The Grammar of Causation: pattern, construction, system
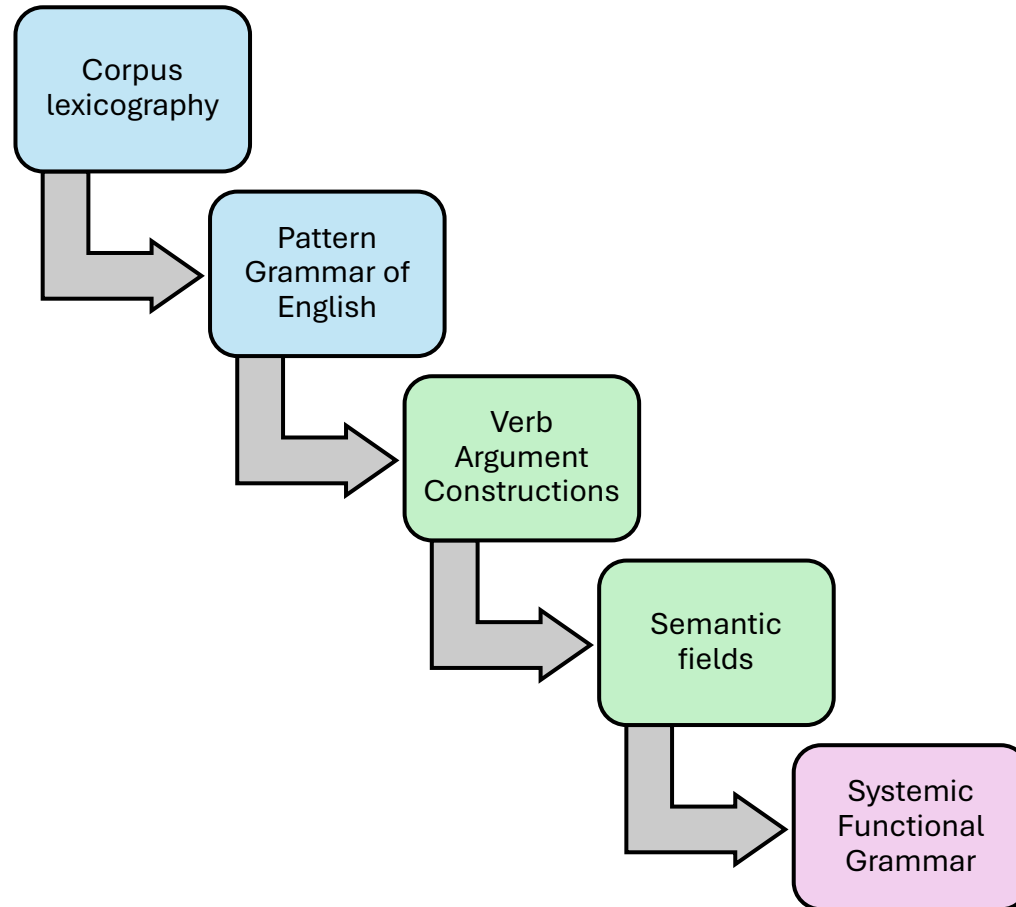
Paper given at ICAME45, Vigo, Spain, 18-22 June 2024

The project outline

Corpus lexicography → Pattern Grammar of English → Verb Argument Constructions → Semantic fields → Systemic Functional Grammar

Or in words…

- Take 50 verb complementation patterns from Francis et al. (1996): *Collins Cobuild Grammar Patterns 1: Verbs*. (See also grammar.collinsdictionary.com/grammar-pattern)

- Re-state those patterns as constructions. Each pattern is re-interpreted as between 4 and 40 constructions.

- Altogether 700+ constructions have been identified. Each construction has an 'empty slot' into which a small range of verbs fits (Haspelmath 2023).

...in words

- Take 8 semantic fields (Communication, Cognition, Equivalence, Logical_Relations, Change, Creation, Location_Change, Possession_Transfer)

- Find all the constructions that express each semantic field.

- Arrange those constructions in a network modelled on the 'choice' networks of Systemic Functional Grammar (Halliday and Matthiessen 2014).

Grammar patterns

- A grammar pattern is a code consisting of abbreviations that describes the behaviour of a word in English.

- The patterns were used in the 1995 Cobuild dictionary.

- Grammar patterns were developed initially by Jyl Francis (Francis 1993).

Examples of patterns without prepositions

- **V n** = verb + noun phrase e.g. *Jo <u>bought</u> a cake*.
- **V adj** = verb + adjective phrase e.g. *Jo <u>felt</u> tired*.
- **V to-inf** = verb + to-infinitive clause e.g. *Jo <u>started</u> to cross the road*.
- **V n n** = verb + noun + noun e.g. *Jo <u>gave</u> Sal a cake*.
- **V n –ing** = verb + noun + -ing clause e.g. *Jo <u>saw</u> Sal crossing the road*.
- **V n that** = verb + noun + that-clause e.g. *Jo <u>told</u> Sal that it was raining*.
- **V n wh** = verb + noun + wh-clause e.g. *Jo <u>asked</u> Sal what time it was*.

Examples of patterns with prepositions

- **V *against* n** e.g. *Jo <u>argued</u> against the decision.*
- **V *as* n** e.g. *Jo <u>emerged</u> as the winner.*
- **V *into* n** e.g. *Jo <u>turned</u> into a swan.*
- **V *on* n** e.g. *Jo <u>concentrated</u> on her work.*
- **V n *as* adj** e.g. *Jo <u>described</u> Sal as loopy.*
- **V n *in* n** e.g. *Jo <u>involved</u> Sal in her scheme.*
- **V n *into* –ing** e.g. *Jo <u>talked</u> Sal into investing in the stock market.*
- **V n *of* n** e.g. *Jo <u>persuaded</u> Sal of the value of gold.*
- **V n *with* n** e.g. *Jo <u>did not trouble </u>Sal with her worries.*

An example of constructions from a pattern: **V *after* n**

Cx #1	Cx #2	Cx #3	Cx #4
'yearn after something'	'follow after someone'	'chase after something'	'clean up after someone'
A person wants something very much.	A person follows another person with negative intentions.	A person tries to get a physical or abstract thing that is difficult to get.	A person helps someone, especially by correcting their mistakes.
hanker, hunger, lust, thirst, yearn	*chase, follow*	*chase, go, run*	*clean up, clear up, run around, tidy up*
...hankered after the travelling life...	*...threatened, spat on, chased after...*	*...chasing after something you can't have...*	*...expected other people to clean up after him.*

Describing a construction: V n *as* n. Cx 3.

Name	the strike someone as construction
Description	A person or entity is perceived as having a characteristic. The subject indicates the perceived person or entity. The NP following the verb indicates the perceiver.
Verbs	strike, impress
Example	…but he doesn't strike me as a dictatorial megalomaniac. (BNC)
Semantic field and roles	Cognition. NP1+NP3: Phenomenon; NP2: Cognizer Equivalence. NP1: Carrier; NP2: Cognizer; NP3: Attribute

