# That hour is almost upon us

Metaphors in climate policy speeches at the UNFCCC climate conferences

A thesis submitted in partial fulfilment of the requirements for

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Er is maar weinig tijd

Dus doe je mooiste kleren aan

Laten we nog één keer dansen gaan

Dansen op een vulkaan


Allemaal om de krater

We horen een dof geluid

Het staat als een paal boven water

Morgen barst-ie uit


Allemaal om de krater

Het rommelt overal

De uitbarsting komt later

Met een boem en een flits en een knal


Maar we trekken ons er niets van aan

We beginnen weer van voren af aan

Het is altijd zo gegaan

Nooit iets anders gedaan

Dansen op een vulkaan


*'De laatste dans', Annie M. G. Smidt, uit Foxtrot, 1977*

# Acknowledgements

My internship at the Inclusive Green Growth department at the Ministry of Foreign Affairs gave me a glimpse of the extremely complicated and wide-ranging policy field of climate change. Visiting the European Speechwriters Network conference in April 2018 convinced me of the power of speeches. And so I found my thesis topic.

A big thanks to my supervisor dr. Felix Ameka for guiding me where necessary, while trusting me in following my own process. Thanks to my parents for encouraging me during the whole process. Thanks to my twin sister: your enthusiasm for science motivated me to write another thesis as well. And thanks to my friend Mirte for inspiration and nerdy discussions.

I enjoyed diving into the intriguing topics of metaphor and climate change policy and developing my thoughts on the topic.
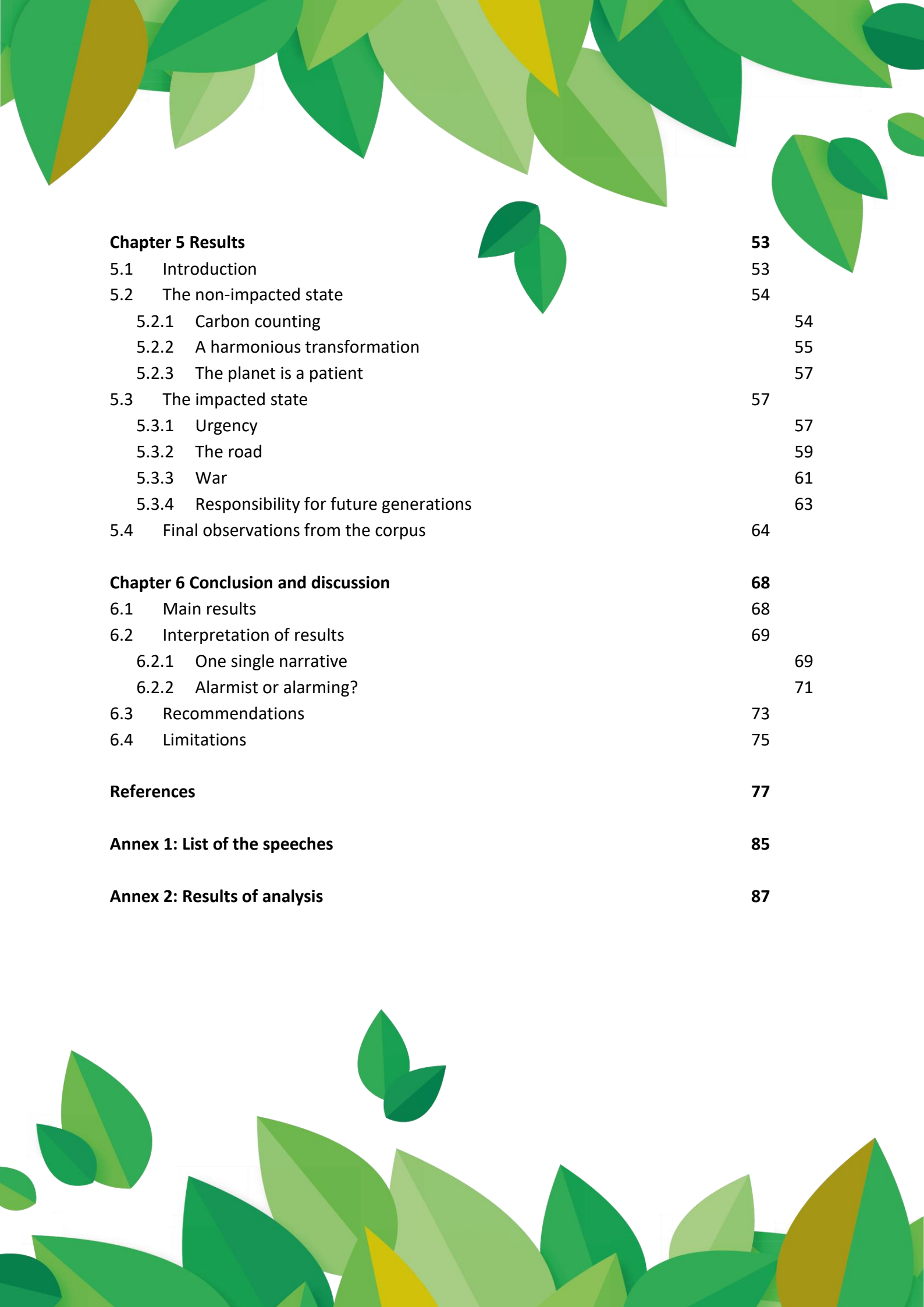
Emma van der Deijl
The Hague, 2019

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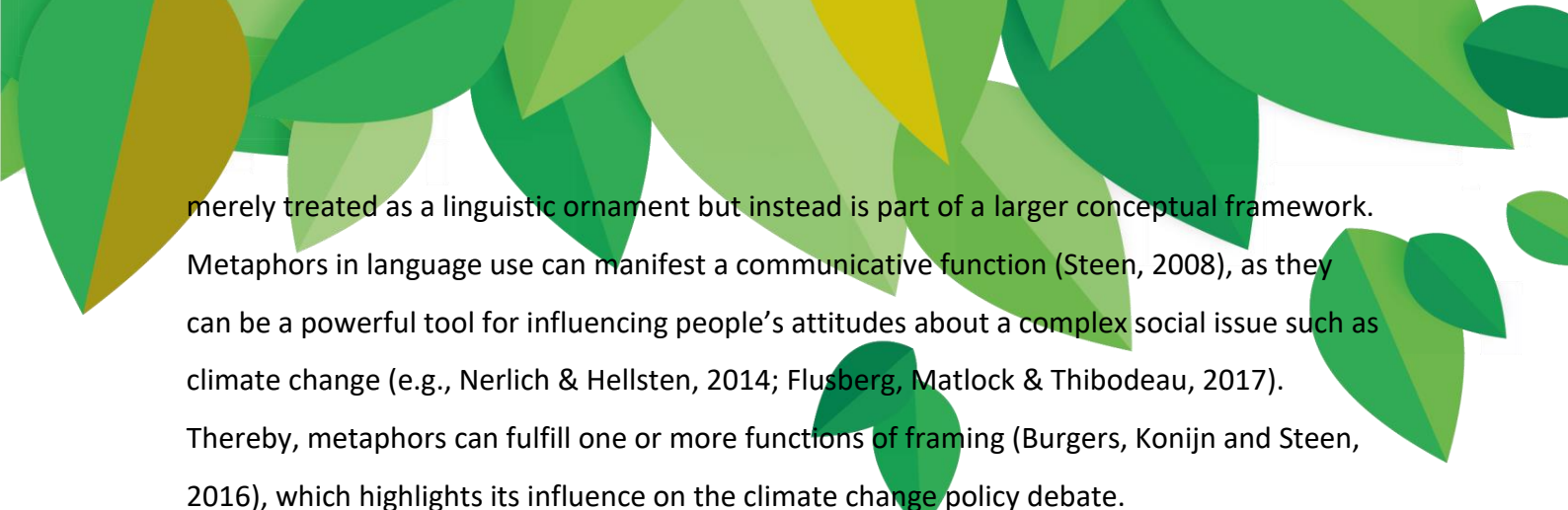
# 1    Introduction

On 30 November 2015, a line-up of world leaders were charged with an immense task: to convey the weight of climate change with the power of language alone. How could their speeches capture the complexity of the issue and shed their desired light upon it? How could they convey the urgency of the problem while taking into account the many interests at stake? Barack Obama formulates the sense of urgency by referring to something everyone feels strongly about, namely the fate of the next generation:

> "For I believe, in the words of Dr. Martin Luther King, Jr., that there is such a thing as being *too late.* And when it comes to climate change, *that hour* is almost upon us. But if we act here, if we act *now*, if we place our own short-term interests behind the air that our young people will breathe, and the food that they will eat, and the water that they will drink, and the hopes and dreams that sustain their lives, then we won't be *too late* for them."

By bringing forward the image of a ticking alarm clock as a source domain in this quote, Obama concretizes the target domain: the urgency to act before bad things will happen to the next generations. The matter at stake now is simple: we will either make it or we will not, and the message is clear: we have to make it.

Delegates from around the world gathered in Paris for the crucial UN summit on climate change to negotiate a treaty to limit global warming to 2 degrees Celsius. What went into history as the Paris Agreement was the result of two weeks of negotiation in which the different interests and points of view of 196 parties had to be taken into account. The adoption of the climate accord is aiming for a worldwide collaboration to avert catastrophic disasters. The UN climate conferences thereafter have been focused on the further interpretation and implementation of the agreement.

