"Eh uwa, tilëkhem helë!"

Contextualizing the conceptualization and expression of illness and health in the language of the Wayana

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Table of Content

Acknowledgements	3
Abbreviations	5
Notation	6
Glossary	7
1. Introduction	8
1.1 The Arrival of Epidemics	9
1.2 The Wayana and Their Context	11
1.2.1 The Wayana and Illness	11
1.2.2 Role of the <i>Pijai</i>	12
1.3 Translational Mismatches	14
1.4 The Societal Issue	15
1.5 Structure of the Thesis	16
2. Transdisciplinarity and Health	17
2.1. Ontological Stances	17
2.2 Transdisciplinarity	18
3. Methodology	20
4. Morphological Sketch of Wayana	22
4.1 Nominal Morphology: Attributive Possession	22
4.1.1 Possessability of Nouns: Unpossessable Nouns	23
4.1.2 Possessability of Nouns: Optionally Possessed Nouns	24
4.1.3 Possessability of Nouns: Inherently Possessed Nouns	25
4.2 Nominal Morphology: Predicative Possession	25
4.2.1 The "ti-N-ke Construction"	26
4.2.2 The Suffixes -hpe and -hme	28
4.3 Verbal Morphology	30
4.3.1 Verbal Morphology: Set I	31
4.3.2 Verbal Morphology: the <i>tï</i> -V-(<i>h</i>) <i>e</i> set	37
4.4 Verbal Morphology: Participle	38

5. Linguistic Expression of Illness and Health	39
5.1 Expressing Illness and Health	39
5.2 Naming Strategies for Disease Terminology	42
5.2.1 Dedicated Disease Names	42
5.2.2 Polysemic Insect Names	42
5.2.3 Polysemic Body Part Names	43
5.2.4 Wayana Coinages	43
5.2.5 Augmentative Coinages	44
5.2.6 Dutch Loans	44
5.3 Expression of Illnesses	45
5.3.1 Adverbialized nominals	45
5.3.2 Participial Constructions	46
5.4 Paraphrastic Constructions	48
7. Conclusion	51
8. List of References	53

Abbreviations

1 First Person

1+2 Dual Person

2 Second Person

3 Third Person

AUG Augmentative

CERT Certainty

CIRCNOM Circumstantial Nominalizer

COLL Collective

COREF Coreferential

DEMPRO Demonstrative Pronoun

DISTPST Distant Past

EXADV Existential Adverbializer

HABPST Habitual Past

In'

INFEST 'Infested with'
INSTR Instrumental
INT Interjection

NAME 'Name'

NCERT Non-Certainty

NEG Negative NPST Non-Past

ONOM Onomatopoeia

PARTNOM Participant Nominalizer

Poss Possessive
PRES Present
PRO Pronoun
PRTC Participial

Q Question
RECPST Recent Past

REFL Reflexive
SAP Speech Act Part

SAP Speech Act Participant
TAM Tense, Aspect & Mood

T-HE $t\ddot{\imath}$ -V-(h)e WITHOUT 'Without'

Notation

Examples always follow the same format throughout the whole thesis. See the following example as an illustration of the format.

(O) jujuhpe wai

juju-hpe w-a-\phi-he

burn-Infest 1S_A-be-NPst-Cert

'I have furuncle' 'I am infested with burns'

The first line represents the realized form of an utterance in italics. Morphophonological processes, realized allomorphs and ablaut are all represented in this form. The second line represents the underlying suffixes and presents the morpheme boundaries with a -, all in italics as well. In case the first and second line are similar or differ only slightly, the first line might be omitted. The third line represents the glosses, of which a list will be provided below. The last line represents an English translation. Often two translations are given, of which the first translation is a free translation and the second is a more literal translation, which better represents the construction that is exemplified.

Glossary

This glossary is provided to explain some terminology that will be used, which will contribute to a more comprehensible thesis. It is suggested to study these definitions before reading the rest of the thesis.

Ablaut The alternation of the initial vowel of a verbal, nominal or postpositional stem. In Wayana this is usually morphophonologically conditioned (Tavares 2005: 88).

Circumfix A discontinuous morpheme that surrounds one or more morphemes, also known as an ambifix. Wayana makes usage of circumfixes in many contexts.

Neologism From Ancient Greek $v\acute{e}o\varsigma$ ($n\acute{e}os$) 'new' and $+\lambda\acute{o}\gamma o\varsigma$ ($l\acute{o}gos$) 'word', indicating a word which is newly coined. In Wayana, neologisms are often the result of using existing lexical morphemes in newly lexicalized contexts, modifying existing lexical morphemes by means of affixes or employing onomatopoeias.

Suppletion The alternation of mostly nominal stems, of which the allomorphs are unrelated and the result of two paradigms that have merged together into one. Tavares (2005:135) notes that for Wayana some stem alternations can be explained historically, but synchronically no rule can be derived and thus, they are analyzed as suppletive.

1. Introduction

The European Outthrust has undoubtedly had an enormous influence on world history. Many people set sail for the Americas in order to acquire newly discovered resources, gain newly explored lands and achieve a great amount of wealth because of it. However, much changed for the people who were indigenous to these lands, when these newly arrived white people¹ set foot in their territories. These communities suffered from a decrease in population due to severe epidemics brought from Europe, endangering both the people and their languages (Clough & Hair, 1994).

One of the people that have also dealt with these consequences, and were especially affected by the arrival of the Dutch and French, are the Wayana. They are a people that live in several small communities in the Amazonian basin in the south of Suriname and on the borders of the neighboring countries of French Guiana and Brazil (Tavares, 2005). The Wayana language is part of the Cariban language family and therefore genetically related to languages such as Trio and Kari'nya, with which it is not mutually intelligible, but shares many grammatical features. These are features such as an extensive number of suffixes, only allowing prefixes for pronominal expression, a complicated nominalization system, also used to express subordinate clauses and a split-ergative system that is still heatedly debated to this day. The following figure gives an overview of Gildea's (2012) somewhat speculative classification of this language family, focusing especially on the Guianan Branch, of which Wayana, presented in bold, is a part.

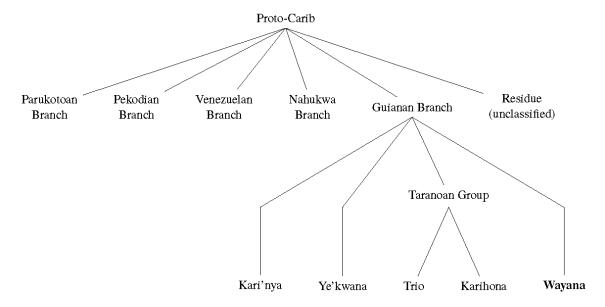


Figure 1. Gildea's (2012) classification of the modern Cariban language family

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¹ Many Cariban languages share a similar word for 'white person', which is ultimately borrowed from Kari'nya *parana akyry*, which means 'sea ghost'. The Wayana word *palasisi* 'white person' ultimately derives from the French word *français* 'French (person)'.

Although the exact classification of the languages of this language family, and generally most language families in South America, is still uncertain to this day, new research provided by Gildea (2012), indicates that Wayana is more closely related to Trio and Kari'nya than thought before. According to his work all three languages are part of the Guianan Branch within the Cariban language family. This is important because these languages will serve as a comparison to Wayana in some instances in this research. Although this study will mainly utilize a synchronic approach, comparing Wayana to these closely related languages is sometimes inevitable and especially with the analysis of different morphemes, a more diachronic approach is used to more closely represent the historical processes that led to modern Wayana morphology.

1.1 The Arrival of Epidemics

The Wayana have a rich history of oral traditions, extensively documented and translated by Chapuis & Rivière (2003), including many tales about the preparation of specific food or the process of making several goods. Other tales include past events like wars with or between other Amerindian groups, but also the arrival of the Europeans is a part of it. The oral story lastly mentioned in particular is extremely important to this thesis, for Europeans did not only bring Christianity, a monetary system and slavery to the indigenous peoples of the Americas, but also introduced the many diseases that were mentioned before. An excerpt from the oral traditions of the Wayana, *Tilëkhem mëkitpë* 'The arrival of epidemics' provides a clear image of the arrival of the Europeans (Chapuis & Rivière, 2003:854-855).

(1) Tilëmëphe kalipono pëlëmnëke,

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tï-lëmëp-he kalipono<sup>2</sup> pëlëmnë ke

T-die-HE stranger breathlessness INSTR

'(People are) dying because of the breathlessness of strangers,'
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(2) moloinë imepin tilëmëphe...

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moloinë imepin ti-lëmëp-he
then other T-die-HE
'Then others die...'
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(3) - « Eh uwa, tilëkhem helë! », tikai.

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eh uwa tï-lëk-he-m helë tï-ka-he

INT NEG PRTC-hurt-PRTC-PARTNOM DEMPRO T-say-HE

'- "Oh no, here's an epidemic!", they say.'
```

It clearly depicts the catastrophic consequences these epidemics had on the communities. The word *pëlëmnë* describes an abnormal way of breathing ("as if one has been running"), which will result in eventual asphyxiation (Chapuis & Rivière, 2003). From a Western perspective, this condition would

 $^{^2}$ The word *kalipono* 'stranger' is often used to describe Westerners, especially in historical contexts refering to the European Outthrust (Camargo & Tapinkili, 2010)

be described as a bronchial infection. From a Wayana perspective however, this condition is not so much seen as an infection, but it has invariably been associated with the disharmony caused by the arrival of the Europeans (Chapuis & Rivière, 2003). As a reaction to these epidemics, the Wayana appealed to the shaman, who in Wayana is referred to as the *pijai*. His interference is also reported in the oral story.

(4) Pijai tëhjumkai, uwa, ënumala!

```
pijai ti-ahjumka-he uwa ën-uma-la
shaman T-do.job³-HE NEG 3NEG-cure-NEG
```

The Wayana have always known *pijais* and they are highly respected individuals within their communities and among other abilities, have the power to cure and curse people. A care session carried out by a *pijai* is distinctly different from the treatment a Western doctor would apply in order to fight an epidemic. However, in this case the *pijai* does not have the ability to prevent the tremendous effects of the epidemics and in the rest of the story it is suggested that the presence of a *tokte*⁴ 'Western doctor' could have been of service.

(5) Tilëkhem esike tilëmëphe lëken

```
tï-lëk-he-m

PRTC-hurt-PRTC-PARTNOM because T-die-HE only

'Because of the epidemic, we can only die'
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(6) tokte tomomna upak sike [...]

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tokte tomo-mna upak ehiike doctor COLL-WITHOUT long.ago because "Because there were no doctors in the past [...]"
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In these excerpts there exists a contrast between the *pijai* 'shaman' and the *tokte* 'doctor'. On the one hand, there is the *pijai*, who has been a part of the daily lives of the Wayana for a very long time. On the other hand, there is the *tokte*, who has not always been part of the culture of the Wayana and is a person who has been trained to be a Western doctor and is typically, but not always, from and also trained in the city. The contrast between *pijais* and *toktes* is interesting, because both of them are associated with the illness and health of the Wayana, but both come from very different backgrounds and have different ideas on the conceptualization of illness and health. In the excerpt of the oral story, the *pijai*'s attempts to fight the illnesses bestowed upon the Wayana by the Westerners, are in vain and thus the help of a Western *tokte* is sought. This is in line with the trend that we see nowadays; the Wayana prefer to go to a Western doctor, rather than to the *pijai* for medical advice, which was also

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^{&#}x27;A pijai does care sessions (his job), to no avail, it does not cure!'

³ The verb -ahjumka 'to do one's job' is only used when referring to the pijai, carrying out care sessions, shooting spirit arrows and other activities related to his job. More about the pijai will be discussed in subsection 1.2.2.

⁴ The noun tokte 'doctor' is derived from Dutch dokter 'id.' or French docteur 'id.'

confirmed by several of the Wayana speakers involved in this research project. People from the Wayana communities have a strong faith in biomedical treatments and they are often much preferred over a treatment of the *pijai*. However, because of the contrasting conceptualizations of what illness and health are, several issues have arisen. Before these problems are discussed, the following section will firstly give a general overview of the lives of the Wayana and in more detail provide the Wayana perspective on what illness and health are.

1.2 The Wayana and Their Context

A background of the Wayana will be provided in this section, which will form the foundation for the rest of the thesis. As mentioned before, the Wayana live mostly in the southern parts of Suriname and on the border of French Guiana and Brazil (Tavares, 2005). Several estimations exist on the number of the population and its speakers, varying from a mere 450 (Simons & Fennig, 2019) or 900 (Tavares, 2005) to quite an extensive 1200 to 1500 (Boven, 2006), but their number is definitely decreasing, as Ethnologue also allocates the language a developing status (Simons & Fennig, 2019).

