

What Can One See if One Brings the Linguistic Concept Into a Panchronic View?

Olha V. Vakhovska

Department of Germanic Philology and Translation, Kyiv National Linguistic University, Kyiv, Ukraine

Abstract—This paper takes a panchronic perspective to show that the evolution of a linguistic concept in a worldview embraces this concept's diachronic depth and this concept's diachronic variation. The diachronic depth of a concept is an archaic image (modal mental representation) that was prerequisite for this concept (amodal mental representation) to emerge; this image had formed perceptually in the human mind, through the direct visual experience humans had in perceiving the world, which accounts for this concept's embodiment. Mental image at this concept's diachronic depth and embodiment of this concept are the two facts that this paper assumes one can see when viewing this concept panchronically. This paper treats panchrony as the combination of diachrony of language with universal processes of human cognition, and suggests that the panchronic mechanism behind linguistic semiosis is the modal-to-amodal conversion that takes place in the human mind and has the inner form of the word as its panchronic product and the image-driven interpretation of the word as its emergent product. This mechanism operates at each stage in language evolution, determines the genesis of the word as that of a sign-symbol, and is universal for the speakers of language by virtue of their embodiment. This paper's theoretical commitments find application in the case of SIN in the English worldview: archaic image at SIN's diachronic depth is reconstructed using methodologies of etymological research, as the inner form of the word *sin* in English; SIN's content in diachronic variation is reconstructed using methodologies of cognitive linguistic research.

Index Terms—embodied cognition, linguistic concept, mental image, panchrony, word

I. INTRODUCTION

The word is not a copy of the object as such, but reflects the soul's image of the object. In this sense, the words of different languages can never be synonyms – their meaning, strictly speaking, can never be encompassed in a simple definition which merely lists the objective characteristics of the object designated. There is always a specific mode of *signification* which expresses itself in the syntheses and coordinations underlying the formation of linguistic concepts. (Cassirer, 1955, p. 284; emphasis in the original)

This paper takes a panchronic view on human concepts manifested in language, and shows that linguistic concepts evolve, as the evolution of each such concept embraces this concept's diachronic depth and this concept's diachronic variation in the worldview this concept is part of. The paper treats panchrony as the combination of the diachrony of language with the universal processes of human cognition, and suggests that the cognitive mechanism that drives linguistic semiosis in panchrony is the conversion of human non-propositional into propositional thought, which is the conversion of modal mental representations (the non-conceptual content of the human mind, as in seeing the world) into amodal mental representations (the conceptual content of the human mind, as in understanding the world), and back.

This paper assumes that the diachronic depth of a concept is an archaic image that was prerequisite for this concept to emerge; this archaic image that had formed perceptually in the mind of a human being who sensed and cognized the surrounding world through interaction with this world, which *per se* accounts for this concept's embodiment in terms of those opportunities for conceptualization that the human body then afforded morphologically. The paper goes on to assume that all human concepts are embodied as long as all such concepts have their diachronic depths in the worldviews that these concepts constitute, and also in the minds of the people who inherit these peculiar worldviews as they come to speak their particular languages, with words manifesting concepts as lexical meanings coupled with forms.

SIN is chosen in this paper as an embodied linguistic concept whose evolution in the English worldview is traced from SIN's diachronic depth through SIN's diachronic variation, i.e. from the original information that once made SIN's content in the English worldview to the eventual information that therein has ever made its content, given that the noun *sin* acts as the name for SIN in the English language. The paper thus brings together the human language (*sin* (n.) is part of the linguistic worldview), the human mind (SIN is part of the conceptual worldview), and the objective world, with *sin* emerging as a phenomenon that is (near-)universally known by humans but only subjectively experienced by them.

The archaic image at the diachronic depth of SIN relates to mythical thinking, which as a stage in the evolution of human consciousness is pre-written. This image is in this paper shown via a diachronic semantic reconstruction, taking up the etymological analysis together with the image-driven etymological interpretation of *sin* (n.). Conceptualizations of *sin* in the English worldview are then delivered with respect to the major written periods in historical time, suggesting diachronic variation as the continuous transformations that SIN has undergone in its development. As SIN due to its Biblical prototype is rather invariant in Christian religious discourse, pieces of English secular discourse with SIN

manifested by *sin* (n.) were collected into a direct sample for the 14th–21st centuries, and then analyzed using cognitive linguistic methodologies of synchronic and diachronic research. This has filled with meaningful data the semantic continuum that stretches, as an evolution, in between SIN's origin and modern state.

This paper serves the lens through which the author looks at her earlier research in light of the experience she has so far accumulated towards reconstructing concepts synchronically and diachronically on the basis of linguistic data. The research has matured into a theory of how semiosis in language takes place, and into a methodology of how linguistic concepts may get reconstructed panchronically by virtue of their names, with respect to the cognitive mechanisms behind the process of linguistic semiosis. The precursors of this paper are Vaxovskaja (2011) and Vakhovska (2022, 2024) that are now transformed into a comprehensive view of linguistic concepts in their evolution.

II. THEORETICAL FRAMEWORK

A. *Panchrony as Diachrony of Language and Universal Processes of Human Cognition*

What can be recognized in language as panchronic comes from <...> seeing language categories as ever-evolving derivatives of cognitive tensions. The very presence of cognitive factors in diachronic description is precisely the reason why instead of a linear succession of discrete language states in space and time (which is a broad definition of diachrony) we obtain a multi-directional progression of non-discrete categorization processes in language (which might be a working definition of panchrony). Unlike in diachrony, in panchrony language no longer functions in space and time, but it operates in human understanding of space and time. (Łozowski, 2022, pp. 47–48)

Panchrony as a mode of linguistic investigation suggests that language is independent, – and can and should therefore be studied independently, – from the restrictions of time and space (Łozowski, 2023, pp. 157–159). Panchrony has an inseparable link with synchrony and diachrony that do put such restrictions, each in its unique way: *synchrony* focuses on the static state of language, whereas *diachrony* looks at the dynamic change that language undergoes in its development.