An example of a semantic field: Causation

- In English:
  - …expressed through verbs: *kill, break, drop*
  - …expressed periphrastically: Biber et al. (1999: 363) verbs of facilitation or causation: *allow, cause, enable, force, help, let, require, permit*
- Gilquin (2006):
  - 'billiard-ball causation' e.g. *The tree falling on it made the lorry lose its loading.*
  - 'direct manipulation' e.g. *I got John to repaint the wall.*
- Stefanowitsch and Gries (2003):
  - Collostructions: the causative 'into' construction (*I tricked John into repainting the wall.*)
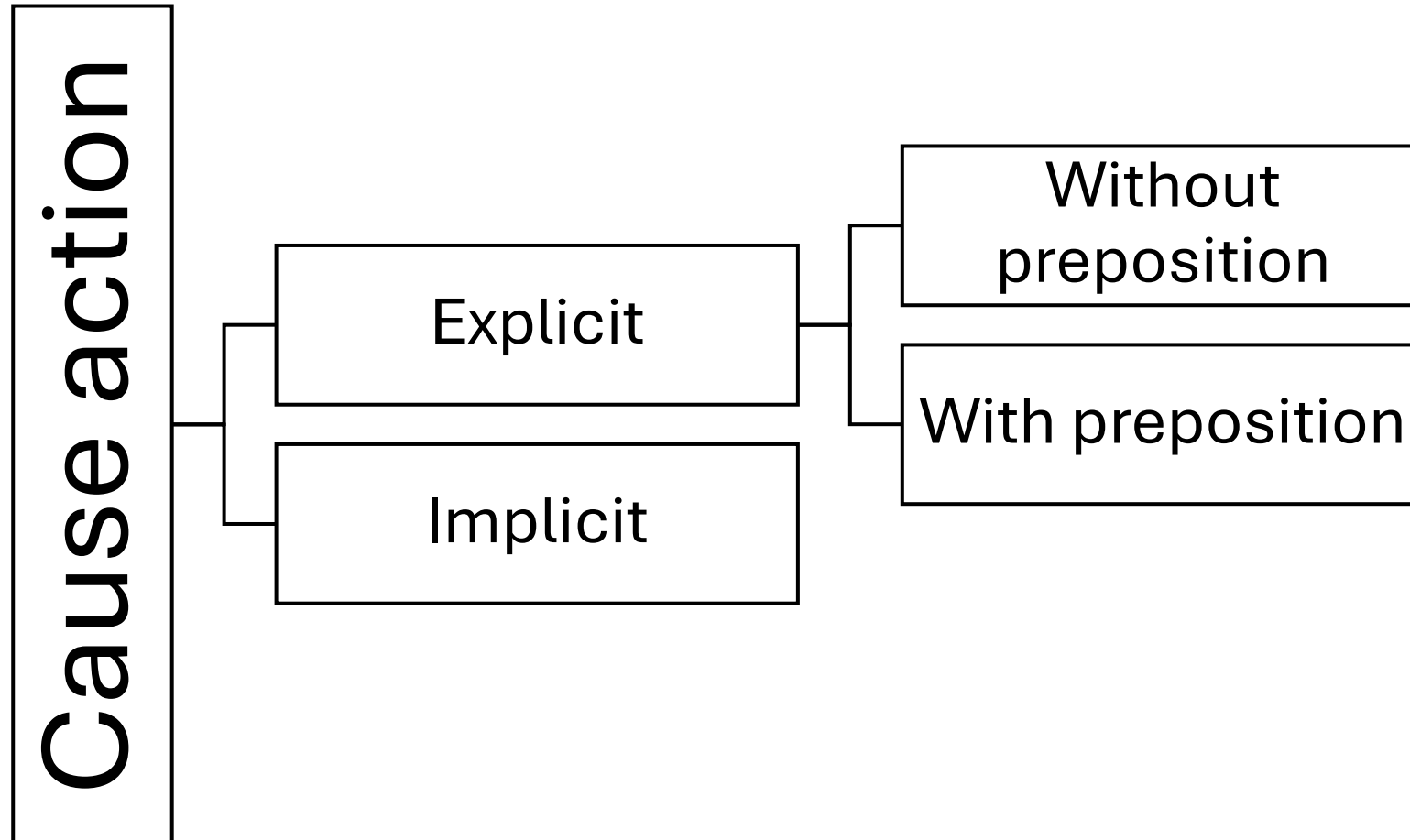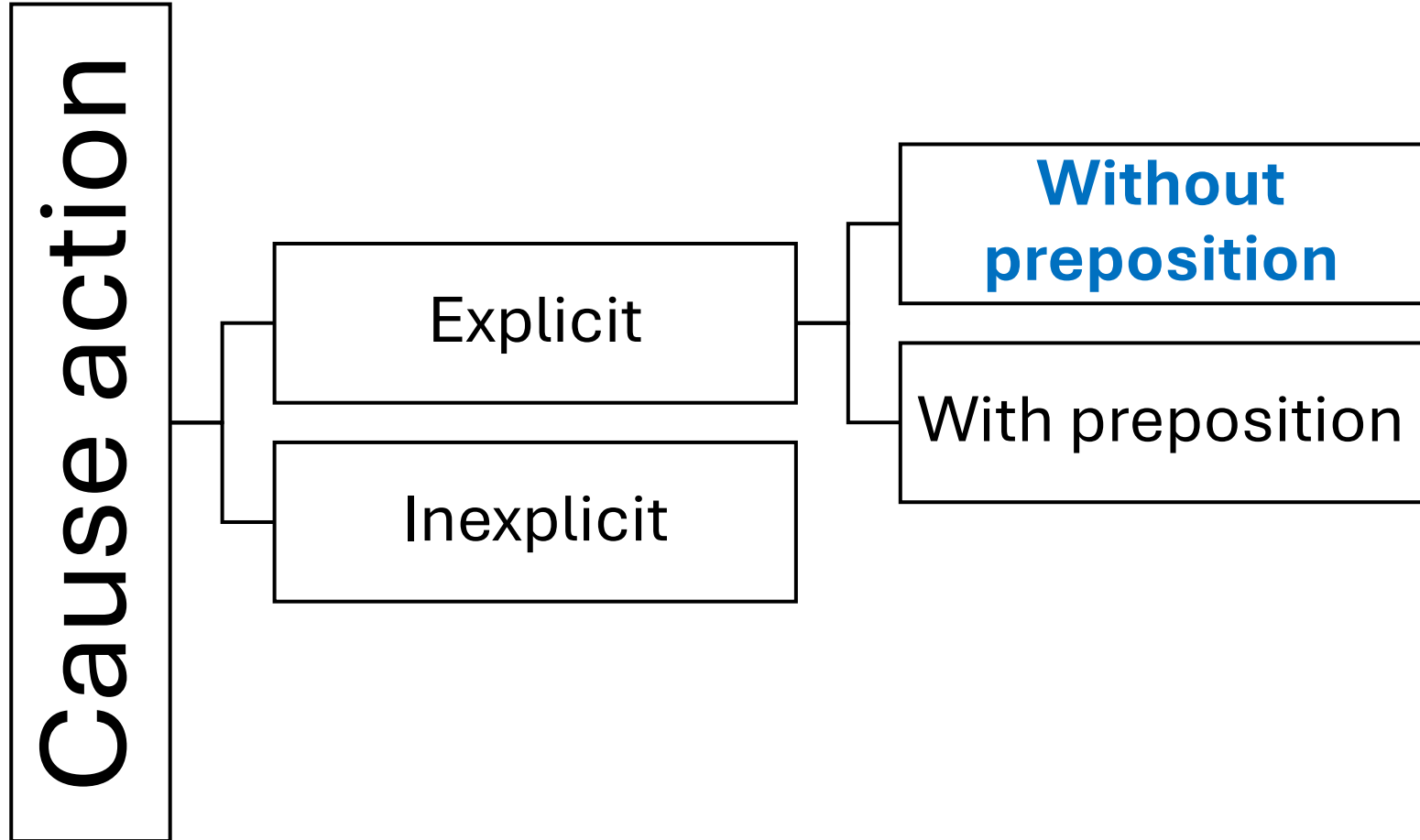
Causing an action or event

- A speaker of English expresses that:
    - A person or thing makes someone do something
    - A person or thing makes something happen
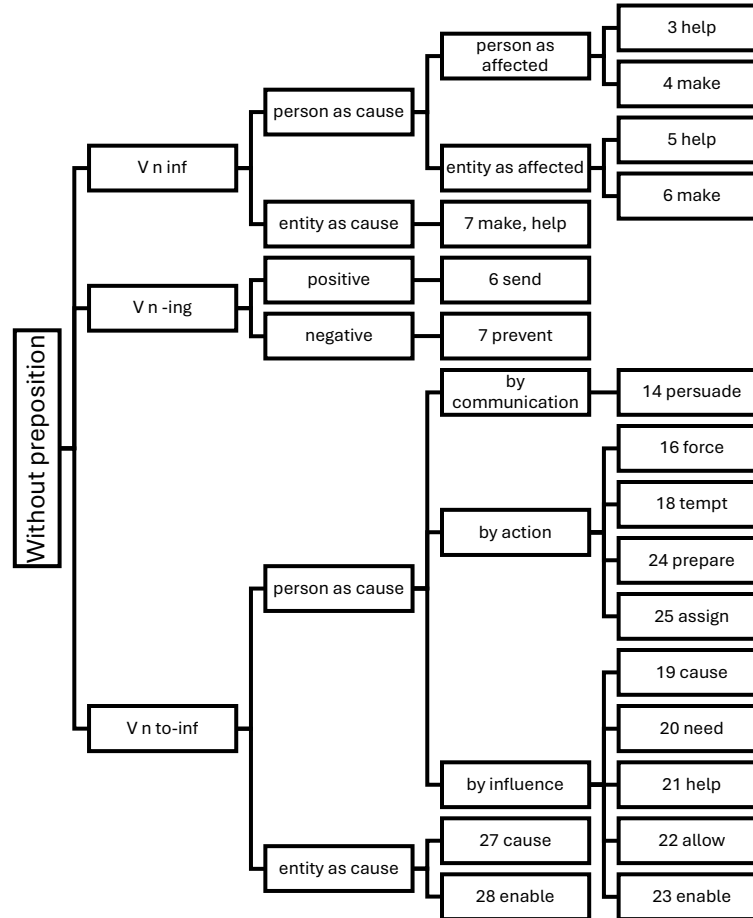
Causing an action or event: resources

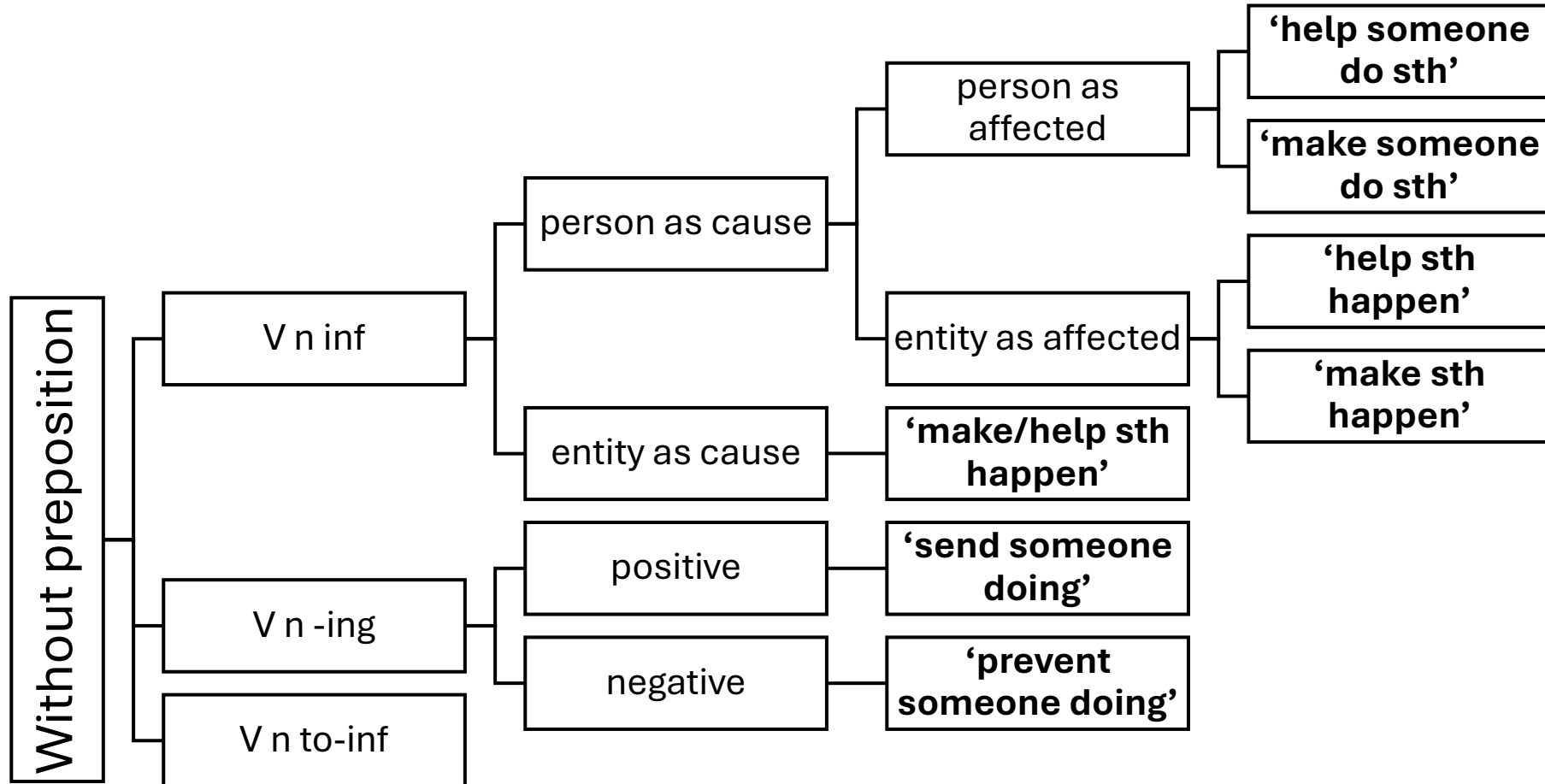| Pattern type	With preposition: *Raj talked Lucy into leaving*	Without preposition: *Raj forced Lucy to leave*
Explicitness	All elements are explicit: *Investment enabled the company to stay open.*	Some elements are inexplicit: *The stone broke the window.*
Causer type	Causer is a person: *Raj talked Lucy into leaving*	Causer is an entity: *Investment enabled the company to stay open.*
Cause type	Construed as communication: *Lucy talked Raj into robbing the bank*	Construed as action: *Lucy tricked Raj into robbing the bank*
Result type	Result is action: *Lucy forced Raj to leave*	Result is absence of action: *Lucy prevented Raj from leaving*