Wayana villages are located by rivers and mostly near the so-called *sula's* 'rapids'. These places make excellent spots for catching fish, which is a very important source for food. The Wayana are also highly dependent on hunting wild animals, such as pigs and several birds. Most villagers also have access to their personal plot (Dutch: *kostgrondje*), on which they cultivate their own fruits and vegetables. Lastly, a handful of goods are brought to the villages by plane from the city once in a while, including mostly rice, chicken and Maggi cubes, which is at least true for the village of Apetina. Villages are governed by the *Granman* together with the help of several *Kapiteins* and *Basia's*, who are all highly respected people within these communities. The Wayana live side by side with other communities that also speak Cariban languages. In the village of Apetina for example, there is a number of people who are of Trio descent. Several of the speakers of Wayana that were a part of this research were able to speak Trio to some extent and one of them mentioned that his mother was actually Trio and not Wayana. A village like Palëmeu is completely bilingual, with both native Wayana's and Trio's living together. The younger generation in Apetina is very proficient in Dutch, as a primary school has been founded there and Dutch is an important part of the curriculum.

The rest of this section will further discuss the world view of the Wayana, focusing on the way they view the concepts illness and health in particular in paragraph 1.2.1. It will become clear that these concepts are not only connected to physical illness and physical health, but also to social illness and social health. The *pijai*, who was mentioned before in the oral story in paragraph 1.1, is an important figure in the world of the Wayana and his role will further be examined in paragraph 1.2.2.

1.2.1 The Wayana and Illness

The way in which illness and health are conceptualized and the way in which people perceive them can vary a lot across cultures (Ember & Ember, 2003). According to Kleinman (1988) an important

distinction is to be made between the two phenomena "illness" and "disease". He describes "illness" as the way in which symptoms and disabilities are perceived, lived with and responded to by the patient and its social environment. "Disease" is described as the actual alteration in the biological structure or functioning, which serves as a very Western, biomedical approach. Disease is therefore usually what a doctor diagnoses a patient with, whereas an illness can be related to social issues and might not have any causes a doctor can find a clear biomedical solution to. Ember & Ember (2003) also mention that health is not always merely the absence of disease, but it can also relate to having strong social relationships, a successful love-life or financial stability. In other words, health is not only the absence of disease, rather it is the absence of illness, for it also includes the social dimension, instead of solely focusing on biomedical alterations.

De Goeje (1941) is one of the very first works on the Wayana, written by a researcher from the Netherlands. De Oayana-Indianen ('The Wayana Indians') gives quite an impressive overview of the beliefs, cultural practices and day-to-day activities of the Wayana of that time. De Goeje himself mentions in the very beginning of his chapter that his work is not altogether complete, but that he was able to create a coherent whole after all, by also adding notes from other researchers (De Goeje, 1941:72). In his work he describes the way the world is perceived from a Wayana perspective, referring to their beliefs as the study of nature, rather than superstition, of which the latter is a term frequently used by his peers in that time (De Goeje, 1941:74). The Wayana also "recognize a much vaster amount of fundamental forces of nature, while these forces are also of a different kind of nature, such as passion, instincts, attraction and repulsion, temperament and character (De Goeje, 1941:74)." In the case of illness and health, this means these are not only controlled by the forces of nature that we know of in Western cultures, but the many human traits mentioned before also play a significant role. To the Wayana, health is closely related to social harmony, happiness and a more general feeling of well-being, while illness is related to being in a state of conflict, anger, sadness, unhappiness and disharmony. The way illness and health are conceptualized by the Wayana is thus distinctly different from the way it is conceptualized from a Western perspective.

1.2.2 Role of the *Pïjai*

In order to access a more adequate understanding of what illness means to the Wayana and how it is conceptualized, it is also necessary to understand the importance of shamanism within the world of the Wayana and what significant role *pijais* play in the process of falling ill and being cured from it. *Pijais* are figurative bridges between the human world and the spirit world and are able to see and communicate with the spirits (De Goeje, 1941:93, Chapuis & Rivière, 2003:320). They are the only ones who have

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⁵ De Goeje (1941) writes this as *piiyai*, but for the sake of consistency, the spelling *pijai* will be used throughout the whole thesis, as the pronunction of the word is also [pijaj].

access to transformative powers in order to reach this spirit world. It is their job to take care of the Wayana people and assure a balance is pertained within the communities.

Patients can come to the pijai if they need help curing an illness, they are suffering from 6 . Pijais will then dream away in order to access the spirit world. During their journey in the spirit world the pijai investigates the illness, what its causes are and how it can be cured. It is not unusual the cause of the illness is attributed to another pijai or an evil spirit, who has cursed the patient in question. When the pijai comes out of his trance, they will inform the patient and explain the treatment that will follow. This treatment takes place inside a hut, which is constructed from palm leaves, which are picked out by the spirits, depending on the illness that is being treated. The patient will enter the hut, joining the pijai, who will take off his human skin and disappear from the hut, allowing spirits to enter his body. Eventually the pijai will suck the part of the body that appears to be ill, after having smoked a specific mix of tobacco and other herbs, and will spit out a bit of blood in which a little piece of glass can be found, that is a representation of the figurative arrow that a spirit sent to the patient from another enemy pijai. Afterwards, the patient is given a prescription on what to eat and drink and how to behave in order to complete the cure of the illness.

According to De Goeje (1941) the Wayana make a distinction between three different kinds of illness, namely tijephe 'fever' and kuwamai 'common cold', which indicate illnesses that are visible on the outside, and *jolok pile* 'arrow of a *pijai* or spirit', to which internal pain is attributed. This distinction is not the distinction that was found during my time with the Wayana, but it does showcase the importance of *pijais* and spirits in regard to illness and health. According to the Wayana, *pijais* are able to shoot these jolok piles 'arrows of a pijai or spirit' over large distances towards people who are or have done evil, often making the targeted person ill or hurt. These people do not have to be in sight and might actually reside far away from them the moment the pijai shoots the arrow. Carlin (2018) describes a socalled "spooky action at a distance", that will provide us with an example of such an event. A Trio friend of hers, who lives in the jungle of Suriname found himself in a coma after having seen a stingray. It must be noted that the man explicitly said that there had been no stinging whatsoever, but he had simply seen the stingray. The doctors from Paramaribo also did not know how her friend had come into this comatose state and expected him to die in a few days. When, to everyone's surprise, he woke up from his coma a few days later, he explained that he had been in a misunderstanding with another man four months before the incident. The other man had shot (or had a pijai shoot) an arrow, such as the ones mentioned before, in order to make him ill. Only when the other man had realized it was actually a misunderstanding and Carlin's friend had not done him any evil, the comatose man was able to wake up. Although the men mentioned in this example were both Trio and not Wayana, it is safe to say that identical situations occur within the communities of the Wayana. Speakers of Wayana mentioned they

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⁶ There are several rituals to be carried out by a *pijai* in order to cure an illness. The description here is taken from Chapuis & Rivière (2003:320-321), but serves only as an example.

had similar experiences or knew other people within the villages that had found themselves in a comparable situation. However, we were not able to discuss the details of these instances and it would be inappropriate to citate the few stories that were told in private. Nonetheless this section gives a representative overview of the role *pijais* play within the Wayana world and showcases that illness and health are lived with in a way, which is quite different from the way it is lived with in the Western world.

1.3 Translational Mismatches

The Wayana conceptualization of illness and health is very different from a Western perspective. It is more closely related to what De Goeje (1941) calls forces of a different kind of nature, referring to emotions, feelings and other human conditions. Health is fundamentally based on social harmony, happiness and a general sense of well-being, whereas illness is the result of social friction and unhappiness. Emotions such as anger towards other people within the community or grief because someone is being missed are strongly connected to falling ill, getting hurt or even death. Such emotions are good motives to inquire the pijai for his service to curse another member of the community and also explains his significant role. Moreover, illness is believed to be caused by forces, which are not solely biomedical alteration, as is believed in the Western world, as it is caused by a curse from a pijai or an attack of a spirit. This approach towards illness and health contrasts with the conceptualization of the Western world and contributes to mutual misunderstanding. This becomes visible, when diseases, from a Western perspective, are translated into Wayana, for which The Medical Dictionary and Phrase Book - Wayana Language (Schoen, 1966) will serve as a good example. This phrase book gives a practical overview of a rather extensive amount of lexicon on describing illnesses. Something that must be noted is that the book is intended for practical purposes and therefore uses idiomatic, rather than literal translations. There are however, several translations that are problematic and exemplify how the conceptualization and perception of the Wayana are pressed into a Western model. The following example is taken from the phrase book, from the subsection "Illness, words describing various types" (Schoen, 1966:8-9).

(7) wetep
belly
"stomach disorder"

As becomes clear from the gloss, the English phrase is much more specific than the translation is in Wayana. In Wayana *wetep* does not signify any type of illness or disorder, but simply refers to the body part. One can imagine the implications such a mismatching translation can give rise to. The question is whether Wayana has access to a dedicated term to describe a stomach disorder altogether and whether it is actually categorized as an illness. If this were the case, a more specific term would have been used in Wayana to translate the English condition "stomach disorder". Instead, the Wayana translation simply identifies the place of the disorder, indicating there is no dedicated term for a stomach

disorder and speakers of Wayana have to use descriptive terminology in order to express there is something wrong with their stomachs. Because English has a dedicated term for "stomach disorder" it is expected Wayana has one too, but this is not the case. Using *wetep* as a translation for "stomach disorder" is therefore insufficient and discards the fact that *wetep* is only a part of describing a stomach disorder. Another example is given from the data collected during the fieldwork conducted for this thesis.

(8) i-mephaku m-a-\phi-n ipoke-la

3POSS-brain 2S_A-be-NPST-NCERT good-NEG

"S/he has a concussion"

The literal translation of this phrase from Wayana is "His/her brain is not well". The translation to Wayana is not mismatching per se, as it does describe the symptoms of the medical condition, but it does perfectly represent the fact that paraphrastic constructions are used to describe this condition. This means there might be no dedicated term to describe the medical condition of a concussion, but because speakers are forced to translate this condition from a Western language, they seek another way to express it. This approach however, discards the way the Wayana conceptualize illness and does not acknowledge the system it functions in. In other words, such translations are established from a Western perspective and unintentionally press the Wayana conceptualization into a Western model.

1.4 The Societal Issue

Assuming that all people perceive the same concepts as illnesses is problematic and there lies a danger in this assumption. Because of the contrasting and mismatching conceptualizations of illness, the efficacy of Western biomedical treatments is not always as high as one would expect. Because of the close cooperation with people from the city, a new lifestyle emerged within the villages of the Wayana communities, which brought forth a host of new diseases. Flu epidemics are not posing such a threat anymore as they used to, but because of the introduction of fattier and more sugary nutrition, diseases like obesity, diabetes and cardiovascular diseases are becoming more prevalent. These diseases cannot be fought by simply undergoing a biomedical treatment, but a change in diet or a change in lifestyle altogether is needed to live with such a disease. As the Western biomedical world and the Wayana have such different views on the conceptualization of illness and health, as even translating disease terminology poses problems, and because there is little to no mutual understanding, not much progress is being made towards better treatments.

The main focus of this thesis will lie on answering the question of how illness and health are linguistically expressed in the language of the Wayana, in order to acquire a more culturally appropriate understanding of the Wayana conceptualization of illness and health, which might result into an improvement of the health care system for the Wayana communities.

1.5 Structure of the Thesis

In order to acquire a deeper understanding of the conceptualization of illness and health, chapter 2. will first discuss the transdisciplinary approach that was used during this project. In order to access the most culturally appropriate understanding of the conceptualization of illness and health in Wayana, it is important to reevaluate what methodologies are appropriate for research projects like these. It will discuss what it means to step out of one's ontological stance and what the added value is of transdisciplinarity.

The methodology that was used during the fieldwork, but also during the other stages of this project, will result from this and be discussed in chapter 3

Chapter 4. contains a morphological sketch of the relevant morphology in Wayana that is necessary to be understood in order to comprehend the analysis of the data presented in the subsequent chapter. It also explains how these points relate to the expression of illness and health.

In Chapter 5. the data that was gathered from the fieldwork, but also the data from the existing literature, will be analyzed. It will focus on the most common ways of expressing diseases and what strategies Wayana uses in order to name diseases. These will provide us with new insights on the perception and conceptualization of illness and health in Wayana. The last chapter will discuss what can be concluded from these insights.