Structuralist views of language explain panchrony in terms of *linguistic universals* (general rules and principles regarding language make-up that exist independently of concrete linguistic facts and also of individual language speakers) and suggest that panchrony is impossible due to the fact that language is an autonomous system of *arbitrary signs* (de Saussure, 1983), which divides synchrony and diachrony sharply, hides causality in language change, and precludes the possibility to simultaneously study language from the generalized synchronic and diachronic, i.e. from the panchronic, point of view (Łozowski, 2023, pp. 159–162). Synchrony (simultaneous co-existence of linguistic signs) and diachrony (chronological succession of linguistic signs) are dichotomous for structuralists, with synchrony dominating their research, due to the psychological realism that language enjoys among its speakers in its current static state. On that, the structuralist belief is that extralinguistic factors, i.e. time and space that are given in the world and construed in the human mind, must not enter into the scientific investigation of language *per se*.

Functionalist views of language explain panchrony in terms of *functional universals* (cognitive and experiential patterns of human behavior, culture included) and suggest that panchrony is possible, and even imperative, due to the fact that language is not an autonomous but a cognition- and culture-dependent system of *motivated signs*, or symbols of human experience (Łozowski, 2023, pp. 153–157). This introduces the extralinguistic factors into linguistic research, highlights causality in language change, unites synchrony and diachrony, now treating them on a par, and includes the possibility to simultaneously study language from the generalized, i.e. panchronic, point of view, owing to the cognitive processes that drive the genesis of language. Views on panchrony have developed continually in cognitive linguistics, where panchrony is(was) understood in terms of universal laws, of omnipresence of history, of cognitive universalism, and, ultimately, of diachrony plus cognition (Jarosz, 2020, pp. 53–57), following which we in this paper assume that the *combination of the diachrony of language with the universal processes of human cognition* constitutes panchrony.

Panchrony we think is less an independence of language from the restrictions of time and space but a peculiar sort of this dependence, as synchrony is now and here, diachrony is then and there, and panchrony is always and everywhere, each assuming a particular relation of language to time and space. This relation does adopt a dependence of language on time and space, as language is hardly thinkable in terms of never and nowhere, and still less in terms of being unfindable of its own self. Rather, the peculiar dependence of language found in panchrony is that language is grounded in time and space, and in the cognitive processes that run always and everywhere and drive the genesis of language, as linguistic phenomena are products of these cognitive processes in their functioning. This peculiar dependence of language makes it possible to liberate linguistic research from the dichotomy of synchrony and diachrony, as it is this dichotomy that would otherwise be of a restricting sort.

The cognitive mechanism behind linguistic semiosis that we suggest is panchronic is the conversion of human non-propositional into propositional thought, which is the conversion of mental images as modal mental representations (seeing the world) into word meanings as amodal mental representations (understanding the world), and back (Vakhovska, 2024). We believe that in the genesis of language cognitive processes and their products are not isolated; we mean that *functional universals produce linguistic universals*, as in the evolution of life first there appears a function and it is this function that eventually requires that an organ appear to fulfill this function. On this view, panchrony must be defined first with reference to the universality of cognitive mechanisms behind language, and then with reference to the universality of linguistic phenomena that become the products of these mechanisms in action. While in this paper we

work with the modal-to-amodal conversion (a cognitive mechanism; one that regulates the process of linguistic semiosis) and with the word as a sign-symbol (a linguistic phenomenon; one that becomes the product of this cognitive mechanism), we may suppose that pairings of this kind are potentially many, setting the stage for congruous panchronic research.

The modal-to-amodal conversion occurred at the moment when the word was created and emerged into language, *and has* the inner form of the word as its first, – and panchronic, – product (Vakhovska, 2024, pp. 52–53). The inner form of the word is a fragment of this word’s meaning (Zhabotynska, 2013) that at its own time motivated the emergence of this word in its peculiar outer form into language (Potebnja, 1892). (The outer form of the word is the phonemic and graphemic container for this word’s meaning, as Zhabotynska, 2013). The inner form of the word is an archaic image that has pictorial resemblance to the referent of the word, in view of how this referent emerged into the consciousness of man who gave this referent its name (Vakhovska, 2024, p. 52). The image in the human mind represents the respective thing in the world, and is this thing’s symbol.

The modal-to-amodal conversion occurs at the moment when the word is used and processed by the speakers of language, *and has* the image-driven interpretation of the word as its continuous product (Vakhovska, 2024, p. 52). Whereas it is impossible for individual speakers to change the inner forms of words in their language, as these archaic images are inherited together with the worldview (the magic circle from which there is no escape, as per von Humboldt, 1836) and re-imagining them can only touch but not take them (on touching and taking, see Weber, 2005), the interpretations of words of language by its speakers are fluid, emergent, and variable, owing to individual experiences and cognitive styles as to how individuals (spontaneously and improvisingly) use construal operations, and also owing to the context (physical, social, cultural, and immediate communicative; global and local, as per Kövecses, 2014). The term *emergent* here means that human speech “must be viewed as a real-time, social phenomenon, and therefore [speech] is temporal; its structure is always deferred, always in a process but never arriving, and therefore emergent” (Hopper, 1987, p. 141). Cf. Clifford’s (1986, p. 19) statement that “[c]ulture is temporal, emergent, and disputed”.

