Repetition, Parallelism and Creativity Showcases (REPACS)

4.3. 'Aspects of Creativity in the Assyrian Dream Book'

Version 01

May 2022

Matthew Ong (UC Berkeley, matthewcong@berkeley.edu)

Abstract: This research showcase argues that the Assyrian Dream Book contains a number of interesting semantic properties reflecting what is known as 'exploratory creativity'. This kind of creativity can be metaphorically understood as a person traversing a path across a space of conceptual possibilities. The features of the Dream Book which illustrate this creativity are found in omen protases and include processes of conceptual elaboration, abstraction, and contextual frame shifting. Via such processes, much of the Dream Book can be seen as an exploratory creative walk traversing numerous semantic domains linked by principles of creative association. The upshot of the research showcase is that Akkadian omen collections like the Dream Book crucially involve a heuristic exploratory element akin to what is found in creative storytelling.

How to cite: Ong, M., 2022, "Aspects of Creativity in the Assyrian Dream Book, Version 01," Project REPAC (ERC Grant no. 803060), 2019-2024, at https://doi.org/10.25365/phaidra.338 (accessed day/month/year).

1. Frame-shifting as exploring territory

The collection of dream omens known as the Assyrian Dream Book (Oppenheim 1956) is a good example of how elite Akkadian scribes engaged in the cognitive process known as **exploratory creativity**.

Exploratory creativity relies on the phenomenon of **frame-shifting**, where we reinterpret a given object or concept by viewing it against the background of a new contextualizing frame. A frame is a basic structure of cognition reflecting how humans actually interpret their world, namely in terms of integrated scenes or actions (Fillmore 1982). An example is the Restaurant frame, which involves a customer going to a restaurant, sitting down and ordering food, having the cook make the food, having the waitress bring it out, paying the bill, etc. All of the characteristic roles, actions, smells, emotions, and linguistic terms associated with this scene make up the Restaurant frame, and evoking any one of its characteristic elements evokes the entire frame.

Recontextualizing an object by viewing it as part of another frame can lead to a new set of associations linking the object to the new frame. A simple example would be looking at a tree and thinking of it first as a home for woodland animals. You think of the branches as places birds or squirrels can rest on, and the leaves provide shade for them under the sun. You might then switch to thinking of the tree as a source of timber. You think of the branches as things that can be cut down and turned into beams. The leaves then become annoying things that need to be thrown away. All throughout the frame-shift, the immediate object of your attention stays the same, but the conditioning frame under which it gets its broader meaning changes.

How should one think of exploratory creativity, and how does it relate to frame-shifting? Exploratory creativity is about creating something where you must repeatedly choose among multiple possibilities for how to proceed without either knowing in advance how those choices will play out in the end or having a fixed set of rules to make all your decisions for you. These 'choices' often depend on frame-shift. A useful metaphor for thinking of frame-shifting is an exploratory walk through unknown territory. When you reach the top of a hill that you initially couldn't see beyond, you may decide to proceed in a new direction based on your updated perspective. You might have a habit of exploring the terrain every day by starting out on your walk in the same direction but finding yourself inevitably going on divergent routes due to minor random direction changes on the way. You may also find that on your walk, your decision of which way to go places more emphasis on near-term benefits and less on global ones (such as heading over to a nearby small hill with a shady tree for a slightly better vantage point rather than walking much longer under the hot sun in order to get to a tall mountain).

The above metaphor highlights how frame-shifting, like exploratory walking, is **heuristic**, **stochastic**, and **opportunistic**. It is heuristic in that to a large (but not total) extent, the mind does not make frame-shifts based on pre-set, abstract rules applicable across all contexts. Rather, it largely operates on immediate context that is sensitive to detail. It is stochastic in that the same person who considers the same general set of information can still, on a different occasion, decide to frame-shift in different ways. This has to do with the stochastic nature of many of our lower-order brain functions (Simonton 2003). Finally, frame-shifting is opportunistic in that it tends to be triggered by salient elements of the current mental scene or particularly strong associations involving part of that scene. Rather than considering the consequences of a frame-shift several steps down the line, the mind tends to go for what is immediately promising in terms of imaginative possibilities.

