Cognitive models of dissociation

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“DISSOCIATION”

- Identity disturbance
- Somatic symptoms
- Depersonalization
- Derealization
- Reduced awareness
- Flashbacks
- “Made” actions
- Intrusive thoughts/feelings
- Pseudohallucinations
- Hypnosis
- Possession states
- Absorption
- Defence mechanism
- Divided attention
- Amnesia
Modal understanding of dissociation

“… a disruption in the usually integrated functions of consciousness, memory, identity or perception of the environment” (DSM-IV-TR; APA, 2000)

- Dissociative amnesia
- Dissociative fugue
- Depersonalization disorder
- Dissociative identity disorder (formerly MPD)
- DDNOS

Conversion disorder NOT classified as dissociative in DSM-IV-TR
Modal understanding of dissociation

Core symptoms

- Amnesia
- Identity confusion/alteration
- Depersonalisation
- Derealisation

- Commonly measured using the Dissociative Experiences Scale (Bernstein & Putnam, 1986)

- Often thought to be precipitated by trauma
  - PTSD predicted by “peri-traumatic” dissociation
ICD-10 Dissociative (conversion) disorders

- Dissociative convulsions
- Dissociative motor disorders
- Dissociative anaesthesia
- Dissociative sensory loss
- Dissociative stupor
- Dissociative amnesia
- Dissociative fugue
- Dissociative trance/possession
- DDNOS

Medically unexplained neurological symptoms (somatoform disorders in DSM-IV)

“Hysteria”

“Somatoform dissociation”

Depersonalization disorder *not* dissociative in ICD-10

DID coded as dissociative disorder NOS
Two distinct types of “dissociation” (Holmes et al, 2005)

**Detachment**
An altered state of consciousness characterized by a sense of separation (or “detachment”) from aspects of everyday experience

- depersonalization
- derealization
- emotional numbing
- peri-traumatic dissociation

**Compartmentalization**
A reversible deficit in the ability to deliberately control processes or actions that would normally be amenable to such control

- amnesia (reversible)
- unexplained neurological symptoms
- pseudohallucinations
- identity alteration
Detachment and conversion disorder

Detachment

An altered state of consciousness characterized by a sense of separation (or “detachment”) from aspects of everyday experience

- depersonalization
- derealization
- emotional numbing
- peri-traumatic dissociation

- “Panic without panic” in some patients with PNES (Goldstein & Mellers, 2006)
  - physical not emotional symptoms of panic attacks
- BUT detachment often absent in conversion disorder patients
  - conversion symptoms uncommon in patients with depersonalization disorder
Compartmentalization

A deficit in the ability to deliberately control processes or actions that would normally be amenable to such control

- reversible
- cannot be overcome by will
- occurs alongside evidence of intact functioning
- on a continuum from non-pathological to massively disabling

- Reversibility of amnesia following PNES (Kuyk et al, 1999)
- Implicit perception in conversion sensory loss (summarised by Kihlstrom, 1992)
- Intact motor function in conversion paralysis/weakness (as in Hoover’s sign)
Deficit in attention creates vulnerability to breakdown of “psychological integration” when exposed to trauma.

Fragmentation leads to traumatic memories becoming separated (or dissociated) from awareness.

Symptoms generated by activation of traumatic memories lead to a kind of somatic flashback or reliving.

Same process for hysterical and hypnotic phenomena. Detachment phenomena not seen as dissociative.

Later suggested that memory fragments are kept from awareness for defensive purposes (Breuer & Freud, 1893-1895).
Neodissociation theories (e.g., Hilgard, 1977; Woody & Bowers, 1994; Woody & Sadler, 2008)

- Most processing managed outside of awareness by low level control systems
- Awareness/attention/volition (i.e., “executive ego”) only needed for initial selection of lower systems
- Most everyday functions are “dissociated” from consciousness (consider learning to drive a car)
- Symptoms an extension of this
Pathological dissociation as a monitoring problem

- If behaviour is instigated by the executive (i.e. “on purpose”) but is inconsistent with our goals then we experience it as having made a mistake.

  BUT only if we know we did it on purpose!

- If we don’t realise this (e.g. because we forget, we weren’t paying attention, or we don’t represent it in this way) then we experience it as happening to us.
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![Diagram showing the relationship between executive ego (Awareness and volition), inattention/amnesia, and the “Seizure” control program. The diagram illustrates the input and output pathways for the control program, with labels for “A seizure is happening” and “Have a seizure.”]
Pathological dissociation as a control problem

- Inhibition of the executive (e.g. by intense emotion) reduces control over low level systems, making the system vulnerable to stimulus-driven activation of unintended behaviours

  - conversion phenomena similar to everyday action slips
  - conversion phenomena similar to utilisation behaviour in some patients with frontal lobe damage
Pathological dissociation as a **control** problem

- Inhibition of the executive (e.g. by intense emotion) reduces control over low level systems, making the system vulnerable to stimulus-driven activation of unintended behaviours.

  ➞ conversion phenomena similar to everyday action slips and utilisation behaviour in some patients with frontal lobe damage.
Integrative cognitive model (Brown, 2002a,b, 2004, 2006; Brown & Oakley, 2004)

- Integrates dissociation concepts within broader biopsychosocial model of MUS
  - Assumes that symptoms reflect automatic activation of ideas about illness in memory (i.e., “rogue representations”)
  - Process moderated by factors that (a) contribute to the activation levels of these rogue representations; and/or (b) compromise the individual’s ability to inhibit them;
  - Symptoms are involuntary but may involve volitional processes in a number of ways (e.g., hypervigilance; self-focus; worry/rumination about symptoms; trying to control normally automatic behaviours; suppression)
Integrative cognitive model (Brown, 2002a,b, 2004, 2006; Brown & Oakley, 2004)

**INPUT**
Epileptic seizures encountered in self, others, the media etc.

**CREATION OF “SEIZURE” MODEL IN MEMORY**

**“EXECUTIVE” ATTENTION**
(e.g. Worrying about and looking out for signs of possible seizures)

**ACTIVATION OF “SEIZURE” MODEL**

**INTERNAL / EXTERNAL TRIGGERS**
(e.g. symptoms of arousal, stress etc.)

**NON-EPILEPTIC ATTACK**
Take home messages

1. The term dissociation means different things to different people; mixed questionnaire findings probably reflect a tendency to conflate different definitions of dissociation within the same measure.

2. If we define dissociation as the compartmentalization of information in the cognitive system then conversion symptoms are dissociative by definition.

3. Trauma is not necessary for compartmentalization to occur but may be relevant in individual cases.

4. Detachment is only relevant in a small proportion of cases of conversion disorder.
Take home messages

5. Compartmentalization phenomena reflect the fact that much of behaviour/mental processing is performed automatically and outside of awareness
   - symptoms can result from psychological processes without being produced “on purpose” (although voluntary processes can still be implicated indirectly)
   - it is possible to explain conversion disorder without appealing to emotional conflict or psychological defence
   - research / theory implicates attentional processes

6. There is far more theory than evidence!
   - much more research is needed
References


Brown, R. J. (2006). Different types of “dissociation” have different psychological mechanisms. *Journal of Trauma and Dissociation, 7*, 7-28.


References