On that, the modal-to-amodal conversion is the panchronic mechanism of human cognition that regulates the process of linguistic semiosis, determining the genesis of the word as that of a sign-symbol. This cognitive mechanism operates at each of the stages in language development in time, diachrony and synchrony included, and is universal for the speakers of language by virtue of their embodiment.

B. The Embodied Cognition Framework of Linguistic Research

Make no mistake about it, *that* is the stuff of which human minds are made: brains, bodies, and environments. (Spivey, 2007, p. 33; emphasis in the original)

Cognition is said to be *embodied* to mean that it is caused and constituted by the cognizing agent’s body that in a peculiar way senses and interacts with the environment it is placed into (Varela et al., 2017). The body positively contributes to cognition so much so that it is the body as a whole, not the brain alone, that is argued to make the seat of cognition in living organisms (Gallagher, 2005). *Perception*, on that, is “an extended process involving whole organisms in motion through their environments <...>. Visual perceptual processes, for instance, are not exclusive to the eye or even the brain, but involve the whole organism as it moves about its environment” (Shapiro & Spaulding, 2024).

Human perception is an array of lived, attentional subjective experiences that emerge into human consciousness owing to awareness; these experiences submit to verbal report but yet remain ineffable (Zahavi, 2005). Human perception has an intentionality and a phenomenology of its own (Merleau-Ponty, 1962); it physically occurs in one’s active exploration of the environment, which forms a dependence between one’s movements and sensory states and the world: on this view, cognition in humans is enactive, in the sense that it emerges from, and even is constituted by, sensorimotor activity (Ward et al., 2017), with a dynamic coupling of the brain, body, and world into a single cognitive system (Chemero, 2001). Cognition in humans is embedded, too, in the sense that the capacities of one’s mind depend on one’s environment that might be (un)suitably organized for these capacities to emerge (Martin & Schwartz, 2005). Physical embodiment goes together with cultural embodiment (Kimmel, 2008), as cultural environments shape cognition, too.

Embodied perspectives on cognition naturally apply to concepts. To say that human concepts are embodied is to understand that the morphological properties of the human body inform and constrain (the content and structure of) human concepts.

C. The Embodiment View of Human Concepts in Evolution

The peculiar nature of our bodies shapes our very possibilities for conceptualization. (Lakoff & Johnson, 1999, p. 19)

A concept is a mental entity and an operational unit used in human cognition, as the human mind manipulates concepts in the processes of thinking; *concepts* are quanta of structured knowledge that humans learn experientially about the world. Concepts get manifested in language just as much as in the other systems of signs at human disposal. Concepts captured by linguistic signs make the meanings of these signs. Words stand out among the linguistic signs of other levels, e.g. morphemes or sentences, due to the fact that it is *words* that bridge human cognition, i.e. the conceptual worldview, and communication, i.e. the linguistic worldview. The two worldviews overlap but never coincide (Kubryakova, 2004), as the conceptual worldview is broader than the linguistic one, with the result that concepts are only partially exposed in the meanings of words acting as these concepts’ names.

Concepts suggest historical variation as they transform in the course of time, which makes their *evolution* (Ševčenko, 2016). Evolution is continuous and relates to the human mind, as this mind *per se* is a product of evolution (Bergson, 1911). In the field of linguistics, diachronic semantics intends to explore concepts in view of their evolution, analyzing concepts diachronically by virtue of their names. As a diachronic semanticist, we in our work have come to substantiate the distinction of a concept's diachronic depth (the term by Vasko, 2019) from this concept's diachronic variation (the term by Ševčenko, 2016), where we elaborate on the terms, rendering them panchronically, in particular with respect to the cognitive mechanism of modal-to-amodal conversion, and understand that the evolution of the concept is completed by both its diachronic depth and its diachronic variation.

The diachronic depth of a concept is an archaic image whose formation in the human mind was prerequisite for this concept to emerge. As images of things, the diachronic depths of concepts relate to human organs of vision in the first place. These images had formed perceptually in the mind of human beings who sensed and cognized the surrounding world while interacting with this world, which we offer as an account of the embodiment of human concepts, to mean that *all human concepts are embodied* as long as all such concepts have their diachronic depths; the account includes abstract concepts, too. As abstract concepts refer to "entities that are neither purely physical nor spatially constrained" (Barsalou & Wiemer-Hastings, 2005, p. 129), their embodiment has proven hardest to show, producing much reflection on the matter, for which see (Borghi & Binkofski, 2014) among others. Our suggestion is that the diachronic depths of abstract concepts must be looked at as a proof of their embodiment. "There is no abstract art. You must always start with something. Afterwards you can remove all traces of reality" (Picasso; cited in Moholy-Nagy, 1945, p. 74). Mental images at the diachronic depths of human concepts are the direct visual experience that humans once started with in perceiving the world they were to conceptualize.

The distinction that we introduce for the diachronic depth and variation of a concept resonates with Gebser's (1986) judgment of the stages in the evolution of human consciousness, which we take as archaic images' relation to mythical consciousness, and as concepts' relation to mental consciousness. Consciousness itself is embodied (Merleau-Ponty, 1962, p. 408), and human bodies together with their environments shape human thoughts (Heidegger, 1988; Husserl, 2012) that by nature can be either non-propositional or propositional (Kosslyn et al., 2006). Whereas *archaic images* at the diachronic depths of human concepts are structures of non-propositional thought, these *concepts per se* are structures of propositional thought, and it is as structures of propositional thought that concepts lend themselves to diachronic variation in the worldview they belong to (Vakhovska, 2023). The diachronic depth of a concept is the starting point and the program of this concept's diachronic variation, as this archaic image is archetypal and acts as a seed generating in the soil of a particular culture those multiple mental representations that this concept eventually comes to subsume (Vakhovska, 2023, pp. 195–197).