2.   Example: wooden items to professional crafts

Frame-shifting is evident in a portion of the Assyrian Dream Book dealing with wooden items and professional crafts. The frame defining the omen protases starts out as Carpentry and switches to Craft/Profession based on the semantic categories of key lexical items in the protases. This process is illustrated below for the initial section of Tablet III (K.3941+4017: obv. i 1-18, cf. Oppenheim 1956: 263, 308), shown graphically in Figure 1. Note that the horizontal lines in the transliteration do **not** refer to rulings on the tablet but abstract divisions between frames.

Frame: Carpentry

1-2)   If a man in his dream builds a door – the *mukīl rēš lemutti* demon will seek (him) out.
DIŠ NA *ina* MAŠ.GE$_6$-*šú* GIŠ.IG DÙ-*uš mu-kil* SAG MUNUS.ḪUL SI.SÁ

3)   If a man (in his dream) builds a chair – the *mukīl rēš lemutti* demon will seek (him) out.
DIŠ NA ^{giš}GU.ZA DÙ-*uš mu-kil* SAG MUNUS.ḪUL SI.SÁ

4)   If he (in his dream) builds a bed – the *mukīl rēš lemutti* demon will seek (him) out.
DIŠ ^{giš}NU$_{11}$ DÙ-*uš mu-kil* SAG MUNUS.ḪUL SI.SÁ

5)   If he (in his dream) he builds a table – the *mukīl rēš lemutti* demon will seek (him) out.
DIŠ ^{giš}BÁNŠUR DÙ-*uš mu-kil* SAG MUNUS.ḪUL SI.SÁ

6) If he (in his dream) builds a stool – the *mukīl rēš lemutti* demon will seek (him) out.
DIŠ ᵍⁱˢŠÚ.A DÙ-*uš* mu-kil SAG MUNUS.ḪUL SI.SÁ

7) If he (in his dream) builds a boat – the *mukīl rēš lemutti* demon will seek (him) out.
DIŠ ᵍⁱˢMÁ DÙ-*uš* mu-kil SAG MUNUS.ḪUL SI.SÁ

Frame: Craft/Profession

8) If (in his dream) he does the night watchman's work – his personal god will cause him to burn (with a fever).
DIŠ GE$_6$.DU.DU-*tam* DÙ-*uš* DINGIR-*šú* ú-ḫa-ma-su

9) If (in his dream) he does the leather-worker's work – a rich man will become poor.
DIŠ ˡúAŠGAB-*ta* DÙ-*uš* NÍG.TUKU i-lap-pi-in

10-11) If (in his dream) he doesn't do the leather-worker's work – Šamaš has (a claim for) a vow (which was neglected) against him.
DIŠ NU ˡúAŠGAB-*ta* DÙ-*uš* ᵈUTU ŠÙD UGU-*šú* TUKU-*ši*

12) If (in his dream) he does the *purkullu* seal-cutter's work – his son will die.
DIŠ BUR.GUL-*tam* DÙ-*uš* DUMU-*šú* BA.UG$_5$

13-14) If (in his dream) he does the washer/fuller's work – as for the peasant, his misfortunes will leave him.
DIŠ áš-la-ku-tam DÙ-*uš* a-na MAŠ.EN.DÙ ḪUL-*šú* TAG$_4$-*šú*

15-16) If (in his dream) he does the carpenter's work – confusion of the mind, decrease is in store for him.
DIŠ NAGAR-*tam* DÙ-*uš* di-li-iḫ lìb-bi im-ṭú-ú GAR-*šú*