2. Transdisciplinarity and Health

From the description above it becomes clear that to the Wayana illness and health are closely related to shamanism, spirituality and social harmony. The way illness and health are conceptualized and illnesses are categorized are exceedingly different from the way they are conceptualized and categorized from a Western perspective. The mismatching translations presented in section 1.3 are an example of this. Because the relation between illness and health and shamanism, spirituality and social harmony are very unlike biomedical science in the Western world it is easy to perceive this conceptualization of illness and health as ethnoknowledge or even superstition. There lies a danger in such an approach however, because it might imply the Wayana way of conceptualizing illness and health is less valuable than the conceptualization of illness and health the Western world tends to follow, burying knowledge that might never be uncovered again. Taking into account the Wayana perspective will however bring forward new knowledge, which will prove to be very useful in order to create a more complete and culturally appropriate overview of the Wayana perception of illness and health. Such an approach will not only provide the academic world with new, uncovered knowledge, but will also provide the communities with valuable knowledge on topics such as the issues addressed in the previous chapters.

2.1. Ontological Stances

The reason there are mismatching conceptualizations of abstract concepts such as illness and health, is because people from different backgrounds live within different ontological stances. Ontologies usually do not involve conscious decisions, but are unconsciously based upon the set of beliefs that are assumed to be true and therefore reality. An important distinction is to be made between what is "real" and what is "reality". What is "real" is what is actually true (or real) from an objective perspective, whereas what is "reality" is what is believed to be true (or real) and is always constituted from a subjective and conditioned perspective. What we will refer to as reality is highly influenced by the ontological stance we live in and does not constitute what is real per se, as the assumptions our reality is based on might be false and not in line with what is real (Wilson, 2008). These ontological assumptions are also heavily influenced by the epistemological beliefs that we have. Epistemology indicates how we know that we know things and it determines how we come to this knowledge. Epistemology is thus the study of what we think is knowledge, what there is to be known and how we can get to know that knowledge. What we believe to be knowledge, naturally influences what we believe to be reality (Wilson, 2008). In order to gain more knowledge about what is real, we also have to make use of a specific methodology. Methodology is the study of how to learn more about reality. In other words, methodology indicates what means can be used in order to be able to gather more knowledge about a reality (Wilson, 2008).

It must be evident from this description that ontological stances can vastly vary from people to people and ultimately from person to person. According to Wilson (2008) "[i]f the ontology is that there is one ultimate reality, then there should be one way of examining this reality (methodology) that will

help to see it best (epistemology). If the ontology is that various realities exist, then you will choose ways of examining one of these realities (methodology) that will take into account your point of view as a researcher to come up with a better understanding (epistemology)."

2.2 Transdisciplinarity

As is inevitable for all types of research, there are two parties present in any study. The first party is the researcher, which Nicolescu (2014) refers to as the subject, and is a human being observing and interpreting the world around them. In case of the research conducted for this thesis, the person who conducted the research would be the subject. The world around them is what can be researched (henceforth "the researchee") and is referred to as the object by Nicolescu (2014). The researchee can vary from natural phenomena to man-made items, thoughts and experiments and constitutes what we as human beings consider to be reality. In case of this thesis, this would be the Wayana and more specifically their linguistic expression of illness and health.

Every researcher is bound to their own research paradigm, which is influenced by their ontological stance, their epistemological believes and the methodology they use. It is the set of rules researchers abide to, either consciously or unconsciously, and will therefore influence any research that a researcher conducts. This is because the researcher is influenced by what they think is reality, how they think they know what reality is and what they think is the best way to find out more about that reality. In order to better understand another ontology than one's own, the ethics that determine what knowledge is worth researching, need to be reexamined and redefined, according to the ontological stance one is pursuing to understand. This is formally known as adding an axiological dimension to research, allowing values from another ontological stance to determine what knowledge is important to know and what is not. This is what Nicolescu (2014) calls de-objectifying the object. In other words, the researchee is not something that needs to be passively researched, but instead plays an active role in the research. The former roles of the researcher and the researcher become less important, whilst the relation between the two becomes more prevalent. For this thesis this means, it was not only the semantic domain of illness and health that was researched, but speakers of Wayana were also motivated to explain everything else they knew about illness and health. The advantage of examining the ontological stance of the Wayana is that knowledge can be researched within the system it functions in, instead of researching the knowledge as a stand-alone system. This allows the research to contain a complete overview of the semantic domain of illness and health, and meanwhile agree with the perception, conceptualization and categorization of the Wayana ontological stance.

In order to gain a more complete insight on the concept of illness and health an alternate, more transdisciplinary approach was used for this research. Before this approach is discussed and suggestions are made on what seems suitable for these kinds of projects, it must first be explained what other approaches there are. Monodisciplinarity, as the name suggests, focusses on one specific discipline. A

monodisciplinary approach forces a researcher to work within a certain area within the academic world, allowing them to gain an enormous amount of expertise on very specific topics. Often, there are specific methodologies at hand, which makes the research a smooth process and keeps everything well-defined and manageable. There are, however, also other approaches that can be used to conduct research, allowing researchers to cooperate with other disciplines in order to create a broader understanding of topics that exceed one discipline (McGregor, 2004). Multidisciplinarity for example, allows disciplines to draw inspiration from other disciplines in order to apply that knowledge into their own fields. Interdisciplinarity goes a step further and not only allows disciplines to share ideas and methods, but is rather a cooperation between two or more disciplines. Approaches like these make it possible to research specific topics from more than one perspective, uncovering more knowledge and allowing a larger, more complete piece of reality to be researched.

Transdisciplinarity even tries to go beyond disciplines and the research paradigms that accompany them. The main goal of a transdisciplinary approach is to understand a piece reality, in the broadest and most complete sense as possible (Nicolescu 2014). This is possible from a holistic perspective, where the world is seen as one big whole, in which everything is interacting and cooperating with each other. This allows a researcher to research a specific object, but also the topics that are intertwined with it and the whole system that it functions in. The research conducted for this thesis was therefore not strictly linguistic, but also involved anthropological aspects and even touched upon the discipline of medicine. This allows the researcher to not only research the linguistic expression of these concept, but also explain and understand it from a cultural point of view. In other words, the focal point of this research was not to research the Wayana, their language and culture, focusing on the concepts of illness and health, rather it was a coproduction of knowledge based upon a cooperation between the researcher and the Wayana, in order to collectively work towards a better mutual understanding of illness and health.

A linguistic analysis of illness and health in the language of the Wayana was not the end goal, but simply a means to an end, namely, acquiring a better understanding of what these complex concepts signify. Linguists have the privilege and therefore the advantage of being able to research the expression of illness and health in the language itself. In other words, linguists are able to access different ontological stances through language, as the way the world is categorized by people is reflected in language. From the expression of illness and health no definitive claims can be distilled explaining the exact conceptualization of illness and health. The linguistic expression of illness and health are simply an addition to understanding the great complexity that makes up the Wayana conceptualization of what illness and health encompass. Chapter 3. and 4. will more closely explain what parts of language were analyzed in order to acquire a better understanding of the conceptualization of illness and health in the Wayana language.

3. Methodology

Much of the data presented in this thesis is the result of a fieldwork trip that took place in the Wayana village called Apetina, also referred to as Pïlëuwimë, which was conducted over the course of three weeks. Many of the Wayana that were involved in this project were around the ages of 20 to 24. In case their knowledge on certain topics did not suffice or they were unsure about it, other Wayana people within the community were also consulted. They would either ask others and share their findings with me on a later point in time or we would visit the others together and conduct the research as a joint effort. All speakers that were involved in this project were proficient in Dutch, which is why all data was collected by making use of Dutch as the meta-language. Most of the research consisted of guided interviews with the researcher and one or more speakers of Wayana being present.

An important part of the interviews was researching the expression of well-being and not being well. Based on Carlin's (2018) work on the expression of these concepts in Trio, I asked the Wayana similar questions in order to find out more about their expression of feeling healthy or unhealthy, happy or unhappy and many other types of feelings similar to these. A focal point of this section was to find out what terms can be antonymous to each other and what terms are unrelated. Focusing on the antonymy of conditions related to illness and health will reveal how these concepts are conceptualized. That is, the system that constitutes illness and health is analyzed from a linguistic point of view and can give indications on how they are perceived by speakers of Wayana. The results are provided in section 5.1.

The second and most extensive portion of the interviews contained many questions about the expression of illnesses and disease terminology in particular. The speakers of Wayana were asked how they would refer to themselves or others if they suffered from any type of disease, but also very specific types of diseases. The phrases that were then given were carefully written down, then repeated and if necessary, corrected. The input of the speakers of Wayana themselves, proved to be very useful as well. They would tell stories of when they were ill themselves and explain to me what they would have said about themselves. If they knew someone else that was ill at that moment, they would also tell me what the correct way of describing that illness in Wayana would be. In some cases, I tried to formulate my own sentences, with which they would be very impressed if it were correct, but at which they would giggle if it were wrong. These interviews gave a good insight in the linguistic expression of illness and clarified the many constructions that can be applied in order to talk about disease. An extensive list of disease terminology was also produced from these interviews. Note that this list is not the result of translating disease terminology from Dutch, but is rather a list that was constructed from the examples that were provided by the speakers of Wayana. This is in line with the transdisciplinary approach that was intended in the previous chapter. The disease terminology is produced from and analyzed in the Wayana system it functions in and should therefore be in line with the Wayana conceptualization of illness and health.

The data gathered during the fieldwork were all carefully written down and analyzed as soon as I found the time to do so. Analysis was necessary during the fieldwork, because it would allow me to see if there was anything, I had missed during the first interview, in order to return to that topic in a later interview, to create a completer and more cohesive overview of the expression of these concepts.

Although much of this treatise will be based upon my findings of the fieldwork, a lot of the data was analyzed at a later point in time and several other sources were used to create an appropriate overview of the semantic domain of illness and health in Wayana. Tavares's (2005) reference grammar, which gives an extensive overview of the Wayana language, proved to be a very useful source for the analysis. All linguistic constructions found during the fieldwork were compared to Tavares's findings. Many of these were in agreement with my own findings and vice versa and if not, this is indicated at the relevant points in the thesis. Examples from her work also form a part of the corpus created for this thesis. Camargo & Tapinkili's (2010) work is a comprehensive dictionary of Wayana words that are translated into French and vice versa, all provided with example sentences. It was used to clarify some of the translations that were produced during the fieldwork and further investigate the semantics behind disease terminology and the constructions they function in. The corpus created for this research also includes many examples from this dictionary, of which most were also tested during the fieldwork. In cases where examples are taken from either Tavares (2005) or Camargo & Tapinkili (2010) this is indicated next to or below the example. All other examples are my own and were collected during the fieldwork.

4. Morphological Sketch of Wayana

This chapter gives an overview of the highlights of the Wayana language in order to make the analysis in chapter 5. more comprehensible. The expression of illness and health is relatable to possessive constructions in many languages. Section 4.1 focusses on attributive possession, focusing especially on the possessability of nouns. This is of the utmost importance, because it can clarify the possessability of illnesses as well, which will prove to be relatable to the conceptualization of illness in general.

Section 4.2 discusses the two strategies for yielding a predicative possessive meaning, which are both used for the expression of illnesses and are therefore important to consider. The possessability of nouns in combination with the suffix *-hpe*, its usage and especially the meaning that this suffix yields, will all be discussed in detail, because they give clear images of the Wayana conceptualization of illness and heath.

The last sections 4.3 and 4.4 examine a big portion of the verbal morphology. Verbs were used in almost all expressions of illness and the valency of verbs and the syntactic role that are connected to this are important aspects of the conceptualization of illness and health as well.

4.1 Nominal Morphology: Attributive Possession

All the data described in section 4.1, including its subsections, were extracted from section 4.1.1 of Tavares's (2005:120-150). All examples will however be accounted for. In order to express attributive possession of a noun, Wayana has access to a strategy following the next format. The possessor is expressed through a personal prefix on the possessed noun. This possessed noun, or the possessee ("the one that is possessed"), also takes one of the allomorphs of the possessive suffix, -n(u), -(li), -t(i) or $-\phi^7$. Several possessed nouns are given below in order to exemplify the format.

```
(9) i-pakolo-n
1Poss-hous-Poss
'my house' (Tavares, 2005:121)

(10) ëwosii
ë-wosi-φ
2Poss-fungal.rash-Poss
'your fungal rash (sp.)' (Tavares, 2005:122)

(11) i-malija-n
3Poss-knife-Poss
'his/her knife' (Tavares, 2005:121)
```

⁷ In many cases this allomorph of the possessive suffix lengthens the preceding vowel, which is represented in the orthography as a double vowel. For example, <a> becomes <aa> and is pronounced as [a:], <i> becomes <ii> and is pronounced as [i:] and so forth.