On that, the evolution of human cognition has apparently featured a conversion, in which the format of representations in the human mind could once *convert from modal to amodal*. Here, we refer to Kaup et al. (2024) who state that developmentally, and otherwise, there is an interaction between the two formats; yet, we allow ourselves to refine the statement to mean that this interaction is a conversion of modal mental representations into amodal ones, and back. This conversion we believe *once supported* the evolution of human cognition, when the archaic consciousness in humans transitioned to their modern one; this conversion we believe *now remains central* to human communication with words, where it employs the visual and auditory areas of the human brain, orchestrating the respective organs of sense, along with the deep and shallow layers of the human mind, transcending the individual (un)consciousness into the collective unconscious (For the stages in the evolution of human consciousness, see Gebser, 1986; for the (neuro)physiology of human communication with words, see Hasson, 2016; Zada et al., 2024; Kumar et al., 2024; for the layering of the human mind, the collective unconscious included, see Jung, 1970; Minsky, 1988).

The first words in human evolution were *symbols* whose forms were in a sacred way syncretic with meanings (Makovskij, 2012); we believe that these words inherently were perceptual symbols (the term by Barsalou, 1999) that owed their syncretism to those images of the world that appeared in the emerging consciousness of early humans. In the course of time, this syncretism fell apart, with the result that human words became *signs* whose forms and meanings were now connected only arbitrarily, i.e. the words had lost those mental images that they originally bore. These images are what we show at the diachronic depths of human concepts; they have guided the development of human intelligence that began with nothing other than an image, and are those senses (the term by Frege, 1892) that humans have come to make of the world; they are the inner forms (the term by Potebnja, 1892) of the words that act as concepts' names, and are reconstructed as the etymological meanings of these words. In view of embodiment, the genesis of a concept must therefore be taken together with the genesis of the word that acts as this concept's name. Whereas *the concept is embodied* by virtue of the mental image at its diachronic depth, *the word is embodied* due to its property to bear this image from within this depth.

In what follows, we document our research on the evolution of SIN in the English worldview, with the premise that SIN is an embodied abstract concept that has *sin* (n.) as its name in the English language. As human sins generally are not tangible and not visible, this appears rather non-trivial to show the human body's imprint that SIN and *sin* (n.) have inherited.

III. METHODOLOGY

The evolution of SIN in the English worldview embraces SIN's diachronic depth and SIN's diachronic variation, which informed the two stages in our research.

Stage 1. *The diachronic depth of SIN* took a series of steps to explore. First, the etymon of the Modern English noun *sin* was identified in Old English as *synn*. This etymon by nature is a word, and also is a sign reconstructed via *etymological analysis* from the Proto-Germanic root **sunðjō-/sunjō-* that stands as the etymological archetype of *synn*.

Second, the archaic image that motivated the word *synn* at the moment of creation was shown via *etymological interpretation*, in the form of a mythical story narrated relative to the sacred makeup of the archaic world, as in the mind of early humans the world was represented with the help of images as symbols for certain phenomena of this world. Old English and the other genetically (un)related languages were considered semasiologically and onomasiologically in order to give a coherence to the archaic consciousness of humans whose mind's eyes were looking at sin.

A number of authoritative etymological dictionaries were used in order to reconstruct the original and the etymological meanings of *synn*, and of the root **sunðjō-/sunjō-* that this word and its cognates derive from. For the etymological dictionaries we used, and for the academic literature containing the linguistic terminology we adopted, see Vakhovska (2022).

Stage 2. Studying *the diachronic variation of SIN* required that the content of SIN be specified using *feature lists* for the notional-evaluative and the image-bearing components of this concept. The Biblical notion of sin that acts as a prototype for the diachronic variation of SIN in the English worldview was specified first, drawing the data from pieces of Christian religious discourse. As the diachronic variation of SIN has occurred in the secular segment of the English worldview, pieces of English secular discourse were analyzed using the cognitive linguistic methodologies of research.

Semantic analysis was used to identify and structure the meaning of *sin* (n.) and the meanings of its synonyms organized into the lexical-semantic field 'Sin' in the composition of subfields 'Ungodliness' and 'Wrong' whose centers are the semes 'a violation of the divine law' and 'a violation of a moral / legal / existential norm,' respectively.

Cognitive modeling was used to structure the semantic space of *sin* (n.) as that comprising the RELIGIOUS and SECULAR domains against which the SIN concept profiles; the domains were structured by frames, with the specification and causation relations of SIN to the other concepts whose names are the synonyms of *sin* (n.).

Conceptual mapping was used to expose metaphors in the conceptualization of sin; the metaphorical range of SIN was structured by the entailments of these metaphors.

Contextual analysis was used to compare and contrast the content of SIN at different stages in its historical development; the diachronically invariant and variant features of SIN were identified in the English secular discourse of the 14th–21st centuries, and particularized and interpreted using the data of religious studies, philosophy, ethic, cultural studies, sociology, psychology, and other related sciences; tendencies in the diachronic variation of SIN were identified using elements of *statistical analysis*.

The material of the study was directly sampled from authoritative lexicographical sources, with *sin* (n.) shown to have 137 synonyms in Modern English. The set of discourse data included 15,000 fragments of English secular discourse manifesting SIN; the fragments were collected from fiction and non-fiction works by British and American authors of the 14th–21st centuries, both printed and online, including some of the major corpora of English, both British and American. For the data sources we used, for the academic literature containing the linguistic terminology we adopted, and for the overview we provide for the major religious and philosophical renditions of sin, see Vaxovskaja (2011).