17-18) [If] (in his dream) he does the [sa]ilor's work(?) – Enlil has (a claim for) a vow (which was neglected) [ag]ainst him.
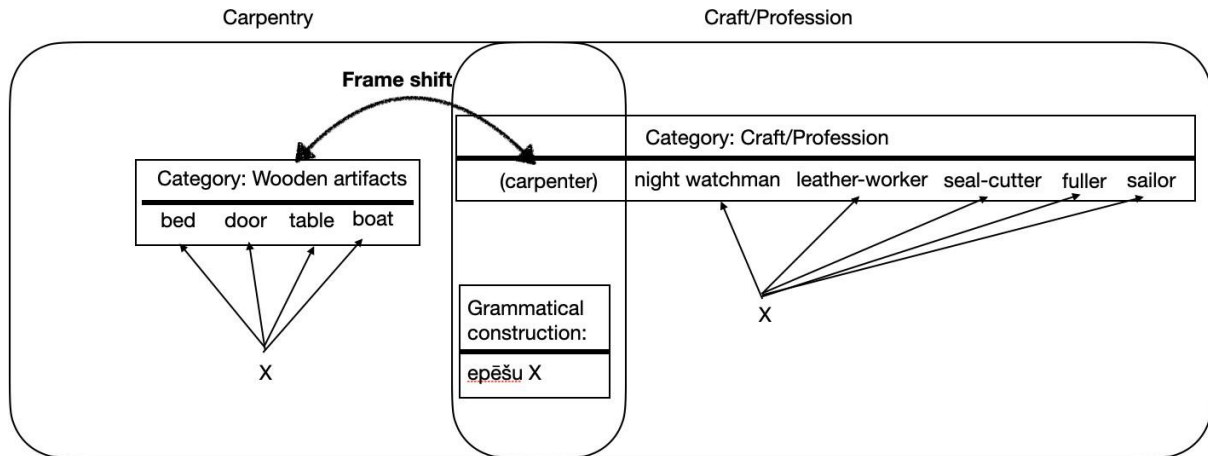[DIS MÁ].DU.DU-*tam* DÙ-*uš* ᵈEN.LÍL ŠÙD [U]GU-*šú* TUKU-*ši*

Figure 1: Frame-shifting from Carpentry to Craft/Profession in the initial section of Tablet III (K.3941+4017: obv. i 1-18). Not all omen protases from those lines are depicted. Each frame is represented by a rectangle, where the elements of that frame are put within the rectangle. The area where the rectangles overlap contains elements common to both frames. One can imagine that the scribe composes the omens by mentally proceeding left to right across the category elements of the Carpentry frame (door, bed, etc.), and then doing the same for the Craft/Profession frame.

Figure 1 illustrates the two types of association between the Carpentry and Craft/Profession frames whereby the scribe composing the omens in lines 1-18 shifts his train of thought. The first association involves basic roles in the scene described by each frame. In the Carpentry frame, a carpenter creates wooden objects such as beds, doors, and stools. These wooden objects play the role of what the agent in the frame (the carpenter) physically produces. In the Crafts/Profession frame, a craftsman or skilled worker such as a leather-worker or seal-cutter exercises his trade skill to earn a living. In the new frame, these professions play the role of what general actions or work a skilled person performs to earn a living. The scribe starts out composing lines 1-7 thinking of various wooden objects, but eventually comes to see those objects as instances of what a carpenter produces (see the end of section 3 for more details). Viewing the carpenter as but one instance of a craft or profession evokes the Craft/Profession frame, giving the scribe a new category to enumerate. The second association between the frames is the grammatical construction 'X + *epēšu'* they both use to linguistically express what the agent in the scene does or produces. This shared grammatical construction helps highlight which elements in each frame are parallel. For instance, in the Carpentry frame X denotes an object built by a dreamer, while in the Craft/Profession frame X denotes the craftsman's work which the dreamer performs.

One should note that the omen in line 8 dealing with the night watchman presents a complication to the above analysis, since it is not a prototypical craft or profession, nor is it the carpentry profession one might expect on the heels of omens about wooden objects. This may be an instance of path digression (see below), where the scribe follows a less obvious chain of

associations for a short time before returning to his main train of thought. Alternatively, in the frame-shift the scribe may already have been thinking further ahead than we give him credit, where he wanted to organize the whole set of craft/profession omens according to some internal scheme. One possibility is that the scribe may have been assembling thematically related but pre-compiled sub-lists of omens, one containing lines 1-7 and the other 8-18. Frame-shift would have still motivated the scribe to concatenate the two lists even if the linear order of the latter one does not reflect what he might have written were he composing from scratch. Whether it was a case of impromptu thinking or pre-compiled lists, writing down the first list would have led the scribe to make a frame-shift and think of professions.

