how we can move in sensitivity toward behaving responsibly toward the other in need of help. The same model could apply to self-awareness (we can function to help ourselves with appropriate reflection). Also, it indicates what we should expect from others in how they help us and how they help other people.

Table 5 A Componential, Biopsychosocial Transdiagnostic Approach to Psychotherapy for Trauma

Assessment	Therapy
1. Symptoms, Appraisals, and Interactions	1. See the symptom map, include relationally and contextually
2. Which are core components	2. Establish core symptom priorities
3. Functional effects	3. Establish core functional goals
4. Diagnosis secondary	4. Explain how categories give labels that ignore the patient's individual differences
5. Treatment Plan	5. Address the core components with evidence-supported approaches (e.g., CBT, breathing techniques, systematic desensitization, exposure)

Figure 3 A Forensic Biopsychosocial Conceptual Model for Posttraumatic Stress Disorder (PTSD)

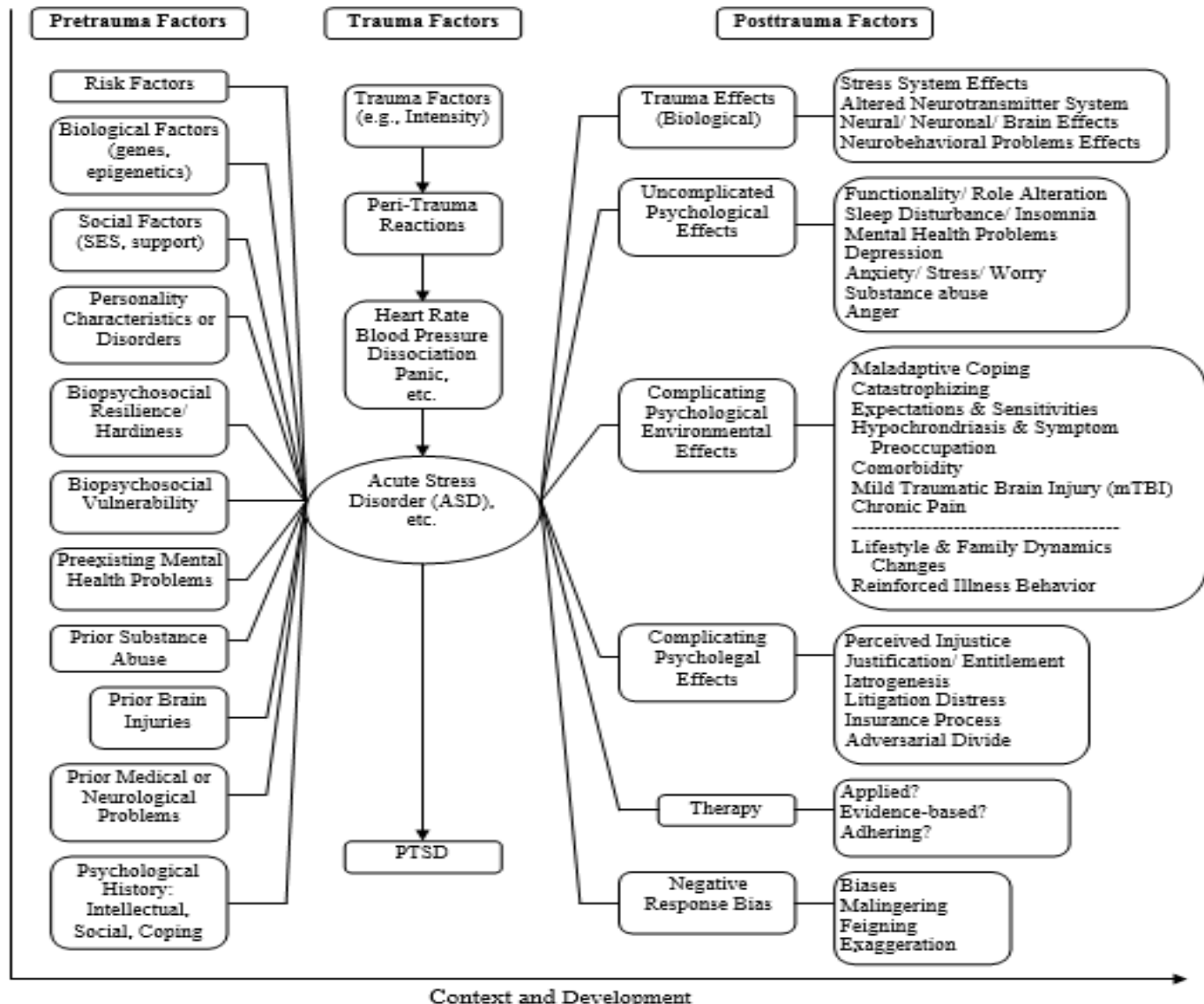


Figure 3 A Forensic Biopsychosocial Conceptual Model for Posttraumatic Stress Disorder (PTSD)

Figure Caption

A biopsychosocial model of posttraumatic stress disorder. Distal pretrauma factors on the left, trauma factors medially, and the posttrauma injury factors to the right.

Figure 4 Causal Models of PTSD and Their Interrelationship

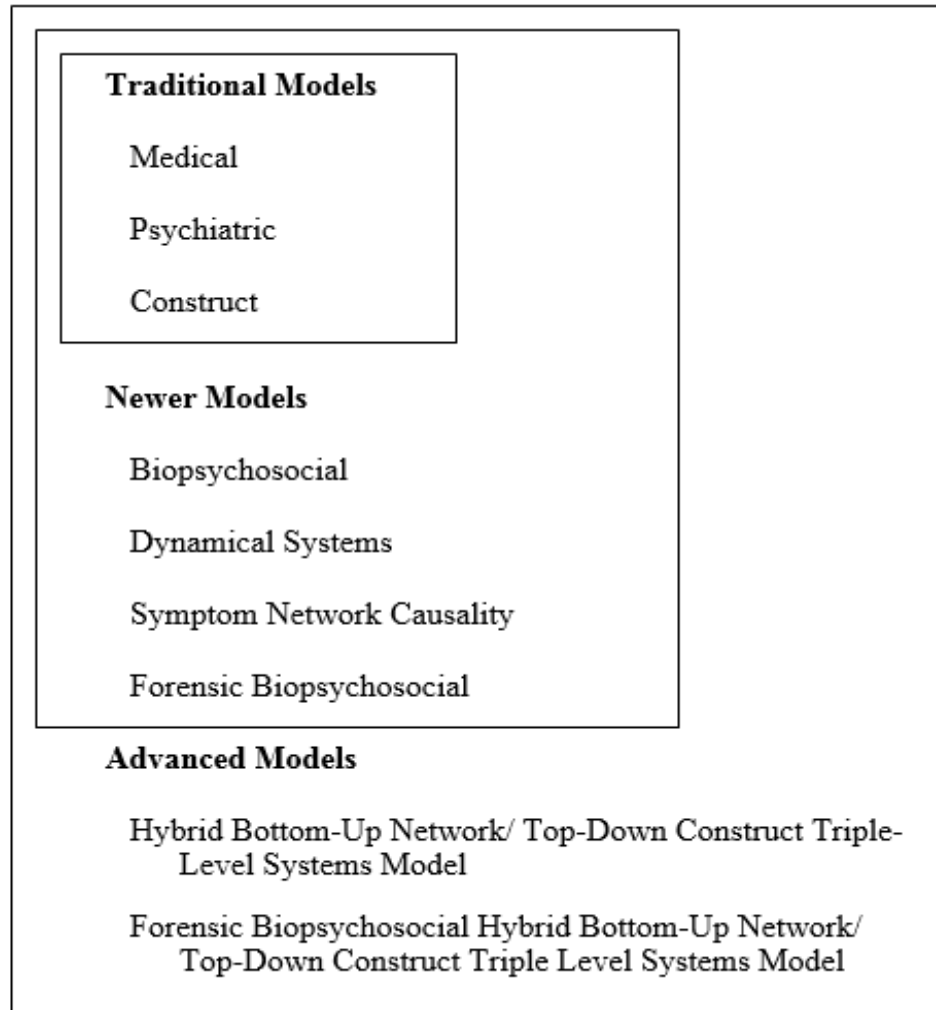




Figure 4 Causal Models of PTSD and Their Interrelationship



Figure Caption

Traditional models of PTSD have been expanded to include newer models, such as the (forensic) biopsychosocial and systems, symptom interactive ones. Advanced models combine these models.