IV. RESULTS AND DISCUSSION

A. *The Diachronic Depth of SIN in the English Worldview*

To say it another way, thinking, however abstract, originates in an embodied subjectivity, at once overdetermined and permeable to contingent events. (de Lauretis, 2004, p. 365)

We find that the Old English word *synn* with the meaning 'a mistake, a bad act' ascends to the Proto-Germanic root **sunðjō-/sunjō-* with the meaning 'movement > a trespass on a territory that must not be trespassed > any violation > an incongruity, a mismatch,' which shows that the diachronic depth of SIN in the English worldview is *the archaic image of movement*:

One moves continuously along a way (the life) and trespasses on a territory that is forbidden (commits a sin). This trespass is a bad act because in it one violates the sacred order of the horizontally marked up world. This world is the nested circles of Cosmos vs. Chaos and of this vs. another tribe's territory that have their center as the good and their periphery as the evil. One goes beyond the boundaries of these circles in sin. <...> Whereas one's movement is a dynamic sequence of scenes (the life), a sin is a scene in this sequence only (a moment in life). A sin is an occasion in the journey (the life) and a blemish on the trajectory that curves one's way (a line of life) but the journey continues and is not terminated by the sin. This sin is this traveler's natural lot because all humans are corruptible and mortal. This sin is a true fact about the traveler. The traveler's guilt in committing this sin is verily proven. (Vakhovska, 2022, p. 183)

This narrative captures a peculiar cultural knowledge of sin, and is *the metaphor* (THE CIRCUMSTANCE OF) SIN *is MOVING THE WRONG WAY*; the entailments of this metaphor are given in brackets throughout the narrative. The sin that this narrative describes is one's trespass beyond the sacred circle of life, as in the mythical view the boundaries of this circle stood between the good and the evil. The metaphor is grounded in embodied cognition, as it explains the human

experience of sin in terms of peculiar primary experiences of the body, given the particular information coming to human sensory and motor systems in action, in a particular sort of environment (cf. Huo & Chen, 2021). Movement is a basic concept that for humans is presumably innate, which grounds SIN in that “direct physical experience,” as Lakoff and Johnson (1980, p. 57) term it, that is afforded to the human species by nature.

Moreover, insofar as abstract and concrete concepts may prove to be grounded in different aspects of embodiment, e.g., “situations versus perceptual properties and direct experience versus metaphors” (Borghi & Binkofski, 2014), SIN does relate to a situation in which abstract knowledge of sin builds upon its experience-based knowledge, through a metaphorical transfer. The cultural embodiment of SIN is its unique metaphors across the diverse human cultures. Compare the embodied metaphor for SIN in the Ukrainian worldview (THE CONSEQUENCE OF) SIN *is* BURNING IN THE FIRE (Vakhovska, 2022), which corresponds to the sacred order of the vertically marked up world. Whereas sin in the English worldview is action-oriented, and in effect is a psychomotor act of movement, which has transcended the culture and got manifested in the principles of justice and law, sin in the Ukrainian worldview is a physical-chemical process of burning, in which the experience of suffering and pain inflicted onto the body is transferred to the sinner’s soul undergoing punishment and purification. The metaphor goes deep into the culture, too, with a particular resonance to the archaic worship of the Sun.

The image of movement at the diachronic depth of SIN in the English worldview is archetypal, with a relation to *the psychological archetypes* THE SHADOW, ANIMA, THE SELF, and TRANSFORMATIONS. Archetypes are “the chthonic portion of the psyche” (Jung, 1970, p. 53), to mean that it is through archetypes that the human psyche is attached to nature, which we take as another proof that human SIN is embodied by virtue of its diachronic depth. Archetypes hold in themselves the foreknowledge of all things known by humans; they possess the power of plurality that for humankind makes “a guarantee against the dead-ends of evolution” (Mamardašvili, 1996, p. 53).

Archetypal images, due to their inherent numinosity, make their appearance as symbols that animate many other things in the context of human cultures. Symbols of this kind emerge in both religious and secular imagery of SIN, giving rise in particular to those metaphors of SIN that surface in English discourse as diachronically invariant and variant ones, for which see the subsection of this paper that follows.

B. *The Diachronic Variation of SIN in the English Worldview*

‘Twas sin before, but now ‘tis charity. (Shakespeare, 2021, p. 243)

SIN is a universal human concept that yet invariably is shaped differently by the different human cultures. SIN varies cross-culturally, as distinct cultures in a unique way conceptualize sin, and intra-culturally, as the conceptualization, the categorization, and the evaluation of sin change in the course of time within one and the same culture, too.

In Christianity, the notion of sin for the most part derives from the Bible, with the Old and New Testaments suggesting their peculiar conceptualizations of sin: whereas SIN in the Old Testament regulates not so much the spiritual life of individuals, but the social life of a community, SIN in the New Testament takes on a spiritual nature, and the value of SIN is now markedly moral. The Christian sin implies an unbreakable bond of man to God, and relates to the notions of the religious autonomy of man, and of the free will: sin is a violation of the moral law that was given to man by God. Biblical theology has elaborated on the notion of the original sin, with the various sins that resulted from the fall of man.

The Biblical notion of sin has diachronically remained (almost) invariant in English religious discourse, with the *religious experiences of sin* added to the religious segment of the English worldview. The Biblical notion of sin acts as a prototype in the diachronic variation of SIN in English secular discourse, which dates back to the 14th century, beginning in the works by G. Chaucer, with the *secular experiences of sin* added to the secular segment of the English worldview. The diachronic variation of SIN in the English secular discourse of the 14th–21st centuries is socioculturally determined, due to the growing secularization of the English-speaking community, with a continuous desacralization of sin. The concept preserves its orientation towards the future and certainly will continue to change.