Elyze Zomer has suggested that the scribe may have aimed at parallelism between the two lists, as a door (1-2) is associated with the work of a night watchman (8), a stool (6) is associated with the work of a carpenter (15-16), and a boat (7) is associated with the work of a sailor (17-18). If this is so, the associative logic in the remaining omens is not clear. One also wonders why the scribe chose to produce a negative omen variant in 10-11 but not do the same for the remaining craft/profession omens.

3. Types of exploratory steps

In the Assyrian Dream Book the scribe uses a number of techniques for exploring a particular conceptual domain, including elaboration, abstraction, adjustment, and compression. The first three techniques can be illustrated with the minimally contrastive pairs in English given below. Sentence 1 is meant to be contrasted pairwise with each of 2-4:

1) John took his dog to the park and walked him there for an hour.
2) John took his dog to Central Park in New York and walked him there for an hour.
3) John took his dog to the park and walked him there (for an hour).
4) John took his dog to the beach and walked him there for an hour.

In elaboration, one adds perceptual detail to the scene. Thus in sentence 2 the added detail is marked in red. In abstraction, one renders the scene more schematic. Thus in sentence 3 the orange strikethrough refers to detail that was thrown out from sentence 1. In adjustment, one alters one parameter of a scene by switching the specific value but maintaining the type. Thus in sentence 4, the altered parameter is marked in green.

The fourth technique of compression takes elements from multiple scenes that have some analogous relation to each other and blends them into one thing. An example given by Fauconnier and Turner is the concept of dusk (Fauconnier and Turner 2002: 196). Humans get

the concept of dusk by observing the analogical relation between the times when the sun goes down each individual day (e.g. the day before yesterday, yesterday, and today), and collapsing them into the idea of when the sun goes down during any day. Compression is different from abstraction in operating over multiple scenes in parallel rather than just one scene. While some information across the input scenes is no longer explicitly represented in the output, this is a result of constructing an ideal or archetype rather than reducing what we know about something specific.

We can find instances of elaboration, abstraction, and adjustment in Tablet III, K.3941+4017: rev. ii x+1 to x+7 (Oppenheim 1956: 264, 308). As with the example sentences, the colors below are to be interpreted by comparing the first omen pairwise against the succeeding ones:

Frame: Seeding Barley

x+1)   If he [takes a plow and se]eds [barley...]
         DIŠ ᵍⁱˢ[APIN DAB-*ma* ŠE-*am* U]RU₄ [...]

x+2)   If he takes a plow and does not se[ed] barley [...]
         DIŠ ᵍⁱˢAPIN DAB-*ma* ŠE-*am* NU U[RU₄ ...]

x+3)   If he takes a plow, seeds barley, [and(?) ...]
         DIŠ ᵍⁱˢAPIN DAB-*ma* ŠE-*am* URU₄-[*ma*(?) ...]

x+4)   If he seeds the ground with a plow (using barley), dis[ruption(?) ...]
         DIŠ *ina* ᵍⁱˢAPIN KI URU₄-*eš di*-[*il-ḫu* ...]

x+5)   If he plows with his plow in the middle of the city, ... [...]
         DIŠ *ina* ᵍⁱˢAPIN-*šú ina* ŠÀ URU URU₄-*eš* a-x-[…]

Frame: Planting Onions

x+6-7)   If [he plants(?)] in the middle of the city onions, *šama*[*šk*]*il*[*lu*] plants [...] pieces of bread/clay [...]
         DIŠ *ina* ŠÀ URU SUM.SAR SUM.[SIK]IL.[SAR ...] NINDA.GUR₄.RA.MEŠ [...]

The type of exploratory step taken in lines x+6-7 depends on what the rest of the omen is (which we do not have). Assuming there is no reference to taking a plow and seeding barley with it, talking about planting onions represents a simple switch in the type of crop cultivated.

One can observe compression at work in the previous set of omens dealing with wooden objects and professions. The frame-shift in that example from Carpenter to Craft/Profession is facilitated when the scribe compresses the specific wooden objects the dreaming man makes

into a general wooden object, which allows the scribe to think of a carpenter engaging in his profession more generally.