It needs to be remarked that the personal prefix is omitted in case the possessee is immediately proceeded by a noun or a pronoun. The noun (which can also be a given name), as is the case in example (12), or the pronoun, as is the case in example (13), will act as the possessor of the attributive possessive construction. The following examples demonstrate this process.

```
(12) *Martine
                i-malija-n
   NAME
                3Poss-knife-Poss
   'Martine, her knife'
   Martine
                malija-n
   NAME
                knife-Poss
   'Martine's knife' (Tavares 2005: 121)
(13) *emna
                   i-pakolo-n
   1+3PRO
                3Poss-house-Poss
   'our (excl.) house'
   emna
                pakolo-n
   1+3PRO
                house-Poss
   'our (excl.) house' (Tavares 2005: 181)
```

The next table summarizes the personal prefixes expressing the possessor on possessed nouns. Wayana has access to prefixes expressing first (1), second (2), third (3), third reflexive (3REFL) and dual (1+2) person. All allomorphs of the personal prefixes are phonologically conditioned. The first allomorph presented in the table is used on nouns starting in a consonant (Prefix _C), and the second allomorph on nouns starting in a vowel (Prefix _V).

Table 1. Personal prefixes of possessed nouns (Tavares, 2005:121)

	Prefix _C	Prefix _V
1	ï-	j-
2	ë-	ëw-
3	i-	ø- ⁸
3REFL	tï-	t-
1+2	ku-	(i)k-

4.1.1 Possessability of Nouns: Unpossessable Nouns

Wayana makes a distinction between nouns that are unpossessable, optionally possessed and inherently possessed. The possessability of nouns is recognizable depending on whether they bear or do not bear

_

⁸ There are few allomorphs of this suffix, as "[n]ouns starting in /w/ take either *i*- or *a*- for the third person prefix." (Tavares 2005:122)

possessive morphology. The semantic distinction between these different nouns is not always as cut and clear, but some tendencies can be found and will be given below.

Unpossessable nouns do not bear any personal prefixes or the possessive suffix and cannot, as the name suggests, be possessed. Nouns in this category are mostly things from the natural world and include, among other things, animals, plants and places. Several examples are provided below.

```
(14) kaikui 'jaguar'
kulasii 'chicken'
ekuu 'flower'
alesi 'rice'
sikola 'school'
Apetina 'the village of Apetina' (Tavares, 2005:132)
```

4.1.2 Possessability of Nouns: Optionally Possessed Nouns

Optionally possessed nouns can bear personal prefixes and possessive suffixes if needed. They can occur both in their unpossessed form, in which case they do not take on any possessive morphology, and in their possessed form, in which case they take on the possessive morphology presented above. Semantically there are a very diverse category, because they include almost anything from the natural world, but also from the man-made world. In many cases, the possessive morphology is the only indication whether the noun is possessed or not, as is presented in the following two examples.

```
Unpossessed Possessed

(15) pakolo 'house' "-pakolo-n 'my house' emna pakolo-n 'our (excl.) house' tuna 'water' "-tunaa 'my water' emna tunaa 'our (excl.) house' (Tavares, 2005:135)
```

In some cases, however, the root of the possessed form differs from the unpossessed form, because of so-called ablaut. The initial vowel of the root alternates, which in most cases is morphophonologically conditioned (Tavares 2005: 88). In case the possessive prefix is omitted, because the noun is preceded by a noun or a pronoun, the possessed form still remains recognizable as such, as the vowel still alternates because of ablaut. See the next two examples.

```
Unpossessed

(16) ëtat 'hammock' j-etat 'my hammock' emna etat 'our (excl.) hammock' omo 'hand' j-amoo 'my hand' emna amoo 'our (excl.) hand'

(Tavares, 2005:125)
```

Furthermore, there are several instances where the root of the unpossessed form is no longer recognizable as an alternation of the possessed form and vice versa, due to the process of suppletion. The two forms are unrelated and are the result of two paradigms that have merged together into one.

Tavares (2005:135) notes that some stem alternations can be explained historically, but synchronically no rule can be derived and thus, they are analyzed as suppletive. In suppletive cases, both unpossessed and possessed forms are always recognizable as such, because of their distinct forms. The next two examples exemplify this.

```
Unpossessed Possessed

(17) ëutë 'village' ï-pataa 'my village' emna pataa 'our (excl.) village' pïlëu 'arrow' ï-ïle 'my arrow' emna ïle 'our (excl.) arrow' (Tavares, 2005:135)
```

4.1.3 Possessability of Nouns: Inherently Possessed Nouns

Inherently possessed nouns are those that have an intrinsic relation towards another entity and always occur with possessive morphology. They include, among other things as well, kinship terms, some body parts and several miscellaneous nouns. Note that inherently possessed nouns can also occur with a preceding noun or pronoun, in which case the personal prefix is also omitted and its form does not change. Several examples of inherently possessed nouns, both with personal prefixes and in combination with a noun or pronoun are given below.

```
(18) i-jum 'my father'

j-emsi 'my daughter'

i-pet 'my upper leg'

i-pun 'my flesh'

i-womii 'my language'

i-pataa 'my land/village'

(Tavares, 2005:136-139)
```

4.2 Nominal Morphology: Predicative Possession

When discussing the expression of illness and health in a language, it is inseparably connected to predicative possession. Many languages use predicative possession to express what illness someone is suffering from. According to Stassen (2009), the linguistic strategies used for the expression of predicative possession can differ vastly from language to language. In languages such as English for example, the verb 'to have' is dedicated to express this relation⁹, which Stassen (2009) refers to as the "have-possessive construction". In Wayana, however, there seems to be no verb that expresses a similar meaning as the English verb 'to have', but other strategies are to be used in order to express predicative possession.

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⁹ Stassen (2009) states that verbs that convey this predicative possessive meaning are often the result of semantically bleaching a verb which an acquisitive meaning, which is also the case for English and many other European languages. The verb 'to have' is derived from Proto-Germanic *habjanq 'to have' or 'to hold', which is ultimately derived from Proto-Indo-European *keh₂p- 'to seize'.

Wayana has access to the adverbializing circumfix *ti*-N-*ke* 'having' and the adverbializing suffixes -*hme* 'existing' and -*hpe* 'infested with', which usages will be explained in the next two sections. Just as with attributive possession, a distinction seems to be made between possessable and unpossessable nouns, resulting is different morphology for yielding a predicative possessive meaning for both types of nouns. The circumfix *ti*-N-*ke* is used for the possession of possessable nouns and is only applied to inherently possessed nouns and optionally possessed nouns, albeit in their unpossessed form. The suffixes -*hme* and -*hpe* are used for the possession of unpossessed nouns and are applied to unpossessable nouns and optionally possessed noun in their unpossessed form.

The circumfix *ti*-N-*ke* can be applied to express illness, although examples are few. The adverbializing suffix -*hme* is never used on disease terminology. The adverbializing suffix -*hpe* 'infested with' on the other hand, is applied to express the possession of illness in almost all cases. Their different usages will be discussed in the following two sections.

4.2.1 The "ti-N-ke Construction"

Like many Cariban languages, Wayana makes use of a construction that will henceforth be described as the "*ti*-N-*ke* construction". This circumfix adverbializes underived possessable nouns (N) and yields a possessive meaning and is best translated as 'having "referent" (Tavares, 2005). Person is expressed on the verb -*a* 'to be' and is described by the preceding adverbial. The following examples demonstrate the possessive meaning of this grammaticalized construction.

(19) *tï-jumï-ke* w-a-\$\phi\$-i

COREF-father-INSTR 1S_A-be-PRES-CERT

"I have a father" "I am with father" (Tavares, 2005:423)

(20) tomole wai

 $t\ddot{i}$ -omo- le^{10} w-a- ϕ -i

COREF-hand-INSTR 1S_A-be-PRES-CERT

"I have a hand" "I am with hand" (Tavares, 2005:393)

(21) towosike wai

tï-wosi-ke w-a-ø-i

COREF-funal.rash-INSTR 1S_A-be-PRES-CERT

"I have a fungal rash (sp.)" "I am with fungal rash (sp.)" (Tavares, 2005:393)

Diachronically, this adverbializing circumfix is relatable to the third person reflexive prefix *t*-(modern Wayana *ti*-) and the instrumental postposition *ke* (Gildea, 2009), yielding a source meaning which is best translated as 'with one's own "referent". Both the prefix and the postposition are still

¹⁰ -ke is known to have the allomorphs -le and -je. Their distribution is lexically conditioned, but examples of the last two allomorphs are few and also bound to variation. e.g. *t-omo-le* 'having a hand' co-exists with *t-omo-ke* 'id.'. The allomorphs -ke is certainly most productive, occurring on neologisms and loans as well.

fully functional in the language and can still co-occur yielding this source meaning (Gildea, 2009), of which an example is given below.

(22) tamoo ke

tï-omo-ø ke

3REFL-hand-Poss Instr

"With (or using) his/her own hands"

However, the combination of the prefix ti- and the postposition ke have been grammaticalized into a circumfix, which is referred to as the "ti-N-ke construction". The first part of the circumfix ti-does not refer to the third person reflexive anymore, but was semantically bleached overtime and acquired a coreferential meaning, rather than a third person reflexive meaning (Gildea, 2009) (also compare Trio (Carlin, 2004)). It is therefore that this part of the circumfix is treated as a semantically bleached third person coreferential possessive prefix, which is also glossed as such (COREF).

The "ti-N-ke construction" shows many similarities to what Stassen (2009) calls a "with-possessive construction". He defines this construction as one that makes usage of a verb which is roughly translatable as 'to be' or 'to exist'. The possessor is the grammatical subjects of the sentence, whereas the possessee is expressed as an oblique or adverbial, as is the case here. The oblique or adverbial of such a construction is often the result of a comitative case (Stassen, 2009:55), so the instrumental meaning must have shifted towards a comitative meaning first, before it acquired its possessive meaning in this construction. The last part of the circumfix -ke is therefore still glossed as an instrumental suffix (INSTR), in order to denote the historical development of the suffix.

As mentioned before, the "ti-N-ke construction" is only used to adverbialize underived possessable nouns. Inherently possessed nouns, such as jumi 'father' in example (19), are always possessed and can only be used in this construction in order to add the predicative possessive meaning. In case, a noun is optionally possessed, such as omo 'hand' in example (20), the unpossessed form is used in this construction (compare the possessed form in example (22)), even though this construction seems to yield a possessed meaning. Example (21) demonstrates that the "ti-N-ke construction" can be applied in order to express the possession of the disease term wosi 'fungal rash (sp.)'. However, only very few examples are available in which the "ti-N-ke construction" is present describing the possession of disease. In Tavares's (2005) work, this was the only example that was found and during the fieldwork no examples were added to the corpus. Although (21) serves as a counter-example, there seems to be a strong tendency for diseases to be expressed through another construction. This construction will be discussed in the following subsection.

4.2.2 The Suffixes -hpe and -hme

Another strategy for expressing predicative possession in Wayana is by using the suffix -hme¹¹. Tavares (2005:385) considers this suffix to carry an existential meaning, which can be translated to "referent" exists' or "referent" is there'. An example of a phrase making usage of this suffix is provided here.

```
(23) [...] tamusi-hme
old.man-EXADV
'...there were old men' (Tavares 2005:385)
```

Tavares (2005) also mentions that a construction making use of the suffix in combination with a copula, can be translated with the sense of 'having "referent", in which case it conveys a predicative possessive meaning. Person is expressed on the verb -a 'to be' and is described by the adverbialized referent. The following example shows the possessive meaning that is yielded in a copular sentence in combination with the suffix -hme.

```
(24) ulu-hme w-a-$\phi$-i

cassava.bread-EXADV 1S_A-be-PRES-CERT

'I have cassava bread' 'I am cassava bread-existing' (Tavares 2005:386)
```

This strategy also resembles what Stassen (2009) calls the "with-possessive construction". The same verb -a 'to be' is used, on which the grammatical subject of the sentence is expressed and is also the possessor of the possessive construction. The possessee is also expressed as an adverbial within this construction. However, this suffix is never applied in order to express the possession of illness. It appears in the same environments as the suffix -hpe 'infested with', which can occur both with and without the copula -a 'to be' as well and yields a slightly more specific meaning.

```
(25) m\u00e4u-hpe ehiike
blood-INFEST because
'because there was blood (on it)' 'because (it) was covered in blood' (Tavares 2005:385)

(26) t-\u00e4-he-m\u00e4-he-m\u00e4-hpe^{12} w-a-\u00fa-i

PRTC-eat.meat-PRTC-PARTNOM-INFEST 1S_A-be-PRES-CERT
'I have meat' 'I am loaded with meat' (Tavares 2005: 385)
```

The suffix *-hpe* is analyzed as an adverbializing suffix which conveys a meaning of 'covered in,' 'infested by' or 'loaded with' and is glossed as INFEST. Carlin (personal communication) suggested that Wayana makes usage of this suffix, which conveys a meaning similar to the suffix *-hpije* 'id.' in Trio. It also corresponds to the postposition *pe* 'id.' in Kari'nya (Courtz, 2008). The suffix is used

¹¹ According to Tavares (2005:385) this suffix is an allomorph of the adverbializing suffix *-hpe* 'infested with', but the evidence provided in this thesis will prove the different usages of these seperate morphemes.

