pp. 107-122, https://doi.org/10.12797/SAAC.25.2021.25.06 Licensing information: CC BY-NC-ND 4.0

Joanna Jurewicz **D** Pretoria, Warsaw

# BRAIN-MIND-BODY-SIGN-WORLD CROSSING THE BORDERS\*

Abstract: The paper discusses the possible meeting areas between oriental studies, archaeology, and cognitive linguistics. The point of departure is study of Chris Gosden (2008) in which he shows a possible cooperation between archaeology and neuroscience when the interactions among brain-body-world are taken into account. On the example of a sword from the Iron Age, he shows the mutual influences of the brain-body-culture complex on the one hand, and the materials used in craft. I will follow his line of reasoning and show the use of the concept of gold processing in thinking about cognition as it is attested in the early Indian texts. The example analyzed in the paper is a description of a Buddhist meditation attested in the Pāli Canon (c. 4th-1st centuries BCE). With the use of cognitive linguistics models of mental processes, I will show how the triangle brain-bodyworld can be enlarged with two more elements, namely, the mind and signs.

**Keywords:** archaeology; cognitive linguistics; oriental studies; neuroscience; embodiment; conceptual metaphor; the Buddha; purification of gold; ancient India

The point of departure of my analysis is the study of Chris Gosden (2008) in which he shows a possible cooperation between archaeology and neuroscience when the interactions between brain-body-world are taken into account. I will shortly discuss 'his main claim before showing how oriental studies and cognitive linguistics can contribute in such a research.

Gosden begins with a statement that the fields of research of neuroscience and archaeology seem to be completely different, since archaeologists study

<sup>\*</sup> I would like to thank the anonymous reviewers for their valuable comments that contributed to the greater clarity and precision of my argument.

objects from the past and try to understand society that created them, and neuroscientists study the human brain. However,

[b]oth neuroscientists and archaeologists are emphasizing material aspects of the brain in its body on the one hand and the physical properties of objects as they affect the body on the other. The triangle of brain-body-world is the point at which neuroscience and archaeology meet.' (Gosden 2009, 105)

According to him, the way we think about the world derives from our modes of activity and activity combines people and the material world. He states then that this combination of humans and things 'brings into question the academic division between the physical sciences on the one hand and the human or social sciences on the other' (Gosden 2009, 105). However, this division can be overcome, at least to some extent. He proposes to 'look at how people objectify themselves in objects and how objects subjectify themselves in people' (Gosden 2009, 105). Plasticity of the objects and brains, which mutually influence one another, constitutes the crucial element of this recursive relationship between people and the world.

To support his claim, he analyzes the so-called Kirkburn sword which comes from East Yorkshire in the northeast of England.<sup>1</sup> It is dated approximately to the 4th-3rd centuries BC. It is an object partly made of iron, its scabbard has copper and enamel decorations and its handle is made of horn. The materials which were used to manufacture the sword and the place where it was founded allows Gosden to reconstruct the complex net of social interactions which were needed to make such a sophisticated object. Objects do not appear in the void, they reflect interactions between bodies and materials as well as various activities which finally bring it into being. You cannot study historic objects without taking into account people who made them. Their way of thinking and their activity is reflected in the artifacts. As Gosden writes, 'the sword and the scabbard condense many stories, some local to them and others from long ago and far away' (Gosden 109, 112).

The new discoveries concerning the human brain and cognition support Gosden's idea. They show that cognition is embodied: it depends on our body in its largest sense, on its specific structure, the way we perceive the world through the senses, on proprioception (the sense of movements

<sup>&</sup>lt;sup>1</sup> https://www.britishmuseum.org/collection/object/H 1987-0404-2.

and position of one's own body). It also depends on culture we have been brought up in and on our personal experience (Damasio 1996, 1999, 2010, 2018; Gibbs 2005; Pecher and Zwaan 2005; Feldman 2006; Clark 2008; Handl and Schmid 2011).