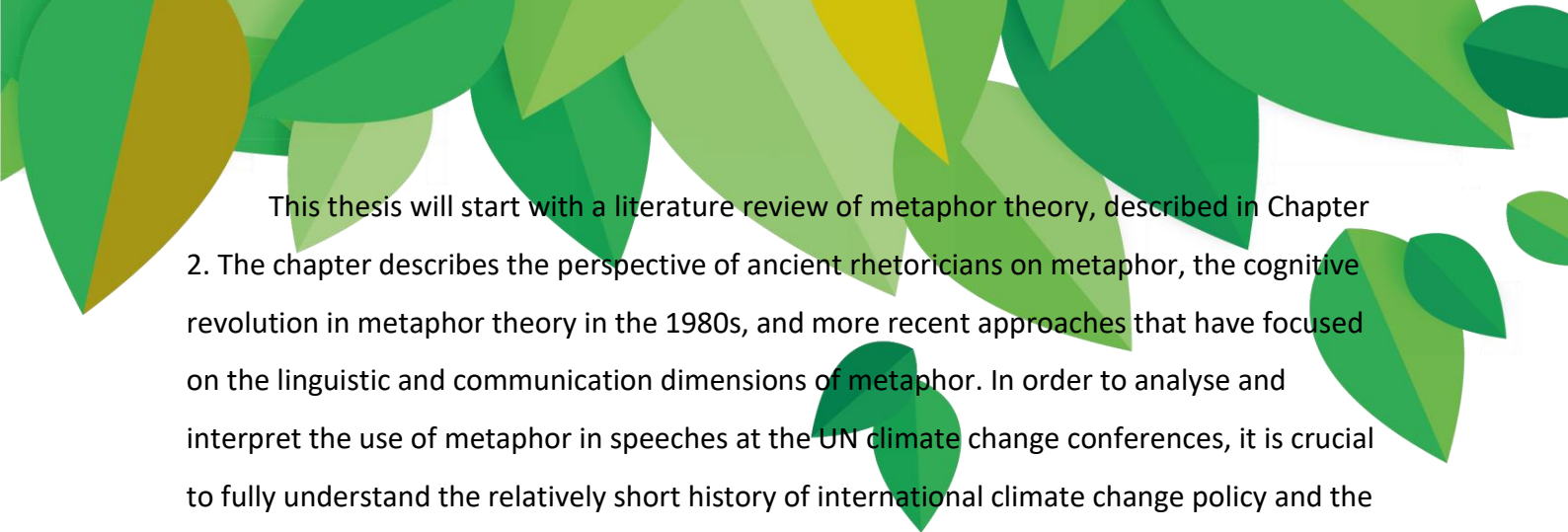The World Economic Forum reported that anthropogenic climate change is the greatest global risk in 2018 (WEF, 2018). However, there is still a lack of public support for emission reduction policies, which is in part attributed to problems in the way climate science is communicated (Pidgeon and Fischhoff, 2011). Since the introduction of the Conceptual Metaphor Theory ((CMT); Lakoff and Johnson, 1980), metaphor has not been

merely treated as a linguistic ornament but instead is part of a larger conceptual framework. Metaphors in language use can manifest a communicative function (Steen, 2008), as they can be a powerful tool for influencing people's attitudes about a complex social issue such as climate change (e.g., Nerlich & Hellsten, 2014; Flusberg, Matlock & Thibodeau, 2017). Thereby, metaphors can fulfill one or more functions of framing (Burgers, Konijn and Steen, 2016), which highlights its influence on the climate change policy debate.

Research on metaphors in the climate change discourse has shown that dichotomous discourses in climate communication are common: nature versus economic growth, the world as impacted or non-impacted by climate change, and costs versus benefits (Shaw and Nerlich, 2015). This dichotomous construction of climate change could prevent public engagement by blocking the emergence of alternative subjectivities (ibid). An example is the 'tipping point' metaphor (Van der Hell, Helsten and Steen, 2018), which is a metaphor that is analysed as evoking the image of humans being left defenceless against risks of climate change (Nuttall, 2012). Other metaphors, on the other hand, make climate change more tangible by describing it as a risk that can be assessed (the 'greenhouse effect' metaphor) or managed (the 'carbon footprint' metaphor) (Nerlich & Hellsten, 2014).

While the role of metaphors in this dichotomous discourse has been identified in climate change policy reports (Shaw and Nerlich, 2015), in the media (Nerlich, Brigitte and Hellsten, Iina, 2014; Woods, Fernández, & Coen, 2010; Atanasova, D. and Koteyko, N., 2017; Van der Hell, Helsten and Steen, 2018) and in scientific articles (Nerlich, Brigitte and Hellsten, Iina, 2014; Van der Hell, Helsten and Steen, 2018), this had not yet been investigated for the genre of speeches. Speeches are an influential genre in climate change communication, as they are a crucial source of information for journalists reporting on climate change policies. Parts of speech ('soundbites') are picked up by the media as quotes for their news articles. The speeches held during the UNFCCC conferences on climate change, are crucial for world leaders to take a stance on the climate change debate and advance the key aspects of their countries policies on the world stage. Therefore, this thesis will contribute to a better understanding of the climate change discourse by analysing the metaphors used in the speeches at Conferences of the Parties to the UNFCCC in the years 2013, 2014, 2015, 2016 and 2017. The thesis hypothesis under investigation is: *Metaphors in speeches on the United Nations climate change conferences in the years 2013 until 2017 are part of a dichotomous discourse of climate change communication.*

This thesis will start with a literature review of metaphor theory, described in Chapter 2. The chapter describes the perspective of ancient rhetoricians on metaphor, the cognitive revolution in metaphor theory in the 1980s, and more recent approaches that have focused on the linguistic and communication dimensions of metaphor. In order to analyse and interpret the use of metaphor in speeches at the UN climate change conferences, it is crucial to fully understand the relatively short history of international climate change policy and the metaphors that have been used in this policy field during the years. This history of climate change policymaking and the dominant metaphors identified by research in climate change discourse are described in Chapter 3. It is explained how increasing scientific concerns led to the global cooperation in climate change policy and it will put the more recent developments around the historical Paris Agreement in perspective. Subsequently, Chapter 4 will explain the method used for the analysis of speeches. This includes justification for the composition of the corpus and a working method for the analysis, including a systematic and transparent procedure for identifying linguistic metaphor: the Metaphor Identification Procedure (Steen et al., 2010), as well as a method for identifying themes in corpora: quantitative thematic analysis. In Chapter 5, the results of my analysis are given. Chapter 6 summarizes the most important findings of the thesis and gives a conclusion of the thesis, while reflecting on the thesis hypothesis given above. Lastly, in Chapter 7, shortcomings and future perspectives are given in the discussion.

# 2    Metaphor, a literature study

## 2.1   Introduction

Metaphor has intrigued scholars, inspired writers and fascinated many others for thousands of years.

For ages already praised as a means to embellish the literal, the metaphor became a booming subject in many fields of study when scholars identified its potential to set pathways of thought in the 1980s. This chapter describes this cognitive approach and recent approaches that have focused on the linguistic and communication dimensions of metaphor. After that, literature on how metaphor can be used to frame the political debate is discussed.
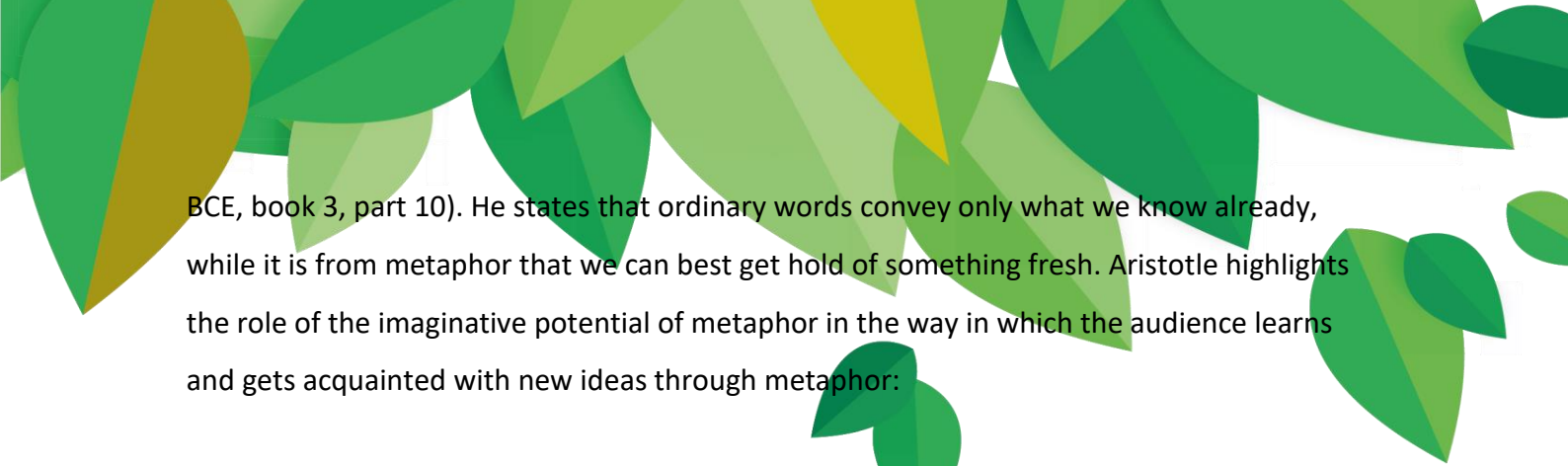
## 2.2   A metaphor revolution

