AND ACTION!

A Study of the Semantic Domains of Action through Interpretation of Metaphor

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WRITER: Henrik Westerdahl

EXAMINER: Jenny Malmqvist

SUPERVISOR: Annika Denke

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Author: Henrik Westerdahl

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Abstract

The aim of this essay is determining and describing some of the semantic domains of the concept of action. Action belongs to the type of abstract nouns with unclear semantic domains. In other words, there are difficulties in determining the precise semantic patterns that the word ‘action’ refers to. In order to shed light on the semantic domains of action, a collection of metaphors using words for body parts has been studied. In metaphor, action can be denoted, described or used to denote or describe something else. That means semantic references to actions can be contained within metaphoric expressions, not the least in metaphors applying words for body parts. This study focuses on hands, feet and fingers. Their respective conceptual models are analysed, to see how they pertain to action as a phenomenon. The discussion subsequently identifies the semantic patterns that relate to how these body parts are conceptualised in the English language. The semantic domains inferred are related to neuropsychology, in order to show how similar patterns have been identified and described in relation to action. The conclusion of this essay is that the semantic domains of space, time, motion and intention are referred to as integral to the meaning of action. In other words, that which is denoted by the word ‘action’ is a movement that occurs in a conceptual space and time, with an intention. As the study shows, also metaphors that describe or denote inactivity adhere to this pattern in reversed form.

Key words: Semantic domain, Semantic dimension, Semantic pattern, Metaphor, Body in metaphor
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1. Introduction

Here is an experiment in semantics: Try to think of the correct antonyms, i.e. opposites, for the following words: 1. Forward, 2. After and 3. Warm. Perhaps that was easy. Are you up for something more challenging? Think about antonyms for the following: 1. Stand, 2. Bee, 3. Honey.

If you would compare your answers to those of a friend, do you think they would have answered the questions with exactly the same words you thought of? Odds are, they would for the former questions, but perhaps not for the latter ones. The reasons for that have to do with semantic domains. The study of semantic domains may explain how an object or phenomenon may be referred to. Imagine that you see a bee, or so you think. At which point do you know that it is a bee and not something else?

This is a question of perception and cognition. According to cognitive research, the understanding that the thing you see is a bee, and not something else, is a computation made from diverse sensory input (Hoffmann, 2019, p. 79). You know colours; you know that the size of an insect is typically much smaller than your own body size, you know the buzz an insect makes with its wings, so that when the bee approaches, you understand that it is an insect of some kind. If you are also familiar with bees, you know about their particular shape, colour scheme, size and behaviour, and you can tell the difference between a bee and similar creatures, like wasps and tigerflies (Temnostoma vespiforme) (Universal Taxonomic Services, 2023a).

What you have, then, is a concept of ‘bee’, ‘wasp’ and ‘tigerfly’, courtesy of your knowledge of the semantic domains which pertain to ‘bee’, ‘wasp’ and ‘tigerfly’. The concept is cognitive; it exists in your mind, when you make the computation of colour, shape, sound etc. When you recognise an object with a certain pattern, your concepts help you to adapt your own behaviour accordingly (Hoffmann, 2019, p. 141). Therefore, you know to avoid the bee and the wasp, because they sting. However, there is no danger if a tigerfly lands on your arm, since they are harmless flies, not closely related to members of the aculeata family (Universal Taxonomic Services, 2023b) and merely mimic the colour scheme of the stinging insects.

When you translate your conceptual knowledge into concrete expression, when you put your knowledge of the properties of a bee into words, you translate that knowledge from concept to semantic patterns. Certain things are easier to describe than others. Other things are so complex
and abstract that they may be difficult to put into words, like emotions, thoughts and actions. Despite that difficulty, you may have no trouble identifying an action when you perceive it in your environment. Why or how is it, that we are capable of recognising an action as such? How can we tell the difference between an action and mere occurrence? This study is concerned with investigating the semantic domains that enable you to compute ‘action’ from your sensory input and cognitive concepts. What are those semantic domains, and what are their respective natures? And how can we find that out?

A starting point for this study is that metaphors hold the key to studying the semantic domains of action. Therefore, in what follows, metaphor will be described first, before more abstract terms pertaining to semantics and metaphor are explained, for example domains, patterns, conceptual models and transfer as well as lexical extension and metonymy. The reader will better understand the rest of this background and study by firstly understanding metaphors, because they are frequently used in everyday language and arguably more concrete than the subsequent terms.

2. Background

2.1 On metaphor

A metaphor can be defined as an expression meant to denote something in a figurative, as opposed to a literal, sense (Stevenson, 2010d). Sometimes the use of metaphors is ostentatious. An example thereof, is taken from Shakespeare: “Friends, Romans, countrymen lend me your ears!” (Shakespeare, 1970, p. 733). Often, however, metaphors are used without a speaker’s explicit awareness (Lakoff & Johnson, 1980, p. 3). Think about statements like ‘Wake up!’”, “It’s time you grew up!” or “Give me a hand, please.” All these metaphors express actions that, taken literally, are nonsense. Where is a person when they sleep? The metaphor indicates ‘down’, which shows that the speaker thinks of the ‘awake’ state as being above sleep in some way. But how can that be? Sleep does not occur in space, in that sense. The same can be said about ‘growing up’, which suggests that childhood, is somehow ‘below’ adulthood. Where is this space to which the ‘up’ refers? Yet, these metaphors are common and often not thought of as metaphors (Lakoff & Johnson, 1980). Furthermore, this way of speaking only makes sense if one accepts that not all meaning is – or can be – literal. There must be some other way to explain the prevalence of metaphorical expressions without their being ‘true’ in a literal sense.