These outcomes constitute an important basis for the research done in cognitive linguistics. Generally speaking, cognitive linguistics analyzes the relationship between signs and the mind (Lakoff and Johnson 1980; Kövecses 2006; Evans and Green 2006; Geeraerts and Cuyckens 2007; Gibbs 2008). In this way, it enlarges the triangle of brain-body-world, which according to Gosden's proposition, is the point where neuroscience and archaeology meet. It adds two elements: the mind and the signs. Instead of a triangle, we have a pentad: brain-mind-body-sign-world.

The signs can be verbal and nonverbal. If we accept Geertz's (1973) definition of culture as a web of signs and understand cultural artifacts as signs, then we can understand archaeological interpretation as a semiotic inquiry that interprets non-verbal signs. The models of analysis relationship between the material signs and the mind proposed by cognitive linguistics can be used to analyze the artifacts, too.

However, in my analysis, I want to focus on verbal signs, i.e., texts, and to show the relationship between thought and language on the one hand and experience on the other. Experience encompasses two elements of Gosden's triangle, i.e., the body and the world. The basis of all of them is brain, the next element of the pentad proposed here, but I will leave out this issue.

As I have mentioned above, cognitive linguistics analyzes the relationship between the mind and signs. However, since cognition is embodied, in order to reconstruct the links between the mind and signs, we need to know the experience which motivates them. One of the models is provided by the conceptual metaphor which allows us to understand more abstract concepts in terms of more concrete concepts (Lakoff and Johnson 1980; Kövecses 2002, 2015). For example, when we say 'he has a heart of gold,' we mean that someone is kind and generous and enjoys helping other people.<sup>2</sup> But this phrase reflects a conceptual metaphor: we map some features of the concept of gold typically ascribed to it in English (or Polish) speaking community to a more abstract concept of specific features of a person's character. Thus, in our mind, a metaphorical thinking occurs due to which we think of kindness in terms of a piece of gold. In cognitive linguistics, the concept that provides its selected features is called the source domain (the concept of a piece of gold) and the concept that is conceived is called

 $<sup>^2\ \</sup> https://www.collinsdictionary.com/dictionary/english/someone-has-a-heart-of-gold.$ 

the target domain (the concept of kindness). Conceptual metaphor is presented as follows: KINDNESS IS A PIECE OF GOLD. And since we also typically think of heart as the locus of emotions,<sup>3</sup> thus, when we say 'he has a heart of gold,' we hope that our hearer will understand that we do not refer to Tin Woodman from *The Wonderful Wizard of Oz*, but to someone extremely kind who, for example, has helped us out in a difficult situation.

Now let us come back to my main point, i.e., the pentad of brain-mind-body-sign-world. I will show their mutual connections on the example taken from two sermons of the Buddha: *Paṃsudhovaka Sutta* ('The Sermon on the Dirt/Gold-Washer') (*Aṅguttara Nikāya* 3.102) and *Nimitta Sutta* ('The Sermon on the Sign') (*Aṅguttara Nikāya* 3.103). I will discuss how the concept of purification of gold is used to conceive and explain stages of meditation. Linda Covill (2009) was the first to propose a cognitive analysis of this sermon and I hope to build up on her study here.

The Pāli Canon is the standard collection of the Buddha's scriptures in the Theravada Buddhist tradition which was preserved orally from the 5th century BC, i.e., from the times of the Buddha himself. It was written down in the 1st century BC. According to traditionally, the sermons were preached by the Buddha himself.