¹² The construction $t\ddot{e}hem(\ddot{i})$ has been lexicalized as 'meat'.

especially for the expression of illness. In fact, the suffix *-hme* 'existing' cannot be used for expressing the possession of an illness, for which the following examples provide good proof.

```
(27) ëlekë-hpe
                         w-a-ø-i
                         1S<sub>A</sub>-be-PRES-CERT
    sore-INFEST
    "I have sores (sp.)" "I am infested with sores (sp.)"
(28) *ëlekë-hme
                         w-a-ø-i
    sore-EXADV
                         1S<sub>A</sub>-BE-PRES-CERT
    "I have sores (sp.)"
(29) malalia-hpe
                         w-a-ø-i
    malaria-INFEST
                         1S_A-be-PRES-CERT
    "I have malaria" "I am infested with malaria"
(30) *malalia-hme
                         w-a-ø-i
    malaria-EXADV
                         1S<sub>A</sub>-BE-PRES-CERT
```

"I have malaria"

The meaning 'covered in,' 'infested by' or 'loaded with' becomes most prevalent in the following examples. In (32) the name of an insect is used polysemically to describe the illness it causes and showcases the meaning of the suffix excellently.

```
(31) moto-hpe w-a-\phi-i
worm-INFEST 1S_A-BE-PRES-CERT

'I have a stomach ache (caused by a worm (sp.))' 'I am infested with a worm (sp.)'
```

The presence of the suffix -hpe meaning 'infested with', makes this phrase easier to parse. The reading 'having a stomach ache caused by a worm (sp.)' is only possible if this suffix has a more specific meaning than that of the existential adverbializer -hme. Because the suffix indeed carries the meaning 'infested with', the reading mentioned before is much more evident and this would also explain why so many disease terms based on the names of insects were productively created through the usage of this suffix. More about the creation of disease terminology will be provided in section 5.2. The meaning of this suffix also becomes very clear in the following example, where the name of the illness is created polysemically after the body part that is infested.

```
(32) i-pana-\phi-hpe w-a-\phi-i

COREF-ear-POSS-INFEST 1S<sub>A</sub>-be-PRES-CERT

'I have an ear infection' 'I am infested with an ear-infection'
```

If *-hpe* were only an existential adverbializer these examples would have been unambiguous. It would only imply the person saying this utterance simply has the referent ('I have "referent"). Yet another reading is found, as it also implies, they are suffering from an infection at the place of the

referent ('I have a "referent-infection"'). Speakers immediately recognized the latter reading, but when speakers were asked whether the first reading was acceptable, they would answer "yes" hesitantly. The latter reading was definitely more instinctive and natural, strongly affirming the 'infested with' meaning of the suffix *-hpe*.

The most commonly used way to express unpossessed nouns describing illnesses is thus by using the adverbializing suffix -hpe 'Infested With'. Note that there is a tendency towards unpossessed nouns being used in this construction, but Tavares (2005) remarks that a few examples exist where possessed nouns are also accepted in this construction, but they are irregularly accepted by speakers (Tavares, 2005:386). The examples presented in (27), (29) and (31), all appear to contain the unpossessed form of the noun, as there is no trace of possessive morphology, and the suffix -hpe tends to be used in combination with unpossessed nouns in most other examples found during the fieldwork as well. However, the example provided in (32), shows traces of possessive morphology. Two others of such examples were found in the corpus that was created for this thesis, occurring on the loans for "cancer" and "AIDS". This is striking, because most other disease terminology and frankly, all most other nouns, seems to be unpossessed. See the following examples for clarification.

```
(33) (i^{-13})kanker-tï-hpe w-a-\phi-i
```

COREF-cancer-POSS-INFEST 1S_A-be-PRES-CERT

"I have cancer" "I am infested with cancer"

(34) ϕ -AIDS-t \ddot{i} -hpe w-a- ϕ -i

COREF-AIDS- POSS-INFEST 1S_A-be-PRES-CERT

"I have AIDS" "I am infested with AIDS"

Speakers explicitly mentioned that the possessive morphology was obligatory when *-hpe* was suffixed to the nouns *kanker* 'cancer' and *AIDS* 'AIDS'. Tavares (2005: 387) mentions that *i-N-hpe* and *i-N-hme* "might be on its way to becoming an adverbializing discontinuous morpheme". This could be true for both suffixes, but the data is insufficient to test such a claim. It would however be wise, to further research these suffixes in the future.

4.3 Verbal Morphology

Verbal morphology in Wayana can be divided into several sets, of which this thesis will discuss Set I, as listed by Gildea (1998), and the $t\ddot{\imath}$ -V-(h)e set. All verbs can occur with the morphology of both sets that will be discussed. The sets show a great semantic overlap with each other, but there seem not to be any morphosyntactic reasons to choose one set over the other. Instead, it is rather pragmatics that determine what set to use. In texts at least, generally speaking, Set I is chosen only for reported speech, whereas the $t\ddot{\imath}$ -V-(h)e set is used for narrative clauses (Tavares, 2005:230-234). More research on this

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¹³ The semantically bleached third person coreferential possessive prefix i- was not recorded in this example. However, it seems plausible this particular example was misheard and the prefix i- was actually realized.

distribution is needed however, but not a relevant goal for this thesis. The following subsection will discuss the verbal morphology of Set I, including the relevant prefixes and suffixes. The copula -a 'to be' will also be discussed, as it functions almost fully as if it were a part of Set I. The subsequent subsection will discuss the $t\ddot{i}$ -V-(h)e set.

4.3.1 Verbal Morphology: Set I

The first group, listed as Set I by Gildea (1998), are verbs that take personal prefixes, Tense, Aspect and Mood (TAM) suffixes and number suffixes. A Set I verb consists of a root and if necessary, several prefixes and suffixes, which all have a strict place within the order a Set I verb is built up of. The figure below demonstrates the order of affixes.

Personal	Thematic	Detransitivizing	Root	Verbalizers	Transitivizers	Causatives	Tense	Aspect	SAP
Prefixes	Prefixes	Prefixes							Affixes

Figure 2. *Diagram of Set I morphology* (Tavares, 2005: 191)

Not all affixes will be discussed in this thesis, because they will not serve any purpose for the rest of the analysis. A more detailed and complete explanation of these affixes is provided in Tavares (2005). In this overview, the focus will lie on personal prefixes, the suffixes to express tense and the Speech Act Participant (SAP) Affirmative suffix, presented in bold in figure 2.

4.3.1.1 Personal Prefixes

Wayana makes a distinction between four different persons, namely first (1), second (2) and third (3) person and a dual (1+2). Dual person refers to a first and second person (1+2) acting by themselves (for intransitive verbs) or acting upon or being acted upon by a third person (for transitive verbs), in which case it could also be described as a 'first person inclusive'. However, a dual marker can also refer to a first person acting on a second person and vice versa, in which case the description 'first person inclusive' is inadequate, which is why 'dual' is more suitable. When it comes to person marking on verbs that are part of the Set I, this is always done by means of a prefix.

4.3.1.1.1 Transitive Personal Prefixes

On transitive stems, portmanteau prefixes mark both the Agent (A) and the Object (O) (Tavares, 2005:205) The following examples of the verb *-ene* 'to see' demonstrates several prefixes expressing different agents and objects (Tavares, 2005:208).

```
(35) w-ene-\phi

1A3O-see-RECPST

"I saw him/her"

(36) j-ene-\phi

3A1O-see-RECPST

"S/he saw me"
```

```
(37) m-ene-ø
2A3O-see-RECPST
"You saw him/her"
(38) ëw-ene-ø
3A2O-see-RECPST
"S/he saw you"
```

Depending on whether an SAP is acting on a third person or a third person is acting on an SAP, either "direct" prefixes or "inverse" prefixes have to be used, respectively (Tavares, 2005:206 & Gildea, 1998). In other words, the "direct" suffix *w*- presented in (35) indicates a first-person agent (A) acting upon a third person object (O). On the other hand, the "inverse" suffix *j*- presented in (36) indicates a first person (O) being acted upon by a third person (A). In these examples the same persons are involved, namely first and third person, but depending on their syntactic roles different suffixes need to be applied. In short, (35) and (37) use "direct" prefixes, whereas (36) and (38) use "inverse" prefixes. Note that for the third person there is no difference between either "direct" or "inverse" suffixes, because such a differentiation cannot be made. See (39) below.

```
(39) n-ene-ø
3A3O-see-RecPst
"S/he saw him/her (but not themselves)"
```

When SAPs, first- and second-person, act on each other, and no third person is involved, two other prefixes are used, depending on whether first person is acting on the second person or vice versa.

```
(40) kuw-ene-ø

1A2O-see-RecPst

"I saw you"

(41) k-ëne-ø

2A1O-see-RecPst

"You saw me"
```

Most transitive personal prefixes are now discussed. A table to summarize all personal prefixes marked on transitive verbs is given below. The allomorphs presented for both "direct" and "inverse" personal prefixes are all phonologically conditioned. As an example, the "inverse" prefixes describing a first and second person agent, i- and \dot{e} -, occur before stems that start in a consonant, whereas j- and \dot{e} w occur before stems that start in a vowel. A more detailed description of the allomorphy of personal prefixes is given in Tavares (2005). Another point worth mentioning is all prefixes involving the dual (1+2) and their allomorphs, except for h-, have a k- in them. Because of this, in some cases several different interpretations can be yielded, but from context, it can be determined what persons are involved and what their syntactical roles are.

Table 2. Transitive Personal Prefixes (Tavares, 2005:205)

	Prefix	Direct			Prefix	Inverse
1	w-	1A3O			<i>ï-/j-</i>	3A1O
2	m-	2A3O	Prefix		ë-/ëw-	3A2O
3			n-/mën-/kun- ¹⁴	3A3O		<u>. </u>
1+2	(ku)h-/kut-, ku-, k-	1+2A3O			ku-, k-	3A1+2O
			kuw-/ku-/k-	1A2O		<u>. </u>
			k-/ku-	2A1O		

4.3.1.1.2 Intransitive Personal Prefixes

For intransitive stems only the Subject (S) is marked, but the same "direct" or "inverse" prefixes for the transitive verbs are used for intransitive verbs nonetheless. The distribution of using either "direct" or "inverse" prefixes is lexically determined, but in order to acknowledge the two different prefixes, different labels are used in the glosses. In case the "direct" prefix is applied, it is labelled as S_A , whereas in case the "inverse" prefix is applied, it is labelled as S_O , in order notify what prefix it was modelled after. Several examples of the intransitive verbs $-\ddot{e}tuk(u)$ 'to eat' and -elemi 'to sing' are given below (Tavares, 2005:208).

(42) *w-ëtulu-*ø

1S_A-eat-RECPST

"I ate"

(43) *m-ëtulu-*ø

2S_A-eat-RECPST

"You ate"

(44) *j-elemi-\phi*

1So-dream-RECPST

"I dreamed"

(45) ëw-elemi-ø

2So-dream-RECPST

"You dreamed"

The table below summarizes all personal prefixes that occur on intransitive verbs. Note that the prefixes for the dual (1+2) never yield a meaning where either of the two persons act on each other, because that is not the nature of intransitive verbs.

¹⁴ Can also be expressed by means of a pre-verbal object. For more information see Tavares (2005:205).

Table 3. Intransitive Personal Prefixes (Tavares, 2005:205)

	Prefix	Direct			Prefix	Inverse
1	w-	$1S_A$			<i>ϊ-/j-</i>	$1S_0$
2	m-	2S _A	Prefix		ë-/ëw-	2S _o
3			n-/mën-/kun-	3S		
1+2	h-, k-, kuh-, kut-,	$1+2S_A$			h-, k-, ku-, kuh-,	1+2S ₀
	kup-				kut-	

4.3.1.2 Suffixes

Many of the suffixes available in Wayana modify a root in order to give it very specific meanings. This subsection will discuss the relevant suffixes. These include several tense marking suffixes and the SAP affirmative suffix -(h)e, as these are most useful in order to understand the examples presented in the rest of the analysis.

4.3.1.2.1 TAM and number suffixes

In order to express TAM and number, Wayana has access to several suffixes that can be added to the end of the verb. This set of verbs knows a two-way distinction between a past tense and a non-past tense. The non-past is expressed through the suffix -*ja*, of which an example is provided from Tavares's work.

(46) Ïwenatei pitë

ï-wenata-ja-he pitë

1So-vomit-NPST-CERT in.a.minute

'I am about to vomit' (Tavares 2005:213)

The non-past is used to express events that take place in the near future or distant future, but also continuous, non-continuous and habitual aspects or simply facts that will permanently be true. The expression of the past can be subdivided into a suffix for the habitual past $-(j)(\ddot{e})m\ddot{e}hneja$, the recent past $-\phi$ and the distant past -ne. An example of each suffix expressing a past tense is provided here.