Note that this means more generally, during the composition process it can take some time for the scribe to conceptualize what he is currently writing in terms of a fairly elaborate frame (such as Carpenter). True to the spirit of an exploratory walk, the scribe can find himself already having put down the first few omens in a new sequence on the basis of implicit association or semi-random thoughts before 'realizing' his new direction.

4. Path digression

In the Assyrian Dream Book, frame-shifts sometimes happen in unexpected ways. This can be likened to a digression from the main line of thought of the scribe. While the digression is often thought of as 'accidental' in nature, it is simply a frame-shift according to a conceptual axis other than the Gestalt organizing the current block (e.g. homophony, polysemy, homography). The example below comes from Oppenheim's Tablet A, Sm. 2073 rev. y+10-14 (Oppenheim 1956: 273, 317). As before, the horizontal lines below refer to abstract frame divisions, not tablet rulings.

Frame: Eating Dust

y+10-11) If he eats dust, he will become ill. He will talk a lot but be negligent. The command of his god is in store for him, wrath.
DIŠ SAḪAR.ḪI.A GU$_7$ LIL-ʾa DUG$_4$.DUG$_4$ i-ma-ki qi-bít DINGIR-šú GAR-šú GE$_6$ IGI

y+12) If he eats dust from the rubbish dump, he will talk a lot but be negligent. His mind will be at peace.
DIŠ SAḪAR tub-kin-ni GU$_7$ DUG$_4$.DUG$_4$ i-ma-ki ŠÀ.BI DÙG.GA

Frame: Eating Leper Scales

y+13) If he eats the scales of a leper, he will talk a lot but [be negligent ...]
DIŠ saḫar-šup-pa-a GU$_7$ DUG$_4$.DUG$_4$ [i-ma-ki …]

Frame: Eating Sand

y+14) If he eats sand, [good/evil(?) ...]
DIŠ ba-ṣa GU$_7$ MUNUS.[ḪUL/SIG$_5$$^?$]

This block begins with a protasis about eating dust (SAḪAR) on its own, then moves to eating dust in a rubbish dump (SAḪAR tubkinni), and then eating leper scales. This last line is

included in the block because the term for leper scales (*saharšubbû*), is based on the metaphor of falling dust. The line directly after returns to the main theme with a protasis about eating something which is semantically related to dust, namely sand (*bāṣu*).

One reason to think that in the mind of the scribe the omen about leper scales represents more of a temporary digression rather than permanent shift in conceptual direction is that he put a tablet ruling only after the omen about eating sand (cf. Oppenheim 1956: 317, 367). After that ruling, the theme changes to a much different topic, eating leather.
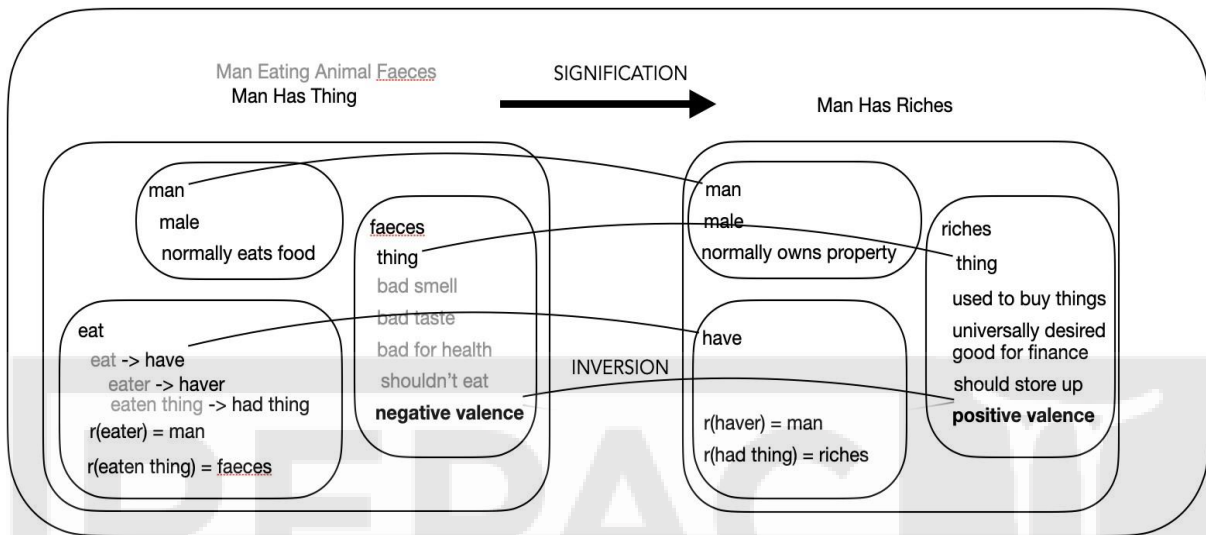