The long and rich tradition in the study of metaphor goes all the way back to Ancient Antiquity. In his *Poetics*, Aristotle describes the rhetorical device: "Metaphor consists in giving the thing a name that belongs to something else [...]" (*Poetics 21*, c. 335 BCE). In his view, metaphor falls in the category of "unfamiliar terms", which he describes as "everything that *deviates* from ordinary modes of speech" [italics added]. In *Rhetoric*, Aristotle praises the metaphor: "Metaphor, moreover, gives style clearness, charm, and distinction as nothing else can: and it is not a thing whose use can be taught by one man to another" (*Rhetoric 3, part 2*, 350 B.C.E.). He even calls it "a sign of genius" to master the metaphor:

> "[i]t is a great thing, indeed, to make a proper use of these poetic forms, as also compounds and strange words. But the greatest thing by far is to be a master of metaphor. It is one thing that cannot be learnt from others, and it is also a sign of genius, since a good metaphor implies an intuitive perception of the similarity in dissimilars."
>
> (*Poetics 22*, c. 335 BCE)

Aristotle explains how the structure of metaphor captivates and produces a pleasurable experience of learning, through the creation of new ideas and meanings (*Aristotle*, c. 350

BCE, book 3, part 10). He states that ordinary words convey only what we know already, while it is from metaphor that we can best get hold of something fresh. Aristotle highlights the role of the imaginative potential of metaphor in the way in which the audience learns and gets acquainted with new ideas through metaphor:

> "It is also good to use metaphorical words; but the metaphors must not be far-fetched, or they will be difficult to grasp, nor obvious, or they will have no effect. The words, too, ought to set the scene before our eyes; for events ought to be seen in progress rather than in prospect. So we must aim at these three points: Antithesis, Metaphor, and Actuality."
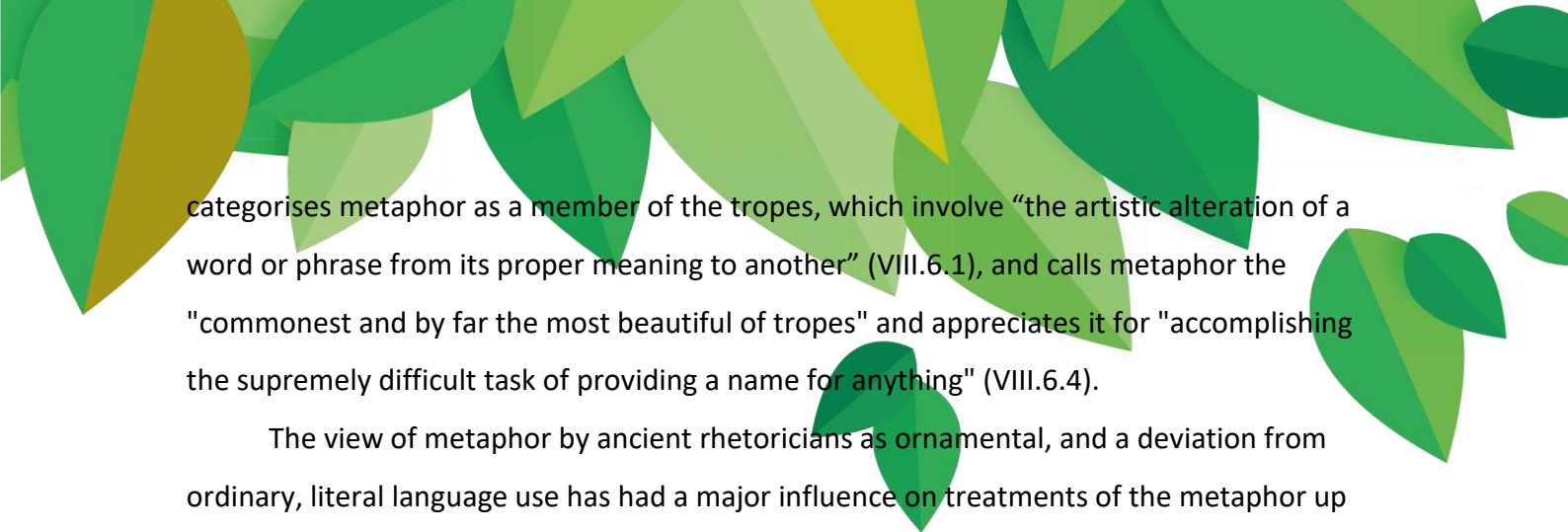
> (*Rhetoric book III, part 10, 1410b*, c. 350 BCE)

With the concept of *pro ommaton poiein*, "bringing before the eyes", he describes this primary function of a metaphor to create an image in the minds of the audience. What he means is that metaphor allows rhetoricians to actualize actions immediately before audiences, leading those audiences to insight (Newman, 2002). At the same time, he also views the creative aspect with suspicion: "But a whole statement in such terms will be either a riddle or a barbarism, a riddle, if made up of metaphors, a barbarism, if made up of strange words." (*Poetics 22*, c. 335 BCE). Through a comparison between metaphor and clothing in *De Oratore* (55 B.C.E.), Cicero articulates a similar view on the corruptive potential of metaphor:

> "For just as clothes were first invented to protect us against cold and afterwards began to be used for the sake of adornment and dignity as well, so the metaphorical employment of words was begun because of poverty, but was brought into common use for the sake of entertainment."

> (*De Oratore*, 3.38, 155)

With this comparison, Cicero cautions us against "borrowing" fancy metaphors, because they suggest "poverty" of thought and expression (p. 121 - 123). Despite his warning, Cicero's elaborate discussion of the metaphor shows his conviction of its power, inspiring Quintilian in his treatment of the rhetorical device in his *Institutio oratoria* (1 C.E.). Quintilian

categorises metaphor as a member of the tropes, which involve "the artistic alteration of a word or phrase from its proper meaning to another" (VIII.6.1), and calls metaphor the "commonest and by far the most beautiful of tropes" and appreciates it for "accomplishing the supremely difficult task of providing a name for anything" (VIII.6.4).
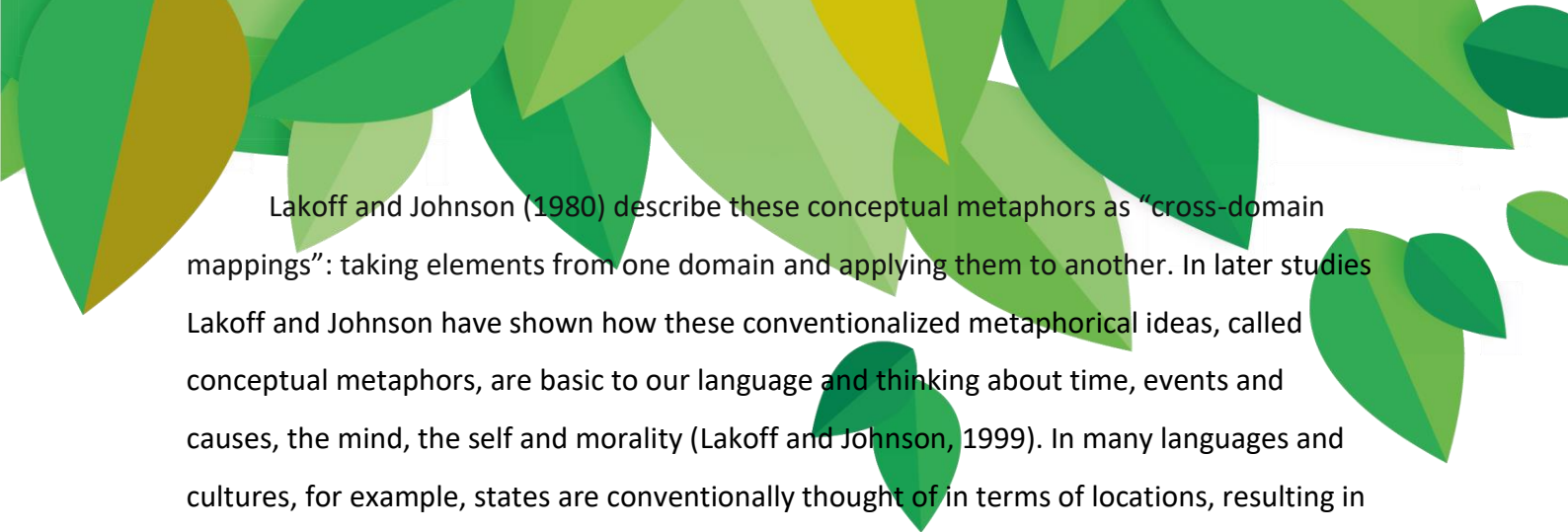
The view of metaphor by ancient rhetoricians as ornamental, and a deviation from ordinary, literal language use has had a major influence on treatments of the metaphor up to the twentieth century. The overall relegation of metaphor as ornamental had the unfortunate effect of leading many subsequent generations of language scholars to ignore the topic of metaphor altogether. For centuries, the study of metaphor was primarily the province of literary scholars who focused on the interpretation of particular tropes in poetry and fiction (McGlone, 2007). Near the turn of the twentieth century, French philologist Breal's (1899) *Essai de Semantique* sparked new interest in the topic (McGlone, 2007, p. 110). In his essay, Breal argued that metaphor was not mere ornament, but a ubiquitous feature of language and a principal device of linguistic change. Philosopher Max Black (1962) was the first to articulate an influential alternative to traditional views of metaphor understanding, by arguing that metaphor is a communicative phenomenon operating not at the level of mere word meaning, but at the (ostensibly) deeper level of conceptual structure (McGlone, 2007, p. 110). This laid the basis for the view that metaphors are understood by one concept in terms of another in order to produce a ground that combines their alignable conceptual attributes and thereby transcends their literal denotations.
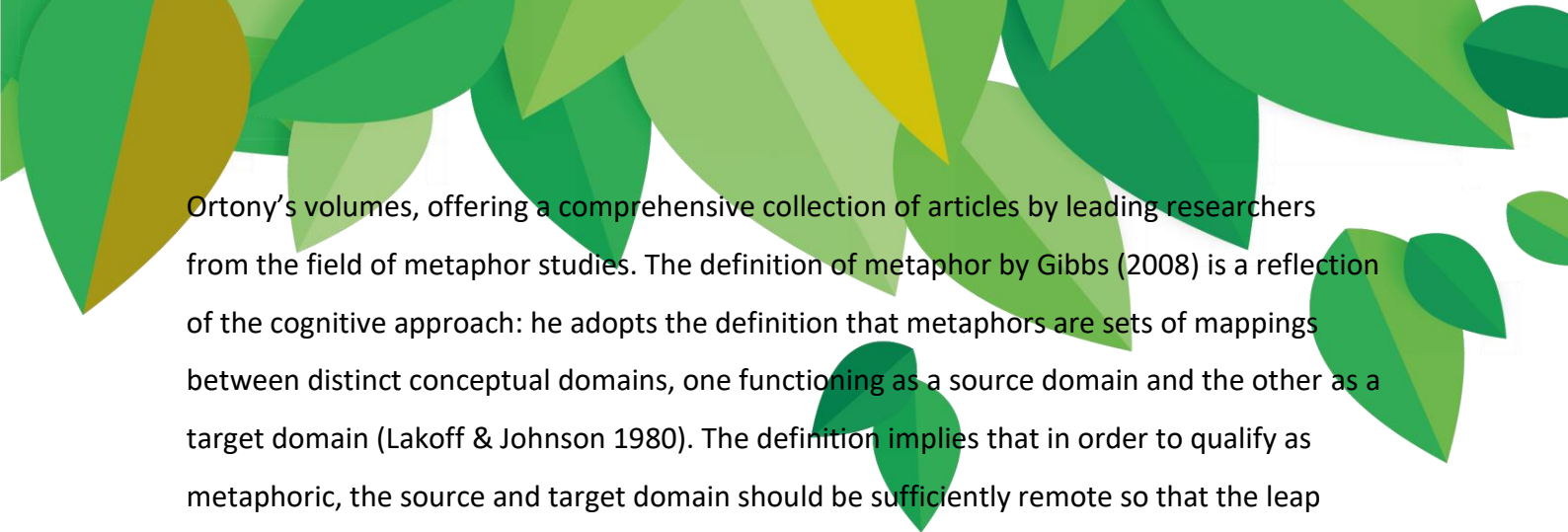
In the years following, a variety of theories and models have been offered that build on this new perspective. In the 1980s metaphor received a great amount of scientific attention with the introduction of a cognitive perspective by Ortony's (1979/1993) *Metaphor and thought* in psycholinguistics and Lakoff and Johnson's (1980) *Metaphors we live by* in cognitive linguistics. These books have given rise to the idea that we do not only talk metaphorically much of the time, but we may also think metaphorically much of the time. Ortony's first *Metaphor and Thought* (1979) contained 21 articles, many of which are now considered essential readings in the field. The first edition came out prior to the landmark publication of *Metaphors we live by* (Lakoff & Johnson, 1980), which gave an introduction of Conceptual Metaphor Theory (CMT). Lakoff and Johnson (1980, p. 3) claim "[o]ur ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature".

