

Shh, I'm talking to myself

Rule-governed behavior in treatment designs

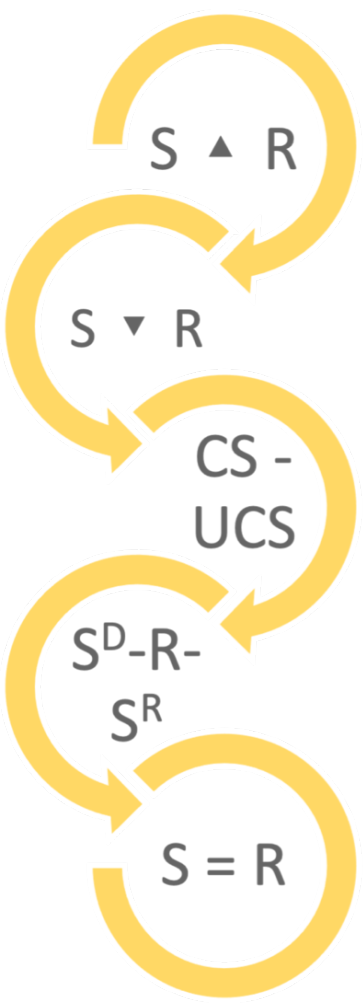
Agenda

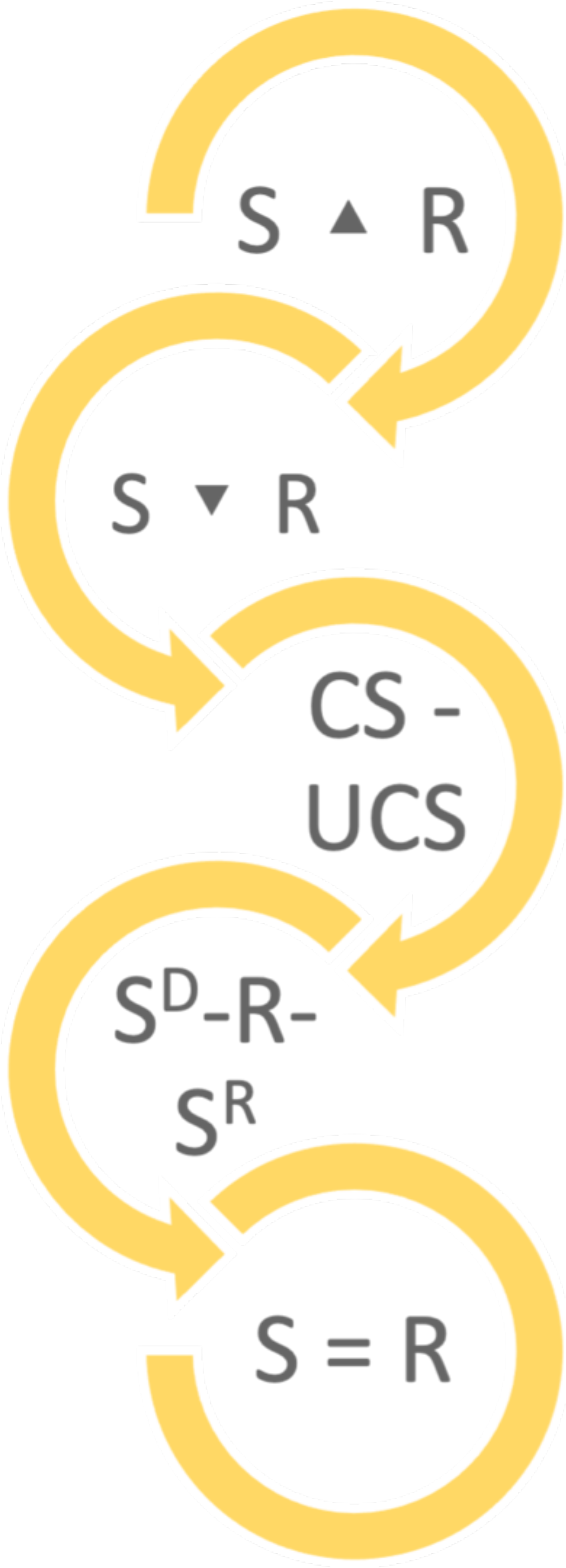
Briefly - What is rule-governed
behavior

Integrating rule-governed behavior
in treatment

Exposure therapies

Harmful sexual behavior





Rule-governed behavior

Rule-governed behavior

Some perspectives

Rule-governed behavior refers to behaviors that are controlled by verbal stimuli outlining behaviors and their contingencies

Wulfert, 2024

SD

R

SC

Rules are function-changing

Blakely & Schlinger (1987)

Rules can evoke nonverbal aversive behaviors

Malott (1989)

Rule-governed behavior = instructions

Galizio (1979)