SIN as a concept of culture presents itself in English secular discourse as a unity of its notional-evaluative and image-bearing components, with a set of features included into each (Vaxovskaja, 2011). The content of SIN varies diachronically, with major changes affecting the evaluation and the metaphorical conceptualization of sin, whereas *the notion of sin* proves rather invariant owing to the Biblical prototype that relates SIN to GOD and MAN, and also explains the gender markedness of sin, as Eve was the first to sin in the Garden of Eden. The other notional features of SIN that derive from the Biblical prototype but prove diachronically variant are that sin belongs to the spiritual sphere of human life; that sin in humans is universal due to the original sin; and that sin is negatively evaluated, in accord with the highest values that are positive.

Sin is now conceptualized outside of the spiritual sphere, as animals and nonliving things that inherently are spiritless are understood as sinners; in the 21st century, sin is a mistake, a bad taste, and a folly, which is taken trivially. Sin is now not an attribute of the universal nature in humans but of that in groups of people of a certain social class, and of a particular race; the 21st century features conceptualizations of sinlessness of some individuals altogether. The negative evaluation of sin can now change to be neutral and even positive; in the 21st century, the evaluation of sin is negative (39%), neutral (34%), and positive (27%). The category of sins proves to fill, too, as the secular society acquires all new vices, e.g. drug trafficking.

Metaphors of SIN make the image-bearing component of the concept, subsuming the diachronically invariant conceptualizations that build upon the Biblical imagery and Christian symbolism of sin, and the diachronically variant

ones that either elaborate pictorially on the negative evaluation, which is most common, or give a neutral and positive evaluation of sin, which is less common in the data.

The range of the *diachronically invariant* conceptual metaphors of sin includes A PHYSICAL OBJECT, A HUMAN BEING, AN ANIMAL, and A PLANT as the metaphorical sources that map on SIN as a target, producing their networks of entailments that highlight certain aspects of SIN. As A PHYSICAL OBJECT forms a specification relation with A SUBSTANCE and AN EVENT that themselves have this and other semantic relations with a range of concepts, this network of entailments includes such metaphors as SIN *is* DOWN / INSIDE / OUTSIDE / ON THE LEFT, e.g. *the underworld of sin*; SIN *is* A BLACK-COLORED / RED-COLORED OBJECT, e.g. *her soul must be black as sin, red was an evil colour*; SIN *is* A BURDEN / THE EARTHLY FLESH, e.g. *on him rested the weight of all her sin*; SIN *is* A CONTAINER, e.g. *she was in mortal sin*; SIN *is* WATER / A STONE, e.g. *the stream of human sin*; SIN *is* FILTH / A BLEMISH, e.g. *stained his soul with a deadly sin*; SIN *is* A WAY / THE FINAL DESTINATION, e.g. *the broad boulevard of sin*; and SIN *is* A COMMODITY, e.g. *paid a high wage for each hour of sin*.

A HUMAN BEING entails such metaphors as SIN *is* AN ENEMY, e.g. *the victory over sin*; SIN *is* AN ILLNESS / A MENTAL DISORDER, e.g. *the illness as sin made manifest in bone*; SIN *is* A HUNTER / A PREY / A BAIT, e.g. *Satan baits his hooks with sin*; and SIN *is* A TRAP / SLAVERY, e.g. *the slavery of sin*. AN ANIMAL when mapped onto SIN produces such metaphors as SIN *is* A BEAST / A WORM, e.g. *dens of sin*. A PLANT does so in SIN *is* A TREE / A WEED, e.g. *the fruits of sin, to eradicate sin*.

As far as the *diachronic variation* goes, there are conceptual metaphors of sin with its negative evaluation that appear only in some historical periods, making a quantitative variation of SIN; these metaphors are SIN *is* AN INFECTION / A SPIDER'S WEB / A CAGE / A DUNGEON / A SLEEP / A SEA / A ROCK / A SPIDER / A SCORPION / A RIVAL / A CRIMINAL / A GRANDEE, e.g. *the livery of sin*. Qualitatively, the metaphors SIN *is* A COMMODITY (e.g. *sin taxes on beer, spirits and tobacco*) and SIN *is* AN OBJECT (e.g. *delicious as the less criminal forms of sin*) change their evaluation to neutral and positive. The 21st century has brought about the SIN *is* UP (e.g. *to dizzy heights of sin*) and SIN *is* A WHITE-COLORED OBJECT (e.g. *the fairest sin, white sin*) metaphors that depart from the Biblical evaluation furthest.

V. CONCLUSION

We are thus introduced to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated. (Whorf, 1956, p. 214)

This paper has shown from a panchronic perspective that the evolution of a linguistic concept in a worldview takes this concept's diachronic depth along with this concept's diachronic variation, with the understanding that the diachronic depth of a concept is an archaic image that was prerequisite for this concept to emerge and that had formed perceptually in the human mind, through the direct visual experience that humans had in perceiving the world, which accounts for the embodiment of this concept. On that, the answer to the question that this paper's title asks is twofold. First, one who brings the linguistic concept into a panchronic view can see the mental image that once converted into this concept and that now lies at this concept's diachronic depth. Second, owing to this image one can see, and understand, the fact of the embodiment of this concept, and of the word that acts as this concept's name, as it is this word that carries this image from the diachronic depth.

Whereas the property of having a diachronic depth is universal for all human concepts in all national worldviews, the image at each concept's diachronic depth in each national worldview will be culture-specific, this specificity making the images at the diachronic depth of one and the same concept different in different national worldviews, e.g. the SIN concept has the archaic image of movement at its diachronic depth in the English worldview, and the archaic image of fire in the Ukrainian worldview. Calibrating this difference makes this paper's prospect.