Figure 2: 'If he eats the faeces of wild animals, he will have riches'. Greyed elements are frame elements that have been abstracted or suppressed. Roles in the main action of each scene (i.e. eating and having) are connected to scene participants via the assignment function r(verbal role) = scene participant.

5.   Competing factors in exploratory creativity

The mind is regularly generating thoughts and images in a quasi-stochastic manner. Such thoughts are the source of exploratory creativity. They are governed by two basic factors and operate at two different levels, the individual and social (Table 1).

	Suspension of judgement	What is interesting
Individual	Cognitive frame	Cognitive stimulation
Social	Genre, training	Social value

Table 1: The dimensions and levels of creativity as a generative exercise.

Suspension of judgment deals with our ability to suppress the pragmatic filter normally applied to our thoughts regarding purpose, acceptability, utility, etc. What is interesting deals with the fascination for certain thoughts based on factors like perceptual stimulation, social taboo, novelty, etc.

In the Assyrian Dream Book, the scribe schematizes the frame of an omen protasis to match it with a stock omen apodosis. Figure 2 shows how this works for the omen 'If he eats the faeces of wild animals, he will have riches' (DIŠ ŠE *ú-ma-me* GU$_7$ NÍG.TUKU T[UKU-*ši*], Tablet A Sm. 2073: rev. y+27, cf. Oppenheim 1956: 317).

In general, the omen protasis, representing the content of a dream, can have wild content. But the content is schematized so that it can be connected to a stock apodosis via analogical correspondence. Figuring out how to do this is part of the extensive tradition of elite scribal hermeneutics. As a result of the abstraction and analogical mapping (here called signification), when thinking of a possible dream protasis for his omen the composing scribe is able to play off of suspension of judgment and what is interesting in a way not possible for other omen types or text genres. This is why dream omen composition can be considered exploratory creativity.

In Figure 2, the frame of Man Eating Animal Faeces is licensed because it is abstracted to Man Has Thing, which maps analogically to the frame Man Has Riches in the apodosis. This provides the necessary suspension of judgment. If a suitable analogical correspondence with the apodosis could not be found, the scene evoked by the protasis would be rejected as scandalous. Conversely, because the abstracted details are scandalous (what is interesting), the scene that evokes them is more likely to occur to the scribe relative to many other more mundane scenes that are also possible in dreams.

In particular, the initially paradoxical combination of negative protasis (eating faeces) with positive apodosis (acquiring riches) also seems to be motivated by suspension of judgement and what is interesting. In essence, combining scenes of opposite polarity does something 'unexpected' relative to the way omen hermeneutics often works, and it is allowed since the basic structural features of many of the stock omen apodoses (e.g. losing or acquiring something, change of state in mind or body) can be easily elaborated in both positive and negative ways (e.g. eating faeces versus eating good food, becoming sad versus becoming happy). Ann Guinan suggested something similar occurred in Šumma ālu, arguing that flipping the polarity in a single pair of corresponding elements of the protasis and apodosis was an easy way to 'complicate' the significance of the omen (Guinan 2014: 119 and Guinan 1990: 231).

6.   Cognitive mechanism for generating the Assyrian Dream Book

Overall, we should reconceptualize how the Akkadian scribe constructed the Assyrian Dream Book, switching our model of what is going on in the scribe's head and on the tablet from the left side of Figure 3 to the right side.