(47) uwame-la w-ehe-mëhneja

healthy-NEG 1S_A-be-HABPST

'I used to be healthy' (Tavares 2005:219)

(48) $nil\ddot{e}m\ddot{e}p$

n-i-lëmëpï-ø

3S-THEM¹⁵-die-RECPST

'He died (just a few minutes ago)' (Tavares 2005:215)

Explaing the usage of the thematic prefix i- (glossed as THEM) in this thesis would be irrelevant, but Tavares's (2005:196-200) work provides an excellent explanation.

(49) jolok ene-ne Martine
evil.spirit see-DISTPST Name

'Martine saw an evil spirit (quite long ago)' (Tavares 2005:216)

The translations given to these Wayana phrases explain the differences in meaning of these past tenses. Although suffixes expressing the permissive and permissive/admonitive occur in the same place as the suffixes mentioned above, they will not be discussed, because they are irrelevant to the rest of the thesis. The following table presents the suffixes for TAM marking and also the same suffixes in combination with the collective marker -të, which is a suffix that expresses number. The alternating suffixes succeeding the collective marker presented in this table for the non-past and habitual past are historical remnants of evidential markers, which will be discussed in the next subsection.

Table 4. Tense-Aspect-Mood-Number Suffixes (Tavares, 2005:210)

	Non-Collective	Collective
Non-Past	-ja	-ja- të -(h)e
		-ja- të -u
Habitual Past	-(j)(ë)mëhneja	-(j)(ë)mëhneja- të -(h)e
		-(j)(ë)mëhneja- të -u
Recent Past	-ø	-ø- të -u
Distant Past	-ne	- të -ne

4.3.1.2.2 The Certainty Markers

As was mentioned before, the suffixes -(h)e and -u are remnants of the evidential system that most Cariban languages still make excessive use of today (Gildea, 1998), expressing either certainty (CERT) or non-certainty (NCERT). Although "the dichotomy certain [and] uncertain is no longer operating fully in the Wayana system" (Tavares, 2005), this thesis will analyze the suffix -(h)e as a certainty marker in order to reflect the historical process that led to the modern Wayana system. As is the case when used in combination with the collective suffix $-t\ddot{e}$, the suffix -(h)e occurs only in affirmative clauses and is omitted in interrogative clauses. It is only used in combination with the suffixes -ja NPST and $-(j)(\ddot{e})m\ddot{e}hneja$ HABPST, but not with any other past tense suffixes. Lastly, it can only occur when SAP's are part of the speech act, whether it is the first and/or second person acting on or being acted on by a third person, or either of them acting on each other. From a synchronic point of view, this suffix is an SAP affirmative suffix, which is also the description Tavares (2005) allocates it. However, from a diachronic point of view, this suffix finds its origin in a certainty marker, which is why it will be analyzed as such.

The uncertainty marker suffix has several allomorphs. The first allomorph to be discussed is -u, which is found only in combination with the collective marker $-t\ddot{e}$ and is therefore conditioned to this

environment only. Another allomorph is -n or -n(e), which is only found on the second and third person of the copula -a 'to be' (which will be discussed in subsection 4.3.1.3). Its origin is unclear, but because it stands in complimentary distribution with the certainty marker -(h)e, this suffix will be analyzed as an allomorph of the non-certainty marker, which is in line with other Cariban languages, such as Trio (Carlin, 2004) and Kari'nya (Courtz, 2008) and reflects the historical evidential system of Cariban languages. Non-certainty is left unmarked in all other cases. That is, when it is not used in combination with the collective marker $-t\ddot{e}$, when another person is expressed on the copula -a 'to be' or when any other verb is used. For consistency reasons, the absence of a non-certainty marker is glossed as $-\phi$ on the verb -a 'to be', but is left unmarked on all other verbs, if not used in combination with the collective suffix $-t\ddot{e}$, because it would be too abundant to gloss it that way.

4.3.1.3 The Copula -a 'to be'

The copula 'to be', which is an intransitive verb, is somewhat irregular and shows some variation in its root. It seems to function as a Set I verb, but it also shows some discrepancies to this set. The next table presents the verbal paradigms of this verb for the non-past tense. The root -a seems to alternate with - ana in second person in the non-past tense. This is most probably the result of a historical merge of two separate morphemes (Carlin, 2004:314). Many Cariban languages also have a form similar to Wayana; Trio has manae (Carlin, 2004:314) and Kari'nya has mana (Courtz 2008:92). For the sake of clarity and consistency -ana is treated as a variation of the verb root.

Table 5. The underlying paradigm of the non-past forms of the copula -a 'to be'

		Form	Underlying	Gloss	Translation
1	Affirmative	wai	w-a-ø-he	1S _A -be-NPST-CERT	"I am"
	Interrogative	wa	w-a-ø-ø	1S _A -be-NPST-NCERT	"Am I?"
2	Affirmative	manai	m-ana-ø-he	2S _A -be-NPST-CERT	"You are"
	Interrogative	man	т-а-ф-п	2S _A -be-NPST-NCERT	"Are you?"
3	Affirmative	man(e)	m - a - ϕ - $n(e)$	3S-be-NPst-NCERT	"S/he is"
	Interrogative				"Is s/he?"
1+2	Affirmative	kutai	kut-a-ø-(h)e	1+2S _A -be-NPST-CERT	"We (1+2) are"
	Interrogative	kuta	kut-a-ø-ø	1+2S _A -be-NPST-NCERT	"Are we (1+2)?"

The allomorph $-\phi$ of the suffix -ja (NPst) is striking. As mentioned before in the non-past tense, the certainty marker -(h)e always follows the non-past marker -ja and does not exist by itself. A simple omittance of the suffix -ja seems unlikely, as -(h)e would then also be dropped. However, all verb stems that end in the vowel /a undergo a specific sound change when uttered in combination with the suffix -ja; a-ja changes into e. The next two examples present the verbs -oko 'to cut' and -ka 'to say' illustrating this pattern for verbs in the recent past tense and non-past tense.

(50) woko wïka

w-oko-ø wï-ka-ø

1S_A-cut-RECPST 1S_A-SAY-RECPST

"I cut it" "I spoke"

(51) wokojai wïk**e**i

w-oko-ja-he wï-k**a-ja**-he

1A3O-cut-NPST-CERT 1S_A-say-NPST-CERT

"I am cutting it" "I am speaking"

As the verb root of -a 'to be' also ends in this vowel /a/ one would expect a similar sound change. If this were the case, the suffix -ja merges with the preceding vowel and results into the sound /e/. However, the root of the verb stays unchanged. This could be explained by the fact that this sound change does not only change the final vowel of the verb, but the entire root itself, making it unrecognizable as the non-past form of the verb -a 'to be'. As a result of paradigmatic analogy, the /a/ might have been reintroduced in all non-past forms. However, if it is the result of analogy, it seems to be a historical pattern, because other Cariban languages have the same verb root -a (Trio has wae 'I am' and Kari'nya has wa 'id.'). With the current data is not possible to find a definitive answer. The best option is to assume that the non-past is expressed through an allomorph $-\phi$ of the suffix -ja, which might or might not be the result of the merger of the suffix into the root of the verb -a 'to be'. As said before, assuming the presence of the underlying suffix -ja, does explain why it is acceptable to use the certainty maker -(h)e even though on the surface there seems to be no non-past marker.

4.3.2 Verbal Morphology: the *tï*-V-(*h*)*e* set

The second verbal set that will be discussed in this thesis, makes use of the circumfix $t\ddot{\imath}$ -V-(h)e, where the V stands for the verb stem. When using this set, there is a lack of conjugation as verbs using this set do not bear personal prefixes, nor tense, evidential, or number suffixes. In order to express person, ergative case-marking is used, by expressing the Agent (A) on the ergative marker ja. Number is expressed through pronouns or the particle tot(o), which is the third person collective. Tense is not expressed at all, but is interpreted by its context and can yield a perfective or progressive past meaning, a habitual or progressive present meaning or a future meaning. As was mentioned before, the $t\ddot{\imath}$ -V-(h)e set and Set I, explained in section 4.3.1, show a great amount of semantic overlap. In order to illustrate this, several examples are given of verbs -ka 'to say' and $-\ddot{\imath}l\ddot{\imath}$ 'to make', taking on the morphology of the $t\ddot{\imath}$ -V-(h)e set and also of Set I.

(52) tikai iu

tï-ka-he ïu

T-say-He 1PRO

'I said'

```
(53) wï-ka-ne
```

1S_A-say-DISTPST

'I said'

(54) kape tiïhe?

kape t-ïlï-he

coffee T-make-He

'Are you making coffee?'

(55) talaa pa kasili wiija?

tala pa kahili w-ïlï-ja

how Q cassava.beer 1A3O-make-NPst

'How do I make kasili?'

4.4 Verbal Morphology: Participle

The circumfix *t-V-he*, which should not be confused with the *ti*-V-(*h*)*e* set from the verbal sets discussed in the previous section, yields a verb with a participial meaning. Tavares (2005) refers to this construction as a discontinuous morpheme, which can occur on all verb roots and is most often found as a complement to a copula. Gildea (1998:142) notes that this "participle indicates a state that is attributed to the notional O of a transitive verb (i.e., a passive participle, such as the English word *broken* in "I saw a broken widow") or the notional S of an intransitive [verb] (i.e., a past [or] completive event)." Tavares (2005:437) adds that "the *t-V-he* forms are formally adverbs denoting a resulting state". For the sake of keeping with tradition within the Cariban literature, this construction will be glossed as a participle (PRTC), not without noting that it has adverbial properties. Two examples from Tavares (2005) are cited here.

(56) [...] ti-lomo-he esike

PRTC-die-PRTC because

"... because they were dead" (Tavares 2005:400)

(57) tokohe psik wai

t-oko-he phikï w-a-ø-i

PRTC-cut-PRTC little 1S_A-be-PRES-CERT

'I am a little bit cut" (Tavares 2005:438)'

5. Linguistic Expression of Illness and Health

The linguistic expression of the semantic domain of illness and health in Wayana is distinctly different from the expression of this semantic domain in many European languages, and as mentioned before, this data can not only shed light on the linguistic differences, but also upon other issues. Section 5.1 will discuss the most frequently used translation that was given for the terms 'illness' and 'health' and what other terms are employed to express well-being and not being well, which are closely related to the former two. This will give more insight in what illness and health include to the Wayana in a more general sense and whether it is different from a European ontological standpoint.

Section 5.2 will discuss the naming strategies Wayana has access to in order to describe illnesses. Whatever illnesses have a dedicated disease term, might play a more vital role in the world of the Wayana perspective. Other disease names, which are neologisms or loans, might play a less vital role or might have played a vital role for a shorter period of time. The strategies for naming diseases will prove to reveal much about the context regarding illness.

Section 5.3 will in depth discuss the linguistic expression of illnesses. As was explained in sections 4.1 and 4.2, nouns can occur in both a possessed and an unpossessed form. When it comes to diseases this is no different. By looking at the linguistic possessability of illness, conclusion can be drawn on what illnesses are and how they are conceptualized both in the language and in the world view of the Wayana. The syntactic roles within these constructions will also be discussed, because they also indicate strongly how illnesses are perceived by the Wayana.

The last section of this chapter, namely 5.5., will discuss all remaining expression of illness, focusing on paraphrastic constructions. As has been said before, paraphrastic constructions are mostly born out of the need to describe a medical disorder there is no name to. Instead speakers are forced to describe, and thus paraphrase, the symptoms in order to get their disorder across. This will also reveal some context on the concepts of illness and health.

5.1 Expressing Illness and Health

The first step towards understanding what illness and health include in Wayana, is knowing how to describe those concepts in language. During my fieldwork there was one translation for the word 'illness' (Dutch: *ziekte*) that was most frequently used, provided in the next example. Speakers connect this term to express 'illness' to diseases such as fevers, coughing or diarrhea.

