Automatic Cognitive Processes in Family Violence Research: What is an Automatic Process and What is an Automatic Measure?

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Why automatic processes are important

• Everybody’s doing it
• If you aren’t actively producing knowledge you are probably consuming the knowledge generated by this research
• My goal today is to help you be a better producer and/or an informed consumer

Two big questions and Two Take-Home Messages

1. What is an automatic process?
   i. Think decompositionally
2. What is an automatic measure?
   ii. A measure does not a process demonstrate

What is an automatic process?
Dichotomous → Decompositional

- Information is processed in one of two ways
  1. Processing occurs in parallel, quickly, and outside of awareness
  2. Processing occurs sequentially, effortfully, and with a sense of awareness

Automaticity

Unintentional
Efficient
Uncontrollable
Lack of Awareness

Example: Spontaneous Negative Attribution
Example: Aggression under ego depletion
Example: Subliminal Prime Effects Evaluation of Child Face
Take-home message #1

- Think decompositionaly.
- Don’t ask "is this an automatic process?" ask “in what ways is this process automatic?”

What is an automatic measure?

- Following Moors & De Houwer (2006), it is common to refer to direct and indirect to describe features of measurement procedures.
- Direct measures rely on respondents to self-report the construct or process of interest (e.g., what is your attitude towards spanking children?)
- Indirect measures don’t require introspection and make assumptions about the construct or process of interest based on task performance (e.g., a child-spank IAT)

Confusion of what is “measured” and what is used to “measure” something

- Indirect Measure
  - Does not require introspective access
  - Immune to Socially-Desirable Responding
  - Is introspectively inaccessible
Are indirect measures immune to socially-desirable responding?

- Implies that relationship between indirect/direct measures should be moderated by social desirability
- Although some data support this assumption (e.g., Nosek, 2005), meta-regression analyses have shown the relationship between the "social desirability" of a topic and the strength of indirect/direct measure to be essentially non-existent ($\beta = -.02$)
- Implies that deliberate attempts at response distortions should be unsuccessful
  - "Proactive" control can be exerted by a simple mental imagery task (e.g., thinking of a counter-stereotypical woman reduces indirectly assessed gender stereotypes)
  - "Retroactive" control can be exerted and estimated

Do indirect measures “tap into” introspectively inaccessible constructs?

- Often claimed to be demonstrated by low correlations between indirect/direct measures
  - First, the associations are often not very low (meta-analysis, $k=317$, $n = 12,289$, $\rho = 0.24$)
  - A lot due to poor psychometric properties of indirect measures
  - Degree of association moderated by conceptual correspondence
- What about self-perception accounts?
  - That adds another layer onto the explanation of why associations may exist
  - Studies testing self-perception hypothesis still find indirect/direct correlations

Quad Model (Conrey et al., 2005)

![Quad Model Diagram]

Take-home message #2

- A measure does not a process demonstrate
- Indirect measures are not necessarily resistant to socially-desirable responding
- Indirect measures do not necessarily “tap into” introspectively inaccessible constructs
- Don’t confuse the characteristics of what is being measured (e.g., a cognitive process) and how it is being measured (e.g., a direct measurement procedure)
Example: Parents’ Spontaneous Trait Inferences

1) Exposure

The kind child stroked the kitten.

Trait both explicit and implied.
1) Exposure

The child stroked the kitten.

2) Recognition

The child stroked the kitten.
1) Exposure
2) Recognition

Showed parents a mix of positive/negative behaviors and strongly/vaguely implicative behaviors.

Analyses of “yes” responses

Greatest “yes” responses for “hits,” least for “mismatches,” and “false alarms” middling.

Process Dissociation Procedure

Effortful Recall
Recall Failure
Unintentional Inference Expression

Guess “yes”
Further

- The trait-recognition task is a direct measure of parents’ ability to accurately recall words from the behavior descriptions (YAWN!!)
- However, the trait-recognition task is an indirect measure of the inferences parents’ formed and the extent to which those inferences affect task performance (THAT’S AWESOME!!)
- Plus, indirect task performance was affected by cognitive processes with characteristics of automaticity and characteristics of being controlled

Recap of Take-Home messages

1. Think decompositionally
2. A measure does not a process demonstrate

The big “so what”

- To change behaviors we must understand how the cognitive processes responsible for producing those behaviors operate
- Allows understanding of when behaviors will be influenced by automatic processes
- Meta-analyses suggest that automatic processes add predictive validity and this is especially true when they facilitate controlled processes (i.e., both processes push in the same direction)
- Indirect measures out predict self-report measures for certain behaviors (e.g., spontaneous behavior), under certain circumstances (e.g., when cognitive resources are depleted), and for certain people (e.g., those with a preference for intuitive decision making)
- The real world is messy…embrace the lab!!
Thanks!!!
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Examples of Indirect Measurement Paradigms
- IAT
- EAST
- GNAT
- AMP
- Semantic priming
- Affective/Evaluative Priming
- "Shooter" Task
- CAP
- MMPI
- and too many more to count…

Take-home message #2
- Embrace the lab…artificiality ain’t such a bad thing
  1. Variables of interest are (often) not sufficiently isolated in the “real world”
  2. Researchers are often interested in whether “something can happen” rather than if it “typically does happen”
  - This involves engineering situations that are theoretically important but may not have a "real-world" counterparts

Eckhardt et al., 2012
between cognitive distortions and IPV. For instance, researchers and scholars have noted the anomaly of IPV perpetrators to minimize, deny, or defend abusive behavior (e.g., Herren, Jones, & Holifield, 2008). Given this tenet, data based on measures that explicitly probe offenders' self-reported violent/approach attitudes may be unduly influenced by respondents' motivation to underreport their prior abuse history and its associated inclination to favor violent conflict acts. Although findings regarding the efficacy of anger management or IPV targeting are equivocal (Herren & Holifield, 2006; Scott & Straus, 2007; Sugerman & Holifield, 1997), offender underreporting may undermine the ability of treatment providers in accurately assessing change in attitudes during intervention programs and improve the validity of results of outcome studies examining whether such programs lead to cognitive changes that foster nonviolence. Second, questions remain concerning whether individuals can directly and accurately access various cognitive processes. Researchers have suggested that such beliefs are likely to be automatic and schematic in nature (Borkowetz, 2000; Bierman, 1990), with specific cognitive distortions hypothesized to emerge from an associative memory network of innate, connected attitudes, memories, behavior's scripts, and emotions that contain an underlying dormant theme (e.g., the implicit theory approach; Pahlavan, Calcott, & Gnan, 2000). Thus, although offenders may be aware of, and report on, surface-level distortions (e.g., “He hit her because she wouldn’t stop annoying me”), they may lack awareness of more tacit components of the scheme level, implicit cognitive structures that may generate these beliefs (e.g., “She should be more honest to her see, punishment is deserved”). As a result, offenders will be unlikely to access such implicit narratives or report on such processes with any useful degree of accuracy when asked to do so on explicit, paper-and-pencil measures of cognitive content (Ward, 2000).