REFERENCES

- [1] Barsalou, L. W. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences*, 22(4), 577–609. <https://doi.org/10.1017/s0140525x99002149>
- [2] Barsalou, L. W., & Wiemer-Hastings, K. (2005). Situating abstract concepts. In D. Pecher, & R. A. Zwaan (Eds.), *Grounding cognition: The role of perception and action in memory, language, and thinking* (pp. 129–163). Cambridge University Press. <https://doi.org/10.1017/CBO9780511499968.007>
- [3] Bergson, H. (1911). *Creative evolution*. Henry Holt & Company.
- [4] Borghi, A. M., & Binkofski, F. (2014). *Words as social tools: An embodied view on abstract concepts*. Springer. https://doi.org/10.1007/978-1-4614-9539-0_3
- [5] Cassirer, E. (1955). The philosophy of symbolic forms. *Mythical thought*. Yale University Press.
- [6] Chemero, A. (2001). Dynamical explanation and mental representations. *Trends in Cognitive Sciences*, 5(4), 141–142. [https://doi.org/10.1016/S1364-6613\(00\)01627-2](https://doi.org/10.1016/S1364-6613(00)01627-2)
- [7] Clifford, J. (1986). Partial truths. In J. Clifford, & G. E. Marcus (Eds.), *Writing culture. The poetics and politics of ethnography* (pp. 1–29). Berkeley.
- [8] de Lauretis, T. (2004). Statement due. *Critical Inquiry*, 30(2), 365–368. <https://doi.org/10.1086/421134>

- [9] de Saussure, F. (1983). *Course in general linguistics*, ed. by Ch. Bally, & A. Sechehaye, with collaboration of A. Riedlinger; transl. by R. Harris. Duckworth. (Original work published 1916).
- [10] Frege, G. (1892). Über Sinn und Bedeutung [On Sense and Reference]. *Zeitschrift für Philosophie und philosophische Kritik* [Journal for Philosophy and Philosophical Criticism], 100(1), 25–50. Retrieved September 3, 2024, from https://www.deutschestextarchiv.de/book/show/frege_sinn_1892
- [11] Gallagher, Sh. (2005). *How the body shapes the mind*. Oxford University Press.
- [12] Gebser, J. (1986). *The ever-present origin*. Ohio University Press.
- [13] Hasson, U. (2016). *This is your brain on communication*. TED2016 Conference. Canada: Vancouver. Retrieved September 3, 2024, from https://ted.com/talks/uri_hasson_this_is_your_brain_on_communication
- [14] Heidegger, M. (1988). *The basic problems of phenomenology*. Indiana University Press.
- [15] Hopper, P. (1987). *Emergent grammar*. Berkeley Linguistics Society.
- [16] Huo, M., & Chen, J. (2021). On embodiment of predicative metaphor: A case of English body-action verbs. *Theory and Practice in Language Studies*, 11(9), 1114–1120. <https://doi.org/10.17507/tpls.1109.19>
- [17] Husserl, E. (2012). *Cartesian meditations: An introduction to phenomenology*. Springer Science & Business Media.
- [18] Jarosz, I. (2020). *In search of the cultural motivation in language: Girl and woman in James Joyce's 'Dubliners.'* Peter Lang GmbH.
- [19] Jung, C. G. (1970). *Mind and earth: Collected works of C. G. Jung*, ed. by R. F. C. Hull. Princeton University Press. <https://doi.org/10.1515/9781400850976.29>
- [20] Kaup, B., Ulrich, R., Bausenhardt, K. M., Bryce, D., Butz, M. V., Dignath, D., Dudschig, C., Franz, V. H., Friedrich, C., Gawrilow, C., Heller, J., Huf1, M., Hütter, M., Janczyk, M., Leuthold, H., Mallot, H., Nürk, H.-Ch., Ramsar, M., Said, N., Svaldi, J., & Wong, H. Y. (2024). Modal and amodal cognition: An overarching principle in various domains of psychology. *Psychological Research*, 88, 307–337. <https://doi.org/10.1007/s00426-023-01878-w>
- [21] Kimmel, M. (2008). Properties of cultural embodiment: Lessons from the anthropology of the body. In R. M. Frank, R. Dirven, T. Ziemke, & E. Bernárdez (Eds.), *Sociocultural situatedness* (Vol. 2, pp. 77–108). De Gruyter Mouton. <https://doi.org/10.1515/9783110199116.1.77>
- [22] Kosslyn, S. M., Thompson, W. L., & Ganis, G. (2006). *The case for mental imagery*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195179088.001.0001>
- [23] Kövecses, Z. (2014). Conceptual metaphor theory and the nature of difficulties in metaphor translation. In D. R. Miller, & E. Monti (Eds.), *Translating figurative language* (pp. 25-39). Università di Bologna.
- [24] Kubrjakova, E. S. (2004). *Jazyk i znanie* [Language and knowledge]. Languages of Slavic Culture.
- [25] Kumar, S., Summers, T., Yamakoshi, T., Goldstein, A., Hasson, U., Norman, K., Griffiths, Th., Hawkins, R., & Nastase, S. (2024). Shared functional specialization in transformer-based language models and the human brain. *Nature Communications*, 15, 5523. <https://doi.org/10.1038/s41467-024-49173-5>
- [26] Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago Press.
- [27] Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. Basic Books.
- [28] Łozowski, P. (2022). The will and be going to constructions as panchronic inferences: In search of cognitive motivation. *Lege Artis. Language Yesterday, Today, Tomorrow*, 7(2), 39–75.
- [29] Łozowski, P. (2023). In search of panchrony: Saussure versus cognitive linguistics. *Lublin Studies in Modern Languages and Literature*, 47(2), 153–164. <https://doi.org/10.17951/lsmll.2023.47.2.153-164>
- [30] Makovskij, M. M. (2012). *Fenomen TABU v tradicijakh i v jazyke indoevropejcev. Suščnost'.* Formy. Razvitie [The phenomenon of TABOO in the traditions and language of Indo-Europeans. Essence. Forms. Development]. URSS.
- [31] Mamardašvili, M. K. (1996). *Strela poznanija: Nabrosok jestestvennoistoričeskoj gnozeologii* [The arrow of knowledge: An outline of the natural and historical gnoseology]. Languages of Slavic Culture.
- [32] Martin, T., & Schwartz, D. L. (2005). Physically distributed learning: Adapting and reinterpreting physical environments in the development of fraction concepts. *Cognitive Science*, 29(4), 587–625. https://doi.org/10.1207/s15516709cog0000_15
- [33] Merleau-Ponty, M. (1962). *Phenomenology of perception*. Routledge.
- [34] Minsky, M. (1988). *Society of mind*. Simon and Schuster.
- [35] Moholy-Nagy, L. (1945). In defense of 'abstract' art. *The Journal of Aesthetics and Art Criticism*, 4(2), 74–76. <https://doi.org/10.2307/426079>
- [36] Potebnja, A. A. (1892). *Mysl' i jazyk* [Thought and language]. Adolf Darre's Typography.
- [37] Shakespeare, W. (2021). *King Henry VI*. Simon & Schuster.
- [38] Shapiro, L., & Spaulding, Sh. (2024). Embodied cognition. In E. N. Zalta, & U. Nodelman (Eds.), *Stanford Encyclopedia of Philosophy*. Retrieved September 3, 2024, from <https://plato.stanford.edu/entries/embodied-cognition/>
- [39] Ševčenko, I. S. (2016). Evoljucijni mexanizmy kognityvnoji semantyky [The evolutionary mechanisms of cognitive semantics]. *Cognition, Communication, Discourse*, 13, 131–141. <https://doi.org/10.26565/2218-2926-2016-13-07>
- [40] Spivey, M. J. (2007). *The continuity of mind*. Oxford University Press.
- [41] Vakhovska, O. V. (2022). The sin of the translator: On words and mental images in translation. *Amazonia Investiga*, 11(54), 178–188. <https://doi.org/10.34069/AI/2022.54.06.17>
- [42] Vakhovska, O. V. (2023). Emotions and the archaic consciousness of man: A diachronic semantic reconstruction of the names of emotions in English. *Amazonia Investiga*, 12(69), 194–203. <https://doi.org/10.34069/AI/2023.69.09.17>
- [43] Vakhovska, O. V. (2024). Emotions and consciousness: Reconstructing emotion concepts' diachronic depths with the use of proto-language data. *Logos*, 119, 49–58. <https://doi.org/doi.org/10.24101/logos.2024.26>
- [44] Varela, F. J., Thompson, E., & Rosch, E. (2017). *The embodied mind*. Massachusetts Institute of Technology Press.
- [45] Vasko, R. V. (2019). Semiotic and culturological passportization of numeric phraseosymbols. *Logos*, 98, 94–103. <https://doi.org/10.24101/logos.2019.10>