(58) uwame-la ei-top
healthy-NEG be-CIRCNOM
'Illness' 'being ill'

This expression of 'illness' can be divided into the adverbial uwamela 'not healthy' and the nominalized form of the verb -a 'to be'. The circumstantial nominalizer (CIRCNOM) nominalizes verbs

and can give meaning to either entities or events, both concrete and abstract. In the case of (58) it is best translated as 'the being of "referent" or 'being "referent". The adverbial *uwamela* 'not healthy' is the negated form of the adverbial *uwame* 'healthy', with *-la* having a negating function. 'Health' is expressed in a similar fashion and is demonstrated in the next example.

```
(59) uwame ei-top healthy be-CIRCNOM 'Health' 'being healthy'
```

It is striking that the commonly used term to express being 'ill' is the negated form of the adverbial *uwame* 'healthy'. According to Givón's (1978), which analyzes paired antonymic adjectives, "the negative member [of such an antonym pair,] behaves as the marked, restricted case, denoting only the extreme negative pole on the scale. The positive member, on the other hand, behaves as the unmarked case, denoting the entire scale." In the case of illness and health, illness is the negative member, whereas health the positive one (Givón, 1978). This is in line with the linguistic expression of illness and health in Wayana. It also results in the conclusion, that being healthy is the norm, whereas being ill is a state that has to be marked specifically and is perceived as the extreme negative pole, namely being ill. It is therefore best translated as 'un-healthy' or rather 'not healthy'. Such a translation also shows the non-nominal nature of illness when it is used as an adverbial in the following sentence.

```
(60) uwame wai
uwame w-a-φ-he
healthy 1S<sub>A</sub>-be-PRES-CERT
'I am healthy'
(61) uwamela wai
uwame-la w-a-φ-he
healthy-NEG 1S<sub>A</sub>-be-PRES-CERT
'I am not healthy'
```

Being un-healthy, however, is not only related to health, but is also intertwined with a more general sense of well-being. While investigating the antonymy of adverbials closely related to these semantic fields, speakers noted that *uwame* is not only antonymous to *uwamela*, but also to *ipokela* 'not well' (Dutch: *niet lekker*). The translation 'not well' was suitable for both *ipokela* and *uwamela*. The next two examples show the antonym pair best translated as 'well' and 'not well' (Dutch: *lekker* and *niet lekker*).

```
ipok waiipoke w-a-φ-hegood 1S<sub>A</sub>-be-PRES-CERT'I am well' 'I am good'
```

(63) ipokela wai

ipoke-la w-a-ø-he

good-NEG 1S_A-be-PRES-CERT

'I am not well' 'I am not good'

However, as can be distilled from the translation, (63) can also be interpreted as 'not being good', referring to being 'bad' or 'evil', which was also confirmed by the speakers. This is why other human conditions, such as anger and sadness, are also important to investigate. As has been explained in 1.2.1, these are heavily intertwined with illness and health. Furiousness or aggression are both seen as conditions that will inevitably cause illness or even death, which is perceived as an illness, only a more severe form of it. Sadness, and being silent because of it, is also closely connected to social disharmony and will eventually also lead to illness or death.

Looking at the antonymy of these human conditions will demonstrate which of these human conditions are intertwined with one another. The table below gives a clear overview of the terms describing human condition related to the concepts of illness and health. The positive concepts are presented in the first row and their antonyms are presented in the middle row. In case positive concepts have more than one (negative) antonym, these are all presented. The last row presents the antonym of the positive concept, marked with the negative suffix *-la*.

Table 6. Wayana opposites and antonyms concerning the human condition

Concept	Meaning	Antonym	Meaning	-la marked	Meaning
tawake	happy, content	(1)askame;	furious;	tawake-la	not happy
		(2)ëile;	angry, aggressive;		
		(3)tëtahamai	sad, missing s.o.		
ewake	visibly happy	jame-la	sad, calm		
ipok	good, well	uwame-la	not healthy, ill	ipoke-la	not good, evil; not well, little weak,
jame-phak	content, friendly, calm	(1)askame;	furious;	jame-la	sad, calm
		(2)ëile;	angry,		
			aggressive;		
		(3)tëtahamai	sad, missing s.o.		

Being ill, or not healthy, can be described by the adverbials *uwamela* 'not healthy' and *ipokela* 'not well'. However, as was mentioned before, *ipokela* is also translatable as 'not good' or 'evil' and was indicated by speakers as a synonym of *ëile* 'angry, aggressive'. This indicates the strong connection between not feeling well and being evil, angry or aggressive. In turn, *ëile* is antonymous to *tawake* 'happy, content' and *jamephak* 'content, friendly, calm', indicating the connection between health and happiness.

This is all in line with the Wayana perception of illness and health, described in section 1.2. Concepts describing happiness, which are related to a general sense of well-being, are also closely related to a sense of being healthy. Being angry with another person within the community or grieving over the loss of a loved one, causes social disharmony and will lead to falling ill or dying. In other words, health is pertained if someone acts in order to pertain harmony, which is visible even in the language.

5.2 Naming Strategies for Disease Terminology

The way illnesses are expressed linguistically and especially what illnesses are expressed in a language can give an indication of how illnesses are conceptualized. This section will discuss the adverbialized nominal disease terminology that makes usage of the suffix *-hpe* 'infested with', discussed and exemplified in subsection 4.2.2. This category includes the biggest portion of disease terminology in Wayana. Note that the examples provided in the following subsections do no constitute a complete list of all disease terminology that is at hand in Wayana. However, the examples contribute to a good overview of the different naming strategies that Wayana employs.

5.2.1 Dedicated Disease Names

Wayana has access to very few dedicated disease terms. This terminology includes inherited words, which are used to describe a medical disorder only and do not carry any other meaning than that. Most of the dedicated disease terms describe skin diseases, such as rashes, inflammations or infections. It is not altogether surprising that dermatological conditions have dedicated names, as they are visible to the naked eye and can therefore be given a name. The next two examples give a phrase including two dedicated disease terms for a 'rash' and for a 'sore'. Note that both terms are quite specific, which is something that is lost in translation.

```
(64) wosi-hpe w-a-\phi-i

fungal.rash-INFEST 1S<sub>A</sub>-be-PRES-CERT

'I have a fungal rash (sp.)' 'I am covered in a fungal rash (sp.)'

(65) \(\vec{e}lek\vec{e}-hpe\) w-a-\phi-i

sore-INFEST 1S<sub>A</sub>-be-PRES-CERT

'I have sores (sp.)' 'I am covered in sores (sp.)'
```

Because Wayana does not have so many dedicated names to describe illnesses, it uses several other strategies to describe them. The next subsections will discuss other strategies that are employed in order to describe other diseases.

5.2.2 Polysemic Insect Names

One of the strategies for naming illness is by polysemically using terms that normally refer to insects that are assumed to cause a specific condition. That is, the name for the insect is also used to describe the illness, yielding the latter meaning because of its morphosyntactic context.

(66) ihkëhpe wai jelepatau

```
ihkë-hpe w-a-\phi-i j-ele-pata-wë
macaque.worm-INFEST 1S<sub>A</sub>-to.be-PRES-CERT 1POSS-liver-place-IN
```

'I have a (macaque worm) rash on my chest'

'I am infested with a (macaque worm) rash on my chest'

(67) moto-hpe w-a-ø-i

worm-Infest 1S_A-be-Pres-Cert

'I have a stomach ache (caused by a worm (sp.))' 'I am infested with a worm (sp.)'

(repetition of example (31))

In both of these examples a worm has infected the body, causing it to either itch in (66) or hurt in (67). Speakers mentioned that the worm was not inside of the body in any way, but the word for 'worm' simply referred to the insect that has caused the medical condition. This is proof for the statement that the name of the insect was used polysemically to describe the disease.

5.2.3 Polysemic Body Part Names

Another strategy that is used to in particular describe an infection, is by polysemically using the word for a specific body part where the infection occurs to describe the actual infection. In combination with *-hpe*, this yields the unambiguous reading of 'having a "referent'-infection'.

(68) *ëwu-hpe w-a-\phi-i*

eye-Infest 1S_A-be-Pres-Cert

'I have an eye infection' 'I am infested with an eye-infection'

(69) *ï-pana-\phi-hpe* w-a-\phi-i

1Poss-ear-Poss-Infest 1S_A-be-Pres-Cert

'I have an ear infection' 'I am infested with an ear-infection'

(repetition of example (32))

Speakers confirmed that it can be interpreted as 'having a "referent", but they were very unsure of this translation and preferred the reading of 'having a "referent"-infection'. This is possible if the words *ëwu* 'eye' and *pana* 'ear' are used polysemically to describe the infection of the body part in question, which is the case here.

5.2.4 Wayana Coinages

Because new diseases were and are being introduced, the Wayana language is forced to find new ways to express illnesses. Another strategy for naming disease is by the means of Wayana coinages. They are typically based on one of the most prevalent symptoms of the disease. Two examples are provided below.

```
(70) kuwamasi-hpe w-a-\phi-i
```

snot-Infest 1S_A-be-Pres-Cert

"I have catarrh" "I am infested with catarrh"

(71) tohtoto-hpe $w-a-\phi-i$

cough-Infest 1S_A-be-Pres-Cert

"I have a cold" "I am infested with a cold"

In example (71) one of the symptoms, namely coughing, is also utilized to describe the common cold. This example in particular is interesting, because the noun *tohtoto* 'cough' is an onomatopoeic expression of the sound one makes while coughing. It contrasts with the noun *ahto* 'cough', which is just one cough, also translatable with 'sound of clearing one's throat'.

5.2.5 Augmentative Coinages

Many Wayana coinages for diseases that are either more severe or more specific involve the augmentative suffix -imë. Although the augmentative meaning is still visible in some nouns in Wayana, most nouns that take on this suffix acquire a more specialized or even lexicalized meaning (Tavares, 2005: 161). This is also the case for many illnesses that take on this suffix. The suffix -imë will be glossed as an augmentative (AUG).

(72) *ahto-imë-hpe w-a-ø-i*

cough-AUG-INFEST 1S_A-be-PRES-CERT

"I have tuberculosis" "I am infested with the big cough"

(73) $wosi-im\ddot{e}-hpe$ $w-a-\phi-i$

fungal.rash-AUG-INFEST 1SA-be-PRES-CERT

"I have a fungal rash (sp.) "I am infested with a big fungal rash (sp.)"

(74) *ëlekë-imë-hpe* w-a-ø-i

sore-Aug-Infest 1S_A-be-Pres-Cert

"I have leishmaniasis "I am infested with big sores"

(75) $jepn\ddot{e}-im\ddot{e}-hpe$ $w-a-\phi-i$

fever-Aug-Infest 1S_A-be-Pres-Cert

"I have malaria "I am infested with the big fever"

5.2.6 Dutch Loans

Not all modern diseases have been given a name that is a Wayana coinage. Another strategy for naming these diseases is using loans taken from the Dutch language. Some of these loans have become integrated in the Wayana language, which has changed its spelling and most importantly, its pronunciation to agree with Wayana phonology. Two of such examples are provided below.

```
    (76) sukulu-hpe w-a-φ-i
    sugar-INFEST 1S<sub>A</sub>-be-PRES-CERT
    "I have a diabetes (sugar)" "I am infested with diabetes 16"
    (77) malalia<sup>17</sup>-hpe w-a-φ-i
    malaria-INFEST 1S<sub>A</sub>-be-PRES-CERT
    "I have cancer" "I am infested with cancer"
```

More recent borrowings have not been adapted to conform to the phonology of Wayana and are pronounced very much the same as in Dutch, depending on the speaker's proficiency of the language. The same spelling is also maintained.

```
(78) kanker-ti-hpe w-a-φ-i
cancer-POSS-INFEST 1S<sub>A</sub>-be-PRES-CERT
"I have cancer" "I am infested with cancer"
(79) AIDS-ti-hpe w-a-φ-i
AIDS-POSS-INFEST 1S<sub>A</sub>-be-PRES-CERT
"I have AIDS" "I am infested with AIDS"
```

As most of the research was done with the younger generation of Wayana, who are very proficient in Dutch, the incorporation of disease terminology from that language sometimes went to extremes. The word *hersenschudding* in (80) is the Dutch word for concussion, which literally translates to 'brain shake' and is also pronounced identical to the language of origin.

```
    (80) hersenschudding-hpe w-a-φ-i
    concussion-INFEST 1S<sub>A</sub>-be-PRES-CERT
    "I have a concussion" "I am infested with a concussion"
```

5.3 Expression of Illnesses

The following subsection will discuss the constructions that were used in order to describe illnesses. The first subsection will discuss the adverbialized nominals that are used in combination with either the "ti-N-ke construction" or the adverbializing suffix -hpe. The second subsection will discuss verbs describing states of being ill in a participial construction.

5.3.1 Adverbialized nominals

As was explained in section 4.2, nouns can occur in both a possessed and an unpossessed form. When it comes to disease terminology, nouns describing illnesses only scarcely occur in their possessed form. There is a strong tendency towards being used in combination with the adverbializing suffix *-hpe*

¹⁶ This example could also be translated as "I am loaded with sugar", which technically is not untrue when one has diabetes, but this probably is more coincidental than intentional.

¹⁷ Both the Wayana coinage *jepnë-imë* and the Dutch loan *malalia* are used to describe 'malaria'.

'infested with', generally occurring on unpossessed nouns. The "ti-N-ke construction" is only found in one example from Tavares's (2005) work and it is repeated here for clarification purposes.