Skinner 1966

Galizio 1979

Zettle & Hayes 1982

Schlinger & Blakely 1987

Gerutti 1989

Hayes et al. 2001

Kelly & Kelly 2022

NAFO 2025

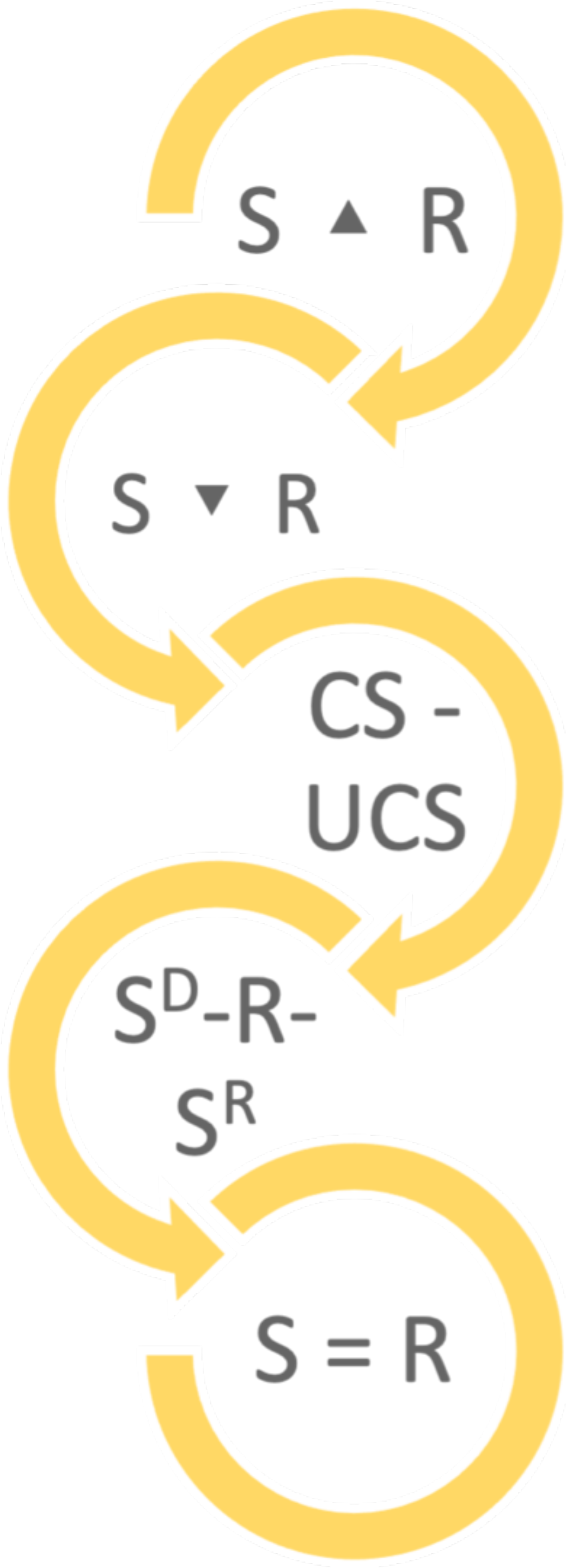
S Δ R

S ∇ R

CS -
UCS

SD-R-
SR

S = R

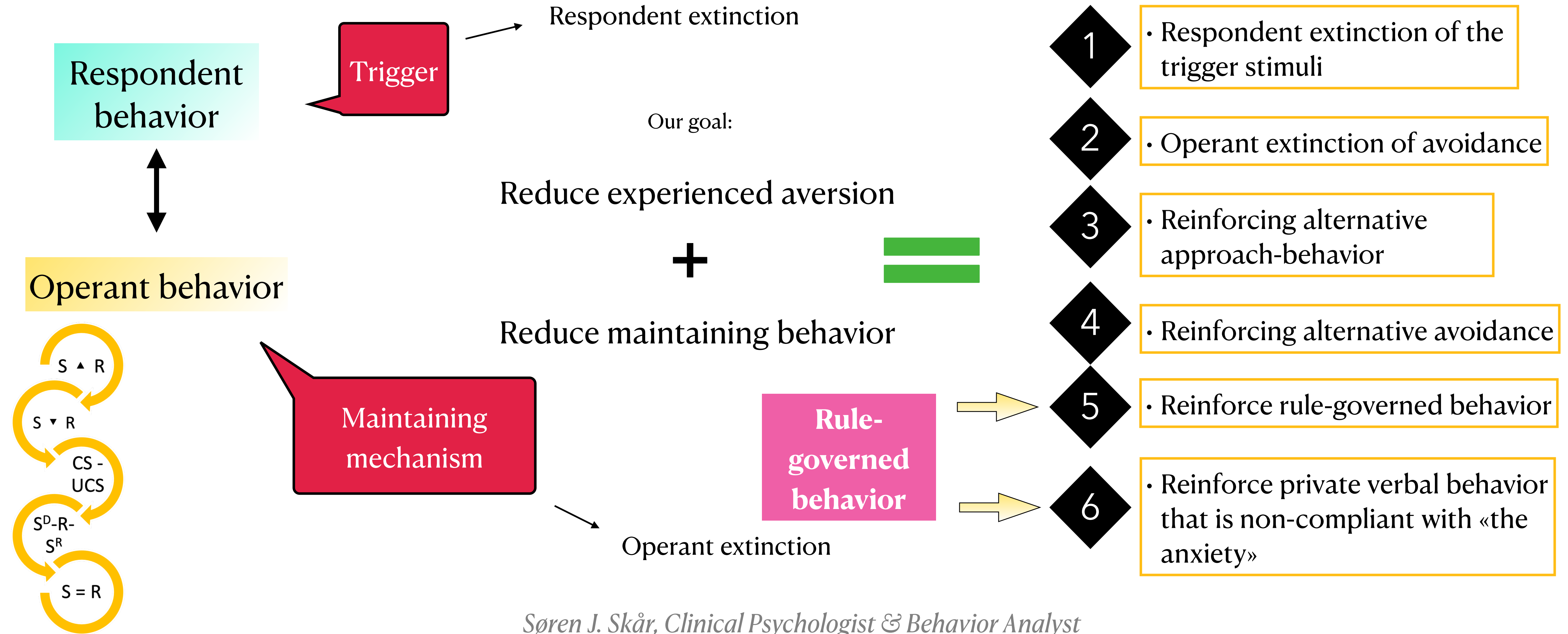


Integrating rule-governed behavior in treatment designs

Aversive and emotional behavior - the world of exposure

Integrating rule-governed behavior in treatment designs

Aversive and emotional behavior - the world of exposure



Aversive and emotional behavior - the world of exposure

1

- Respondent extinction of the trigger stimuli

Habituation vs respondent extinction

Amygdala

mPFC

Hippocampus

Inhibits

Weakens

Disappears

2

- Operant extinction of avoidance

Avoidance must lose its function

Mowrer's two-factor-theory

3

- Reinforcing alternative approach-behavior