Lakoff and Johnson (1980) describe these conceptual metaphors as "cross-domain mappings": taking elements from one domain and applying them to another. In later studies Lakoff and Johnson have shown how these conventionalized metaphorical ideas, called conceptual metaphors, are basic to our language and thinking about time, events and causes, the mind, the self and morality (Lakoff and Johnson, 1999). In many languages and cultures, for example, states are conventionally thought of in terms of locations, resulting in the conceptual metaphor STATES ARE LOCATIONS (pp. 180- 183). Examples of this conceptualization in English are "I'm *in* love", "She's *out of* her depression", "He's *on the edge of* madness", "He's in a *deep* depression", "She's *close to* insanity" and "We're *far from* safety". Another example is the conceptual metaphor IDEAS ARE PLANTS, which is used in linguistic expressions like "his ideas have finally come to *fruition*," "that's a *budding* theory," or "physics has many *branches*" (cf. Lakoff & Johnson, 1980/2003, p. 47).

Furthermore, CMT states that metaphors are *embodied:* they are grounded in our physical, social and cultural experience with the world around us (1999, pp. 102-104). For instance, Lakoff and Johnson (1980, p. 16) describe the metaphor GOOD IS UP; BAD IS DOWN as in "Things are looking *up*", "We hit a *peak* last year, but it's been *downhill* ever since", "Things are at an all-time *low"* and "He does *high*-quality work", as the physical basis for personal well-being: happiness, health, life, and control are all UP. They argue that the metaphor RATIONAL IS UP; EMOTIONAL IS DOWN as in "The discussion *fell to the emotional* level, but I *raised* it back *up to the rational* plane", "We put our *feelings* aside and had a *high-level intellectual* discussion on the matter", and "He couldn't *rise above his emotions*," is both physically and culturally grounded in our experience: In Western culture, people see it as their unique ability to reason that places human beings above other animals, plants, and their physical environment (Lakoff and Johnson, 1980, p. 17).

With the cognitive approach to metaphor, the traditional understanding of metaphor as deviant, erratic, ornamental and spurious was replaced by the acknowledgement that metaphors are important to human experience in many different ways (Steen et al., 2010, p. 1). Metaphor was no longer seen as an expandable adornment of the literal, but instead treated as inherent in language itself, even setting pathways of thought. The wide range of disciplines in which metaphor subsequently has become a central object of study is covered in Gibbs' (2008) overview of research, the *Cambridge Handbook of Metaphor and Thought*, covering theoretical, empirical, and applied studies. His book follows the footsteps of
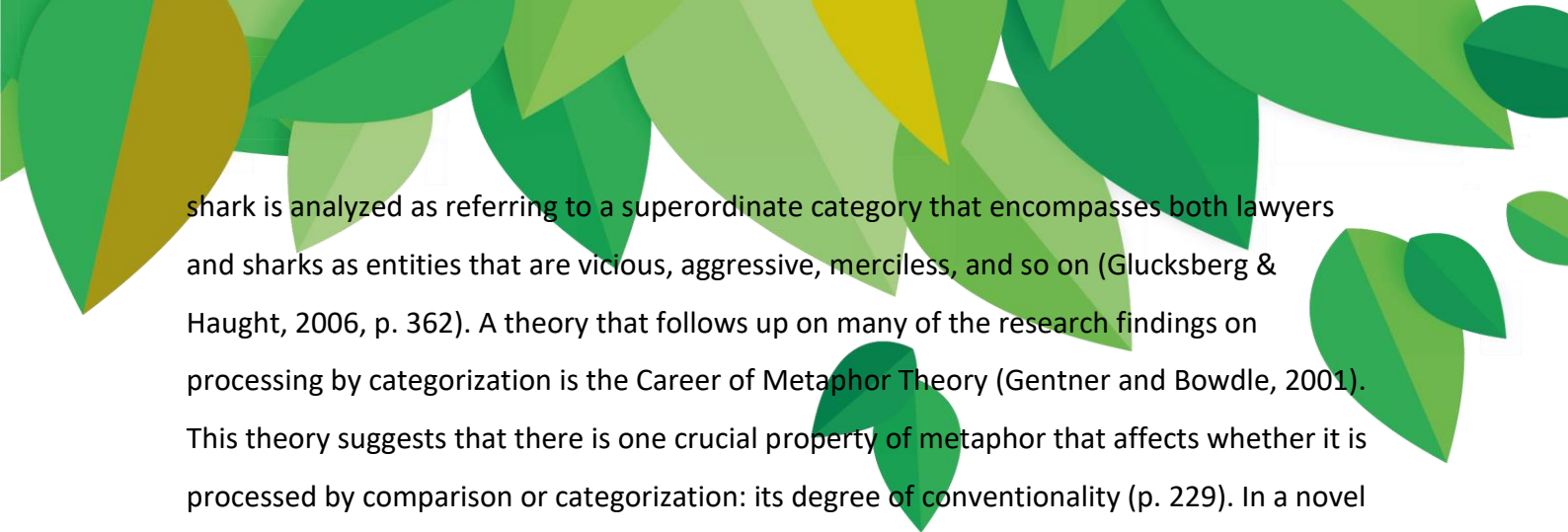
Ortony's volumes, offering a comprehensive collection of articles by leading researchers from the field of metaphor studies. The definition of metaphor by Gibbs (2008) is a reflection of the cognitive approach: he adopts the definition that metaphors are sets of mappings between distinct conceptual domains, one functioning as a source domain and the other as a target domain (Lakoff & Johnson 1980). The definition implies that in order to qualify as metaphoric, the source and target domain should be sufficiently remote so that the leap from source to target contains two distinct domains. For metaphors to be highly apt, the similarity between source and target domain should be as low as possible (called "between-domain similarity"), while the place of both source and target within their respective domains should be as high as possible (called "within-domain similarity") (Gibbs, 2008). Ward and Gaidis (1990) explain this with the example of the metaphoric name of Proctor and Gamble's Dove soap. Obviously, soap and birds are widely separated domains (between-domain similarity is low). At the same time, P&G have designed and promoted Dove soap to have attributes similar to a dove: the soap is white, gentle, and, like a dove is thought to be pure and "innocent," i.e., lacking in harmful additives. This definition by the cognitive approach to metaphor thus assumes that metaphor is based on similarity.