Lakoff and Johnson show how aspects of one thing can be explained and described using terms that in their literal or original sense are used for something different (Lakoff & Johnson, 1980,
For that to happen, there must be some semantic similarity between the things from which descriptive terms are loaned, or ‘extended’ to use a more specific term, and the target object to which the loaned terms are extended.

Lakoff and Johnson use an example borrowed from another researcher, Reddy, to showcase this phenomenon. The example is “It’s hard to put my ideas into words”. Reddy argues that the words ‘put’ and ‘into’ signify space (Lakoff & Johnson, 1980, p. 11). These words are used when talking about things in the physical world, for example, “the letter was put into an envelope”. But neither ideas nor words belong to the physical world; they are pure abstractions. Nothing can literally be ‘put into’ words. In spite of that, the metaphor works. The reason for that, as will be explained, is that it recycles knowledge of something with which speakers are already familiar, and projects that knowledge onto another semantic domain. There, the terms extended serve as vehicles for that ‘projection’ or, to use a more specific term, for the conceptual transfer from a source domain to a target domain.

2.2 On semantics

Semantics is about the referential meaning of words (Yule, 2020, p. 130). That is to say, that to which words refer: colours, sizes, shapes, sounds, emotions, intentions, actions etc. Semantics has been described as the broadest field of research in linguistics, and it has been noted that, in semantic studies, connections are often made to research within, for example, psychology and philosophy (Saeed, 2016, p. 22), a tendency that will be noticeable also in this study.

‘Meaning’ as a phenomenon is, as stated, central to semantics. Therefore, it is of help to understand that the concepts of ‘semantic domain’, ‘semantic dimension’ and ‘semantic pattern’ can be substituted with ‘domain of meaning’; ‘dimension of meaning’, or ‘pattern of meaning’ (Stevenson, 2010e). These terms are perhaps easier to understand, since ‘meaning’ may be less opaque than terms prefaced by the word ‘semantic’. Nonetheless, it may not be obvious what is meant neither by ‘semantic domain’ nor ‘domain of meaning, which is why a background of these terms is provided in what follows.

2.3 Semantic domains

The concept of semantic domains ought to be of interest to all language teachers. It has been suggested by Gärdenfors (2020, pp. 167-168) that language learners do not internalise the words of a target language one by one. Instead, vocabulary is acquired in tandem with developing knowledge of semantic domains (Gärdenfors, 2020, pp. 168-169).
The perhaps easiest way of thinking about a semantic domain is that it is a kind of cognitive space of **word meaning** with one or many **semantic dimensions**, that is, not the space of the objective physical world, with its dimensions (Gärdenfors, 2020, p. 80). Most semantic domains are unidimensional and range from one end of a spectrum to another, whereas others consist of a number of dimensions (Gärdenfors, 2020, p. 80). See figure 1 and 2 and consider the subsequent examples.

![Figure 1: The Semantic domain of temperature: an example of a unidimensional semantic domain.](image1)

![Figure 2: The semantic domain of space: an example of a multidimensional semantic domain.](image2)

From the semantic experiment in the beginning of this text, you may recall that it was relatively easy to find the antonyms of the words ‘forward’, ‘after’ and ‘warm’, namely ‘backward’, ‘before’, and ‘cold’. It was perhaps more of a challenge to find an antonym for words like ‘bee’ or ‘honey’. Semantic domains and dimensions explain why that is.

The word ‘warm’ belongs to the semantic domain of temperature, which has only one dimension, ranging from ‘hot’ to ‘cold’ (Gärdenfors, 2020, p. 76). There are near-synonymous terms that can be used to substitute these words, e.g. ‘warm’, ‘chilly’ etc; and there are some terms for the values in between, like ‘lukewarm’ or ‘cool’. ‘Forward’ and ‘backward’ belong to the spatial domain, that is the **concept of** the physical world, which has three dimensions: one vertical (V.) and two horizontal (H.) dimensions. ‘Front’ and ‘back’ refer to the horizontal dimension of **depth**. The other dimensions can be referred to by ‘left’, ‘right’, ‘up’ and ‘down’. The figures above illustrate how a semantic domain is organised, which shows how the
experiences of temperature and space are referred to by speakers of English, and in turn how space and temperature are conceptualised or understood.

The word ‘bee’ is semantically different, because ‘bees’ have not just one, but many meanings. That is to say, bees belong to many different semantic domains, and typically, the domains to which they belong are multidimensional (Gärdenfors 2020, p. 86) (see fig. 3). The bee belongs to the semantic domain of space and can be measured in accordance with its three dimensions, height, width, and depth (or length). On that basis, the antonym of a bee could be said to be an elephant, because the elephant is enormous compared to the bee. The bee also belongs to the semantic domain of colour, which has three dimensions (Gärdenfors, 2020, p. 77). Within that domain, yellow and blue are opposites (Gärdenfors, 2020, p. 78). The word ‘bee’ can thus be considered to be an antonym of ‘blueberry’, due to the differing colour schemes of the objects to which those words refer.

Honey likewise exhibits a number of different semantic patterns, for example function, texture, colour, flavour, and chemistry. All of these meanings belong to different semantic domains, making it hard to determine what precisely would be an antonym to honey. The antonym depends on which semantic domain or patterns one focuses on. If one would, hypothetically, focus on all of them, the antonym is something that is of opposite quality in all respects, and it may be that no such thing exists save for in human imagination.