## Pamsudhovaka Sutta

'There are these gross impurities in gold: dirty sand, gravel, and grit. The dirt-washer or his apprentice, having placed [the gold] in a vat, washes it again and again until he has washed them away. (1)

When he is rid of them, there remain the moderate impurities in the gold: coarse sand and fine grit. He washes the gold again and again until he has washed them away. (2)

When he is rid of them, there remain the fine impurities in the gold: fine sand and black dust. The dirt-washer or his apprentice washes the gold again and again until he has washed them away. (3)

When he is rid of them, there remains just the gold dust. The goldsmith or his apprentice, having placed it in a crucible, blows on it again and again to blow away the dross. The gold, as long as it has not been blown on again and again to the point where the impurities are blown away, as long as it is not refined and

<sup>&</sup>lt;sup>3</sup> In cognitive linguistics, this kind of thinking is called conceptual metonymy (HEART FOR EMOTIONS).

free from dross, is not pliant, malleable, or luminous. It is brittle and not ready to be worked. (4)

But there comes a time when the goldsmith or his apprentice has blown on the gold again and again until the dross is blown away. The gold, having been blown on again and again to the point where the impurities are blown away, is then refined, free from dross, pliant, malleable, and luminous. It is not brittle, and is ready to be worked. Then whatever sort of ornament he has in mind – whether a belt, an earring, a necklace, or a gold chain – the gold would serve his purpose. (5)

In the same way, there are these gross impurities in a monk intent on heightened mind: misconduct in body, misconduct in speech, and misconduct in mind. These the monk – aware and able by nature – abandons, destroys, dispels, wipes out of existence. (6)

When he is rid of them, there remain in him the moderate impurities: thoughts of sensuality, thoughts of ill will, and thoughts of harmfulness. These he abandons, destroys, dispels, wipes out of existence. (7)

When he is rid of them there remain in him the fine impurities: thoughts of his caste, thoughts of his home district, thoughts related to not wanting to be despised. These he abandons, destroys, dispels, wipes out of existence. (8)

When he is rid of them, there remain only thoughts of the *Dhamma*.<sup>4</sup> His concentration is neither calm nor refined, it has not yet attained serenity or unity, and is kept in place by the fabrication of forceful restraint. (9)

But there comes a time when his mind grows steady inwardly, settles down, grows unified and concentrated. His concentration is calm and refined, has attained serenity and unity, and is no longer kept in place by the fabrication of forceful restraint. (10)

And then whichever of the higher knowledges he turns his mind to know and realize, he can witness them for himself whenever there is an opening.' (11)<sup>5</sup>

The Buddha begins with description of gold production (1-5). As far as our historical knowledge is concerned, we do not know much about ancient

<sup>&</sup>lt;sup>4</sup> That is, the Buddha's teaching.

 $<sup>^{5}\</sup> http://www.buddha-vacana.org/sutta/anguttara/03/an03-102.html.$ 

Indian gold production.<sup>6</sup> The problem is even greater, because, generally, the archaeological evidence of ancient Indian culture is very sparse, and as regards the oldest tradition, we have nothing. So the vast majority of our knowledge of the oldest Indian culture comes only from texts.

We know gold was used in days before the Buddha (beginning with the most ancient textual layer, i.e., the Rgveda, composed c. 13 BC, see below) and it had rich symbolic meanings. It was used primarily in religious and royal rituals and ceremonies, which was meticulously presented by Gonda (1991). He, however, does not mention any text which could be seen as referring to its production. However, one can find such fragments in the original texts. In the Rgveda, a single hymn makes reference to the panning of gold (9.86.43).<sup>7</sup> In some cosmogonies of the great corpus of texts known as the Brāhmaṇas (c. 800 BC), one can find a reference to the production of gold used as the source domain for describing the Creator's activity. In Taittirīya Brāhmana 3.11.8.6ff, the Creator is presented as heating himself and emitting gold from himself. Then he throws it into sacrificial fire, but he is not pleased with the results. He repeats this two more times and is not satisfied either. The fourth time, he throws gold into his own heart, which is omnipresent fire, and thus obtains the desired form of gold. In Śatapatha Brāhmana 6.1.3.1ff., the Creator heats himself and from him water (sweat) appears which, during consecutive heating, acquires various forms to become fluid gold. These source domains indicate that pre-Buddhist Indians were able to process gold in fire. It should also be added that the creation in the Brāhmanas was understood as a self-transformation into a perfect form, and the nature of this process was mental. Taking this into account, it can be seen that the use of the concept of gold processing as a process which aims at perfection of the mind was established in the earlier tradition.