Hippocampus = context-dependent fear-conditioning & -extinction

Trigger stimuli is context-dependent

4

- Reinforcing alternative avoidance

There will always be some avoidance

Stimuli will always trigger emotional responses

Shaping

5

- Reinforce rule-governed behavior

Sustained «effect»

Sustained «effect» requires

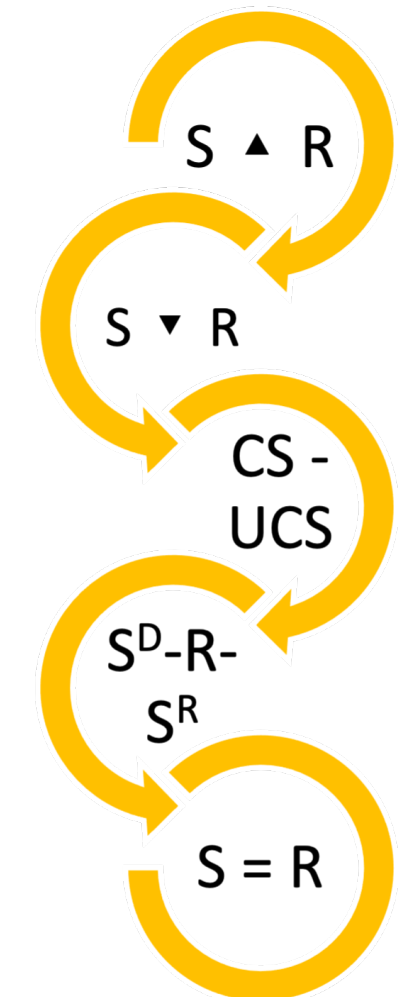
1. Re-exposure
2. «Avoid avoiding»
3. Continued approach

6

- Reinforce private verbal behavior that is non-compliant with «the anxiety»

Private verbal behavior can be conditioned triggers

Synaptic plasticity in the areas of the brain associated with «thinking» (i.e. private verbal behavior)



Aversive and emotional behavior - the world of exposure

5

• Reinforce rule-governed behavior

6

• Reinforce private verbal behavior that is non-compliant with «the anxiety»