Fig. 3: The semantic domains of bees that may be presumed to be known by a person with basic knowledge of bees. A biologist may include a domain pertaining to the biology of bees when describing, for instance, the digestive or reproductive systems of bees. A beekeeper may have a deeper understanding of the behaviours of bees and be able to describe and explain their social organisation and their habits of hibernation (Author’s own work).
Fig. 4: The semantic patterns of honey. Honey can be smooth and solid or grainy and viscous. It can be pale yellow or dark brown but often golden. Typically, the flavour is sweet with floral tones. The contents are of interest for the chemical properties of honey. This shows how honey is recognised from several semantic patterns in different domains (hexagons). (Author's own work.)

Metaphor depends on similarities of semantic patterns. For instance, the bee has been used, ever since European antiquity, as a metaphoric symbol for, among other things, diligence and cooperation, because of its conscientious behaviour (Antonius, 2019, p. 124). Behaviour is one example of a semantic domain pertaining to the animal. The behaviour of animals provides one of several possible semantic patterns thereof (Gärdenfors, 2020, pp. 105, 169). The particular pattern of behaviour constitutes a kind of ‘knowledge’ that is projected from a source to a target domain, through a process of conceptual transfer, in metaphor. That explains how ‘bee’ can be synonymous with ‘efficient’ and ‘conscientious’.
Words of different word classes have varying degrees of potential, as regards semantic domains. Nouns can, as shown, be assigned to an especially large number of different semantic domains, which typically are multidimensional (Gärdenfors 2020, p. 86) and be identified with many different semantic patterns (Gärdenfors 2020, pp. 107-109). Abstract nouns, like ‘democracy’, ‘justice’ and ‘action’ are often difficult to assign to semantic domains, because there may be many different semantic patterns referred to as ‘democratic’ or ‘just’ (Gärdenfors, 2020, p. 88). This is why it is difficult for children to learn the meaning of abstract nouns (Gärdenfors, 2020, p. 88). Additionally, this circumstance also motivates studies of the possible semantic domains of the many abstract objects present in the world.

The study of semantic domains appears to be a recent phenomenon. Ullmann’s chapter “Semantic Universals” (1963) makes no reference to semantic domains. Neither do Lakoff and Johnson in their book (1980), even though they repeatedly and explicitly refer to and use conceptual models in their discussion on metaphor. According to the British National Corpus, the earliest mention of semantic domains is from the 1993 book The Meaning of Syntax by Connor Ferris (Davies, 2004). The primary source used in this study, for a framework on semantic domains is Gärdenfors (2020).

Another important thing to note about semantic domains is that at the moment, no one knows how many there are (Gärdenfors, 2020, pp. 80-1). Researchers are still trying to figure that out, which is why it is of interest to study the various semantic domains to which words for abstract nouns, like ‘action’, belong. The semantic domains of emotions have been explored to some degree (Kraska-Szlenk, 2014). The semantic domains of action, however, have been explored to a lesser degree. The focus of previous research has mainly been on how the knowledge of the usage of different tools contributes to knowledge of the semantic domains associated with tools, rather than on action as a phenomenon per se, say Watson and Buxbaum (2014, p.2).

Despite that, the semantic domains and patterns as phenomena, however, are as ancient as thought itself. At least, if Lakoff and Johnson’s claim is to be believed, that metaphor is a mirror as much of reality as of the mind of the one describing reality (1980, p. 4). Especially the semantic patterns provided by the body, its appearance and function have long been noted in metaphor and understanding of the extracorporeal world. Already in antiquity, did the Greek philosopher Protagoras assert that “man is the measure of all things” (Henriksson, 1987, p. 114 II). His idea is echoed by the Italian philosopher Giambattista Vico who stated, in the 18th century, that “In all languages the majority of expressions referring to inanimate objects are
formed by transfers from the human body and its parts, from human sense and human passions... Ignorant man makes himself the yardstick of the universe” (quoted in Ullmann, 1963, p. 191).

Vico exaggerates, perhaps, when he asserts that “the majority of expressions in all languages” denoting non-living objects and phenomena derive from words for the human body. However, research has confirmed that body lexemes, that is, body-part terms, in many languages, are frequently subjected to conceptual transfer. The effect of this phenomenon is that words for different body parts are extended into domains where it would be nonsensical to interpret a body-part term literally (Kraska-Szlenk, 2014) (Heine, 2014) (Szczygłowska, 2014) (Poppi & Urios-Aparisi, 2018).

2.4 Conceptual transfer

The exemplary metaphors show what is known as ‘conceptual transfer’. The properties of a concept, like ‘bee’, provides a semantic pattern that can be transferred into new contexts. For example, one semantic domain of bees is their behaviour, which provides a pattern that can be conceptually transferred from the source domain (behaviour) to a target domain (e.g. the virtues of diligence) (Antonius, 2019). It is thus that bees can become symbols of conscientiousness, by virtue of their diligent nature. In other words, the meaning of ‘bee’ is that of ‘ideal labourer’, in a metaphorically transferred sense.

Conceptual transfer in metaphor can thus be thought of as a semantic connection made between a concrete and an abstract experience, and the connection is made possible by the existence of semantic patterns that are transferred from one semantic domain to another (Gärdenfors, 2020, p. 112). The domains connected can be referred to respectively as ‘source’ and ‘target’ domains, and the word that is extended in conceptual transfer as ‘vehicle’ (Heine, 2014, p. 15).

Conceptual transfer has been studied by Kraska-Szlenk who inferred conceptual models to explain the transfer from the semantic source domains of the body to the target domain of emotion by use of body lexemes as vehicles of said transfer (2014). Consequently, metaphors are of interest for the researcher interested in exploring semantic domains because metaphors employ conceptual transfer of semantic patterns from and to different domains.