(81) towosike wai

tï-wosi-ke w-a-ø-i

COREF-fungal.rash-INSTR 1S_A-be-PRES-CERT

"I have a fungal rash (sp.)" "I am with fungal rash (sp.)" (Tavares, 2005:393)

(repetition of example (21))

This is the only example that was found that yields a possessed meaning. This results in the conclusion that there is a strong tendency to express illnesses in their unpossessed form. In the corpus that was created during the fieldwork the suffix *-hpe* was used for all cases that involved a nominal describing an illness. The most common way to ask what someone has got when they are showing any symptoms of an in illness in Wayana is also by means of the suffix *-hpe*. Many examples are available of this suffix, of which the following two will illustrate its usage.

(82) *ë-ti-hpe m-a-\phi-n*?

Q-INAN-INFEST 2S_A-BE-NPST-NCERT

"What have you got?" "What are you infested with?"

(83) pile-hpe $w-a-\phi-i$

varicella-EXADV 1S_A-be-PRES-CERT

'I have varicella' 'I am infested with varicella'

Interestingly, the person who is suffering from the disease (I) is not the agent of the sentence, but rather takes on the role of an experiencer. An overt object causes the agent to fall ill or be infested with the disease. This gives a clear indication on the different perception of illness of the Wayana. It is not the patient that seems to be the agent catching a disease, but a rather a disease occurs to the patient, inevitably making the patient sick. This is in line with the important role the *pijai* and (evil) spirits play in the process of falling ill. Diseases are bestowed upon people, which seems to be in agreement with the linguistic expression of diseases.

5.3.2 Participial Constructions

Several conditions relating to illness are expressed through the participle *t-V-he*. As was mentioned before, for transitive verbs this construction yields a state that is attributed to a notional object (O). In some cases, the notional object seems to be easily identifiable. The following examples showcases the transitive verb *-pulu* 'to sting'.

(84) tïpuhe wai

tï-pulu-he w-a-ø-i

PRTC-sting-PRTC 1S_A-be-PRES-CERT

"I have a sting" "I am in the state of being stung"

The agent of the sentence (I) is in the state of "being stung'. This can be attributed to the notional object, which is most likely some sort of animal or insect that has stung the agent. However, many other examples exist, where the notional object is less easy to identify. The next two examples showcase the intransitive verbs *-jep* 'to have a fever' and *-lëmëpi* 'to die'.

(85) ti-jep-he hapon w-a-φ-i

PRTC-have.fever- PRTC a.little 1SA-be-PRES-CERT

"I have a fever" "I am in the state of having a fever"

(86) *tï-lëmëp-he* w-a-ø-i

PRTC-die-PRTC 1S_A-be-PRES-CERT

"I am dead" "I am in the state of having died"

In both of these cases, the agent (I) is clearly in state of 'having a fever' and 'being dead'. The question is who this state can be attributed to. Similar to adverbialized nouns, the agent of the sentence (I) takes on the role of an experiencer, whereas the state can be attributed to an overt object. Taking into account the conceptualization of illness and the fact that *pijais* and (evil) spirits are usually attributed to causing illness, it results in the conclusion the notional object refers to either of those. Note that (86) could never actually be uttered, if the agent (I) is actually in a state of being dead. It can be used as an exaggeration expressing immense discomfort, which is especially used by the younger generation. However, the sentence is completely grammatical.

5.4.1 Noun Incorporation

The meaning of the verb -*lëmëp* 'to die' has also been extended to mean 'to be numb' in some cases. By means of noun incorporation, the specific body part (or the whole body) that has become numb, has to be specified.

(87) tïwalëmëphe wai

tï-wasi-lëmëp-he w-a-ø-i

PRTC-upper.leg-die- PRTC 1S_A-be-PRES-CERT

"My upper leg is numb" "I am in the state of having upper-leg-died"

(88) tïpëlëmëphe wai

tï-upë-lëmëp-he w-a-ø-i

PRTC -arm-die- PRTC 1S_A-be-PRES-CERT

"My arm is numb" "I am in the state of having arm-died"

(89) *tï-pun-lëmëp-he w-a-\phi-i*

PRTC -body-die- PRTC 1S_A-be-PRES-CERT

"My body is numb" "I am in the state of having body-died"

It is worth mentioning, that the nouns incorporated into these constructions are shortened in this context. The reason for this shortening is unclear, but occurs in many other instances in the language as well (Tavares, 2005).

5.4.2 Nominalization

Constructions that makes use of the participial circumfix *t-V-he* can be nominalized by the participant nominalizer suffix *-mi*. It nominalizes the adverbial and refers to 'someone or something to be "verb"-ed' (Tavares 2005:175-176). This suffix is found in another word that describes 'illness', which is *tilëkhem* and was also used in the story from the oral traditions (Chapuis & Rivière, 2003:854), presented in paragraph 1.1. For the sake of clarity, the example is repeated here. The example below demonstrates the different morphemes this word exists of and a literal translation is also given.

(90) eh uwa tï-lëk-he-m helë

INT NEG PRTC-hurt-PRTC-PARTNOM DEMPRO

"Oh no, here's an epidemic" "Oh no, something to hurt is here"

Speakers explicitly mentioned that diseases that are inside of the body are often referred to as *tülëkhem*. However, pain (such as pain in the knee or arm) or many skin diseases are also closely connected to *tülëkhem*. The word itself is derived from the verb *-lëk* 'to hurt' (French: *avoir mal* (Camargo & Tapinkili (2010))). However, the physical aspect of the verb does not seem to play a very important role anymore in the lexicalized term *tülëkhem*. It can even be used in combination with the adverbializing suffix *-hpe* 'infested with', which will yield the following translation.

(91) *tï-lëk-he-mï-hpe w-a-ø-i*

PRTC-hurt-PRTC-PARTNOM-INFEST 1S_A-be-PRES-CERT

"I am ill" "I am infested with illness"

Omitting the morpheme -mï however, shows the original meaning of the verb and is comparable to the examples (84) up and to (89).

(92) *tï-lëk-he* w-a-ø-i

PRTC-hurt-PRTC 1S_A-be-PRES-CERT

"I am hurt" "I am in the state of being hurt'

5.4 Paraphrastic Constructions

In this last section, several paraphrastic constructions that were gathered during the fieldwork will be discussed. They seem to be more descriptions of symptoms that are caused by a disease, but nonetheless

they are worth discussing. When talking about one's blood pressure, Wayana actually has access to a construction to express this. The following two examples will demonstrate this.

```
(93) r-miu-φ m-a-φ-n kawë
1Pss-blood-Pss 2S<sub>A</sub>-be-NPst-NCert high
'I have high blood pressure' 'My blood is high'
(94) r-miu-φ m-a-φ-n lomo
1Pss-blood-Pss 2S<sub>A</sub>-be-NPst-NCert on.ground
'I have low blood pressure' 'My blood is low'
```

These constructions are most probably new coinages, based on either Dutch or French. Both of these European languages use similar ways to talk about blood pressure and it seems too coincidental to be an own invention of the Wayana language itself.

Several examples of onomatopoeic coinages were presented in subsection 5.2.4, but Wayana has more sound symbolic lexemes that can be used to describe illness. The examples presented below represent two of those.

```
(95) ham tïkai
```

ham tï-ka-he

ONOM T-say-HE

'My stomach hurts because of contractions" "(My stomach) says ham"

(96) jok tikai

*jok tï-ka-he*ONOM T-sav-HE

'My stomach aches because I ate too much" "(My stomach) says jok"

The first part of these phrases is the onomatopoeic element. The onomatopoeia *ham* signifies a sensation of a hurting stomach, usually connected to contractions attributed to giving birth. On the other hand, *jok* signifies a hurting stomach, because someone has either eaten or drunken too much. The second part of this phrase is derived from the verb *-ka* "say" and refers to the stomach. Speakers often put their hands on their bellies, uttering both of these constructions. Schoen (1966) uses these phrases as a translation of the English nominals 'hurts' and 'throb' respectively, but these are simply not able to sufficiently describe what they are translated as in Wayana. It discards the fact that these constructions are descriptions of a specific sensation in the stomach, instead of a nominal describing a sensation anywhere else in the body.

Lastly, several verbs are used with the morphology of the $t\ddot{\imath}$ -V-(h)e set. Schoen (1966) uses these verbs as translations for two medical disorders, that are nominal lexemes in English. The examples

below demonstrate these words in Wayana, their glosses and the translation given by Schoen (1966) and an alternate translation, that can be yielded in unspecified contexts.

```
(97) tï-uika-he
T-defecate-HE
'diarrhea' 'I/you/s/he defecated'
(98) tï-ïpkëlë-he
T-break-HE
'fracture' 'I/you/s/he broke it'
```

The examples given in (97) and (98) are actually verbs, that take on the verbal morphology of the $t\ddot{\imath}$ -V-(h)e set, which gives the verbs a participial meaning. Translating these as nominals is therefore problematic. The meanings yielded in the aforementioned examples are possible translations, but only in very specific context and they discard the participial meaning completely. *Tuikai* can also simply mean "I defecate" without having the connotations of any illness. *Tipkëlëi* does not only apply to fractures of bones, but can also be used to describe anything else that is broken, such as glass, wood or any other non-human material.

7. Conclusion

In this thesis it was attempted to shine a little light on the mismatching ontological stances of the Wayana people and the Western world, focusing on the conceptualization of illness and health especially. The objective was to acquire a better understanding of the Wayana conceptualization of illness and health, by examining the expression of these concepts in the language. As was mentioned as well, the goal was never to deliver conclusive claims on the conceptualization of illness and health, based on the linguistic expression of these concepts. However, by contextualizing the expression of illness and health, much is revealed about the Wayana conceptualization of illness and health. Several conclusions were drawn in the previous chapter, which will each be identified and contextualized here.

Allowing the Wayana ontological stance to play a vital role in this research, has created a more culturally appropriate definition for what the concepts illness and health encompass. The concept illness for example, is heavily intertwined with generally accepted negative human conditions such as anger and sadness. This already became clear in sections 1.2.1 and 1.2.2 where it was explained that falling ill is usually attributed to a *pijai* or an (evil) spirit, as these emotions are good motivations for requesting a *pijai* for his services. Linguistic proof confirms a similar claim. The antonymy of illness and health, but also other human conditions such as happiness, anger and sadness, showed that these concepts are heavily intertwined. Being angry or sad is almost always associated with falling ill or even death, whereas being happy and maintaining social harmony are associated with leading a healthy life. Illness and health are thus to be redefined as concepts including a very general sense of being not well and well-being respectively, including not only the physical aspect of it, but also the mental and social aspects.

Schoen's (1966) work proved that many Wayana words that were believed to be names of diseases, were pressed into a model that was created from a very Western point of view. Allowing disease terminology to be examined from within the Wayana ontological stance, assured the system they function in to be acknowledged. What became clear is that most diseases that have a dedicated term to describe them are visible to the eye and mostly dermatological in nature. Only very few of these exist and most other disease names are based on either a description (which is true for the polysemically formed terms) or the symptoms (which is true for the later coinages). Naming disease thus seems to play a subordinate role in the expression of illness. Describing its cause, place or generally the symptoms of an illness is much more important. This is also in line with the many, now lexicalized, paraphrastic constructions described in section 5.3. These are mere descriptive constructions of the symptoms of certain diseases. Using these constructions as translations for nominal disease terminology insufficiently describes the descriptive nature of these constructions. In conclusion, only very specific dermatological diseases have a dedicated name, whereas most other disease are more descriptive in nature.

Verbs describing being in the state of illness, whether they adverbialized nominals or participles, were discussed in section 5.2. It was concluded that the agent of these constructions took on the role of

an experiencer. An overt object acts upon the experiencer, bestowing a certain disease upon them. In other words, the person who falls ill, plays a passive role in the process of falling ill, whereas an overt object plays a more active role in this process. The linguistic expression within this particular construction can easily be explained by the Wayana conceptualization of illnesses. Illness is attributed to a *pijai* or an (evil) spirit, which might be interpreted as the overt object in this construction. This thesis does not seek to conclusively make such a claim. However, such a construction is much easier to analyze in case one has a comprehension of the Wayana conceptualization of illness and health.

Moreover, nominal disease terminology is preferably used in its unpossessed form. The semantic domain of illnesses definitely has a strong tendency towards being unpossessable. From a conceptualization point of view, diseases are bestowed upon people, but not so much seen as possessed by those people. This is in line with the linguistic expression and shows that disease is not something a person can 'have', but is rather something that occurs to a person. Again, the person who falls ill does not play an active role in this construction, but rather takes on the role of an experiencer.

The linguistic expression of illness and health in the Wayana language certainly compliments the conceptualization the Wayana have towards these concepts. By analyzing the linguistic data, it was attempted to create a completer and more coherent overview of the Wayana conceptualization of illness and health. The conclusion drawn in the previous paragraphs give strong indications on how illness and health are conceptualized, but more importantly they are the result of accessing the ontological stance of the Wayana, allowing new research to be carried out from a Wayana perspective, acknowledging the system illness and health function in.

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