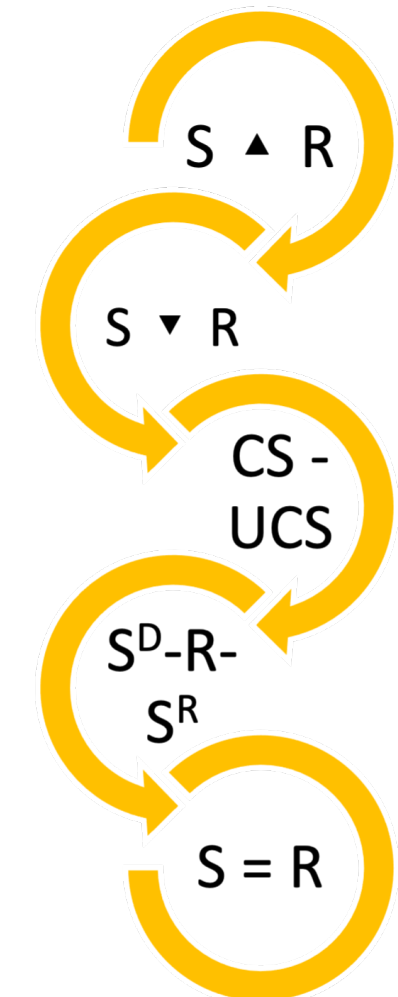
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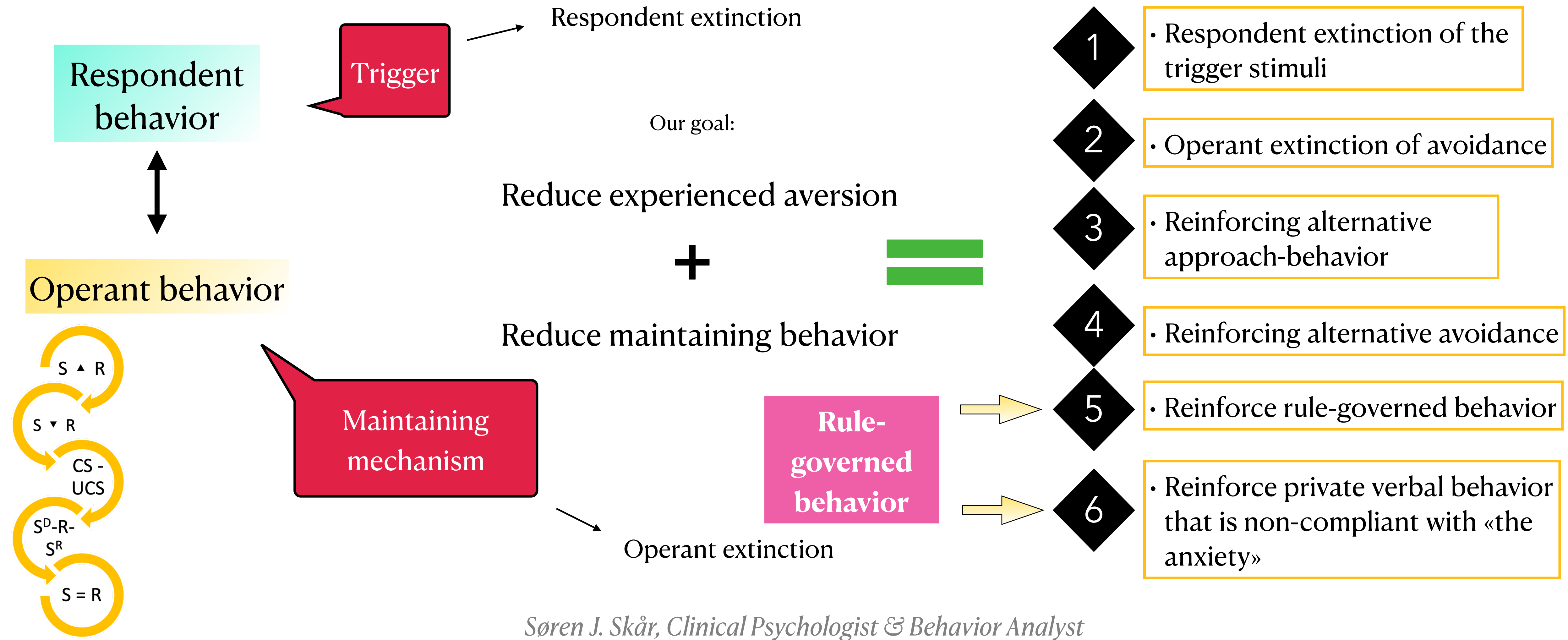
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Aversive and emotional behavior - the world of exposure

1

- Respondent extinction of the trigger stimuli

Ill have to taste or smell the porridge

2

- Operant extinction of avoidance

Running away does not work, Ill still have to taste or smell the porridge

3

- Reinforcing alternative approach-behavior

Ill start by **touching** the spoon with the porridge on

4

- Reinforcing alternative avoidance

«That was too much, but Ill just turn my head and count to 30»

5

- Reinforce rule-governed behavior

«When I get home, I will **smell** two different types of porridge»

«When I taste one sample of porridge, I will grant myself one token!»

