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Structural explanation:

- Common in social sciences;
- Object of increasing interest in philosophy; no unified account;
- Largely ignored in psychology (but see Vasilyeva, in prep.)

Objective: clarify characteristics of structural explanation to prepare the ground for a unified account and empirical work.



Why did Lisa quit her job after having a baby?

Non-structural explanations: Because she prefers to spend time with the baby; She is a woman, and women are inherently predisposed to value childcare over career.

A structural explanation: This outcome is likely given Lisa's position in the social structure. Structural constraints: Lisa makes less than her husband (typical of structures with a gender wage gap), neither parent's job offers an extended paid parental leave, they can't afford to have him take the unpaid leave, etc.

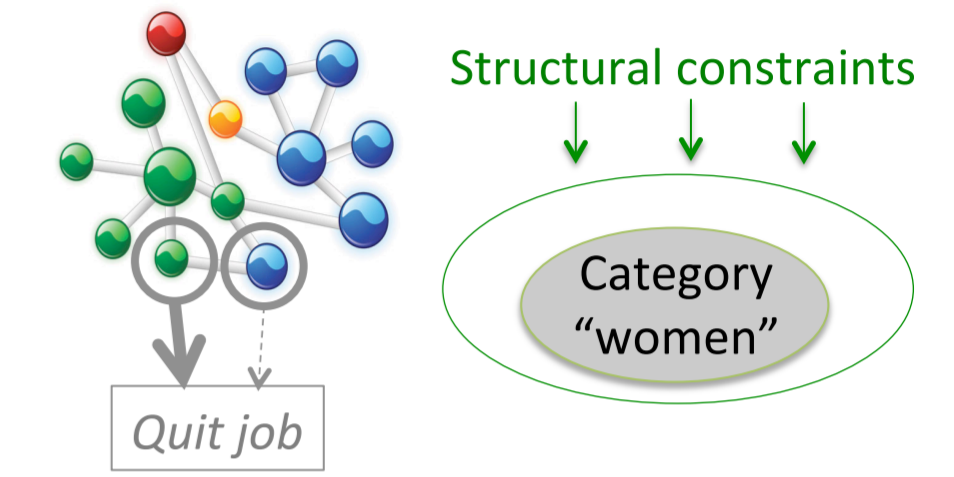
Garfinkel (1981) and Haslanger (2015): structures create a different "choice architecture" for occupiers of different positions within the structure (alter the probability distribution over options); specifying the position within the structure and the corresponding *possibility space* can explain behavior.



Why did the dog treat end up in a gully?

Because of [shape, weight, size, type, detailed trajectory of the treat].

Because it was inside the ball that rolled into the gully

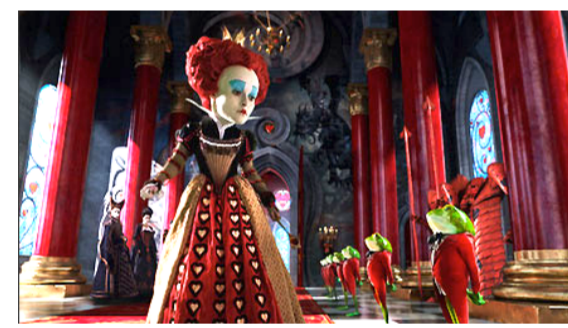


Structural explanations identify higher-level, structuring causes. Are structural explanations a **sub-type of causal explanations?**

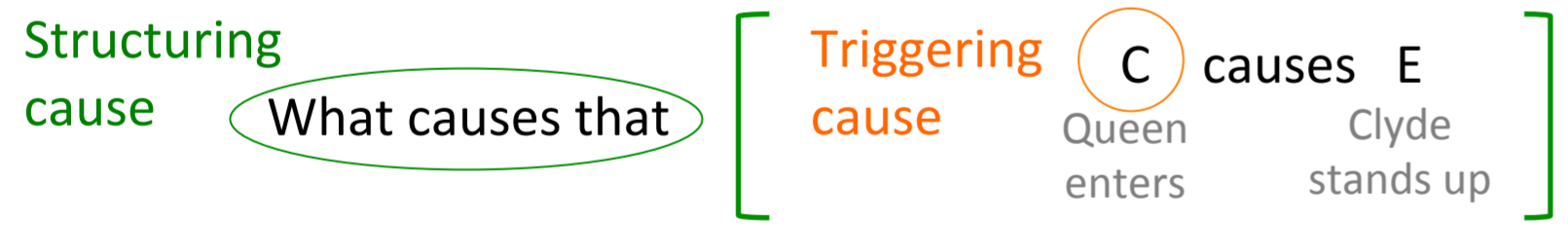
... cite external factors. Are they a **sub-type of situation explanations?**

... often involve token-to-type abstraction. Are they a **sub-type of categorical explanations?**

Structuring vs. triggering causes (Dretske, 1988)



- Why did Clyde stand up?
- **Because the Queen entered**
...and Clyde is the Queen's subject bound by the rules of court etiquette.

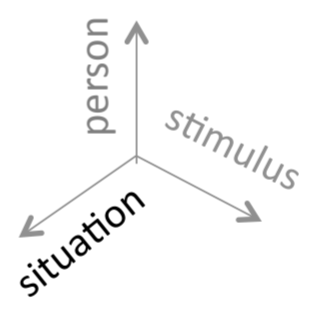


But: constitutive & occupying relationships (structure – node – occupier) conflict with many assumptions about (event) causation:

- Causes and effects are distinct events
- Causes precede their effects
- Causal relation is asymmetrical; only intervene on causes to influence effects. (Craver & Bechtel, 2006)

Implication: "structuring causes" may not be, strictly speaking, causes. Explanatory work is done by identifying **non-causal part-whole** relationships that moderate causal principles acting on each part.

ANOVA, or "cube model": behavior is attributed to co-varying factors (person, situation or stimulus) (Kelley, 1973; Forsterling, 1989)



But, a tacit assumption: the data (behaviors) come from an "unconfounded" factorial design, where person and external factors (situation and stimulus) are free to vary independently.

Structural explanations identify a **confound** between external and internal factors (e.g. between a category and a node in a structure).

In contrast to "merely external" factors, structural factors are **not candidate [triggering] causes** of the explanandum; they are candidate *moderators* for causal relationships that the explanandum participates in. (on moderation, see Vasilyeva*, Blanchard* & Lombrozo, 2016, *co-1st authorship)

But: the abstracting token-to-type shift is neither sufficient nor necessary (cf. Wilkenfeld, 2016): it only happens when the object of explanation is originally formulated at a level too specific relative to the constraining structure.

The shift from the category that occupies a node to the node itself does not qualify as abstraction: **a container is not an abstract type of the contained.** A ball containing a dog treat is not a type of treat; the "women" node in a social structure containing the category of women is not a type of women.

Conclusion: The key characteristic of structural explanation is situating the object of explanation in a network of relationships within an organized, stable larger whole (a structure), and identifying how these relationships to other parts of the whole modify the probability distribution over possible states of the part whose behavior is explained.