

SUPPLEMENT TO
CHAPTER 11, V1¹:
CLINICAL IMPLICATIONS OF NETWORK PRINCIPLES 3 – 12

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CLINICAL IMPLICATIONS OF PRINCIPLE 3: TRANSFORMATION

The relationship between physicians and psychologists has traditionally been a vertical one. Physicians rule hospitals because they modify biology. Psychologists have increasingly been accepted in medical setting because the “mind” is known to influence the body. Treatments prescribed by physicians work because of real physical, biological, mechanisms. Psychological treatments are perceived to work for “mental” reasons which many physicians treat as mumbo jumbo. While physicians understand that placebos can have real physical effects, they are not concerned with how this happens. A major clinical implication of Principle 3 is that it provides a plausible explanation for how physical stimuli are transformed into neural patterns that constitute latent constructs. Principle 3 renders psychology as a biological process. Doing so should give psychologists greater parity with physicians.

CLINICAL IMPLICATIONS OF PRINCIPLE 4: REACTIVATION

Non-Suicidal Self-Injury (NSSI)

It is difficult for parents and most people to understand why anyone would want to injure themselves unless they were attempting to commit suicide and failed. However, Principles 4 and 12 provide an explanation. Principle 4: Reactivation concerns what is ordinarily termed memory.

¹ V1 stands for Version 1 which implies that subsequent chapter updates will become available.

Reactivation means resetting our connectome to the state it was in when memory for the event in question last formed. I say last formed because each time a memory is reactivated it undergoes some modification; partly because the reactivation process is not 100% accurate and is subject to incorporating new events that are occurring at the time of reconstruction which means that some memory modification occurs each time memories are reactivated. We are talking about a pattern of activation and inhibition across synapses of multiple neural networks. Such reactivations entail Top-Down processing which is half of Principle 12. Reactivation includes emotions and cognitions because the neural networks that generate emotions are reactivated as are the neural networks that activate cognitions. What is one to do when this reactivated brain state is extremely aversive?

The person with NSSI has discovered that Top-Down reactivated brain states can be disrupted by Bottom-Up processing, the other half of Principle 12, by activating pain receptors through bodily injury and through vision given the sight of blood and perhaps by activating taste receptors if blood is put in the mouth. Such Bottom-Up activations literally disrupt the aforementioned Top-Down reactivations and thereby provide relief from them.

CLINICAL IMPLICATIONS OF PRINCIPLE 5: PRIMING

Priming takes advantage of the neuroscience fact that neurons that fire together wire together; i.e., they become biologically reinforced. Neural network pathways that are repeatedly activated become stronger and thereby increase the probability with which they are taken. Priming can be subtle. Clinicians can creatively prime their patients without being detected and thus indirectly influence how they think and behave. Priming patients to talk honestly about themselves is an important clinical task.

Sidney Jourard was a noted “humanistic” psychologist who wrote extensively on self-disclosure. His 1970 book entitled *Self-Disclosure: An Experimental Analysis of the Transparent Self* reviews self-disclosure studies. Jourard discussed the positive benefits of self-disclosure in his 1971 book entitled *The Transparent Self*². Jourard believed that an unhealthy person does not know their true self and may therefore find it difficult to make genuine connections with other people. He believed that a healthy person knows their true self. This enables them to behave in an

² See <http://www.thepositivespirit.org/sidney-jourards-approach-to-doing-positive-work/>

authentic and appropriate way with others. They know how to behave responsibly and encourage others to be their true selves. They are therefore more able to make true connections with other people. Jourard suggested that clinicians can creatively prime for self-disclosure and other behaviors.

Jourard believed that a person could increase their inner strength by being true to their self by disclosing their real self to other people and by following their values. This approach is akin to Carl Rogers' ideas about **congruence**. Carl Rogers stated that the personality is like a triangle made up of the **real self**, the **perceived self**, and **ideal self**. According to Rogers, when there is a good fit between all three components, the person has **congruence**. This is a healthy state of being and helps people continue to progress toward self-actualization. The more congruent a person is, the greater their ability to connect with other people. Congruence enables people to have richer relationships. Sidney Jourard's web page is <http://www.sidneyjourard.com/>.

A clinical implication of Jourard's work is that each therapist needs to prepare elements of topics pertinent to the problems that their clients have that they are willing to share. Therapists model and prime patient self-disclosure by sharing these personal elements.

CLINICAL IMPLICATIONS OF PRINCIPLE 7: CONSONANCE AND DISSONANCE

The discussion by Kassin (2005, p. 219) concerning interrogation entails Principle 7: Consonance and Dissonance because this section illustrates how people unwittingly seek, interpret, distort, and even create behavioral data to confirm and support a preexisting decision or belief even if it means convicting an innocent person. Kassin (2005) suggests that our legal system frequently convicts innocent people and provides little resource for detecting and correcting these errors. A better understanding of the reasons for this emerge when one considers the reinforcement contingencies that police and prosecutors operate under. These matters are discussed next.

Police

Every crime opens a case that must be closed. Police are evaluated/rewarded on the basis of the percentage of cases that they solve; i.e., cases that they close. No matter how they close those cases.

Prosecutors

Every case that a prosecutor tries can end in a win or loss just as a baseball player can get a hit or strikeout every time they come to bat. Prosecutors try to convict everyone who comes to court. This behavior presumes that the police only arraign guilty criminals. The presumption of guilt functionally replaces the presumption of innocence. Any consideration that the police arrested an innocent person causes the dissonant cognition that the guilty party remains at large. This dissonance is reduced by viewing the arrested person as guilty as per Principle 7. So the only remaining task is to get a jury to believe that the person is guilty and convict them.

Convictions

Several “good” things occur when a person is convicted. The police case gets closed. The prosecutor’s conviction rate increases and the public can rest easy knowing that the criminal has been apprehended. Except that is not always true. But this conclusion creates too much dissonance to accept so it is dismissed as per Principle 7. Prosecutors are rewarded on the basis of their conviction rate. No matter how they win those convictions. This includes suppressing evidence that exonerates the person they are prosecuting. Losing a case means that everyone has to start over and nobody wants that. Neither the police nor prosecutors are rewarded for getting things right. This is why the Innocence Project was necessary. It is also why psychologists should pay close attention to how social and material reinforcers are applied relative to law enforcement personnel.

A related example was reported in a Sunday NY Times article concerning a period of time where 12 banking crises occurred in the US but none occurred in Canada. The reported reason was that Canada has federal banking rules that the US lacks. The reinforcement contingencies under which US banks operate reward risky behaviors that Canada penalizes. US banks are allowed to gamble with depositor’s funds because they make big financial contributions to influential politicians. The Supreme Court recently facilitated the selling of America politicians. What could possibly go wrong with such a practice?

CLINICAL IMPLICATIONS OF PRINCIPLE 10: PROTOTYPE FORMATION

Some readers may wonder why I emphasize the word prototype instead of stereotype. Stereotypes are negative prototypes. There is no antonym for stereotype; at least not one that I could find. We don't have a single word for positive stereotypes. Hence, we use the more general word prototype to include both positive and negative cases.

REFERENCES³

Tryon, W. W. (2014). *Cognitive neuroscience and psychotherapy: Network Principles for a Unified Theory*. New York: Academic Press.

³ References not included in this list are in the reference section of the Tryon (2014).