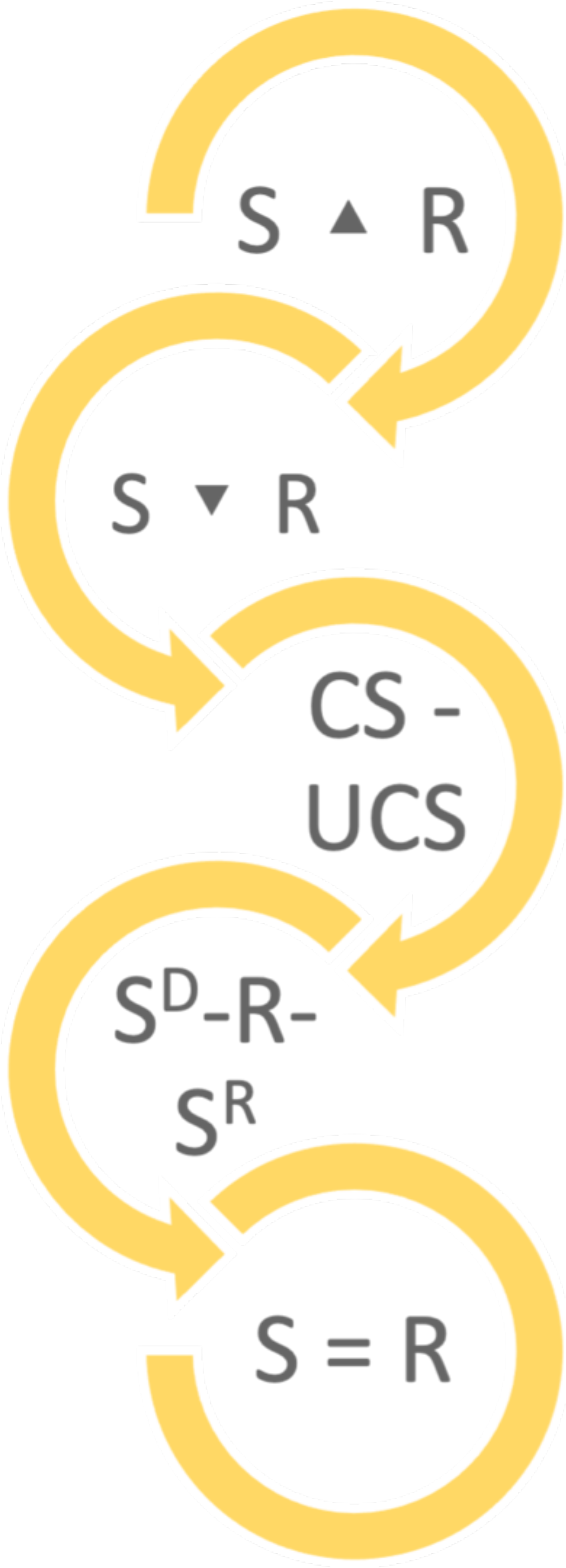
6

- Reinforce private verbal behavior that is non-compliant with «the anxiety»

«Porridge is healthy»

«Being scared is OK, as long as I gradually work on this»

«Porridge has lumps, but lumps won't clog my throat»
«I want to eat without getting anxious about what I eat»



Integrating rule-governed behavior in treatment designs

Harmful sexual behavior

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Harmful sexual behavior

*This refers to sexual behavior that **violates others**, is **excessive, compulsive, threatening, or boundary-crossing**. This type of behavior indicates the **need for immediate reaction and action from adults**.*

Emotional behavior involved

=

Respondent behavior

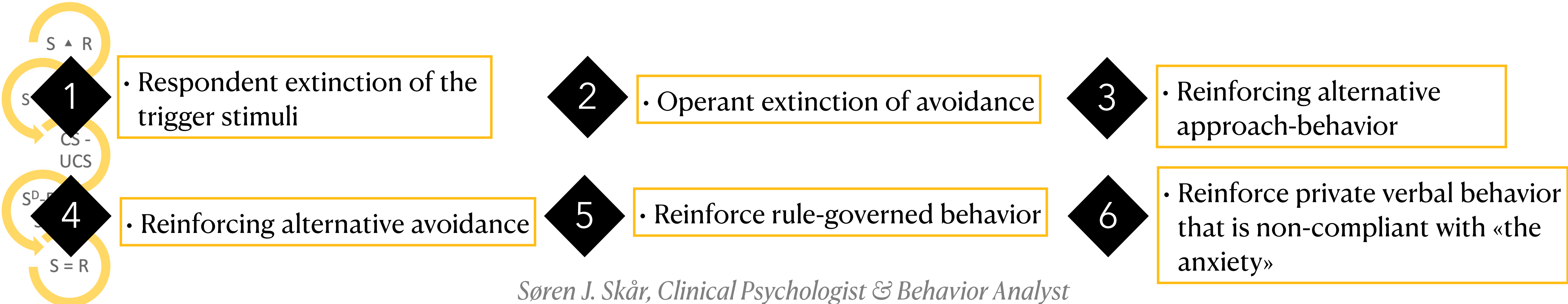
Negative

Reinforcement involved

=

Operant behavior

Positive



Integrating rule-governed behavior in treatment designs

Harmful sexual behavior

Emotional behavior involved

=

Respondent behavior

Negative

Reinforcement involved

=

Operant behavior

Positive

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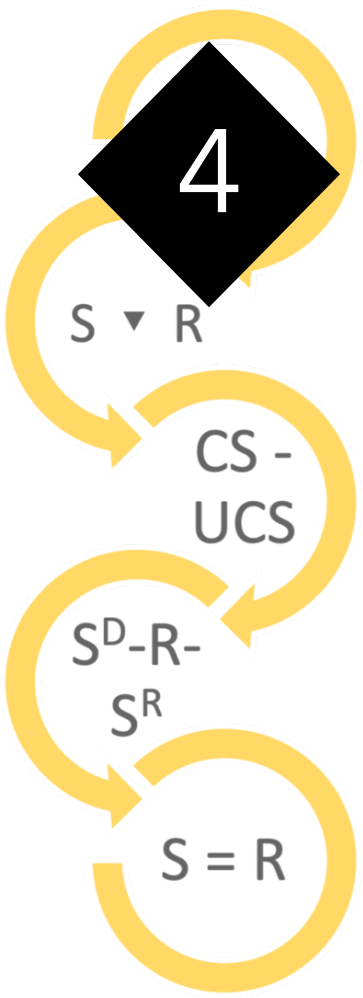
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Integrating rule-governed behavior in treatment designs