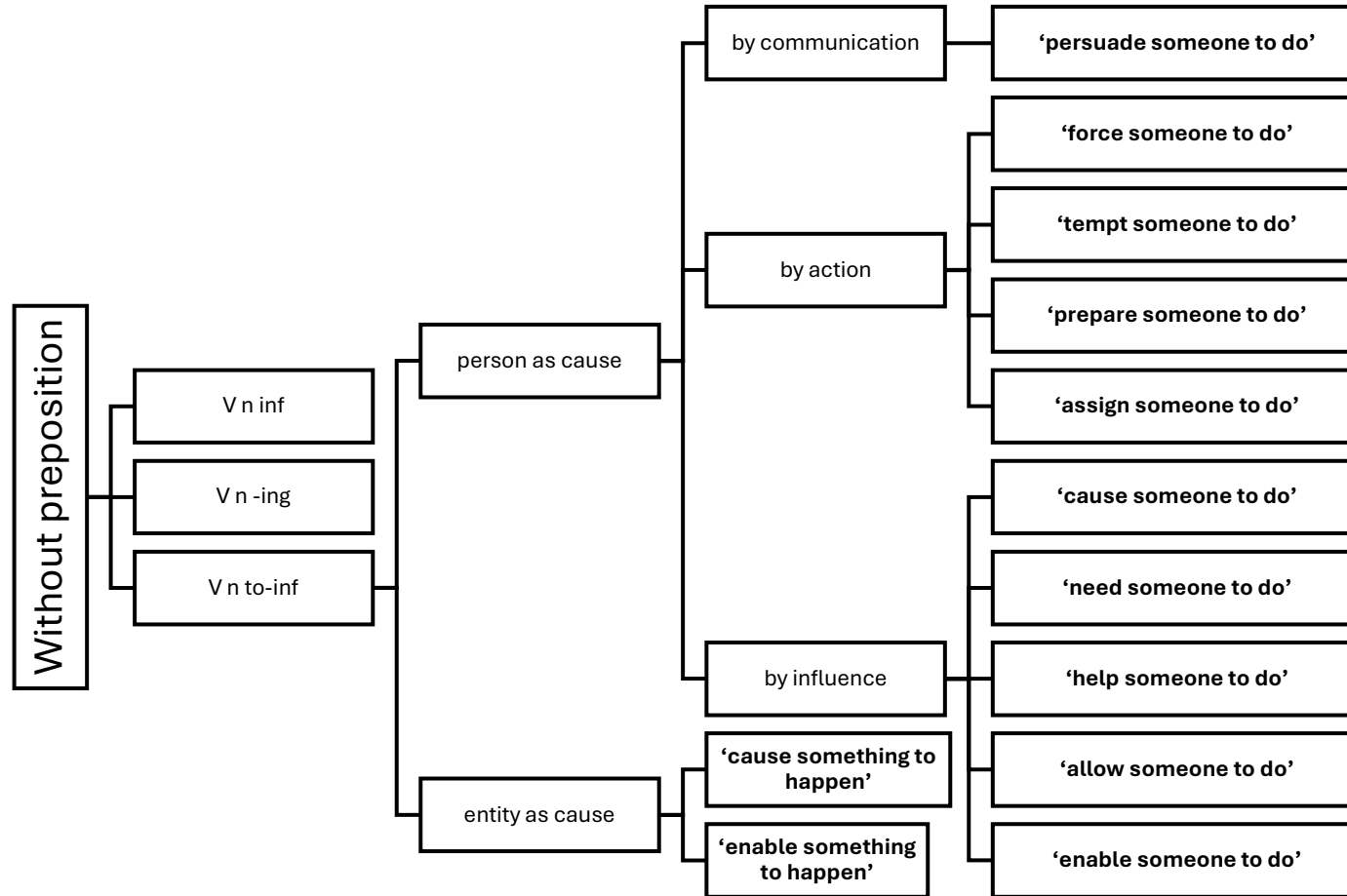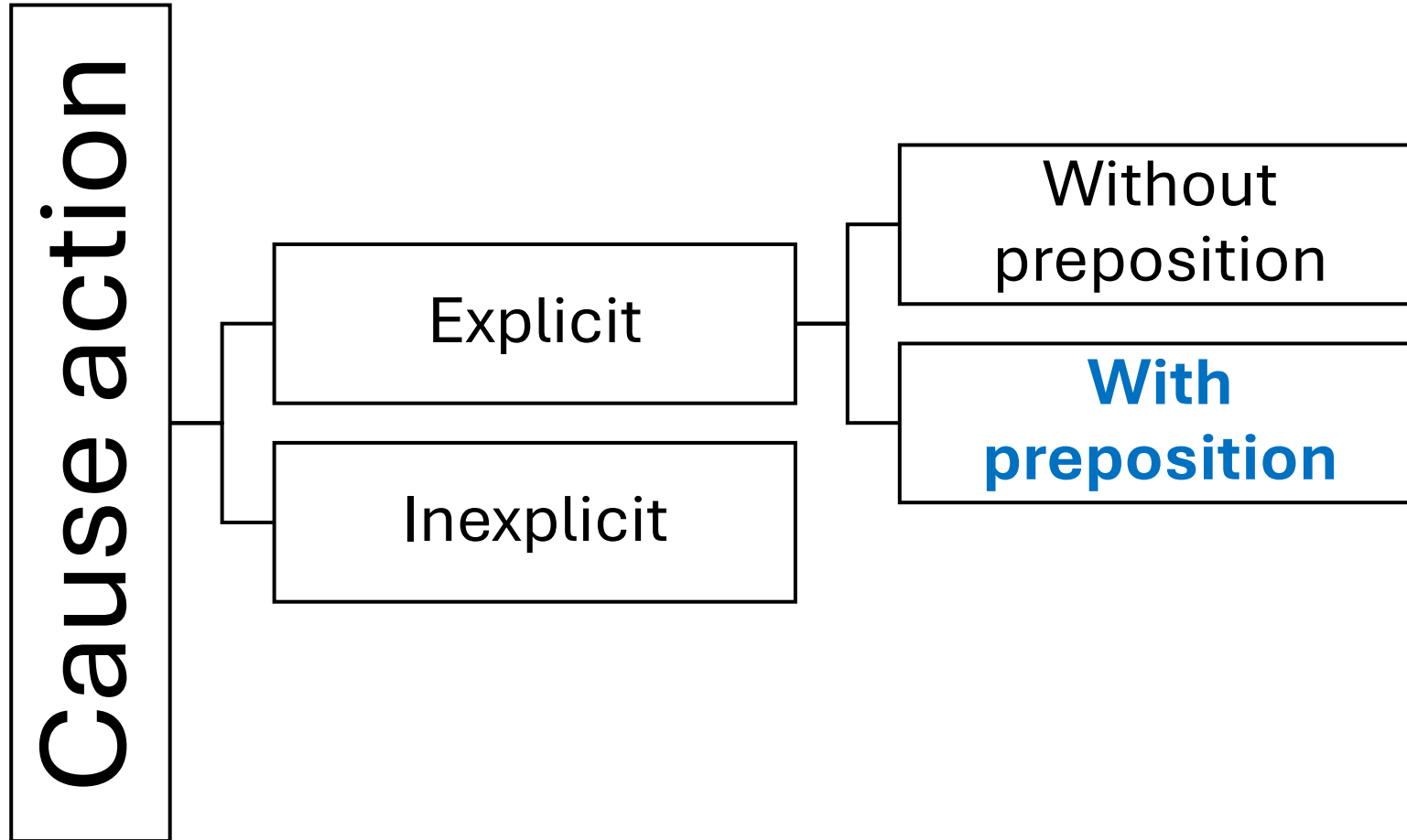# Showing this in a network: first part

The network: second part

More legible:

More legible:

The network: third part

with preposition
- positive
  - V n into n/ing
    - by communication
      - 'talk / bully / frighten / charm / persuade someone into doing'
      - 'talk / pressure / intimidate/ charm someone into action'
    - by action
      - 'trick someone into doing'
      - 'trap someone into action'
      - 'jolt someone into action'
  - V n to n
    - 'incite someone to action'
- negative
  - V n from n
    - person as cause
      - 'person restrains someone from action'
    - entity as cause
      - 'entity prevents someone from action'
  - V n out of n
    - 'person talks someone out of action'