## 2.3   Breaking the mirror of metaphor
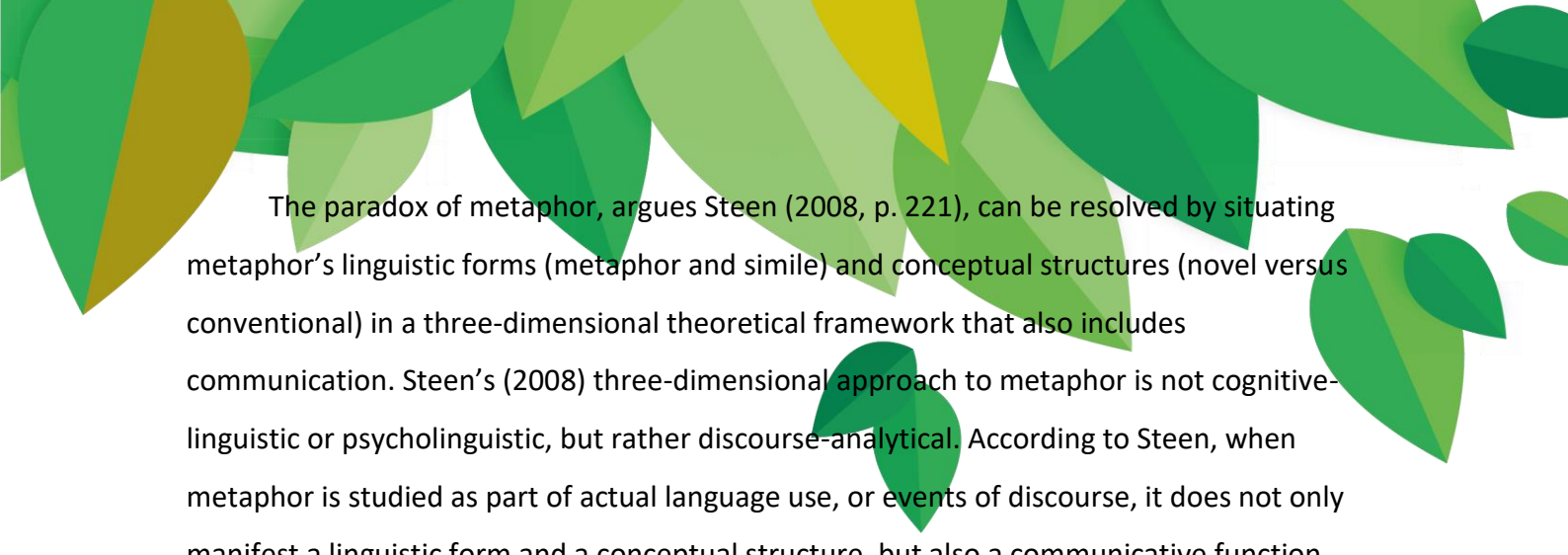
The claim by CMT that metaphors are elements of cognition but also involve a dimension of thought is empirically tested in social psychology, where scholars have tried to activate conceptual metaphors in the brain without using language (Burgers et al., 2016). For example, a famous series of experiments has focused on the conceptual metaphor "affection is warmth," which conceptualizes interpersonal affection as physical heat (Williams & Bargh, 2008). In these experiments, participants feeling physically warm (by holding a cup with a hot beverage) generally judged others to have a more generous ("warmer") personality than participants feeling physically cold (by holding a cup with an iced beverage).

However, psycholinguistic research has also produced evidence against the bold hypotheses of Lakoff & Johnson (1980) that all metaphor is based on cross-domain mappings. A more skeptical view is formulated by Glucksburg & Haught (2006), who argue that some metaphors are not processed by cross-domain mappings (by comparison) but as forms of categorization. As an example they give the sentence *my lawyer is a shark*, in which

shark is analyzed as referring to a superordinate category that encompasses both lawyers and sharks as entities that are vicious, aggressive, merciless, and so on (Glucksberg & Haught, 2006, p. 362). A theory that follows up on many of the research findings on processing by categorization is the Career of Metaphor Theory (Gentner and Bowdle, 2001). This theory suggests that there is one crucial property of metaphor that affects whether it is processed by comparison or categorization: its degree of conventionality (p. 229). In a novel metaphor such as *science is a glacier*, *glacier* only has a literal sense —"a large body of ice spreading outward over a land surface"—but no related metaphoric sense (e.g., "anything that progresses slowly but steadily"), and can thus only be processed by comparison to *science*. In contrast, they state that conventional metaphors are polysemous: they refe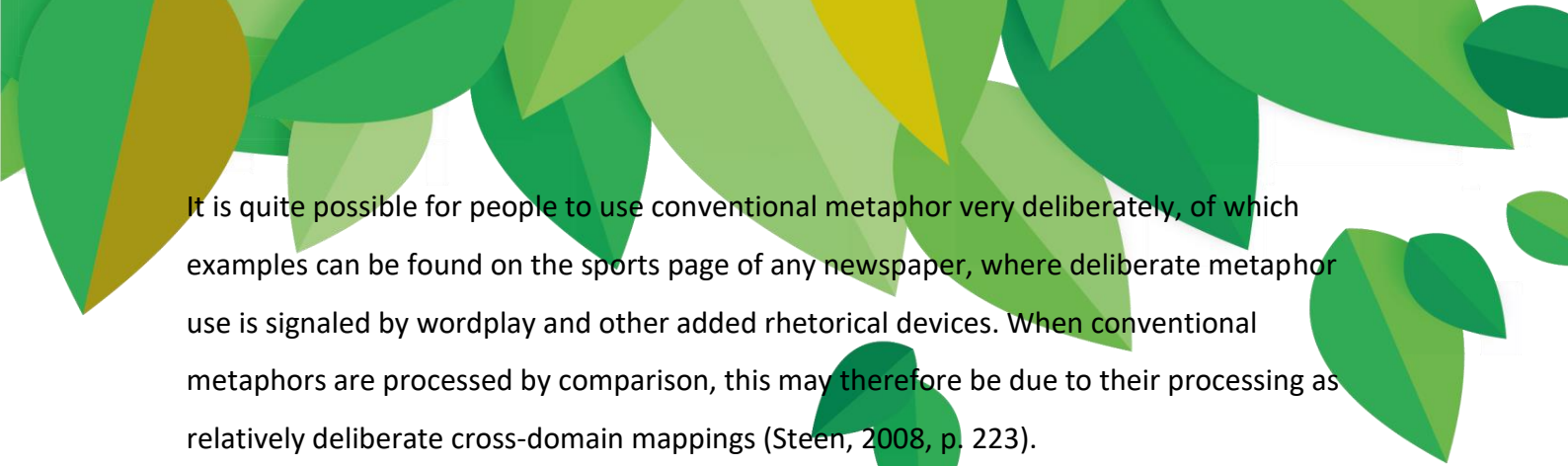r both to a literal concept and to an associated metaphoric category. In the sentence *a gene is a blueprint, blueprint* has two closely related senses, they argue: the literal "a blue and white photographic print in showing an architect's plan" and the metaphorical "anything that provides a plan." The conventional metaphor may thus be processed by categorization or comparison. In the process of conventionalization of a metaphor, the comparison between the literal source and target may be lost and a new word meaning is created (the metaphorical meaning) (p. 228). The change in processing from comparison to categorization has been called the career of the metaphor (Gentner and Bowdle, 2001).

Steen (2008, p. 219) argues that the distinction, but also the connection, between the linguistic forms and the conceptual structures of metaphor has offered a productive two-dimensional map of metaphor in language and thought, but it yielded an incomplete and eventually misleading model for metaphor. The psycholinguistic findings are a crack in the cognitive-linguistic mirror of metaphor, argues Steen (2008): it is now shown that not all metaphors are necessarily processed metaphorically by setting up a cross-domain mapping (by comparison). He adds to that that corpus-linguistic observations in his team at the VU University show that when people communicate by metaphor, they massively prefer conventional metaphor to novel metaphor, and hardly ever use simile to express those metaphorical intentions (p. 220). Considering this observation, it is likely many or most metaphors in authentic language use are processed by categorization, not comparison. To rephrase, many or most cross-domain mappings "in language" may not be processed as cross-domain mappings "in thought". Steen (2008) calls this the 'paradox of metaphor': a lot of metaphor may not be processed metaphorically.

The paradox of metaphor, argues Steen (2008, p. 221), can be resolved by situating metaphor's linguistic forms (metaphor and simile) and conceptual structures (novel versus conventional) in a three-dimensional theoretical framework that also includes communication. Steen's (2008) three-dimensional approach to metaphor is not cognitive-linguistic or psycholinguistic, but rather discourse-analytical. According to Steen, when metaphor is studied as part of actual language use, or events of discourse, it does not only manifest a linguistic form and a conceptual structure, but also a communicative function. Communication may be conceptualized as purposeful interaction between people by means of language on the basis of thought.