Harmful sexual behavior

Emotional behavior involved

=

Respondent behavior

Negative

Reinforcement involved

=

Operant behavior

Positive

1

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2

• Operant extinction of SSA-behavior

3

• Reinforcing alternative approach-behavior

4

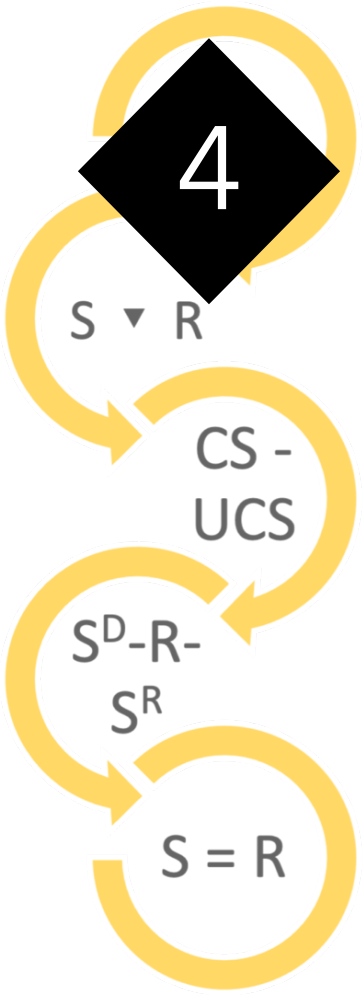
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Integrating rule-governed behavior in treatment designs