The network: fourth part

implicit

- V n (relational) — **'thing ensures event'**
- V n (material)
  - **'person drives a car'**
  - **'person moves person along'**
- V that
  - person as cause — **'person arranges that something happens'**
  - entity as cause — **'thing dictates that something happens'**
- V wh
  - person as cause — **'person influences what happens'**
  - entity as cause — **'thing determines what happens'**
- V n to n
  - **'delegate action to someone'**
  - **'apply oneself to action'**
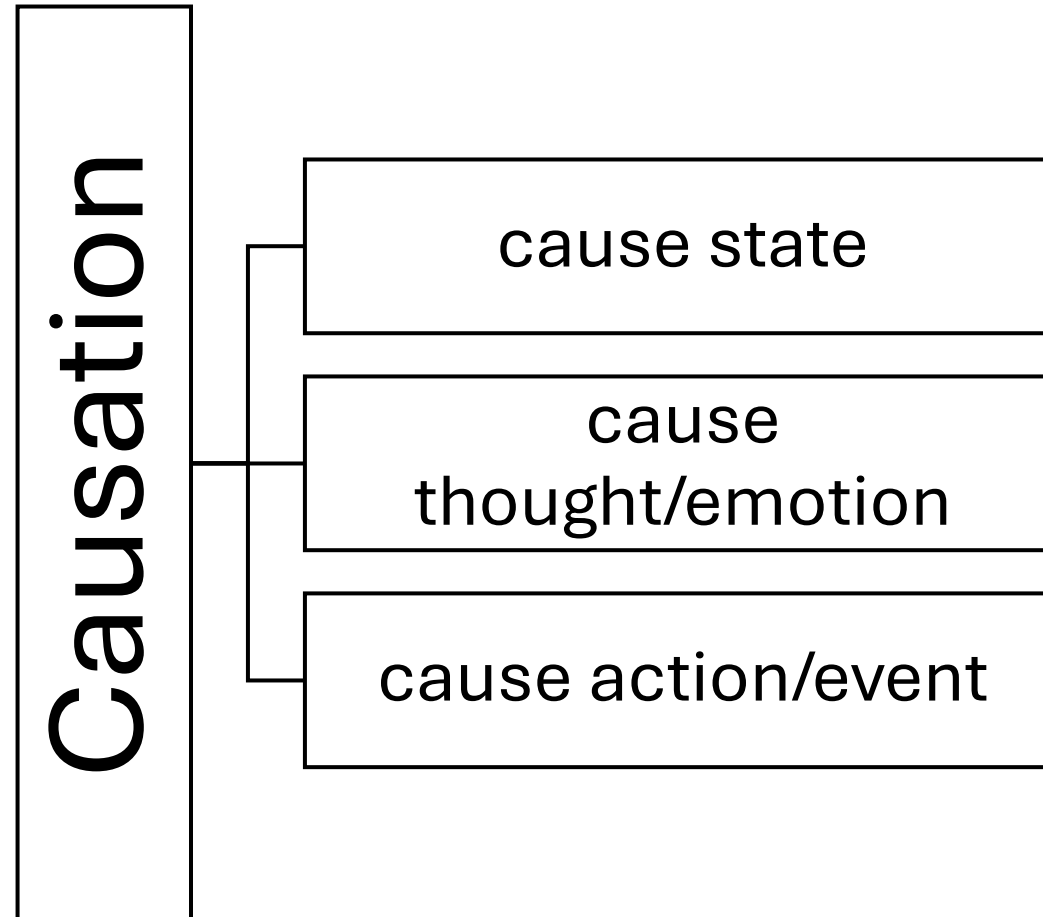
But that's not all

# Causation: a preliminary network

Causing change in thought: the constructions

| Construction	Construction	Verbs	Example
the 'entity decides s.o.' construction	entity change_thought person	claim/hold attention, convince, decide, enter mind	*Apparently her innocent looks convinced him.*
the 'person persuades s.o. that' construction	person change_thought person that situation	convince, persuade	*He persuaded me that acting was infinitely fascinating.*
the 'entity decides s.o. against' construction	entity change_thought person against something	decide, turn	*Their actions ... decided him against pushing on with his ambitions.*
the 'entity decides s.o. on something' construction	entity change_thought person on something	decide, sell	*...fears for personal safety decided them on this course.*
The 'person blocks thought out of mind' construction	person cause_stop thought out of mind	block, blot	*Her instinct was to block it out of her mind.*
The 'entity casts doubt on sth' construction	entity put thought on topic	cast doubt, throw light, place importance	*Some studies have cast doubt on the drugs' safety...*

The network
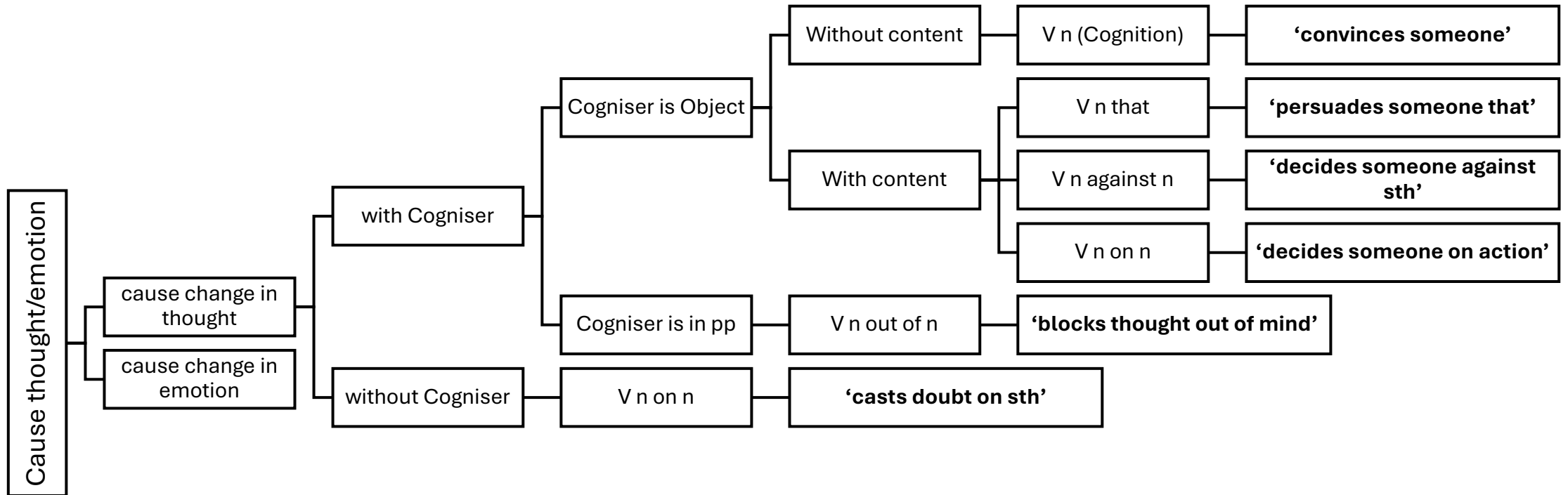
Causing change in emotion: the constructions

Construction	Construction	Verbs	Example
the 'entity interests s.o.' construction	entity cause_emotion person	attract, hurt, interest, please, surprise, upset, worry	*She read only the news that interested her.*
the 'entity arouses emotion in s.o.' construction	entity cause emotion in person	arouse, stir	*She'd aroused suspicion in some members of staff.*
the 'entity jolts s.o. out of emotion' construction	entity change_emotion person out of emotion	jolt, shake	*…an investigation … shakes her out of her complacency.*
the 'entity amazes s.o. with entity' construction	entity cause_emotion person with thing	amaze, bore, console, dazzle, excite, surprise, tantalise, traumatise	*You'll … amaze your friends with your … skills.*
the 'person confronts s.o. with entity' construction	person cause_awareness person with thing	acquaint, bother, burden, confront, face, familiarise, tempt	*It's rude of me to burden you with my troubles.*
the 'entity leaves impression' construction	entity cause impression	give, leave, suggest	*Two other plays left a more lasting impression.*

The network
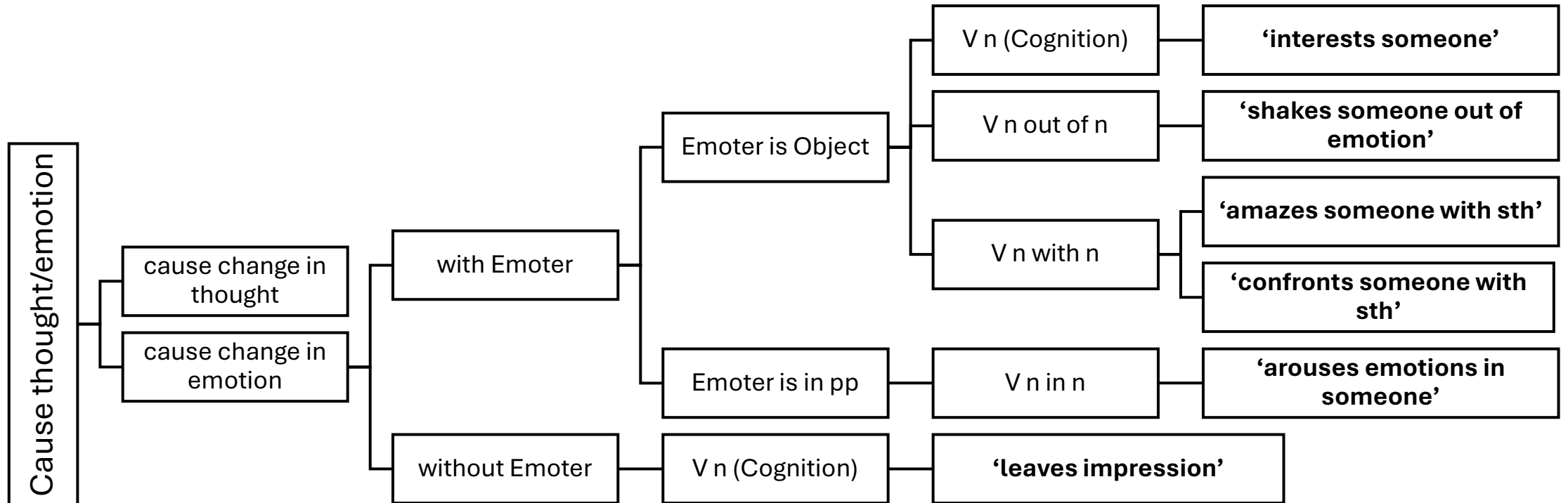
And there's more...