One crucial communicative aspect of metaphor has to do with the deliberate versus nondeliberate use of metaphor by language users in production and reception in particular ways that are related to the encompassing event of discourse they are involved in. Steen (2018, p. 222) proposes that a metaphor is used deliberately when it is expressly meant to change the addressee's perspective on the referent or topic (the target of the metaphor) by making the addressee look at it from a different conceptual domain or space (the source of the metaphor). Deliberate metaphor is a relatively conscious discourse strategy that aims to elicit particular rhetorical effects (p. 223). An example of a deliberate metaphor he gives is *Juliet is the sun*, in which attention is drawn to the new information presented at the end of the sentence that causes a falsehood, *sun.* In the analysis of Steen (2008, p.222), this cannot be anything but a deliberate invitation for the addressee to adopt a different perspective of Juliet from a truly alien domain that is consciously introduced as a source for reviewing the target. An example of a nondeliberate metaphor Steen (2008, p. 226) gives is the use of *clear* in, for example, '*clear* cases of metaphor are [...]'. Here, it is not the communicative function of *clear* to change the perspective from the abstract topic of 'a quality of cases of metaphor' to the concrete domain of vision. Attending to the conceptual source domain of nondeliberate metaphors will frequently be irrelevant and even distracting, states Steen. Steen (2008) argues that all metaphor that is experienced as deliberate is presumably processed metaphorically, that is, by comparison between domains, because it invites adopting a different perspective. By contrast, all metaphor that is not deliberate is probably processed nonmetaphorically, that is, by categorization, because it is meant to stay within the conceptual target domain. It is important now to make a difference between conventional metaphor and nondeliberate metaphor (Steen, pp. 222-223). Steen argues that
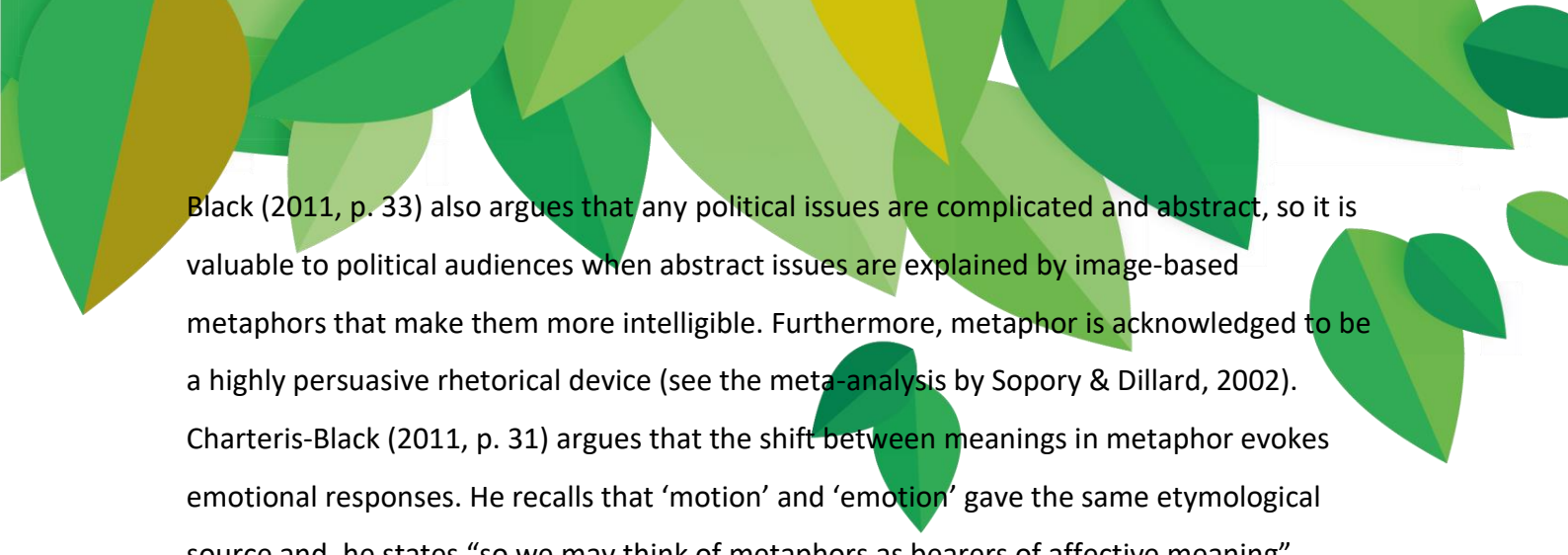
It is quite possible for people to use conventional metaphor very deliberately, of which examples can be found on the sports page of any newspaper, where deliberate metaphor use is signaled by wordplay and other added rhetorical devices. When conventional metaphors are processed by comparison, this may therefore be due to their processing as relatively deliberate cross-domain mappings (Steen, 2008, p. 223).

With acceptance of a three-dimensional model of metaphor, Steen (2008, pp. 230-231) identifies a connection between the dimensions to three basic functions of metaphor that have been distinguished in the literature (e.g., Ortony, 1975). *Naming* is the linguistic function of metaphor to fill lexical (and other formal) gaps in the language system; *framing* is the conceptual function of metaphor to offer conceptual frameworks for concepts that require at least partial indirect understanding; and *(perspective) changing* is the communicative function of metaphor to produce an alternative perspective on a particular referent or topic in a message. Steen explains that not all naming functions of metaphor correspond with framing and changing functions, nor do all framing functions of metaphor correspond with changing functions.

## 2.4    Metaphorical framing in politics

A domain in which the communicative dimension of metaphor as a purposeful interaction plays an important role is the domain of political communication. Metaphor is important in thinking and acting in the world, including political acting (Lakoff and Johnson, 1980; Lakoff, 2008). Lakoff (2010) has argued in his Theory of Moral Reasoning that metaphor is exceptionally critical to political discourse. In his book *Politicians and Rhetoric*, linguïst Charteris-Black (2011, p. 320) argues that the primary purpose of metaphors in political rhetoric is to frame how we view or understand political issues by eliminating alternative points of view. Metaphors evoke strong emotions through powerful images that might cause a shift in someone's view or give a new perspective on the matter.

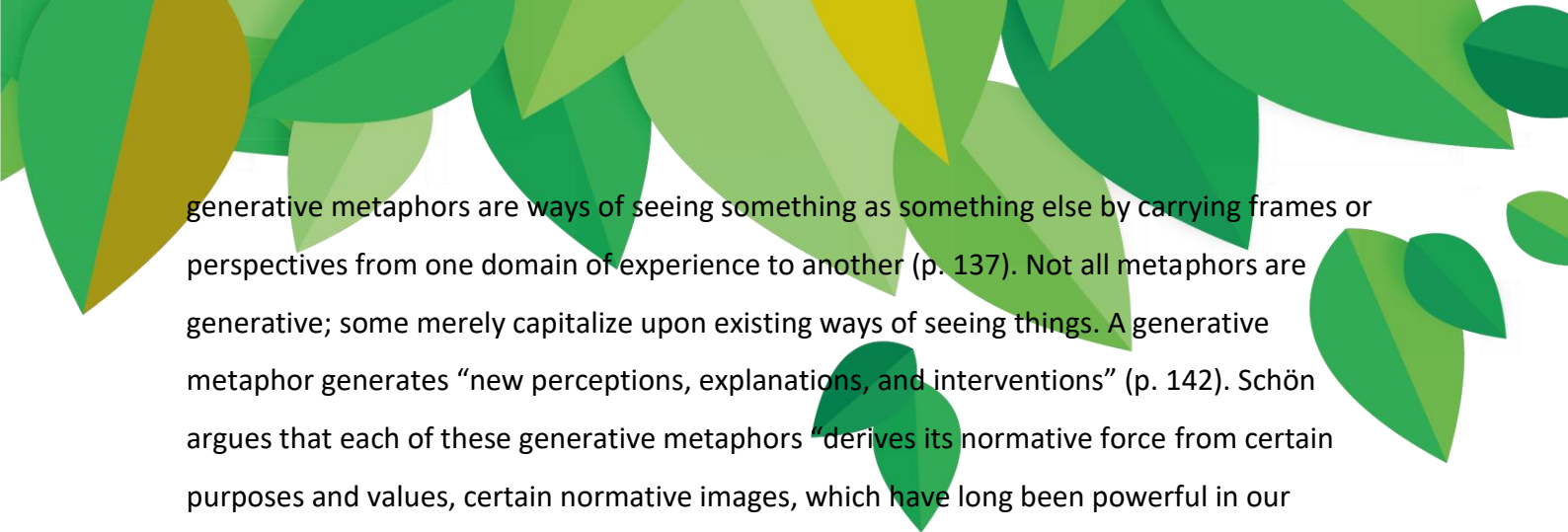Building upon the identification of these strong capacities of metaphor, Burgers et al. (2016) have argued that metaphors can function as framing devices. Since Conceptual Metaphor Theory gave way to seeing metaphor in larger conceptual structures, it was recognized that these conceptual metaphors often imply a story and/or event sequence, enabling metaphors to function as reasoning devices (Lakoff & Johnson, 1980). Charteris-

Black (2011, p. 33) also argues that any political issues are complicated and abstract, so it is valuable to political audiences when abstract issues are explained by image-based metaphors that make them more intelligible. Furthermore, metaphor is acknowledged to be a highly persuasive rhetorical device (see the meta-analysis by Sopory & Dillard, 2002). Charteris-Black (2011, p. 31) argues that the shift between meanings in metaphor evokes emotional responses. He recalls that 'motion' and 'emotion' gave the same etymological source and, he states "so we may think of metaphors as bearers of affective meaning".

Taken together, Burgers et al. (2016) have argued that metaphors can fulfill one or more functions of framing as defined by Entman (1993): they can foreground a particular problem definition, give a causal interpretation, address a problem evaluation and/or promote a possible problem solution. An example is the metaphorical frame *immigration is a natural disaster*, identified by Charteris-Black (2006): this frame portrays immigration as something negative (problem definition), which causes serious trouble (causal interpretation), and is difficult to control (problem evaluation). Considering the ability of a figurative frame to present their readers with a particular problem description and evaluation, Burgers et al. (2016, p. 424) propose that abstract and complex topics invite more metaphoric frames than straightforward topics. The complex climate change problem might be an example of a topic that is specifically prone to metaphoric frames.