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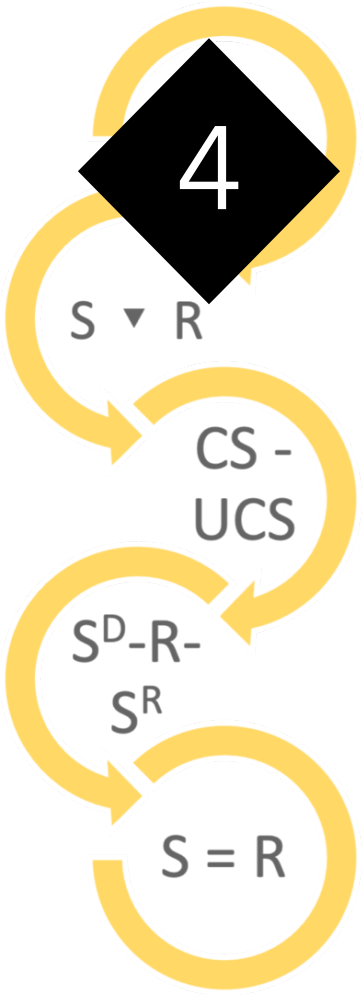
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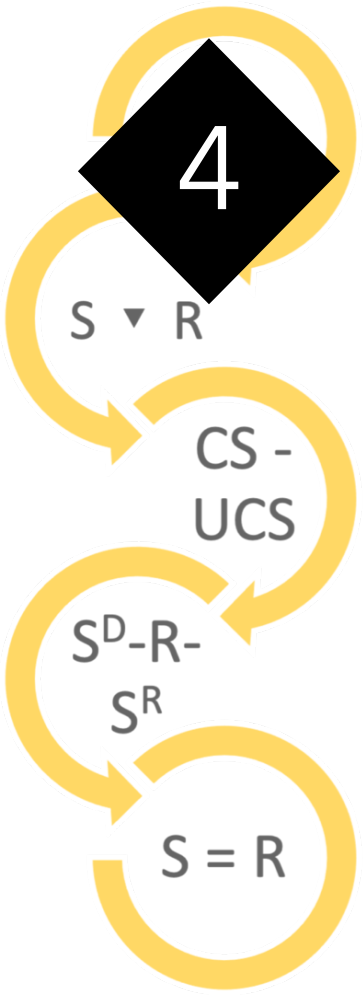
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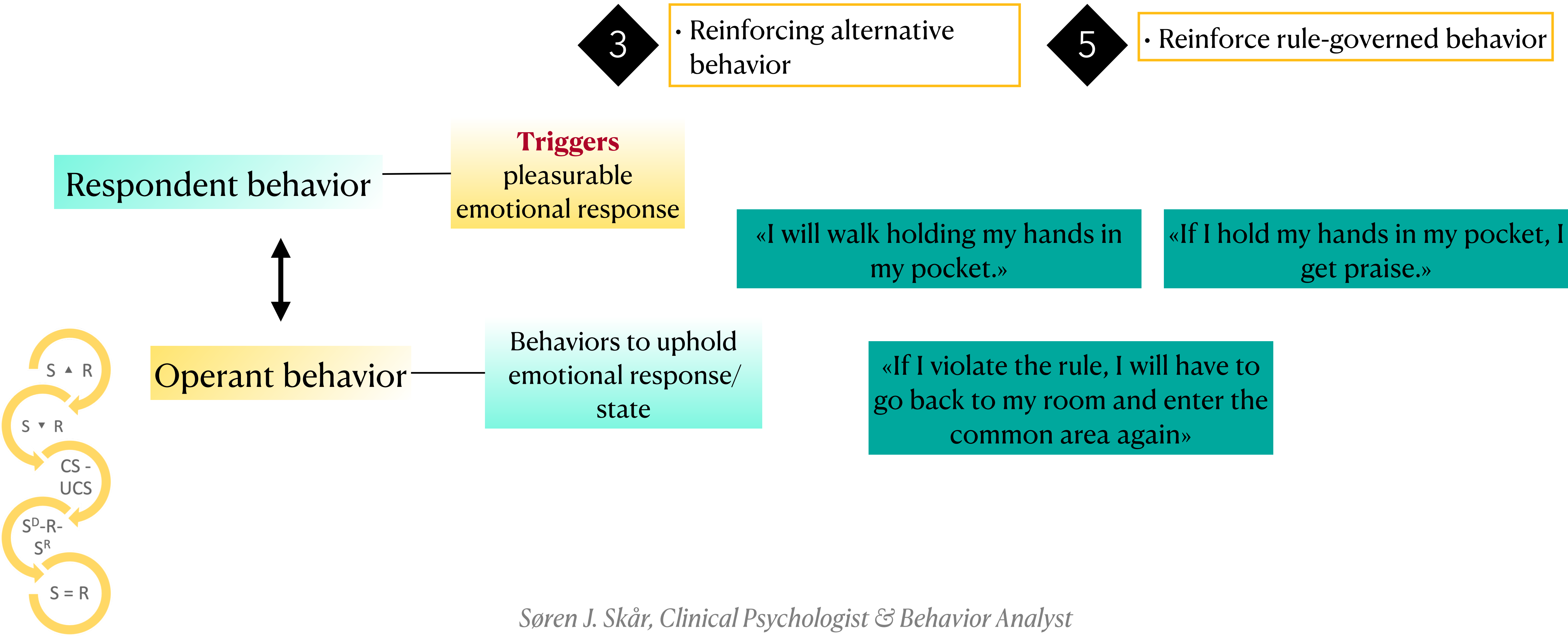
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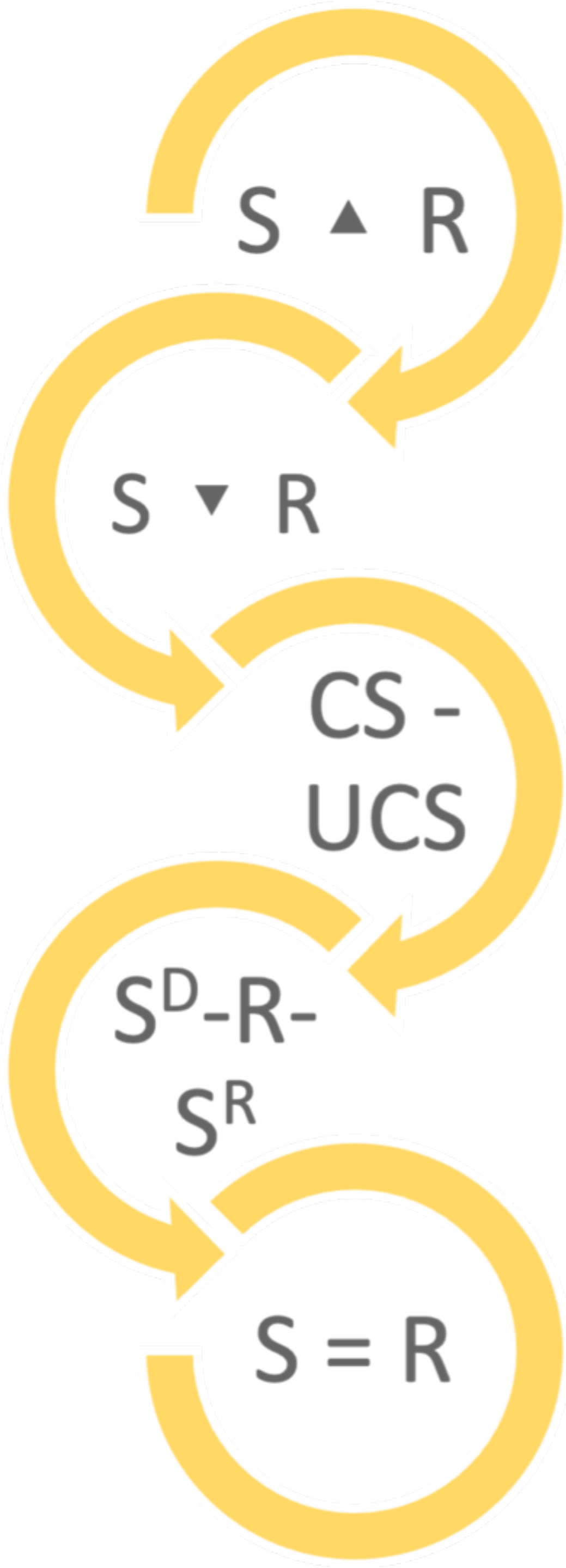
• Reinforce private verbal behavior that is non-compliant with the respondents



Integrating rule-governed behavior in treatment designs

Harmful sexual behavior





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We need to integrate rule-governed behavior and private verbal behavior into our analysis of the organism

«What is inside the skin, and how do we know about it? The answer is, I believe, the heart of radical behaviorism.»