- [46] Vaxovskaja, O. V. (2011). *Verbalizacija koncepta GREX v anglojazyčnom diskurse XIV–XXI vekov* [Linguistic manifestation of the SIN concept in the English discourse of the 14th–21st centuries] [Unpublished doctoral dissertation]. V. N. Karazin Kharkiv National University.
- [47] von Humboldt, W. (1836). *Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwicklung des Menschengeschlechts* [On the Difference of the Structure of Human Languages and its Influence on the Spiritual Development of Mankind]. F. Dümmler.
- [48] Ward, D., Silverman, D., & Villalobos, M. (2017). The varieties of enactivism. *Topoi*, 36(3), 365–375. <https://doi.org/10.1007/s11245-017-9484-6>
- [49] Weber, S. (2005). A touch of translation: On Walter Benjamin's 'Task of the translator.' In S. Bermann, & M. Wood (Eds.), *Nation, language, and the ethics of translation* (pp. 65–79). Princeton University Press. <https://doi.org/10.1515/9781400826681.65>
- [50] Whorf, B. L. (1956). *Language, thought, and reality: Selected writings of Benjamin Lee Whorf*, ed. by J. B. Carroll. Massachusetts Institute of Technology Press.
- [51] Zada, Z., Goldstein, A., Michelmann, S., Simony, E., Price, A., Hasenfratz, L., Barham, E., Zadbood, A., Doyle, W., Friedman, D., Dugan, P., Melloni, L., Devore, S., Flinker, A., Devinsky, O., Nastase, S., & Hasson, U. (2024). A shared model-based linguistic space for transmitting our thoughts from brain to brain in natural conversations. *Neuron*, 112, 1–12. <https://doi.org/10.1016/j.neuron.2024.06.025>
- [52] Zahavi, D. (2005). *Subjectivity and selfhood: Investigating the first-person perspective*. Massachusetts Institute of Technology Press.
- [53] Zhabotynska, S. A. (2013). Saussure's theory of the linguistic sign: A cognitive perspective. *Papers of the International Congress of Linguistics*. Université de Genève. Retrieved September 3, 2024, from https://www.academia.edu/22862255/SAUSSURES_THEORY_OF_THE_LINGUISTIC_SIGN_A_COGNITIVE_PERSPECTIVE



Olha V. Vakhovska (b. 1984) is Doctor of Linguistics (Ukraine), Master of Cognitive Science (Germany), Associate Professor, Postdoctoral Researcher at the Chair of Germanic and Finno-Ugric Philology, the Department of Germanic Philology and Translation, Kyiv National Linguistic University (Kyiv, Ukraine).

Her research interests are linguistics, semiotics, semantics, philosophy of mind and cognition, human and artificial intelligence, historical linguistics, comparative linguistics, cross-cultural communication, and translation. E-mail: olha.vakhovska@knl.u.edu.ua