There are more archaeological evidence, including coins, from the time when the Pāli Canon was compiled (c. the 5th-2nd centuries BC), however, these were mainly silver punch-marked coins (Mitchiner 1973, Kosambi 1981, Srivastava 1996, Ray 2006). We still have no sources from this time to give us any information about gold panning, mining or its purification.

Let us come back to the sermon of the Buddha. Most probably, he refers to open-cast gold mining in rivers whose sediment carried lumps of golden ore mixed with gravel, sand, silt, etc. A gold washer collects river's sand in a pan, then selects the largest stones, then sieves the remainders to separate

<sup>&</sup>lt;sup>6</sup> See Rau 1974, Olivelle 2012. It cannot be excluded that the author/s of the sermon actually have an alchemical process in mind (White 1996).

<sup>&</sup>lt;sup>7</sup> Within the description of purification of soma, see below.

gravels and sand, and ends up with lumps of gold, still contaminated at this stage. Then the gold is heated in a crucible to remove other metals, such as silver; usually this should be done several times. Finally, the pure gold ready for further processing. At this point, the goldsmith makes the ornament he wants. This is the experience which is the basis for the source domain, i.e., the concept which lends its categories to another concept: the Buddha wants to explain how to meditate and not how to produce gold.

Now, let us come to our pentad. As the recipients, we are confronted with the words, i.e., signs. They open the way to experience (the body and the world) on the one hand and to the mind, i.e., the concepts, on the other. The division is artificial and only for analytical clarity. The fact that the Buddha begins with the description of the gold production shows that he wants to frame the minds of his recipients: he wants them to think about the source domain before he begins his description of meditation, which is the target domain. In order to reconstruct this framing, we should reconstruct the source domain, i.e., the way the gold production is presented and conceived in the sermon. The Buddha describes it as a complex and lengthy process which, as we may presume, needs a considerable knowledge: one should know where to look for the golden ore, how to take it out, etc. This process of its purification has to be learned from a master by trials and errors, and needs practice, skillfulness, and patience. But the effects are marvelous!

However, there is much more meaning in the concept of gold production. A concept cannot be reduced to an instruction how to produce gold or to the script of this process. As stated above, cognition is embodied, any knowledge is filtered through our organisms. Thus we arrive to the next element of the pentad, i.e., experience: the body and its interaction with the world. Let me again refer to Gosden. He actually describes the copper and bronze metallurgy, but his description can be used in reference to the gold metallurgy as well:

The working of metals requires a large amount of embodied knowledge. Ancient metallurgists were able to control firing temperatures in the smelt or forge, as well as the atmospheres around the objects, add quantities of metals together very precisely or arrive at a desired surface finish for an object, all without the thermometer or means of measuring gases or precise means of estimating weight. Some of this knowledge would have been transmitted orally, but books, plans or chemical formulae were all absent, so that much

would have come from learning the heft of the tools, the color of flames or metal and the right amount of air to pump in with the bellows. Bodily intelligence, rather than mental construction, was the key to skilled productive activity. (Gosden 2009: 113)

Although these and other aspects of experience are not described by the Buddha explicitly, they were part of the general knowledge of what it means to produce gold even if one never did it oneself.

Then the Buddha describes the target domain, i.e., meditation, which he wants to explain and teach (6-11). He describes stages of meditation in the following way. A monk should release his mind from bad deeds in the first stage. In the second stage, he should release his mind from thoughts full of passion and malice and in the third stage, he should release his mind from thoughts about home, family, or reputation. And when his mind is filled with only one thought, which is the teaching of the Buddha (*Dhamma*), he should try to concentrate his mind again and again until he succeeds and his consciousness is 'calm and refined, and attains serenity and unity.' Then he will able to think about whatever he wants, to obtain the miraculous powers, to cognize everything in the past, in the present and in the future.