Skinner, 1974

References

- Blakely, E., & Schlinger, H. (1987). Rules: Function-Altering Contingency-Specifying Stimuli. *The Behavior Analyst*, 10(2), 183-187. <https://doi.org/10.1007/BF03392428>
- Bakken, T. L., Helverschou, S. B., Eilertsen, D. E., Heggelund, T., Myrbakk, E., & Martinsen, H. (2010). Psychiatric disorders in adolescents and adults with autism and intellectual disability: A representative study in one county in Norway. *Research in Developmental Disabilities*, 31(6), 1669-1677. <https://doi.org/10.1016/j.ridd.2010.04.009>
- Elliott, S. J., Marshall, D., Morley, K., Uphoff, E., Kumar, M., & Meader, N. (2021). Behavioural and cognitive behavioural therapy for obsessive compulsive disorder (OCD) in individuals with autism spectrum disorder (ASD). *Cochrane Database Syst Rev*, 9(9), CD013173. <https://doi.org/10.1002/14651858.CD013173.pub2>
- Galizio, M. (1979). Contingency-shaped and rule-governed behavior: Instructional control of human loss avoidance. *Journal of the experimental analysis of behavior*, 31(1), 53-70.
- Guertin, E. L., Vause, T., Thomson, K. M., Frijters, J. C., & Feldman, M. A. (2022). Obsessive-Compulsive Behaviors in Autism Spectrum Disorder: Behavior Analytic Conceptual Frameworks. *Behavior analysis (Washington, D.C.)*, 22(1), 81-99. <https://doi.org/10.1037/bar0000236>
- Hagopian, L. P., & Jennett, H. K. (2008). Behavioral Assessment and Treatment of Anxiety in Individuals with Intellectual Disabilities and Autism. *Journal of Developmental and Physical Disabilities*, 20(5), 467-483. <https://doi.org/10.1007/s10882-008-9114-8>
- Hansen, B., Hagen, K., Öst, L.-G., Solem, S., & Kvale, G. (2018). The Bergen 4-day OCD treatment delivered in a group setting: 12-month follow-up. *Frontiers in Psychology*, 9, 639-639. <https://doi.org/10.3389/fpsyg.2018.00639>
- Hennessy, A., Seguin, D., Correa, S., Wang, J., Martinez-Trujillo, J. C., Nicolson, R., & Duerden, E. G. (2023). Anxiety in children and youth with autism spectrum disorder and the association with amygdala subnuclei structure. *Autism*, 27(4), 1053-1067. <https://doi.org/10.1177/13623613221127512>
- Lefebvre, A., Cohen, A., Maruani, A., Amsellem, F., Beggiato, A., Amestoy, A., Moal, M. L. L., Umbricht, D., Chatham, C., Murtagh, L., Bouvard, M., Leboyer, M., Bourgeron, T., & Delorme, R. (2021). Discriminant value of repetitive behaviors in families with autism spectrum disorder and obsessional compulsive disorder probands. *Autism research*, 14(11), 2373-2382. <https://doi.org/10.1002/aur.2570>
- Malott, R. W. (1989). The achievement of evasive goals: Control by rules describing contingencies that are not direct acting. In *Rule-governed behavior: Cognition, contingencies, and instructional control* (pp. 269-322). Springer.
- Moss, J., Oliver, C., Arron, K., Burbidge, C., & Berg, K. (2009). The Prevalence and Phenomenology of Repetitive Behavior in Genetic Syndromes. *Journal of Autism and Developmental Disorders*, 39(4), 572-588. <https://doi.org/10.1007/s10803-008-0655-6>
- Nilssen, K. M. (2024). *Regelstyringsbegrepet i atferdsanalysen* [PowerPoint]. NAFO, Storefjell, Norge.
- Rodrigues, M., Gomes, A., Santos, E., & Figueiredo, Z. (2021). Co-occurring Obsessive-compulsive Disorder, Autism Spectrum Disorder and Intellectual Disability: A Case Report. *Revista Portuguesa de Psiquiatria e Saúde Mental*, 7(1), 31-34.
- Schlinger, H., & Blakely, E. (1987). Function-Altering Effects of Contingency-Specifying Stimuli. *The Behavior Analyst*, 10(1), 41-45. <https://doi.org/10.1007/BF03392405>
- Ströhle, A., Gensichen, J., & Domschke, K. (2018). The Diagnosis and Treatment of Anxiety Disorders. *Dtsch Arztebl International*, 115(37), 611-620. <https://www.aerzteblatt.de/int/article.asp?id=200319>
- Skinner, B. F. (1974). *About behaviorism*. Alfred A. Knopf.
- Skinner, B. F. (1984). An operant analysis of problem solving. *Behavioral and Brain Sciences*, 7(4), 583-591.
- Vaughan, M. (1989). Rule-Governed Behavior in Behavior Analysis. In S. C. Hayes (Ed.), *Rule-Governed Behavior: Cognition, Contingencies, and Instructional Control* (pp. 97-118). Springer US. https://doi.org/10.1007/978-1-4757-0447-1_3
- Yates, P. M., & Kingston, D. A. (2006). The self-regulation model of sexual offending: the relationship between offence pathways and static and dynamic sexual offence risk. *Sex Abuse*, 18(3), 259-270. <https://doi.org/10.1177/107906320601800304>