Causing a (change in) state: constructions with explicit outcome

Causer		Affected	Result
He	pushed	the door	open.
The board	elected	her	president.
This decision	led	to her	having many problems.
The press	hounded	the president	out of office.
The courts	deported	him	to America.
Result		**Causer**	
Brian's success	resulted from /arose out of	the changes.	
Affected		**Result**	
The victim	bled	to death.	
The train	ground	to a halt.	

Part of the network
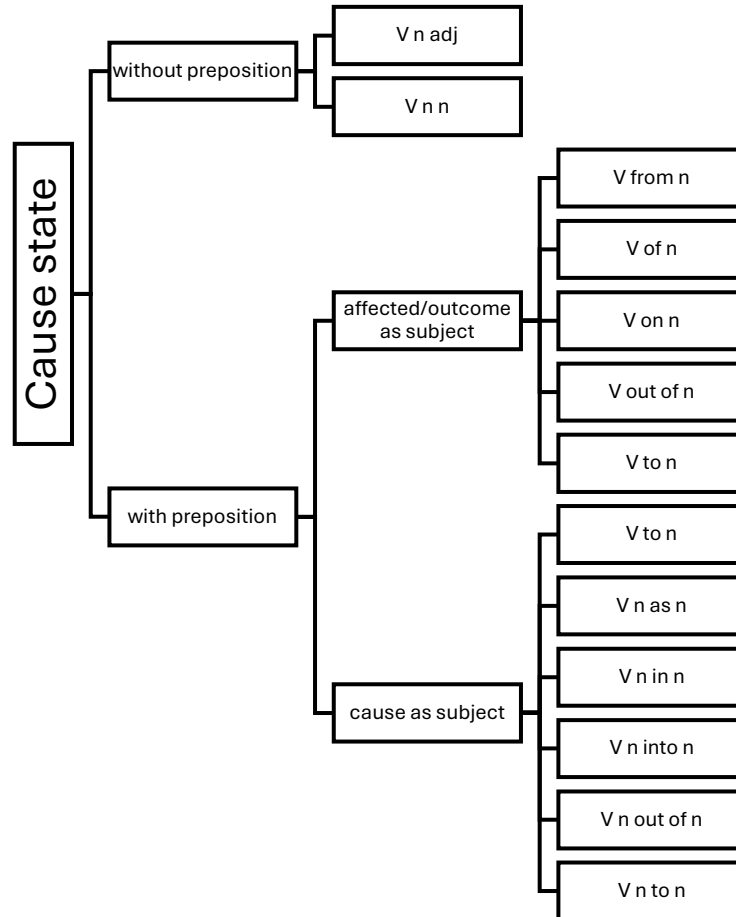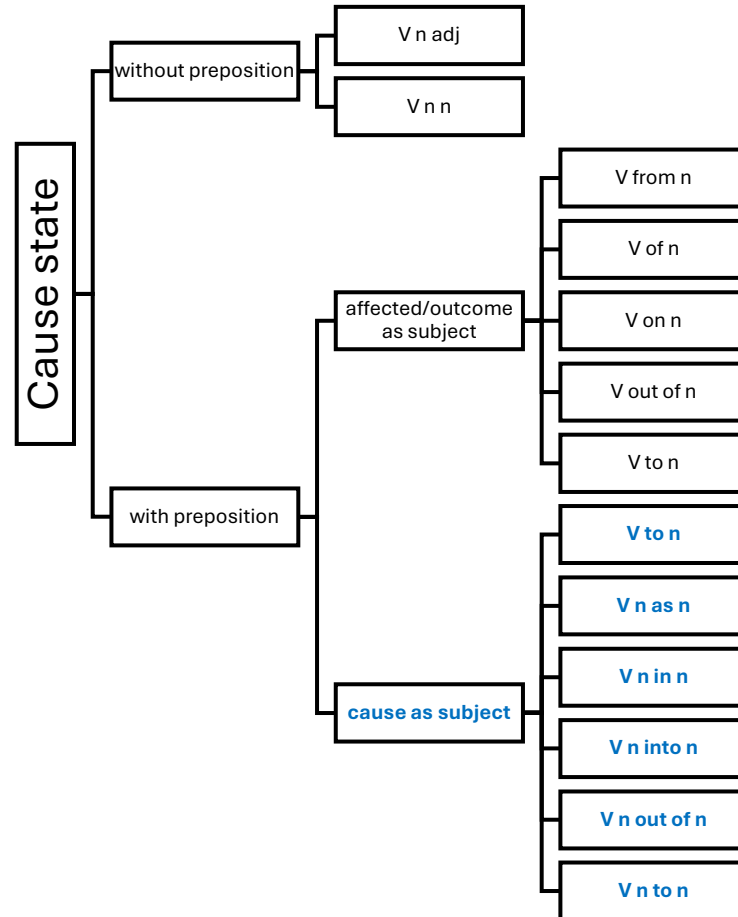
Part of the network

Part of the network expanded

cause state: explicit

- with phrase
- with preposition
  - affected/outcome as subject
  - cause as subject
    - V to n — 'lead to outcome'
    - V n as n — 'elect … as role'
    - V n in n — 'land … in situation'
    - V n into n
      - 'co-opt … into role'; 'plunge …into situation'
      - 'drag … into place'
    - V n out of n
      - 'hound … out of role'
      - 'shut … out of situation'; 'bail out of situation'
    - V n to n
      - 'deport … to place'; 'shackle…to thing'
      - 'broaden …to scope'
      - 'promote … to role'; 'condemn …to situation'
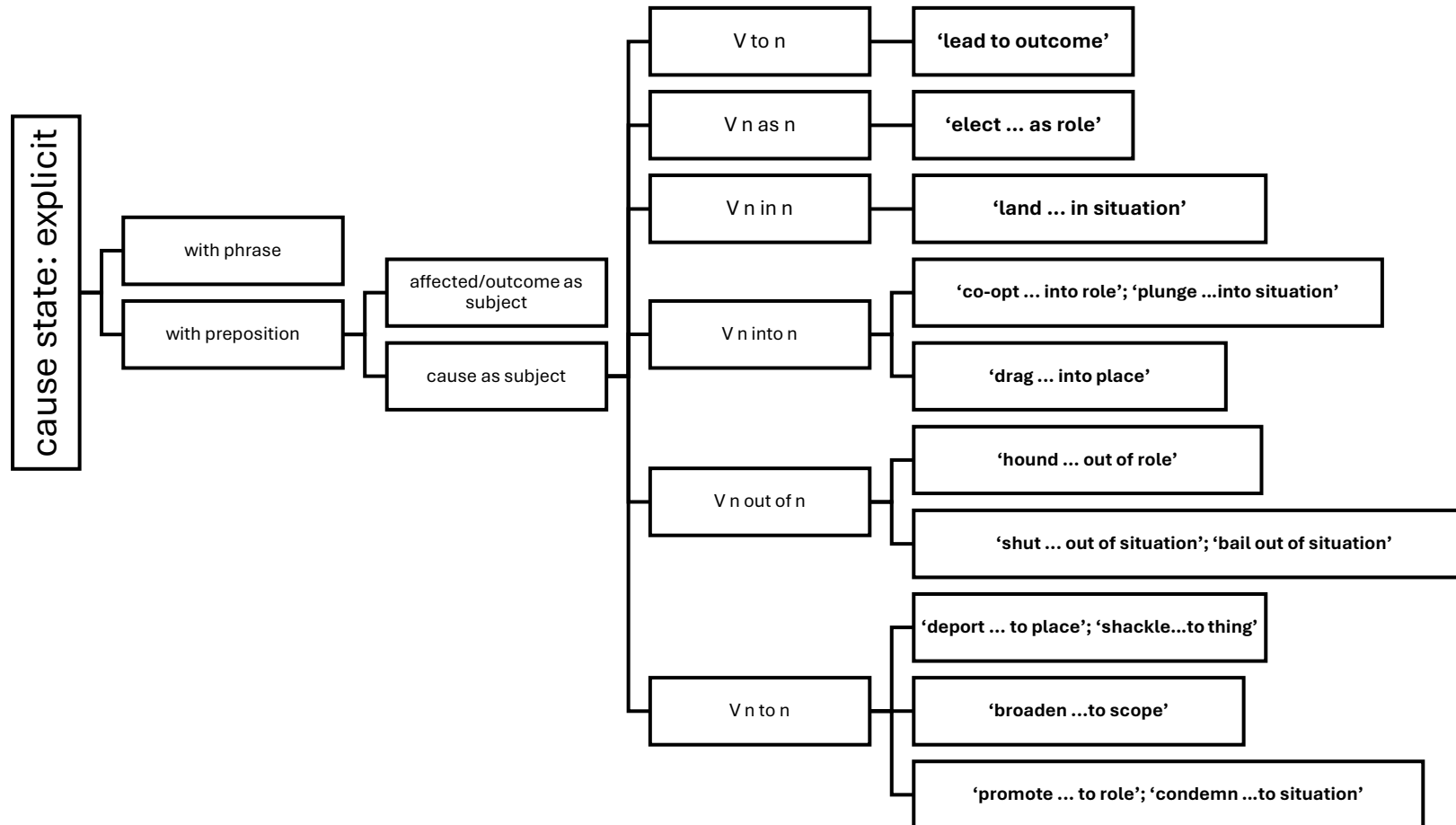
Causing a (change in) state: constructions with an inexplicit outcome (examples)