Figure 5 Model of Intention and Deception in PTSD Evaluations Including Possible Malingering

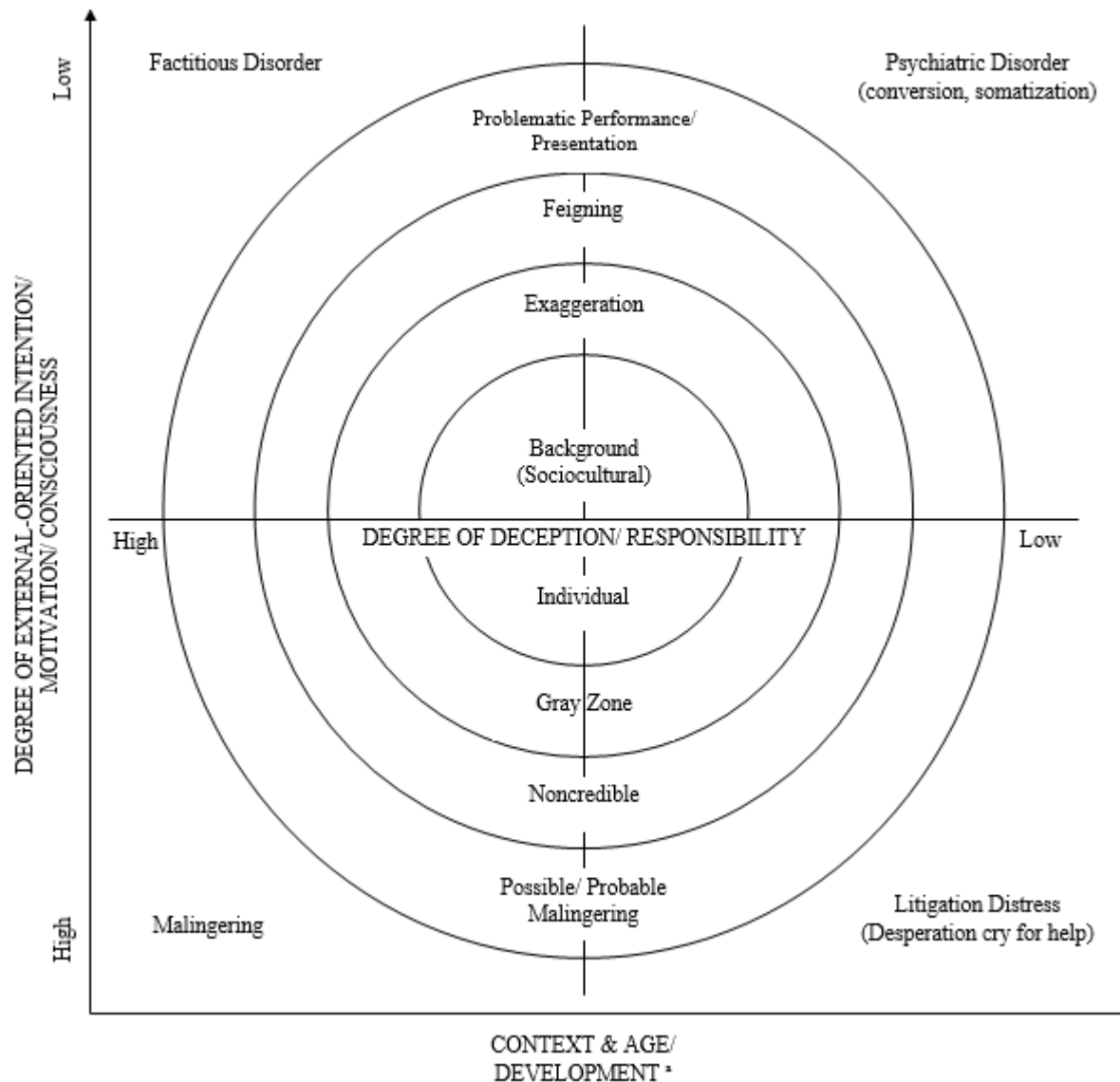


Figure 5 Model of Intention and Deception in PTSD Evaluations Including Possible Malingering

- Note.* ^a Context: 1. Degree to which deception is an adaptation that is acceptable and/ or is coached
2. Degree system exacerbates symptoms (iatrogenesis; insurance process; litigation distress; adversarial divide, etc.)
3. Culture, race, etc.

Figure 5 Model of Intention and Deception in PTSD Evaluations Including Possible Malingering

Figure Caption

The figure indicates that intention/ motivation affect the presence of any deception/ taking responsibility in context. There might be anything from exaggeration to much feigning, but malingering occurs with conscious deception for monetary gain in the psychological injury context. The evaluator needs to rule out a cry for help/ litigation distress, or other disorders that might apply, such as nonconscious factitious disorder.

Adapted from Young (2016a)



End



- ◆ Thank You!
- ◆ Please consider joining ASAPIL, submitting articles to Psychological Injury and Law, and communicating with me.
- ◆ Memorial University is a unique and great organization. I look forward to future collaboration.

References

- Armour, C., Tsai, J., Durham, T. A., Charak, R., Biehn, T. L., Elhai, J. D., & Pietrzak, R. H. (2015). Dimensional structure of DSM-5 posttraumatic stress symptoms: Support for a hybrid anhedonia and externalizing behaviors model. *Journal of Psychiatric Research, 61*, 106-113.
- Brewin, C. R., Lanius, R. A., Novac, A., Schnyder, U., & Galea, S. (2009). Reformulating PTSD for DSM-V: Life after Criterion A. *Journal of Traumatic Stress, 22*, 366-373.