2.5 Conceptual models

Conceptual transfer is dependent upon conceptual models. Lakoff and Johnson exemplify a conceptual model with the word ‘argument’. They write that an argument is conceptually like the concept for war, in that one may win or lose a war as well as an argument. This accounts
for the conceptual model ARGUMENT IS WAR on the basis of common semantic patterns between arguments and wars (Lakoff & Johnson, 1980, p. 4). Thus, conceptual models are notions of similar semantic patterns between different objects that underlie a metaphor. These can be inferred from analysis of metaphors as has been performed by, for instance Kraska-Szlenk (2014). Therefore, conceptual models are relevant to an analysis and discussion of semantic domains to refer to the conceptual models operating in metaphors.

2.6 Lexical extension

Metaphor readily employs lexical extension, which may be explained as the phenomenon in which a word with several semantic domains and thus several semantic patterns, is used in different contexts with diverse, but related, reference meanings. In Swahili, the word ‘heart’ for example, extends into the domain of emotions, in accordance with the conceptual model HEART FOR EMOTIONS which can be discerned in many different Swahili metaphors (Kraska-Szlenk, 2014, p. 57). For example, “you have no heart” means “you have no mercy” (Kraska-Szlenk, 2014, p. 57). Additionally, this is an example of metonymy, to be explained shortly. Kraska-Szlenk observes the parallel conception in English, where the word ‘sweetheart’ is a lexical extension made in reference to a beloved person, and not to the organ (2014, p. 58). In English, another example of lexical extension is to speak of a ‘great’ storm as well as a ‘great’ view. That is because ‘great’ in its original sense was used to talk about things that were large, like physical objects, and later acquired an extended sense of ‘admirable’ or ‘awesome’ (Hoad, 1996).

2.7 Metonymy

Substituting one word for another is known as metonymy. The example from Swahili above where ‘heart’ was substituted for ‘mercy’ illustrates this. Metonymy means that a part of something is used to denote that thing as a whole, for example in referring to a country by its people, e. g. “the Dutch” in reference to “The Netherlands” (Yule, 2020, p. 139). Alternatively, a whole can be used to denote a part. For example, a part of the function of hands, is to help others. Therefore, one might say ‘let me give you a hand’, where hand is a metonym for ‘help’ (Yule, 2020, p. 139). Metaphor and Metonymy can be mixed, as shown in Kraska-Szlenk's (2014) study, where the heart is metaphorically connected to emotion, and then used to refer to a person’s capacity for emotion, as in the quote of “you have no heart” from Swahili.
3. Aim
This study aims to study metaphors with the purpose of shedding light on the semantic domains of action. The topic of ‘action’ has been chosen on the basis of having received little attention in previous studies, compared to, for instance, the domain of emotions, tastes or colours, and also because it is estimated that it is possible to investigate some of the significant semantic domains of action in a study of this scope.

4. Research questions
This study focuses on the following questions:

1. What conceptual models can be inferred from metaphoric expressions used in this study?

2. What evidence can be found of the semantic domains of space, time, motion and intention in relation to action?

5. Method and material
The method of this study primarily employs a qualitative approach (Bryman 2012, p. 538), in analysis of the meaning of metaphorical expressions in order to infer conceptual models and semantic domains.

First, metaphor expressions of the desired types, stated in demarcations, built on the words for ‘hand’, ‘foot’ and ‘finger’ are compiled, respectively using the Oxford Dictionary of English 3rd ed. (Stevenson, 2010) as well as the Cambridge Dictionary of English (Cambridge, 2023).

Secondly, an analysis of conceptual models will be conducted, since it will be necessary in the discussion of semantic domains to refer to various conceptual models, and these must be defined within this study. In the analysis, it will, at times, be necessary to find genuine examples of the metaphor in use, which is why the British National Corpus (Davies, 2004) will be used to access authentic examples of the metaphors.

As indicated, the analysis of conceptual models is followed by an analysis and discussion on the semantic domains which can be determined to pertain to action. In this discussion, references will be made to ideas from neuropsychology and philosophy to substantiate the arguments and conclusions reached by comparing and contrasting the results of other studies,
as well as borrowing suitable specific terminology. The purpose of so doing, is to give further credence to the conclusions reached by this study.

6. Demarcations

This study will focus solely on studying English metaphoric expressions that denote and/or describe actions or emotional or existential states on the basis of the actions of body parts. Since an important part of the aim is describing conceptual models that are manifest primarily in metaphorical expressions, it makes sense to exclude those idioms where a body part is referred to in a literal sense, for example in expressions like “she turned up her nose at...” or “he knitted his eyebrows”. Although it could be argued that these indicate underlying emotions, these terms, strictly speaking, refer not to anything other than the movement of body parts. Such expressions may denote very different things, for example either anger or bewilderment, in the case of “to knit one’s eyebrows”.

I have chosen to focus on the words for hands, fingers and feet. The head and the parts thereof have already been explored in Szczygłowska (2014). The heart and some other internal organs have been dealt with to some degree in Kraska-Szlenk (2014) in relation to other semantic domains than action. The results of Watson and Buxbaum (2014) show that, on the basis of their function, hands and fingers are of central importance to motion, why it may be expected that these words will yield many metaphors denoting actions or states that depend on action in some way. In the study, I have also included the words for ‘feet’ since these too play a role in the motion and locomotion of the human body. By “words for hands, fingers and feet”, I mean to include both plural and singular forms of the same words.
7. Results

The survey of the dictionary yielded the following metaphors:

7.1 Hands

<table>
<thead>
<tr>
<th>Metaphor</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>All hands on deck</td>
<td>Used to indicate that the involvement of all members of a team is required</td>
</tr>
<tr>
<td>At hand</td>
<td>‘Readily accessible when needed’ and ‘close in time; about to happen’</td>
</tr>
<tr>
<td>At the hands of [sb.]</td>
<td>Through the agency of</td>
</tr>
<tr>
<td>Get (or keep) one's hand in something.</td>
<td>become (or remain) practised in something</td>
</tr>
<tr>
<td>Get (or lay) one's hands on something.</td>
<td>To find or acquire something</td>
</tr>
<tr>
<td>Give (or lend) a hand</td>
<td>To assist in an action or enterprise</td>
</tr>
<tr>
<td>Hand in glove</td>
<td>In close collusion or association</td>
</tr>
<tr>
<td>Hand in hand</td>
<td>Closely associated or connected with something.</td>
</tr>
<tr>
<td>“The hand that rocks the cradle rules the world”</td>
<td>the person who raises a child determines the character of that child and so influences the type of society that the next generation will create</td>
</tr>
<tr>
<td>(From) hand to mouth</td>
<td>satisfying only one's immediate needs because of lack of money for future plans and investments</td>
</tr>
<tr>
<td>[To win] hands down</td>
<td>[to win] easily and decisively</td>
</tr>
<tr>
<td>Have a hand in something</td>
<td>be involved in doing something</td>
</tr>
<tr>
<td>Make (or lose, or spend) money hand over fist</td>
<td>informal make (or lose, or spend) money very rapidly</td>
</tr>
<tr>
<td>Get out of hand</td>
<td>To escalate out of control</td>
</tr>
<tr>
<td>Set (or put) one's hand to something.</td>
<td>To start work on something</td>
</tr>
<tr>
<td>Turn one's hand to something</td>
<td>To undertake something (an activity different from one's usual occupation)</td>
</tr>
<tr>
<td>Wait on someone hand and foot</td>
<td>attend to all someone's needs or requests, especially when this is regarded as unreasonable</td>
</tr>
<tr>
<td>Be in good hands</td>
<td>Managed or cared for with great attention.</td>
</tr>
<tr>
<td>Hands are tied</td>
<td>If your hands are tied, you are not free to behave in the way that you would like</td>
</tr>
</tbody>
</table>

(Cambridge, 2024c; Cambridge, 2024d; Stevenson, 2010c).
## 7.2 Feet

<table>
<thead>
<tr>
<th>Metaphor</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be rushed (or run) off one's feet</td>
<td>To be very busy</td>
</tr>
<tr>
<td>Get one's feet wet</td>
<td>Begin to participate in an activity</td>
</tr>
<tr>
<td>Start off on the right (or wrong) foot</td>
<td>Make a good (or bad) start at something</td>
</tr>
<tr>
<td>Keep one's feet on the ground</td>
<td>Be (or remain) practical and sensible</td>
</tr>
<tr>
<td>Have (or get) a foot in the door</td>
<td>Have (or gain) a first introduction to a profession or organization</td>
</tr>
<tr>
<td>Put one's best foot forward</td>
<td>Embark on an undertaking with as much effort and determination as possible</td>
</tr>
<tr>
<td>Put one's feet up</td>
<td><em>Informal</em> Take a rest</td>
</tr>
<tr>
<td>Put one's foot down</td>
<td>Adopt a firm policy when faced with opposition or disobedience</td>
</tr>
<tr>
<td>Put one's foot in it; Put one's foot in one's mouth</td>
<td><em>Informal</em> Say or do something tactless or embarrassing</td>
</tr>
<tr>
<td>Put a foot wrong</td>
<td>[Usually with <em>negative</em>] make a mistake in performing an action</td>
</tr>
<tr>
<td>Set foot on (or in)</td>
<td>[Often with <em>negative</em>] enter; go into</td>
</tr>
<tr>
<td>Set something on foot</td>
<td><em>Archaic</em> set an action or process in motion</td>
</tr>
<tr>
<td>Sweep someone off their feet</td>
<td>Quickly and overpoweringly charm someone</td>
</tr>
<tr>
<td>Think on one's feet</td>
<td>React to events decisively, effectively, and without prior thought</td>
</tr>
</tbody>
</table>

(Cambridge, 2024b; Stevenson, 2010b)
7.3 Fingers

<table>
<thead>
<tr>
<th>Metaphor</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get (or pull) one's finger out</td>
<td><em>British informal</em> stop hesitating or wasting time and start to act.</td>
</tr>
<tr>
<td>To burn one's fingers.</td>
<td>(Especially in a financial context) suffer unpleasant consequences as a result of one's actions, discouraging one from trying a similar action again.</td>
</tr>
<tr>
<td>A finger in the pie.</td>
<td>Be involved in a matter, especially in an annoyingly interfering way.</td>
</tr>
<tr>
<td>Have (or keep) one's finger on the pulse.</td>
<td>Be aware of all the latest news or developments</td>
</tr>
<tr>
<td>Lay a finger on someone</td>
<td>Touch someone, especially with the intention of harming them.</td>
</tr>
<tr>
<td>Put one's finger on something</td>
<td>Identify something exactly</td>
</tr>
</tbody>
</table>

(Cambridge 2024a; Stevenson, 2010a)

8. Analysis of conceptual models

8.1 Hands

From the metaphors above, it may be inferred that ‘hand’ is conceptualised in accordance with three models: HAND FOR CAPACITY; HAND FOR PARTICIPATION and HAND FOR INTENTION.