Cause state: inexplicit

- **without prep**
  - **V n** → 'break sth'; 'change sth'
  - **V n n** → 'cause s.o. harm'; 'charge s.o. money'
- **with prep**
  - **V from n** → 'benefit from'; 'suffer from'
  - **V n into n** → 'introduce variable into situation'
  - **V n with n** → 'decorate sth with sth'
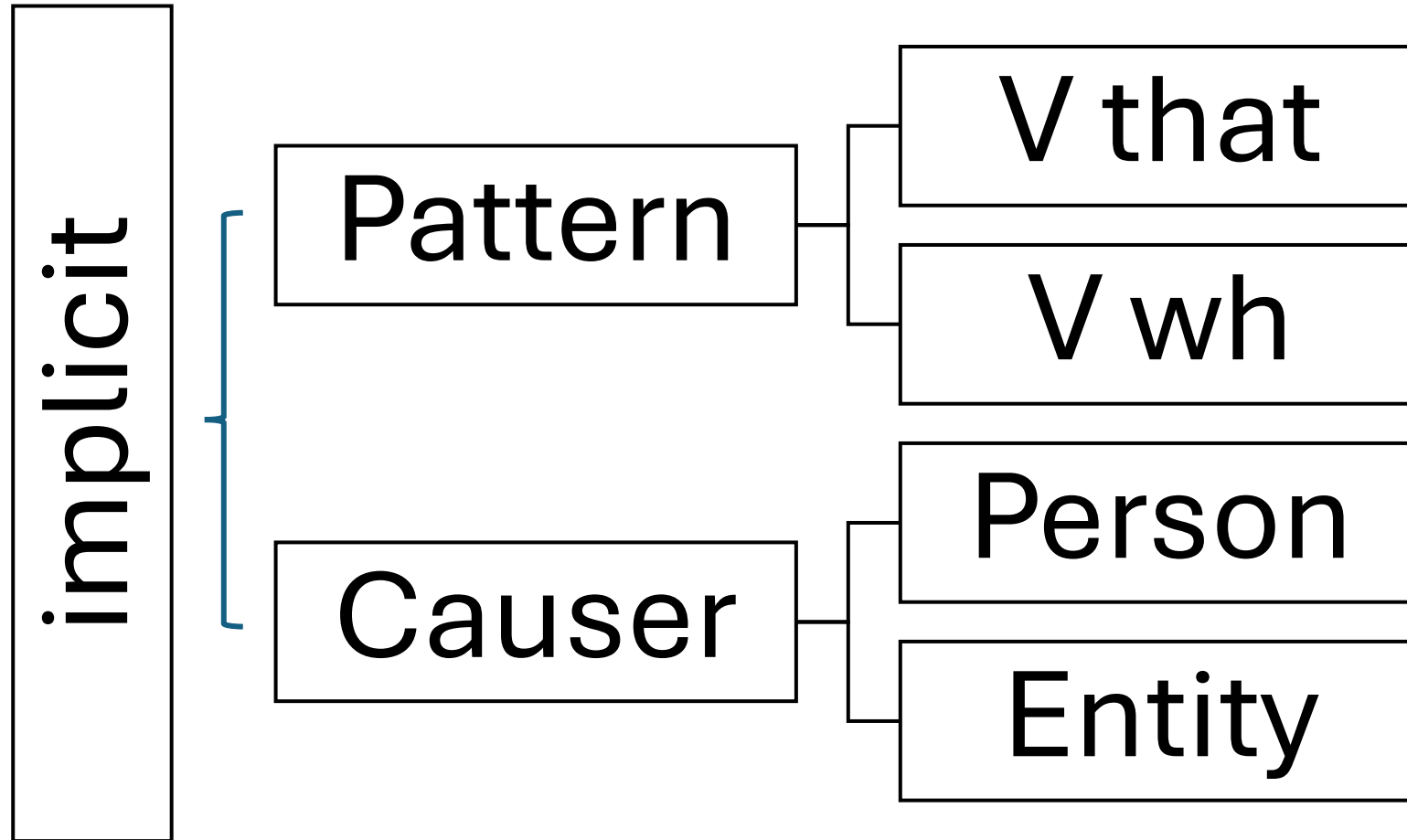 - **V n with n** → 'imbue a situation with emotion'
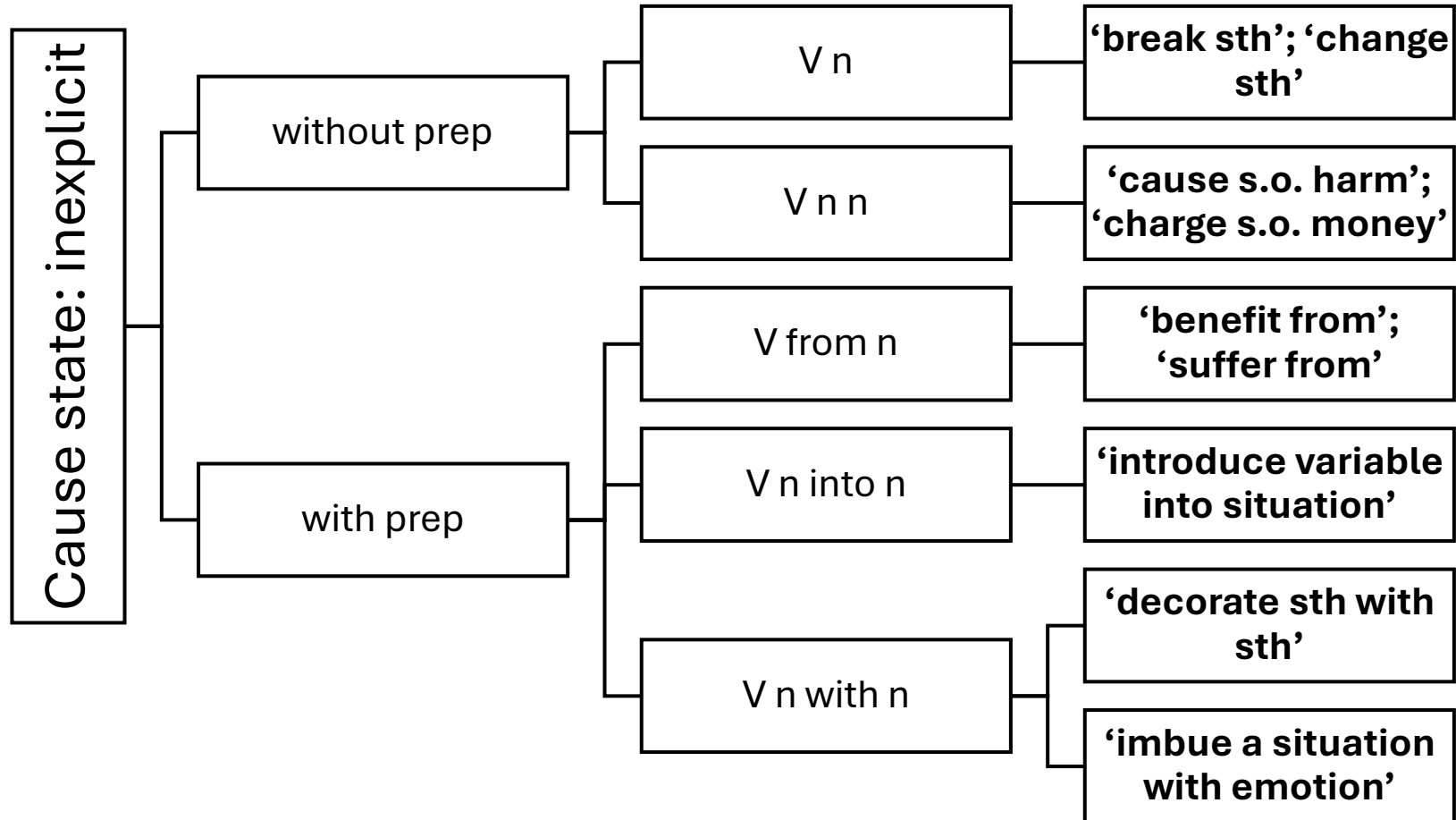
The networks and SFL

- Cf. Matthiessen (2023):

- These networks are unidimensional
- They are taxonomies rather than systems

- They contain a lot of repetition (see next slide)
- 'Choices' are in fact simultaneous
- We can show this in a system network

A network showing repetition

implicit

- **V that**
  - **person as cause** — 'person arranges that something happens'
  - **entity as cause** — 'thing dictates that something happens'
- **V wh**
  - **person as cause** — 'person influences what happens'
  - **entity as cause** — 'thing determines what happens'
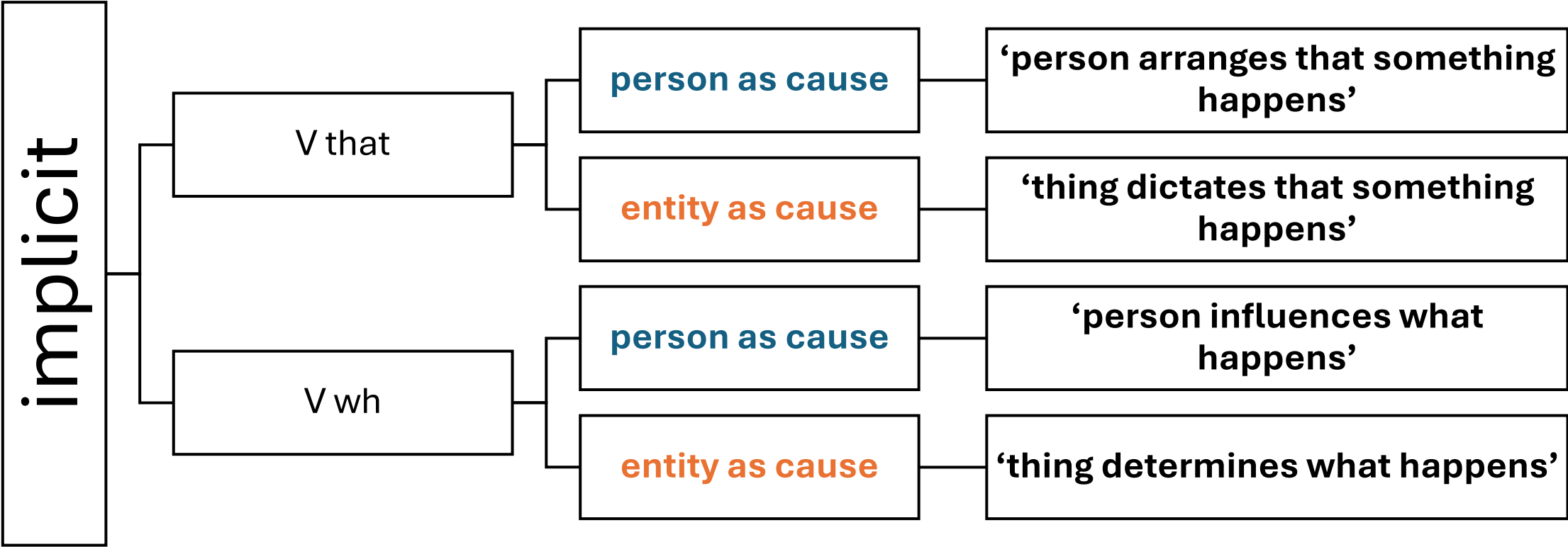
Showing the network as a system