- Briere, J. (2001). *Detailed Assessment of Posttraumatic Stress professional manual*. Lutz, FL: Psychological Assessment Resources.
- Briere, J. (2011). *Trauma Symptom Inventory (TSI-2) professional manual (2nd ed.)*. Odessa, FL: Psychological Assessment Resources.
- Cloitre, M., Garvert, D. W., Brewin, C. R., Bryant, R. A., & Maercker, A. (2013). Evidence for proposed ICD-11 PTSD and complex PTSD: A latent profile analysis. *European Journal of Psychotraumatology, 4*. doi: 10.3402/ejpt.v4i0.20706

References

- Frewen, P. A., Schmittmann, V. D., Bringmann, L. F., & Borsboom, D. (2013). Perceived causal relations between anxiety, posttraumatic stress and depression: Extension to moderation, mediation, and network analysis. *European Journal of Psychotraumatology*, 4, 1-14.
- Friedman, M. J., Kilpatrick, D. G., Schnurr, P. P., & Weathers, F. W. (2016). Correcting misconceptions about the diagnostic criteria for posttraumatic stress disorder in DSM-5. *Journal of American Medical Association: Psychiatry*.
- Galatzer-Levy, I. R., & Bryant, R. A. (2013). 636,120 ways to have posttraumatic stress disorder. *Perspectives on Psychological Science*, 8, 651-662.
- Gottesman, I. I., & Gould, T. D. (2003). The endophenotype concept in psychiatry: Etymology and strategic intentions. *American Journal of Psychiatry*, 160, 636-645.
- Gottesman, I. I., & Shields, J. (1972). *Schizophrenia and genetics: A twin study vantage point*. New York: Academic Press.
- Hoge, C. W., Yehuda, R., Castro, C. A., McFarlane, A. C., Vermetten, E., Jetly, R., Koenen, K. C., Greenberg, N., Shalev, A. Y., Rauch, S. A. M., Marmar, C. R., & Rothbaum, B. O. (2016). Unintended consequences of changing the definition of posttraumatic stress disorder in DSM-5. Critique and call for action. *Journal of American Medical Association: Psychiatry*.