Since the process of meditation is impossible to be understood and described literally, the Buddha construes a conceptual metaphor in which meditation is conceived in terms of gold production: THE MIND IS GOLD, MEDITATION IS SELECTION OF GOLD ORE/HEATING OF GOLD. In this conceptual metaphor, some features of the concrete concept of gold production are mapped onto the very abstract concept of meditation construed during every experience of meditation. The recipient who wants to meditate and transform the way his mind cognize is instructed to conceive himself in terms of a gold washer who selects large stones from the river's sand and pebbles and throws them away, then sieves the river's sand in a pan and finally obtains a lump of gold which is still not clean. The recipient may develop the source domain and understand the situation of his mind immersed in the cycle of rebirth in terms of gold which is hidden in the water of a river. The embodied nature of human thinking may trigger him to use other features of the source domain: he might feel pain in his back or in hands or coolness of water, or the excitement.

The subsequent stage of meditation conceived in terms of gold production is described in the next sermon.

#### Nimitta Sutta

Just as if a goldsmith or goldsmith's apprentice were to set up a smelter. Having set up the smelter, he would fire the receptacle. Having fired the receptacle, he would take hold of some gold with his tongs and place it in the receptacle. Periodically he would blow on it, periodically sprinkle it with water, periodically examine it closely. (1)

If he were solely to blow on it, it is possible that the gold would burn up. (2)

If he were solely to sprinkle it with water, it is possible that the gold would grow cold. (3)

If he were solely to examine it closely, it is possible that the gold would not come to full perfection. (4)

But when he periodically blows on it, periodically sprinkles it with water, periodically examines it closely, the gold becomes pliant, malleable, and luminous. It is not brittle, and is ready to be worked. Then whatever sort of ornament he has in mind – whether a belt, an earring, a necklace, or a gold chain – the gold would serve his purpose. (5)

In the same way, a monk intent on heightened mind should attend periodically to three signs: he should attend periodically to the theme of concentration; he should attend periodically to the theme of uplifted energy; he should attend periodically to the theme of equanimity. (6)

If the monk intent on heightened mind were to attend solely to the sign of concentration, it is possible that his mind would tend to laziness. (7)

If he were to attend solely to the sign of uplifted energy, it is possible that his mind would tend to restlessness. (8)

If he were to attend solely to the sign of equanimity, it is possible that his mind would not be rightly concentrated for the ending of the fermentations. (9)

But when he attends periodically to the sign of concentration, attends periodically to the theme of uplifted energy, attends periodically to the theme of equanimity, his mind is pliant, malleable, luminous, and not brittle. It is rightly centered for the stopping of the fermentations. (10)<sup>8</sup>

<sup>&</sup>lt;sup>8</sup> http://www.buddha-vacana.org/sutta/anguttara/03/an03-103.html.

In this stage, a monk should harmonize his mental activity to attain concentration, energy, and balance. He is prompted to imagine himself in terms of a goldsmith who has to heat the crucible, put the gold ore into it, heat it with fire with bellows, cool it with water, and watch closely if everything goes well (1-5). And these three activities must be harmonized. If he focuses only on the signs of concentration, his mind will become lazy, in the same way as gold will be burnt if the goldsmith heated it too much. If he focuses only on the signs of energy, his mind becomes overexcited, in the same way as gold will cool down if the goldsmith poured too much water on it. If he focuses only on the signs of equanimity, his mind will not be able to get rid of evil thoughts and deeds, in the same was as the goldsmith would not obtain the perfect form of gold if he only watches it. But if he practices all three types of meditation, his mind will become soft, malleable, shiny, not brittle and perfect for further processing.

The implications of such understanding of meditation are as follows. It is difficult and lengthy process, but neither magical nor supernatural. It can be taken up by anyone who is ready to learn it, to practice it, to go through all its stages with due attention in the same was as one learns the processing of gold. Meditation gives the monk full control over his mind and full freedom in choice of what he wants to think about in the same way as a goldsmith can create whatever he wants and the trained mind has the capacity to assume any form in the meditative state.