One of the first to highlight the importance of metaphors in policymaking was policy analyst Donald Shön (1979). He already recognized the function of metaphor as a frame and argues that the choice of a metaphorical frame may have the potential to exert an effect on social-policy questions. For Schön "the framing of problems often depends upon metaphors underlying the stories which generate problem setting and set the direction of problem solving" (p. 138). The difficulties of collective response to societal problem situations, such as the climate change problem, are severely compounded by different perceptions of the nature of the problems. For Schön, "Such a multiplicity of conflicting stories about the situation makes it dramatically apparent that we are dealing not with "reality" but with various ways of making sense of a reality" (p. 149). He states that disagreements on policy questions can often be understood as frame conflicts. Conflicts of frame can be resolved by re-structuring the frame. Here, Shön introduces 'generative metaphors'. Whilst the 'conceptual metaphors' of Lakoff and Johnson create new knowledge and potential for action by mapping the concrete onto the abstract and the familiar onto the unfamiliar,
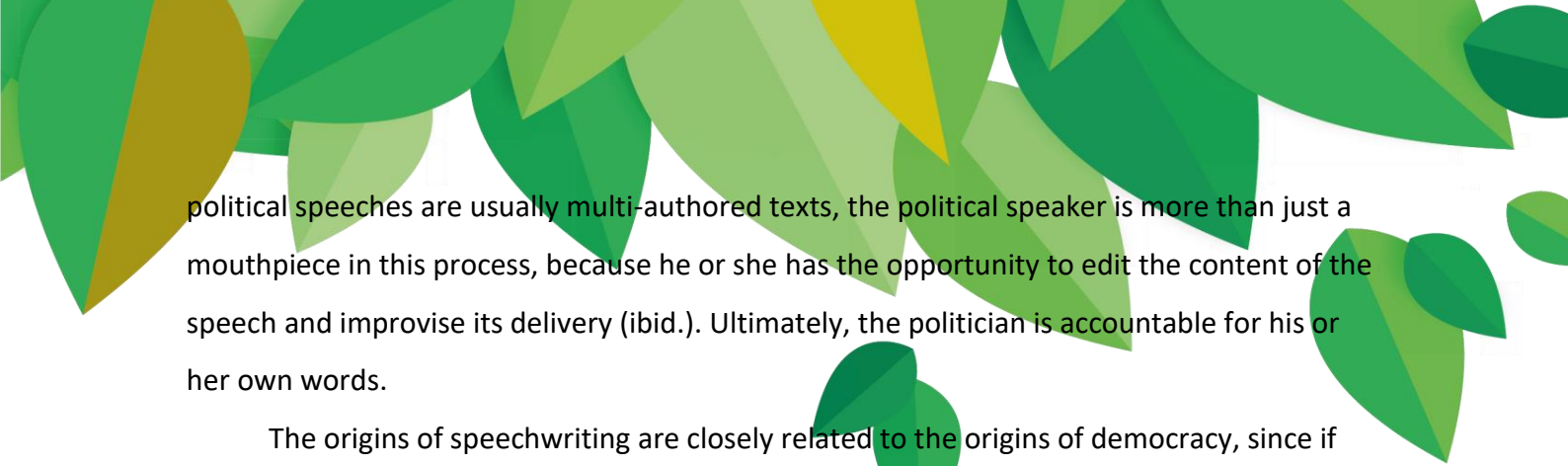
generative metaphors are ways of seeing something as something else by carrying frames or perspectives from one domain of experience to another (p. 137). Not all metaphors are generative; some merely capitalize upon existing ways of seeing things. A generative metaphor generates "new perceptions, explanations, and interventions" (p. 142). Schön argues that each of these generative metaphors "derives its normative force from certain purposes and values, certain normative images, which have long been powerful in our culture" (1979, p. 147). Many of these generative metaphors are difficult to detect, but Shaw and Nerlich (2015) reveal some of the most potent metaphors that shape international climate policies, which will be described in chapter 3. Comparable are what Zinken, Hellsten & Nerlich (2008) call 'discourse metaphors'. These are metaphors that are shaped by specific socio-political contexts: a relatively stable metaphorical projection that functions as a key framing device within a particular discourse over a certain period of time (p. 363).

More recently, Thibodeau and Boroditsy (2011) asked participants in their studies to read a text about a city's crime problem in which crime was either framed metaphorically as a beat or as a virus. They found that even the subtlest instantiation of a metaphor (via a single word) had a powerful influence over how people attempt to solve the problem. Interestingly, they also found that the influence of metaphorical framing is covert: people do not recognise metaphors as influential in their decisions but instead point to more 'substantive' (often numerical) information as the motivation for their problem-solving decision. Thus, the influence of metaphor in creating solutions in climate change policy may be greater than it seems at first sight.

## 2.5   Speeches as a genre

Within all types of political system, leaders have relied on the spoken word to propose their point of views. And although politicians have, to varying extents, always relied on others to provide their scripts, there has been an increased reliance on speechwriters in modern times (Charteris-Black, 2011, p.5). Soon after his election, Barack Obama publicly recognised the contribution of his speechwriter Jon Favreau by appointing him 'Director of Speech Writing'. The use of speechwriters raises important issues of authenticity of the politician. Charteris-Black (2011, p. 6) comments on this that contrary to popular belief, the politician is usually the puppet master pulling the strings rather than the other way around. While modern
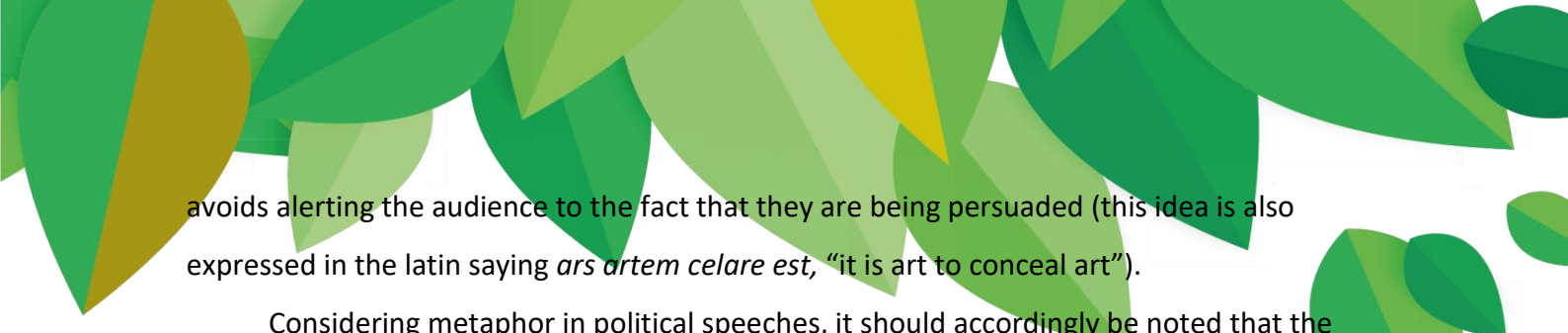
political speeches are usually multi-authored texts, the political speaker is more than just a mouthpiece in this process, because he or she has the opportunity to edit the content of the speech and improvise its delivery (ibid.). Ultimately, the politician is accountable for his or her own words.

The origins of speechwriting are closely related to the origins of democracy, since if power was to be negotiated and distributed to the people, then there would need to be those who were skilled in persuasion (Charteris-Black, 2011, p. 6). In classical antiquity rhetoric, the *ars bene dicendi* ("the art of speaking well") was of crucial importance to persuade the audience in the democratic society. Aristotle argued that the argument in a speech or debate should contain proofs to support it (*logos*), should be morally worthy (*ethos*) and the successful rhetorician should be able to arouse the feelings (*pathos*) (Charteris-Black, 2011, p. 7). Classical rhetoricians identified three main contexts where speeches could occur: the judicial, the epideictic (as in eulogies) and the deliberative or political speech. The three speech types varied in terms of the types of response they expected and in terms of their purpose. The political speech deals with an important controversial topic, is addressed to a public assembly and required a decision to be made about a future action (2011, pp. 7-8). The structure of an argument in classical theory contains five stages: an introduction (*exordium*), the outline of the argument (*narratio*), the support of an argument with examples, precedents or analogies (*confirmatio*), the anticipation of counter-arguments (*refutatio*) and finally the *conclusio* in which there would be some form of appeal to the audience. Many of these features continue to be used in contemporary political speeches.