The conceptual model of capacity for ‘hand’ is clear from a phrase like “It got out of hand”. In this phrase, the hand is construed as the locus of control: whatever gets out of hand is also out of control. In another phrase like ‘To lend a hand’, it may be inferred that ‘hand’ is a metonym for ‘help’. Help suggests the capacity to do something, which is comparable to how “out of hand” suggests an inability to do anything about an intractable situation. A third aspect of the conceptual model HAND FOR CAPACITY can be seen in phrases like “Erik Thorstvedt suffered at the hands of Aston Villa” (Davies, 2004), where hands are construed as both the locus of control and agency of an agent. This conceptual model is enforced through the expression “my hands are bound” (Davies, 2004), in that the inability to move one’s hands is a semantic pattern applicable to an inability to performing one’s own intention. Therefore, motion of hands is identified as the prerequisite for their function.

Another conceptual model that may be inferred from the phrases above is HAND FOR PARTICIPATION. Take for example “It was all hands on deck as they worked flat out over a
weekend in March" (Davies, 2004) or “Professor Smith may have a hand in self-fulfilment of his prophecy” (Davies, 2004). In these metaphors, the use of the word ‘hand’ signals involvement in an activity. Thus, the model HAND FOR PARTICIPATION emerges.

In addition to these, several of the metaphors suggest the intentions of an agent, for example, in “Denis knew his wife was in good hands” (Davies, 2004). It can be argued that this expression has more to do with intention than with outcome, since a person may falsely believe that someone is in ‘good hands’. This can be seen in the following example sentence, where the speaker signals his uncertainty: “… I’d thought she was in good hands but of course I couldn't visit her as often as I'd like …” (Davies, 2004).

As noted, the expression “my hands are bound” means that one is incapable of acting in accordance with one’s desires and that one intends to act contrary to them. The intention of an action is also visible in the example sentence “she sought refuge ... and turned her hand to writing popular fiction” (Davies, 2004). In sum, the conceptual model of hand is that of potential for action, which is predicated on motion, active engagement and manner and intention of action, which I have chosen to call ‘capacity’, ‘participation’ and ‘intention’.

8.2 Feet

Three conceptual models can be argued for the word ‘foot’: FEET FOR DIRECTION; FEET FOR LOCATION and FEET FOR INTENTION.

FEET FOR DIRECTION is a model that provides a semantic pattern used when speaking about initiating or undertaking something, like in “to get one’s feet wet” or “to start off on a bad foot” or “to get a foot in the door”. Foot is used here metonymically for a human being and their direction. Expressions like these suggest that the first part of a human body to enter a location is the foot, which make sense given the locomotion of human beings. The foot moves forward – and the human to which it is attached, follows closely after. This image provides the semantic pattern describing someone’s direction and location, which is applied in other contexts in a figurative sense. Because the feet signal someone’s placement in space, they can also indicate the situation of someone, as in ‘start off on a bad foot’.

This general pattern occurs in many of the metaphors. For example, ‘put a foot wrong’, ‘set foot in’, ‘to keep one's feet on the ground’ and ‘to think on one's feet’. In expressions like these, the metaphoric meaning is abstracted from the literal sense of setting or keeping one’s foot in a certain place, as in “the Apollo astronauts set foot on the lunar surface”. The expression suggests that someone literally has their foot in place but refers not precisely to that fact but
rather to the presence of that someone in a particular place. Therefore, FEET FOR LOCATION is an important model of conceptualisation.

‘To put one’s foot wrong’ and ‘to keep one’s foot on the ground’, and to ‘think on one’s feet’ also suggest posture in relation to how an action is performed. That means that the semantic pattern of being upright, on one’s feet, potentially with connection to the ground, is akin to ‘location’ or posture in an action. For that reason, someone may ‘think on their feet’ even if they are sitting down, or ‘keep their feet on the ground’, when they are not actually standing erect. In the sentence “we always have had our feet on the ground” (Davies, 2004), it’s clear that the meaning cannot be taken literally but has to be interpreted figuratively.

‘To put one’s best foot forward’ exemplifies how intentionality ties in with action. The expression means to try to do one’s best and to enter an activity with the intention of excelling, as in the example “I’m absolutely sure you could make it if you put your best foot forward next year” (Davies, 2004). Similar patterns of intention can be discerned in the expression “to put one’s foot down”, which means to assert oneself and one’s intentions, especially when opposed. This amounts to the conceptual model FOOT FOR INTENTION.

8.3 Fingers
From the collected phrases, the models FINGERS FOR CONNECTION and FINGERS FOR INTENTION can observed. In all the phrases, “pull one's finger out”, “keep one's finger on the pulse”, “have a finger in the pie”, “lay a finger on” and “put one's finger on something”, the action of connecting the human body to something outside of it by means of a finger is a semantic pattern that serves as a conceptual vehicle in metaphoric expressions, amounting to the model FINGERS FOR CONNECTION.

In the mentioned metaphor ‘to lay a finger on’ intention is part of the established sense of the expression, according to the dictionaries. It becomes even clearer from authentic examples like “My dad always brought me up saying you never lay a finger on a woman, never ever” (Davies, 2004). This exemplifies FINGER FOR INTENTION, and it is of interest to the study because it shows how intention ties in with action.

Comparing the usage of the words for ‘hand’, ‘foot’ and finger, there can be discerned a common pattern of intentional engagement, connection and presence in an operation or situation. Human beings clearly use the image of both the hand and the finger touching on physical objects when thinking about actions performed in a more abstract space. Thus, it is
clear from the conceptual models that the different words reviewed provide similar patterns for conceptual transfer from domains of physical space, motion and intention.

9. Discussion
The subsequent analysis and discussion of semantic domains reveal how action is conceptualised and semantically referred to as intentional motion in spacetime, which corresponds to semantic domains space, time, motion and intention.