The trained mind is beautiful and unique, as is the golden ornament. As Gosden writes, the beauty if objects and their apprehension should be taken into account in the analysis of the artefacts. Let me quote him again:

Objects which enchant can overawe and influence people, so that they find it hard to resist the blandishments of their makers in other spheres, such as those of exchange. Enchanting objects are active presences in our lives, influencing a whole range of social relations between people. (Gosden 2009: 108).

Taking into account that the mind well trained in meditation is conceived in terms of an ornament made of pure gold may trigger the recipients to see it as enchanting and so be motivated to practice it. Moreover, it is conceivable that the conceptualization of the mind of Buddhist monks in terms of pure gold which can be used by them in various beautiful ways contributes to their prestige. The beauty of his mind is metonymically mapped onto the monk himself as if he were a possessor of something precious and beautiful.

It should be added that a concept of meditation conceived in terms of heating is already attested in in the Rgveda. Its authors describe ritual production of juice made of a plant called soma, which was similar to purification of gold: the plant was pressed, the juice was purified in the sheep's flees, possibly cooked, the water or milk or clarified butter was added. The juice was yellow and shining. The juice of the soma plant was hallucinogenic, it caused a transformation of the mind. As the Rgveda describes, the first symptom after drinking the juice was a strong feeling of physical heat causing sweating and then it gave supernatural cognition and power to create hymns, freedom and ability to do what one wanted, e.g., ability to fly. The composers conceived this supernatural cognition in terms of various processes which could be generally labelled as cleansing by heat. They were mainly connected with cow-herding (as clarification of butter), although the concept of forging of bronze axes or knives in terms of which supernatural cognition after soma was conceived, also is attested. As already mentioned, in one place (9.86.43), the concept of gold purification appears in the context of preparation of somic juice and the recipient is prompted to view it as the source domain of supernatural state achieved thanks to soma (Jurewicz 2010).9

The plant must have been grown in the mountains and when the Rgvedic community left them to move to the Gangetic Plane, the memory of this marvelous experience remained<sup>10</sup> and the Brāhmaṇas attest the efforts to obtain it without a hallucinogenic plant, through hard exercises leading to heat up and extreme fatigue, through prolonged recitation of traditional text, and fasting. These efforts were successful c. the 6th century BC in Brahminic<sup>11</sup> and the Buddhist communities. Although, as we have seen, the composers of the Brāhmaṇas use sometimes the concept of purification of gold to represent mental creative transformation, the main source domain used by them is the concept of cooking.

The choice of the concept of purification of gold as the source domain by the Buddha was connected with the changes in cultural and economic environment which had been taking place in northern India since the 6th century BC and with development of technology, metallurgy included. It should be noted that the Buddha was not a Brahmin, but – as a son of a king – a Kṣatriya and he often preached to rich urban communities,

<sup>&</sup>lt;sup>9</sup> It should also be noted that beginning with the Common Era, the yogic tradition used the concept of purification of gold to represent the transformation of a yogin (White 1996).

<sup>&</sup>lt;sup>10</sup> Thanks to oral transmission of the R*gveda* (and other sacred texts).

<sup>&</sup>lt;sup>11</sup> which is attested in the early upanisads, see Jurewicz (2016/18).

contrary to the Brahmins who preferred rural life. This fact can be the next factor why he used the concept of transformations of gold whose aim was to produce expensive objects, symbols of richness and power, as the source domain. Moreover, the nature of Buddhist meditation was different from the Brahminic one, so perhaps in his opinion, the concept of purifying gold reflected its specificity better than the concept of cooking (e.g., when it comes to the final purpose). Cognitive skills were developing alongside practical ones in close connection to social changes to integrate finally in the metaphor: COGNITION IS GOLD PROCESSING.

