Behavior Changing Hats:
When quantitative observation becomes qualitative analysis and its own conclusion

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Longitudinal Design

The study of a variable or group of variables in the same cases or participants over a period of time, sometimes of several years" (APA Dictionary of Psychology, p. 543).

LONGITUDINAL STUDY

'Longitudinal study' is one in which repeated observations of the same variables (e.g., people) are made over short or long periods of time (i.e., longitudinal data). It is often an **observational** study (Shadish, William R.; Cook, Thomas D.; Campbell, Donald T. *(2002). Experimental and Quasi-Experimental Designs for Generalized Causal Inference (2nd ed.).* Boston: Houghton Mifflin Company. p. 267).

In social-personality and clinical psychology, longitudinal studies are used to study fluctuations in behaviors, thoughts, and emotions from moment to moment or day-to-day. In Developmental Psychology it is used to study developmental trends across the life span. In Sociology it studies life events throughout lifetimes or generations (Carlson N, Miller H, Heth D, Donahue J, and Martin GN. *Psychology: The Science of Behaviour.* Pearson 2010).

Longitudinal studies of individuals make observing changes more reliable and accurate. In medicine it is used to uncover predictors of certain diseases. In Psychiatry and Clinical and Forensic Psychology, it is used to discover characteristics, timing, severity and duration of symptoms and/or responses to various treatment methods.

Because of repeated observations, longitudinal studies have more power than cross-sectional observational studies because they are able to observe the temporal order of events and exclude

time-invariant unobserved individual differences **(**van der Krieke, L., Blaauw, F.J., Emerencia, A.C., Schenk, H.M., Slaets, J., Bos, E.H., de Jonge, P., Jeronimus, B.F. (2016). *"Temporal Dynamics of Health and Well-Being: A Crowdsourcing Approach to Momentary Assessments and Automated Generation of Personalized Feedback"*. Psychosomatic Medicine: 1).

There are **two disadvantages of the longitudinal study:** it takes **a lot of time** and is **very expensive** and, therefore not very convenient.

LONGITUDINAL DIAGNOSTIC STUDY (LDS)

In the case of forensic patients who are **involuntarily committed** to State hospitals – often for lengthy periods - the basic conditions for Longitudinal Diagnostic Study, *par excellence,* exist: patients are there involuntarily, meaning they cannot come and go as they please; they are in fully controlled environments in which they are subjects of wide-ranging observations on a 24-7, 365 days per year by a variety of professionals who are usually trained specifically to deal with the specific populations of patients; their adherence to treatment and routines are systematically observed and recorded; they must follow treatment regimen or be subject to involuntary administration of the treatment; their movements, speech, emotional expressions, behavior and actions are closely watched (and, increasingly, video recorded); symptoms and behavioral changes to different treatment approaches and to no treatment at all are observed and recorded; the behavior of interest can be more reliably and accurately ruled in or out for the specific patient when specific behavior constitutes the defining symptoms of a legally defined mental disorder – as it is in all legally defined involuntary commitment cases in which statutes and higher court rulings define the dysfunction of interest to the law.

Longitudinal diagnostic studies in these legal situations are both retrospective and prospective; i.e., the record of the patients' past behavior, diagnoses and treatments and their past responses to various situations and treatments and other interventions can serve as baselines and suggest directions of importance, serving as a focus for the prospective study that begins when the patient enters the hospital and initial observations are made; which is the case for all offenders committed under involuntary commitment laws.

Although the Longitudinal Diagnostic Study is the diagnostic study of choice for many patients, it rapidly became few and far between with the beginning of the HMO era (early 1980's) until today, it is essentially extinct in the private sector in all but **alcohol/substance abuse in-patient treatment settings, albeit in far less well-controlled conditions.** In forensic involuntary commitment settings, however, the Longitudinal Diagnostic Study is – or should be – ***the*** diagnostic method of choice since it is the diagnostic method *par excellence* and conditions necessary to its successful implementation and conduct are already in place.

Individuals in private alcohol/substance abuse treatment settings are there voluntarily, not forced to be there, and can come and go essentially as they wish. In private settings there are not only gaps in the observations that the professionals can make of the patients but myriad chances for contamination by unknown variables. Hence, there is an absence of vital – even pivotal - information for determining cause-effect relationships (mental status-behavior) that might exist in the case (i.e., the patient cheeks his meds, takes them inconsistently or stops taking them permanently and also ingests who know what; ceases following treatment plans or instructions, has experiences and is influenced by factors unknown to the diagnostician, etc.).

It is under conditions of **involuntary commitment** - moderate to long-term – in locked and controlled mental health facilities that the **patient's behavior itself becomes the most reliable and accurate evidence** for ruling in or out specific diagnoses; i.e., the "diagnosed mental disorder" of the Sexually Violent Predator (SVP) law; the "severe mental disorder" of the Mentally Disordered offender Law. In such cases, **behavior itself** becomes the *only* indisputable evidence of whether the patient under observation does or does suffer the specific dysfunction targeted by the specific law.

Aspects of two involuntary commitment laws that create ideal circumstances in which behavior serves as its own analysis and conclusion:

The "**Severe Mental Disorder**" of the Mentally Disordered Offender Law; California Penal Code Sections 2962 (a)(2) & (a)(3):

(2) The term "severe mental disorder" means an illness or disease or condition that substantially impairs the person's thought, perception of reality, emotional process, or judgment; or which grossly impairs behavior; or that demonstrates evidence of an acute brain syndrome for which prompt remission, in the absence of treatment, is unlikely. The term "severe mental disorder," as used in this section, does not include a personality or adjustment disorder, epilepsy, mental retardation or other developmental disabilities, or addiction to or abuse of intoxicating substances.

(3) The term "remission" means a finding that the overt signs and symptoms of the severe mental disorder are controlled either by psychotropic medication or psychosocial support. A person "cannot be kept in remission without treatment" if during the year prior to the question being before the Board of Parole Hearings or a trial court, he or she has been in remission and he or she has been physically violent, except in self-defense, or he or she has made a serious threat of substantial physical harm upon the person of another so as to cause the target of the threat to reasonably fear for his or her safety or the safety of his or her immediate family, or he or she has intentionally caused property damage, or he or she has not voluntarily followed the treatment plan. In determining if a person has voluntarily followed the treatment plan, the standard shall be whether the person has acted as a reasonable person would in following the treatment plan.

The "**Diagnosed Mental Disorder**" of the Sexually Violent Predator Law (California Welfare & Institutions Code Sections 6600, *et seq* (also termed, "Mental Abnormality" in some States):

6600 (c) "Diagnosed mental disorder" includes a congenital or acquired condition affecting the emotional or volitional capacity that predisposes the person to the commission of criminal sexual acts in a degree constituting the person a menace to the health and safety of others.

The US Supreme Court has ruled on the meaning of the key terms in SVP cases:

"Emotional or volitional capacity" means "serious difficulty controlling" one's predisposition to commit sexually violent predatory offenses" and "emotion" is relevant only when it can be shown to affect one's "volitional" control of his sexual behavior.

(Note: "remission", per se, is not an issue in the SVP law).