9.1 Space
Action, it seems, is conceptualised as occurring within space. However, this notion is primarily an analogy to space. That means that the space of actions is spoken of as if occurring in the three dimensions of the physical world, although the semantic space of actions is an abstract concept not identical to space. Take for example the metaphor “He wouldn't dare lay a finger on any of us” (Davies, 2004). Here neither ‘lay’, nor ‘finger’ nor ‘on’ is used to refer to objects or motions in actual space but in a semantic space by the conceptual model of FINGER FOR CONNECTION. The body and its actions belong in the physical world, but the notion of action occurs not literally but conceptually in a three- (or four-) dimensional space. Thus, the three dimensions provide a semantic pattern that pertains to action.

Further evidence of this can be discerned in the sentence “After a year or two of keeping house for Hugh, she put her foot down and said it was ridiculous not to use her money” (Davies, 2004). In this sentence, the action referred to by the metaphor is not analogous to any action that occurs in the physical world. The action is completely contained within the conceptual semantic domain of action and its dimensions. Dimension here is evident from the usage of the word ‘down’, which denotes orientation in space along the vertical dimension, which ranges from ‘up’ to ‘down’ (Gärdenfors, 2020, p. 80). Since the action is not an occurrence in the physical world, the direction of the action cannot possibly be intended to denote orientation according to any of the three dimensions of the physical world. It occurs on a different plane of reality, which is accessible only as a concept to the minds of human beings.

Many of the metaphors adhere to this fashion of lexical extension. The space of the physical world provides a semantic pattern that is transferred to a conceptual spatial domain of action. For example, “There was some difference that she could not at first put her finger on, and then at last it came to her …” (Davies, 2004), or “[They] kept their feet on the ground and proceeded with caution …” (Davies, 2004).
In these metaphoric expressions, an action is carried out by means of a body part touching the abstract object of “difference”. It must be conceded that the touch occurs within a semantic space that is not identical to physical space. Likewise, in the metaphors where a word denoting orientation is used, e.g. ‘down’ or ‘forward’, the reference to orientation is to the semantic space in which the action is conceptualised to occur. Therefore, the semantic domain of space, I assert, is one of the domains that is referred to by the concept of action.

9.2 Time
In philosophy, there is the observation that we usually do not think of things, processes and events as occupying a single instant of time, appearing and disappearing suddenly. Instead, things are considered to occur or exist over a period of time. That intuitive belief of persistence during time is called ‘endurantism’, and its objects are called ‘continuants’ (Power, 2021, p. 64). This notion, or concept of endurantism can be discerned as a recurring idea within the semantic patterns of the metaphors collected in the results.

Take for instance the proverb “the hand that rocks the cradle rules the world”. The proverb makes an association between child rearing and the creation of future societal circumstances. The action of rocking a cradle becomes a pattern that is used to transfer from the literal sense to a figurative sense of ‘child rearing’. ‘The cradle’ can be metonymically identified as a reference to infants and children, in general. As was noted before, the conceptual model for ‘hand’ connotates control. That conceptual model is reused in this metaphor to the effect that having one’s hand on the cradle means raising a child, in a metaphorically transferred sense. Thus, the action of child rearing is continuant proceeding from the earliest days in the life of an infant, during childhood, with consequences into its adulthood.

Another example of a continuant action can be inferred from the metaphor ‘from hand to mouth’. An example is: “I'm still living from hand to mouth like a bloody tramp.” (Davies, 2004). The metaphor emerges from the image of a motion conjured by ‘hand’ and ‘mouth’ and the prepositions ‘from’ and ‘to’, which indicate direction of motion. The pattern of hand in its source domain, as a container of physical substances, as well as the pattern of the function of the mouth for food ingestion is used as vehicles for conceptual transfer. The action denoted becomes an image that is representative of a way of life – one characterised by scarcity and need, where any acquisition of resources necessary for survival is followed by immediate depletion.
In the example sentence above, there is another clue to the continuity of the action, namely the use of the progressive aspect of the verb ‘live’, which indicates that an action is going on at the time it is expressed (Estling Vannestål, 2015, p. 210). That time can be inferred from verbs that are used with or in metaphor can be seen also in examples expressing past events. For example, in the sentence “As ever, Mary made sure I kept my feet on the ground” (my emphasis). The use of the preterite ‘kept’ indicates that an action was performed and completed at a past point in time (Estling Vannestål, 2015, p. 214).

In sum, metaphors refer to time in different ways, as actions can be continuant over a period of time or completed in the past. This suggests the importance of the temporal semantic dimension for the concept of action.

9.3 Motion
As has already been stated, many of the expressions appear to denote or describe an action by reference to a movement with a body part, for example, in ‘turning one’s hand to’ an activity; ‘to pull a finger out’ or to ‘put’ either a ‘finger’ or a ‘foot’ ‘on’ or ‘in’ something. The prepositions used in conjunction with body-part terms appear to suggest that posture of the body is semantically significant. A finger or foot ‘on’ something is different from having it ‘in’ something. The prepositions indicate the way in which the motion of the body part is oriented and located, with consequences for the meaning of a metaphor. This finding reflects Watson and Buxbaum’s results (2014), where participants noted that magnitude of motion as well as posture of a hand is meaningful to grouping tools of different kinds together (p. 12), suggesting that the posture of a body part is one dimension in the semantic domain of motion.