References

- Insel, T. R., Cuthbert, B., Garvey, M., Heinssen, R., Pine, D. S., Quinn, K., Sanislow, C., & Wang, P. (2010). Research domain criteria (RDoC): Toward a new classification framework for research on mental disorders. *American Journal of Psychiatry*, *167*, 748-751.
- Kendler, K. S., Zachar, P., & Craver, C. (2011). What kinds of things are psychiatric disorders? *Psychological Medicine*, *41*, 1143-1150.
- Kliem, S., Kröger, C., Foran, H. M., Mößle, T., Glaesmer, H., Zenger, M., & Brähler, E. (2016). Dimensional latent structure of PTSD-symptoms reporting: Is it adding by subtracting? *Psychological Assessment*.
- Lewis, M. D. (2005). Bridging emotion theory and neurobiology through dynamic systems modeling. *Behavioral and Brain Sciences*, *28*, 169-245.
- Li, H., Wang, L., Shi, Z., Zhang, Y., Wu, K., & Liu, P. (2010). Diagnostic utility of the PTSD Checklist in detecting PTSD in Chinese earthquake victims. *Psychological Reports*, *107*, 733-739.
- Lilienfeld, S. O., & Treadway, M. T. (2016). Clashing diagnostic approaches: DSM-ICD versus RDoC. *Annual Review of Clinical Psychology*, *12*, 435-463.

References

- McNally, R. J. (2016). The expanding empire of psychopathology: The case of PTSD. *Psychological Inquiry, 27*, 46-49.
- McNally, R. J., Robinaugh, D. J., Wu, G. W. Y., Wang, L., Desero, M. K., & Borsboom, D. (2014). Mental disorders as causal systems: A network approach to posttraumatic stress disorder. *Clinical Psychological Science*. doi:10.1177/2167702614553230
- Miller, M. W., Wolf, E. J., & Keane, T. M. (2014). Posttraumatic stress disorder in DSM-5: New criteria and controversies. *Clinical Psychology: Science and Practice, 21*, 208-220.
- Wang, L., Zhang, L., Armour, C., Cao, C., Qing, Y., Zhang, J., Liu, P., Zhang, B., Wu, Q., Zhao, Z., & Fan, G. (2015a). Assessing the underlying dimensionality of DSM-5 PTSD symptoms in Chinese adolescents surviving the 2008 Wenchuan earthquake. *Journal of Anxiety Disorders, 31*, 90-97.
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD checklist (PCL): Reliability, validity, and diagnostic utility*. Paper presented at the Meeting of the International Society for Traumatic Stress Studies. San Antonio, TX.
- Young, G. (2011). *Development and causality: Neo-Piagetian perspectives*. New York: Springer Science + Business Media.

References

- Young, G (2013). *The DSM-5: Overview, critique, recommendations*. Paper presented at the Continuing Education Workshop presented to Canadian Academy of Psychologists in Disability Assessment (CAPDA). Toronto, June 21.
- Young, G. (2015a). Dimensions and dissociation in PTSD in the DSM-5: Towards eight core symptoms. *Psychological Injury and Law*, 8, 219-232.
- Young, G. (2015b). Causality in psychiatry: A hybrid symptom network construct model. *Frontiers in Psychiatry*, 6, 164.
- Young, G. (2016a). *Unifying causality and psychology: Being, brain, and behavior*. New York: Springer Nature.
- Young, G. (2016b). Endophenotypes, personality, and mental disorder. In V. Zeigler-Hill & T. Shackelford (Eds.), *The encyclopedia of personality and individual differences*. New York: Springer Science + Business Media.
- Young, G., Lareau, C., & Pierre, B. (2014). One quintillion ways to have PTSD comorbidity: Recommendations for the disordered DSM-5. *Psychological Injury and Law*, 7, 61-74.