implicit
- Pattern
  - V that
  - V wh
- Causer
  - Person
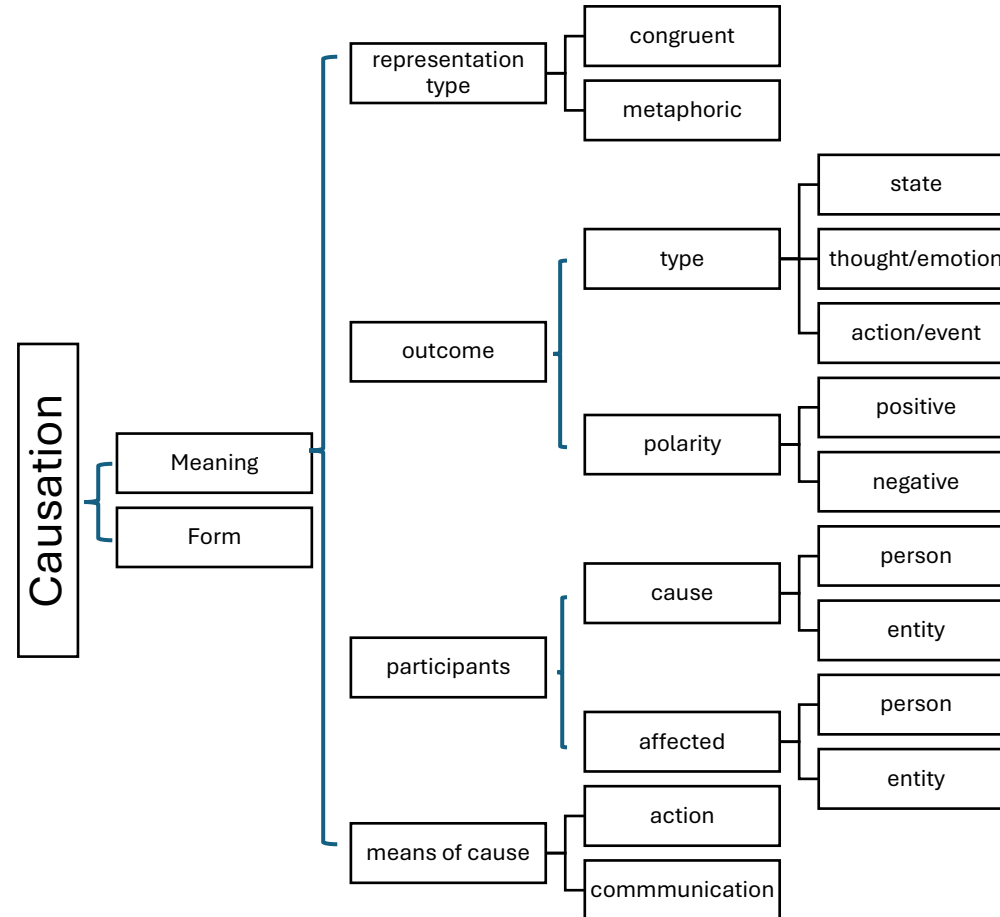 - Entity

Causation: the Systemic Network
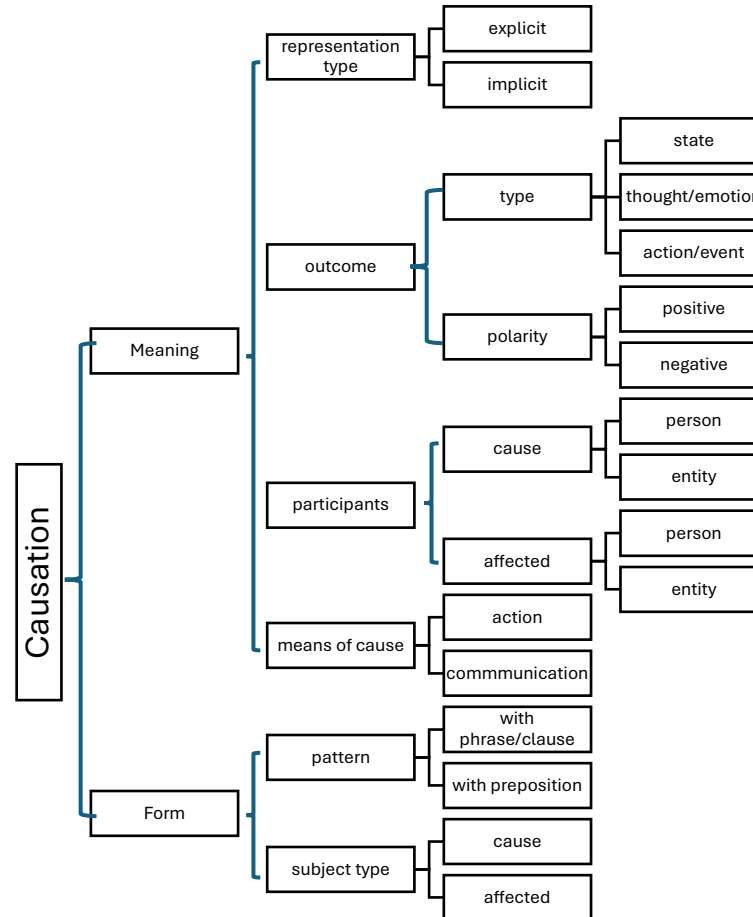
More legible

More legible
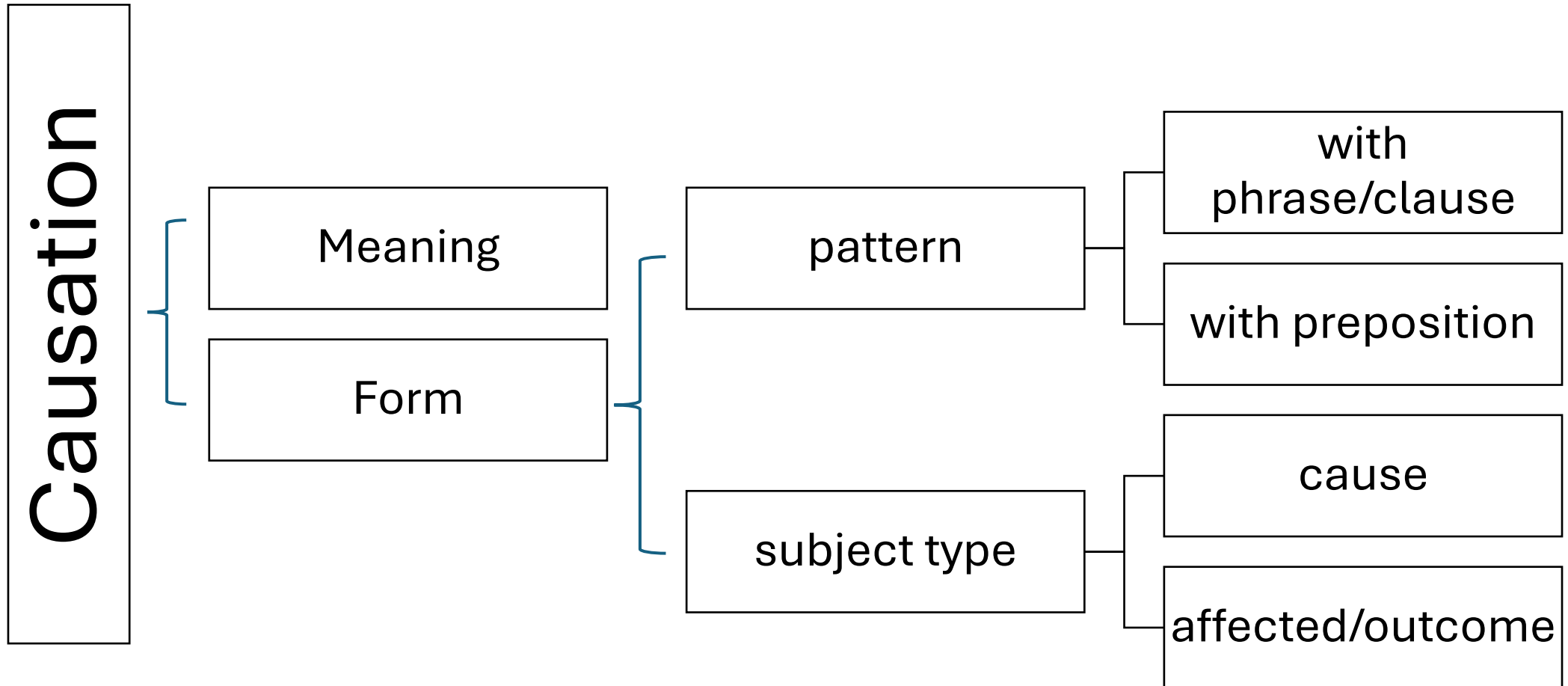
What the system networks capture 1

- Expressing causation means using resources of 'meaning' and 'form'. These can be represented as simultaneous / independent choices.

What the system networks capture 2

- The relevant resources of form are:
  - the verb complementation patterns, with or without prepositions, and
  - the subject types (subject is cause or subject is affected or outcome).