### Conclusion

I hope to have shown the mutual connections between the experience, its conceptualization, and its metaphoric use to conceive another concept. The concept of purifying gold by fire is the source domain for perfecting the mind (target domain) in the sermons of the Pāli Canon analyzed above. Purifying gold is a long, complicated process, but the Buddha only selects those aspects that are suitable for explaining the nature of meditation. Therefore, the testimony of the religious-philosophical texts does not allow to fully reconstruct the experience (for example, we do not know what the hearth or the crucible looked like), although it does enable the understanding of its basic picture. However, the testimony of surviving Indian texts is invaluable in the absence or a small number of archaeological data. In this way, oriental studies (in this case, Indological) can make a significant contribution to archaeological research, because it also provides an insight into experience, describing processes and artifacts, even if the descriptions included in the texts use concepts that merely constitute source domains for other, more abstract ideas.

As Gosden writes, each object has its own history, but it also gives us access to its meaning, i.e., to the mental work triggered by its existence. The theory of mind proposed by cognitive linguistics, which assumes the metaphorical nature of human thinking, provides tools for analyzing the relationship between experience, source and target domains. In other words, these tools give us access to the mind and the way it works. Thus, a cognitive analysis enlarges the triangle proposed by Godsen into a pentad. His idea that '[t]he complex actions and interactions of brains, bodies and worlds are what make us human and historical' (2009: 117) cannot be fully appreciated if we do not include the mind, which creates the meaning, and the signs, which evoke it.

Finally, the possible contribution to the neurosciences can be seen in that the cognitive Indological studies of the early Indian texts confirm the basic claim of the embodiment of cognition and the role of experience in conceptualization of abstract ideas. Such a complex process as meditation cannot be explained literally and, according to the conceptual metaphor theory, it needs conceptualization in terms of simpler concepts related to experience. 12 Experience, in turn, is motivated by our human structure and culture. The understanding of meditation in terms of transforming gold into fire, as I have shown, goes back to the beginnings of Indian culture, even if during Buddhist meditation you do not feel your body temperature rise, as was the case with drinking soma. And there is inextricable link between experience and brain. As Gazzaniga (2011: 406) writes: 'all of life's experiences, personal and social, impact our emergent mental system. These experiences are powerful forces modulating the mind. They not only constrain our brains but also reveal that it is the interaction of the two layers of brain and mind that provides our conscious reality, our moment in real time.'

The evidence of embodiment of cognition from more than two thousand years ago ecould be, in my opinion, of significant importance for the neuroscientific research, too, because it can reveal some common features of the human brain, which can be deduced from linguistic data and cognitive analysis.

<sup>&</sup>lt;sup>12</sup> as do the vast majority of other complex mental and biological processes, see Lakoff, Johnson (1999), Semino (2008).

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Joanna Jurewicz
Department of Linguistics and
Modern Languages
UNISA
Chair of South Asian Studies,
Faculty of Oriental Studies
University of Warsaw
j.jurewicz@uw.edu.pl

## Metaphorical correspondences of the metaphor

THE MIND IS GOLD, MEDITATION IS SELECTION OF GOLD ORE/PURIFICATION OF GOLD

THE MEDITATOR IS A GOLD WASHER/GOLDSMITH

MEDITATION IS SELECTION OF GOLD ORE/PURIFICATION OF GOLD

THE DURANCE OF MEDITATION IS THE DURANCE OF PURIFICATION OF GOLD

THE RULES OF MEDITATION ARE THE RULES OF PURIFICATION OF GOLD

KNOWING THE STAGES OF MEDITATION IS KNOWING THE STAGES OF PURIFICATION

OF GOLD

THE MIND BEFORE MEDITATION IS GOLD IN ITS NATURAL FORM

BAD DEEDS AND THOUGHTS ARE GOLD'S CONTAMINATION

THE MIND IN SUCCESSIVE STAGES OF MEDITATION IS GOLD IN SUCCESSIVE STAGES

OF PURIFICATION

MEDITATION IS REMOVING DIRT THANKS TO SELECTION AND HEATING THE MIND TRAINED IN MEDITATION IS PURIFIED GOLD