In the figure, the upper two rectangles reflect the mental processes the scribe goes through when compiling the omens. The lower two rectangles show the output on the tablet (which in both models is the same, consisting of a strict linear sequence of omens). Vertical arrows connecting the upper and lower rectangles illustrate implicit decisions the scribe makes as he shifts attention between written content on the tablet and his own internal thoughts. In particular, the new model specifies feedback processes where unanticipated frames can be evoked in the scribe's mind midway through composition, and this in turn will a new set of omens on the tablet.

Using the analogy of sequential omen composition as walking across the land, the old model represents a situation where the scribe progresses through a given conceptual subdomain appearing in the omen compendium according to a route determined in advance. The scribe tries to walk across all the area in each subdomain, and it is clear when and how he should move from one subdomain to the next. Moreover, the path connecting all the subdomains is also determined in advance. The new model represents a situation where the scribe makes a heuristic walk through a given subdomain, taking opportunistic steps based on semantic salience and cross-domain overlaps. He does not try to cover all the area in a given domain but rather follows his nose within a limited range, ultimately switching to another subdomain under frame-shift.
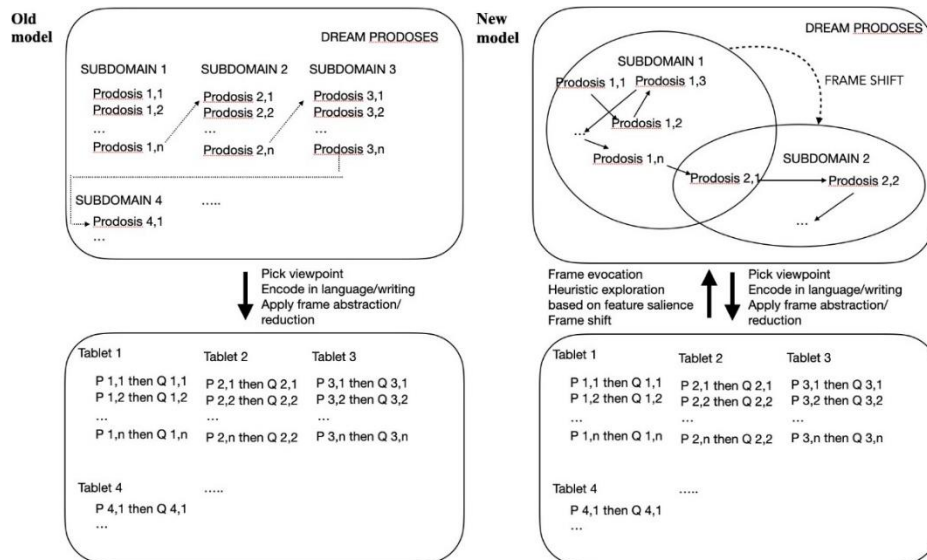

Figure 3: Old versus new model of how the scribe constructs the Assyrian Dream Book.

Selected Bibliography

Coulson, S. 2001, Semantic Leaps - Frame-shifting and Conceptual Blending in Meaning Construction. Cambridge.

Fauconnier, G./M. Turner, 2002, The Way We Think: Conceptual Blending and The Mind's Hidden Complexities. New York, NY.

Fillmore, C.J. 1982, 'Frame Semantics' in Linguistics in the Morning Calm. Seoul, 111–137.

Guinan, A. 1990, 'The Human Behavioral Omens - On the Threshold of Psychological Inquiry' in Bulletin of the Canadian Society of Mesopotamian Studies 19, 9–13.

Guinan, A. 2014, 'Laws and Omens: Obverse and Inverse' in J. Fincke (ed.) Divination in the Ancient Near East: A Workshop on Divination Conducted During the 54th Rencontre Assyriologique Internationale, Würzburg 2008. Winona Lake, IN, 105–121.

Oppenheim, L. 1956, The Interpretation of Dreams in the Ancient Near East -With a Translation of an Assyrian Dream Book. Transactions of the American Philosophical Society, Vol. 6, pt. 3. Philadelphia, 179–373.

Simonton, D.K. 2003, 'Scientific Creativity as Constrained Stochastic Behavior - The Integration of Product, Person, and Process Perspectives' in Psychological Bulletin 129.4, 475–494.