Another aspect of posture in motion is to be found in expressions where the absence of motion is indicated, as in ‘hands down’. This expression makes use of the conceptual model HANDS FOR ENGAGEMENT in reverse. The posture of the hands, down’, indicates the ease of an achievement by transferring the pattern of inactive hands to the way in which something is performed, for example in winning a competition. In a certain sense, also the expression ‘put one’s feet up’ suggests the cessation of movement, by exploiting the conceptual models of FEET FOR LOCATION as well as DIRECTION. In the expression, the ‘putting up' of feet provides a semantic pattern for a human who prepares to lie down, which in turn provides the semantic pattern applicable to resting. This observation makes sense due to the anatomy of human beings. When the feet go ‘up’ the rest of the body goes ‘down’, when positioning the body horizontally, as when resting.
These findings suggest that the concept of action can be denoted by evoking the image of motion semantically, e.g. by expressing movement of body parts. This can be related to findings of neuropsychology, where studies have shown that merely hearing sentences that indicate motion, e.g. “the car drives towards you” activates the same areas of the cortex that are primarily used to process visual sensory input (Kaschak et al, 2004, pp. 8-9). This result supports the conclusion that motion and action are linked semantically and conceptually, which is to say that action can be denoted by expressing semantic patterns for motion. Therefore, action is recognised by motion, just as inaction is recognised through the absence of motion.

9.4 Intention
The domain of intentionality has come into view in connection to a handful of expressions analysed, for example ‘to lay a finger on’, ‘in good hands’ and ‘to put one’s foot down’. Such expressions carry an established reference to the intention of action, to the point where the literal actions denoted by the words of the metaphor are reduced to mere vehicles for conceptual transfer of the semantic pattern for which they stand. For instance, in the quote of the expression noted in 11.1 on space, intentionality is referred to through a semantic pattern of motion: “she put her foot down and said it was ridiculous …”

This finding can be compared with studies in psychology. Morales-Bader et al (2020) conducted an experiment in which participants were asked first to watch abstract and anthropomorph, i.e. human like, shapes and figures move around on a 2D-screen and describe the events unfolding on-screen. The participants described the motions of the shapes as intentional, when the frame rate was adjusted to resemble human motion, in terms of speed. When the motion was too slow, or too fast, they were less inclined to do so. Even when the shapes were completely abstract, the participants often attributed the shapes with intentionality, and described their motions as actions, on no other apparent basis than their movement and movement speed (Morales-Bader et al, 2020, p. 10).

This phenomenon coincides with the semantic pattern of the expression ‘to put one’s foot down’ in that intentionality is attributed on no other basis than movement. The same pattern can be discerned in the metaphor quoted in 11.1 “She sought refuge in... and turned her hand to...”. In turn, this gives credibility to the claim that intention is part of the semantics of action.

This domain, furthermore, appears to have a dimension that ranges from destructive to constructive, from harming to caring for someone or something. This can be seen in the expressions analysed in section 10.1: “in good hands”, suggesting that something is cared for,
and 10.3 “you never lay a finger on a woman …”. “To lay a finger on” carries a destructive connotation, referring to an intention of harming. The quote from 10.3 carries a moral aspect; it deals with what one should never do.

It therefore appears that the semantic domain of intention parallels morality. This find can be compared to philosophic reasoning on the subject of intention and morality. According to British philosopher Sir Roger Scruton, intention is integral to self-aware subjectivity (Scruton, 2017, p 37). The fact that individual human beings are aware of their own desires, emotions and intentions, and know others to be the same, is a form of knowledge inextricably linked to moral conceptions of accountability, freedom and blame (Scruton 2017, p. 51). This is because personhood entails agency (p. 17), which in turn sets human beings apart from the currents of causality, which humans are immersed in, but not enslaved to (p. 67). Humans are free to act both in accordance, and in spite of their desires. This circumstance enables the “overreaching intentionality of interpersonal attitudes” (p. 66), which means that relationships between human beings are predicated on the intentions of that relationship, with the other person, not merely as an object, but as animated ‘you’ with intentions and emotions of its own. Typically, this ‘you’-personhood is referred to by the word ‘soul’ which refers to “a true but hidden self that is veiled by the flesh” (p. 67) which humans discern in the actions of agents.

This philosophical idea mirrors the way in which intention is semantically conjectured in metaphor and explains how human beings can ascribe intention to abstract shapes, on the basis of movement speed. Occurrence, as identified by motion in space, is thus ascribed intentionality, when the agent is believed to be a self-aware subject, acting independently of causality. This marks an important difference between action and mere occurrence, in that action is referred to as motion in spacetime, with intention, whereas occurrences are unintentional motions in spacetime, governed by causality. Perhaps this is the most important semantic domain of action, albeit that, or maybe precisely because, it is implicitly presupposed in action.

10. Conclusion
Conclusively, this study has studied a plethora of metaphoric expressions that use body-part terms to denote actions. The study has explored conceptual models and semantic domains. The conceptual models reviewed show how intention can be attributed to expressions with hands, feet as well as fingers. Furthermore, hands can be used to suggest participation and activity, or
lack thereof as in “hands down”. The feet are used to suggest direction, and location. The fingers also indicate connection.

The analysis found that the semantic domains that pertain to action are space, time, motion and intention. Evidence of these is found in the way the body parts themselves are conceptualised and the use of particular prepositions, adverbs and verb forms in, or in connection to, the metaphors.

To their nature, both space and time appear to be conceptualised as a space within which motion occurs, in different directions, places and at different points in time, or for a period of time, at different rates. Motion is partially defined by posture of a body part which is indicated by prepositions in metaphor and concurs with findings from other semantic experiments. Motion appears both from the study of metaphors as well as from findings of neuropsychology, to be a potential indicator of intentionality. Intentionality thus appears to have a relationship to motion and is evident from or in action. In metaphor, it has been discerned also how movement is used to signify the intention to inactivity.

It would be interesting to explore the relationship between the domains of motion and intention further in future studies. Furthermore, the domains listed may not be exhaustive. Other methods and materials could show how other action can refer to more and other domains than the ones investigated here.
11. List of references