What the system networks capture 3

- Meaning resources make these distinctions:

- Whether the representation is explicit or inexplicit

- What the outcome of the cause is: action, a change in thought, or a change in state

- And whether the outcome is positive (something done) or negative (something not done)

- Whether the participants are people or entities – this applies to the cause and the affected thing

- How the cause is made to happen: through communication or action

A reminder: we started with this:

V n **V adj** **V to-inf** **V n n** **V n –ing** **V n that** **V n wh**	**V *against* n** **V *as* n** **V *into* n** **V *on* n** **V n *as* adj** **V n *in* n** **V n *into* –ing** **V n *of* n** **V n *with* n**

And ended with this:
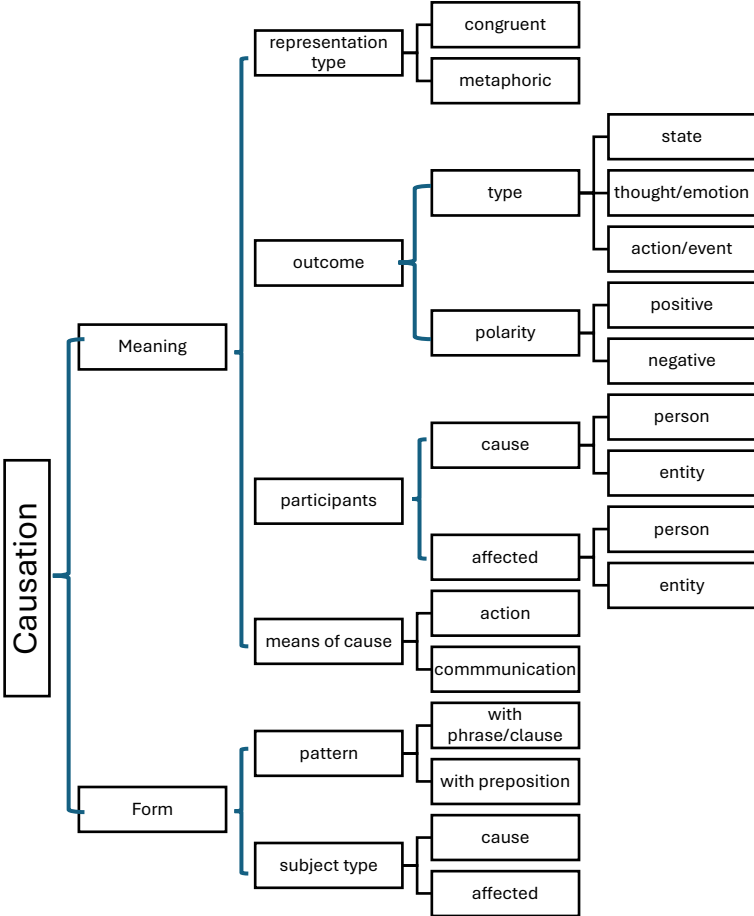
A few additional notes

- Many constructions express more than one semantic field. E.g.
    - 'talk someone into doing something' = Communication and Causation
    - 'think someone something' = Cognition and Equivalence
- So, double-labelling of roles in some cases.
- I am not the only person to interpret patterns as constructions. E.g.
    - Ellis, Römer & O'Donnell 2016: 69. Usage-based approaches to language acquisition and processing.
    - Perek and Patten 2019. Towards an English Constructicon using patterns and frames.

The on-line resource

- The Conceptualising Transitivity website (transitivity-net.bham.ac.uk) has

PATTERN LIST

Patterns with phrases and clauses	Simple patterns with prepositions	Complex patterns with prepositions
V (Coming soon)	V about n	V way prep/adv
V n (Cognition)	V after n	V n about n
V n (Communication)	V after n	V n against n
V n (Material)	V against n	V n as adj
V n (Relational)	V around n	V n as n
V adj	V as adj	V n at n
V -ing	V as n	V n between pl-n (Coming soon)
V to-inf	V at n	V n by n
V inf (Coming soon)	V between pl-n	V n for n
V that	V by amount	V n from n
V wh	V by -ing	V n in n
V n n	V for n	V n into n
V n adj	V from n	V n into -ing
V n -ing	V in n	V n of n
V n to-inf	V into n	V n off n (Coming soon)
V n that	V of n	V n on n
V n wh	V off n	V n onto n (Coming soon)
	V on n	V n out of n

PATTERN: V n as n

The pattern can be best understood by viewing the interactive construction network link above.

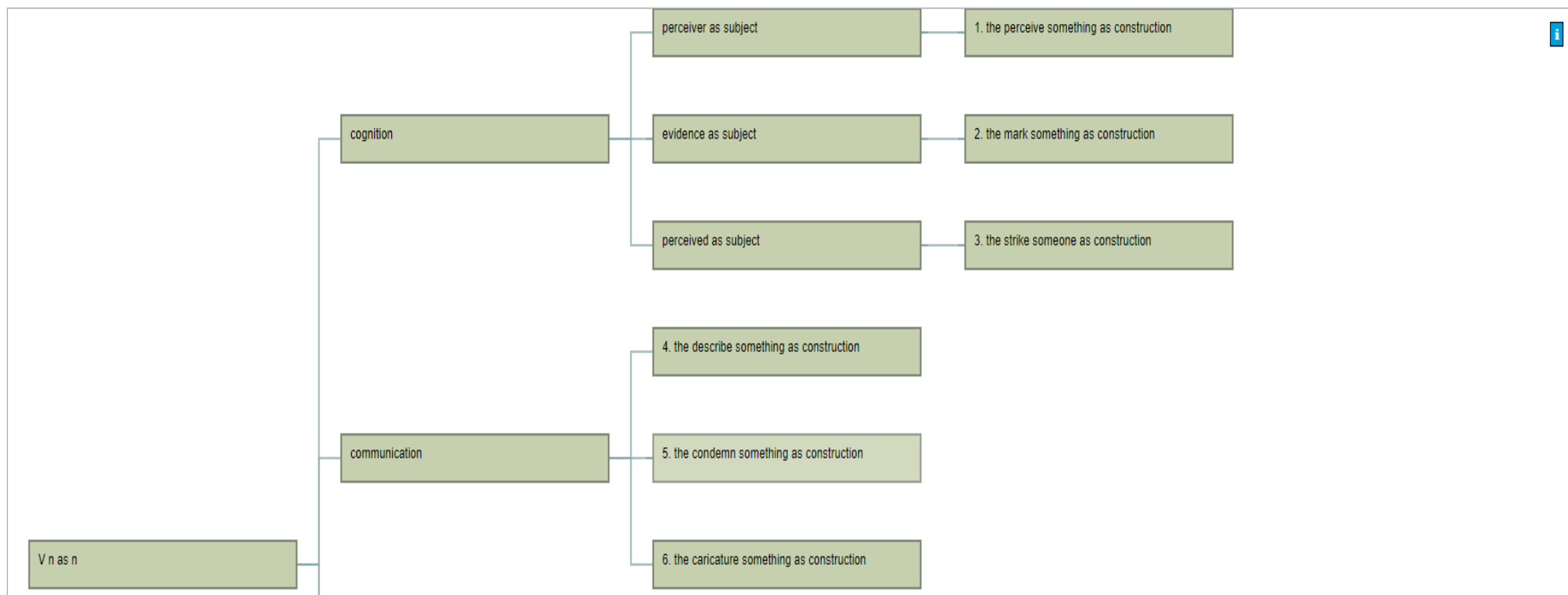To examine the individual constructions please see the tables below:

Examples
...numerous opposition leaders had condemned the visit as a pointless extravagance… (BNC) They're used to perceiving old Ted as a loser. (BNC) ...the bronze octagon that marked him as an alumnus of the University… (BNC) Moynihan had replaced Spencer as Professor of Painting. (BNC) He deliberately employed the judges as instruments of his policy… (BNC)

Constructions							
1. the perceive something as construction	2. the mark something as construction	3. the strike someone as construction	4. the describe something as construction	5. the condemn something as construction	6. the caricature something as construction	7. the elect someone as construction	8. the employ something as construction
9. the replace something as construction	10. the begin a time period as construction						

« Back to Construction Pattern List

CONSTRUCTIONS NETWORK OF "V n as n"

	perceiver as subject	1. the perceive something as construction
cognition	evidence as subject	2. the mark something as construction
	perceived as subject	3. the strike someone as construction
	4. the describe something as construction	
communication	5. the condemn something as construction	
V n as n	6. the caricature something as construction	

« Back to Pattern

'V n as n' - Construction 3

Name:	the strike someone as construction
Description:	A person or entity is perceived as having a quality or characteristic. The subject indicates the perceived person or entity. The NP following the verb indicates the perceiver.
Verbs:	impress, strike
Example:	...but he doesn't strike me as a dictatorial megalomaniac. (BNC)
Membership:	cognition; perceived as subject
Semantic fields and roles:	

« Back to Pattern

V n *as* n. Construction 3

Name	the strike someone as construction
Description	A person or entity is perceived as having a characteristic. The subject indicates the perceived person or entity. The NP following the verb indicates the perceiver.
Verbs	strike, impress
Example	...but he doesn't strike me as a dictatorial megalomaniac. (BNC)
Membership	cognition; perceived as subject
Semantic field and roles	Cognition. NP1+NP3: Phenomenon; NP2: Cognizer Equivalence. NP1: Carrier; NP2: Cognizer; NP3: Attribute

Thank you to:

- Leverhulme (project funders)

- Cerys and Afraz (website developers)

- Abbie, Caroline and Kelly (research assistants)

And thank you for listening

References

- Biber D., Johansson S., Leech G., Conrad S. and Finegan E. 1999. *Longman Grammar of Spoken and Written English*. London: Longman.

- Ellis N., Römer U. and O'Donnell M. 2016. *Usage-based Approaches to Language Acquisition and Processing: Cognitive and Corpus Investigations of Construction Grammar*. Malden MA: Wiley

- Francis G. 1993. A corpus-driven approach to grammar: principles, methods and examples. In Baker M., Francis G. and Tognini-Bonelli E. (eds.) *Text and Technology: in honour of John Sinclair*. Amsterdam: Benjamins. Pp 137-156.

- Francis J. et al. 1996 *Collins Cobuild Grammar Patterns 1: Verbs*. London: HarperCollins

- Haspelmath M. 2023. On what a construction is. *Constructions* 15(1): 1-15.

- Matthiessen C. 2023. *System in Systemic Functional Linguistics: a system-based theory of language*. London: Equinox.

- Perek F. and Patten A. 2019. Towards and English Constructicon using patterns and frames. *International Journal of Corpus Linguistics* 24(3): 354-384.

- Stefanowitsch A. and Gries S. 2003. Collostructions: investigating the interaction of words and constructions. *International Journal of Corpus Linguistics* 8(2): 209-243.