Early modern studies of speechmaking concerned the effects of rhetorical strategies on the audience of the speech. One way of measuring these effects, is by recording the audience applause.
Atkinson (1984, p. 47-48) uses the term "claptrap" to refer to the range of strategies that instruct the audience, in a step-by-step manner, towards a precise moment in the near future where all are to be applauding (an effective one being for example the 'list of threes'). Even though measuring audience response is one way to gain insight into the persuasion of the audience, it does not cover all "rhetorical success". Charteris-Black (2011, p. 9) makes the important comments that especially the interplay between overlapping rhetorical strategies is persuasive, because it conceals the contribution of any single strategy, and this
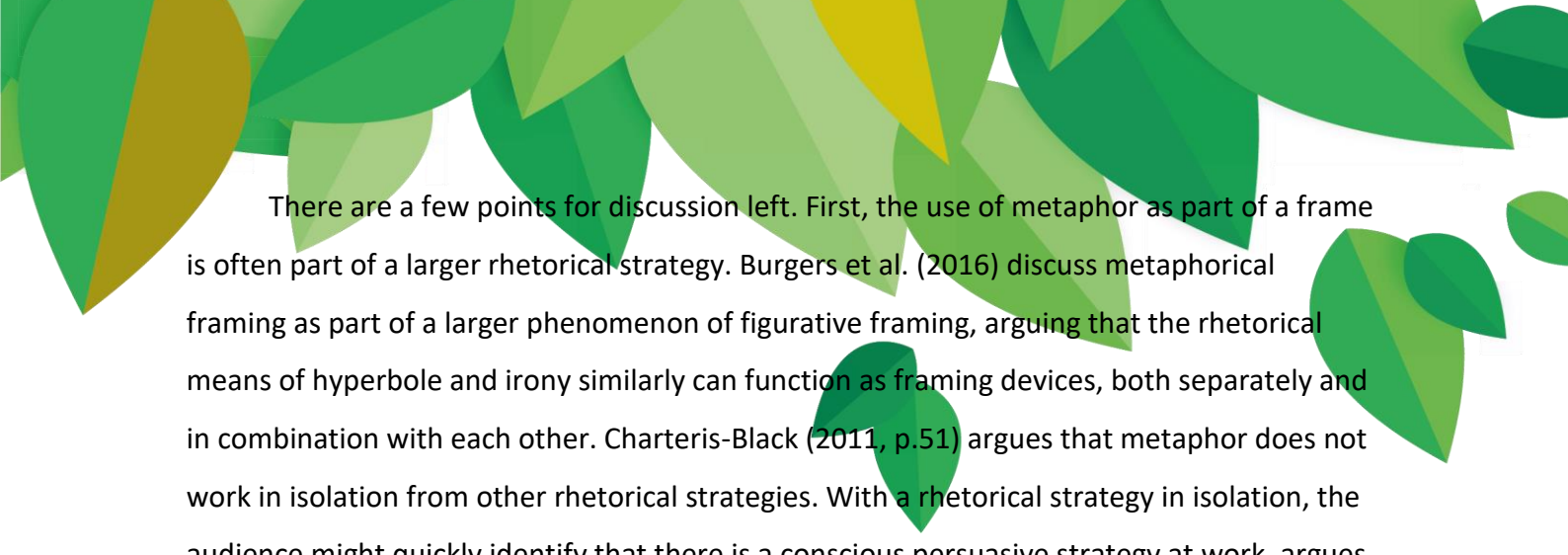
avoids alerting the audience to the fact that they are being persuaded (this idea is also expressed in the latin saying *ars artem celare est,* "it is art to conceal art").

Considering metaphor in political speeches, it should accordingly be noted that the rhetorical figure does not work well in isolation, and therefore metaphors are often part of an interaction of rhetorical strategies. Metaphor in particular is vital to the language of politicians, according to Charteris-Black (2011), because it plays an important way in communicating ideology that is vital to the discourse of politics. Metaphor mediates between the conscious and rational basis of ideology and the unconscious emotional associations of the words that are used to describe it, the values of which are rooted in cultural knowledge. It potentially has a highly persuasive force, because it influences our rational, moral and emotional response, both directly - though describing and analysing political issues - and indirectly by influencing how we feel about things (2011, pp. 50-51). Analysing the use of metaphor in the discourse of political speeches is a useful manner to detect underlying ideologies and strategies of politicians (and speechwriters).

## 2.6   Conclusion

This chapter has demonstrated the long and rich tradition of approaches to metaphor. Where ancient rhetoricians describe it as deviant, erratic, ornamental and spurious, it took some centuries for metaphor to be acknowledged as not only a figure of speech, but also a figure of thought. The cognitive turn in metaphor theory in the 1980s has advanced the idea that metaphors are processed in cross-domain mappings, taking elements from one conceptual domain and applying them to another. The cognitive perspective on metaphor has clarified the relation between the linguistic forms and the conceptual structures of metaphor. However, more recent literature (Steen, 2008) has noted the paradox that it is likely that most metaphor in language is not processed metaphorically (in cross-domain mappings). This paradox may be resolved by including a dimension of communication in the theoretical framework of metaphor. When metaphor is studied as part of actual language use, or events of discourse, it does not only manifest a linguistic form and a conceptual structure, but also a communicative function. This communicative function is acknowledged in the theory on metaphorical framing. Metaphor is highly persuasive and has the capacity to act as a reasoning device, and is therefore able to frame political debates.

There are a few points for discussion left. First, the use of metaphor as part of a frame is often part of a larger rhetorical strategy. Burgers et al. (2016) discuss metaphorical framing as part of a larger phenomenon of figurative framing, arguing that the rhetorical means of hyperbole and irony similarly can function as framing devices, both separately and in combination with each other. Charteris-Black (2011, p.51) argues that metaphor does not work in isolation from other rhetorical strategies. With a rhetorical strategy in isolation, the audience might quickly identify that there is a conscious persuasive strategy at work, argues Charteris-Black. Also, the combination of strategies may increase its persuasiveness.

Second, considering the renewed attention for metaphor as a communicative strategy in the theory of metaphorical framing, it is interesting to note that a recent body of research at the Metaphor Lab in Amsterdam has combined the insight of metaphor theory with argumentation theory in order to get a more complete picture of metaphor as a rhetorical strategy. In contemporary argumentation theory, the metaphor is often considered to be (a kind of) analogy argument (e.g. Garssen & Kienpointner 2011; Xu & Wu 2014). However, in the recent project of the Metaphor Lab it is argued that metaphors can also form a relevant contribution to an argumentative discourse in other ways. The research group combines the pragma-dialectical reasoning theory with Steen's (2008) 3-dimensional model of metaphors and Deliberate Metaphor Theory. Preliminary results show that the use of metaphors can result in complex argumentation, consisting of different types of arguments. The incorporation of argumentation theory in metaphor theory may also give insight to the concerns of ancient rhetoricians that were suspicious of the corruptive potential of the rhetorical device, by addressing when metaphor as an argumentative strategy crosses the border of reasonableness. With the concept of *strategic maneuvering* (Van Eemeren en Houtlosser 2002; Van Eemeren 2010), the pragma-dialectical argumentation theory claims that language users maneuver strategically between effectiveness and reasonableness. Since metaphor is deviation from the literal, it always carries with it two layers of meaning: the direct and the indirect – resulting from the source and the target domain. The fact that the intended meaning is not explicitly conveyed means that the speaker can hide behind the defence of misinterpretation. This potential fallacious way of deceiving the opponent by means of metaphor must be kept in mind in the research of metaphor in discourse.

# 3 Metaphor in climate change policy

## 3.1 Introduction

Awareness of climate change as an issue facing humankind is a relatively new phenomenon, as is the urgency to act upon it. Although the Swedish chemist Svante Arrhenius had already signaled the problem of climate change in 1896, it was not until the late 1970s that the World Meteorological Organization (WMO) began to express concern that human activities – notably the emission of carbon dioxide – might lead to serious warming of the lower atmosphere (Dorward 2014, p.14). Since the climate change issue hit the global scientific and political agenda in the late 1970s, climate change policy has gone through some swift evolutions. The ever-increasing urgency of the climate change problem makes this an issue that concerns every human being on the planet and demands complex global cooperation, influenced by infinite different interests and agendas. While the poorer parts of the world are increasingly affected by climate change, international policies struggle to keep up with appropriate responses.

For an effective international governance regime for climate change, good communication is essential. The lack of support for emission reduction policies has been attributed in part to problems in the way climate change science is communicated (Pidgeon and Fischhoff, 2011). While climate change discourse expanded increasingly from the scientific context to the political during the past century, climate change increasingly became a communication challenge: How do you motivate action in the face of what can appear to be an overwhelming situation? In chapter 2, it was shown how metaphor can be used as a framing device and can play an important role in shaping the discourse on political issues. Metaphors can enable as well as constrain the ways we think about policy issues, especially with regard to largely abstract, complex and seemingly intractable problems like climate change (Shaw and Nerlich, 2015, p. 35).

This chapter gives an overview of the relatively short history of the international climate change policy process and the most important metaphors that have shaped the discourse around this process. This is not an exhaustive assortment of metaphors on climate change, on the contrary: there are infinite possibilities in creating novel metaphors for the

complex phenomena of climate change that are to a certain extent exploited by language users. Instead, the goal of this thesis is to get a better understanding of the role of metaphor in the discourse of climate change policy. Therefore, the literature review in this chapter focuses on policy relevant metaphors, "generative metaphors" in Schön's (1979) terms and "discourse metaphors" as Zinken, Hellsten & Nerlich (2008) described (see chapter 2.4). I put the metaphors in broader trends in the discourse of new ways of seeing climate change, in which metaphors can play a role of opening up a new perspective on the world.

This thesis investigates the occurrence of a dichotomous structure in climate change discourse as identified by the study of Shaw and Nerlich (2015). They carried out an in-depth thematic and metaphor analysis of 63 policy documents from prominent international organisations involved in the building of climate governance, published between 1992 and 2012. The overarching and consistent trend over the time period of the analysis that they found is that global science-policy discourses universalise the myriad impacts of a changing climate into a single dichotomous impacted/not-impacted scenario. The dichotomous discourse they found is constructed in terms of themes and metaphors, for which examples are "thresholds", "guard rails", "tipping points", "positive feedbacks", "feedback effects", "non-linear change", "crash barriers" and "runaway greenhouse effects". Changes in our climate are so threatening by now, that a large part of the climate change discourse is focusing on doom scenarios of an abrupt and non-reversible effect on our complete ecological system. Many metaphors that have been identified in the literature can be classified as part of this "apocalyptic discourse" in which climate change is conceptualized as an abrupt process as opposed to a gradual change. In line with my thesis hypothesis, I will focus on these metaphors in this chapter.
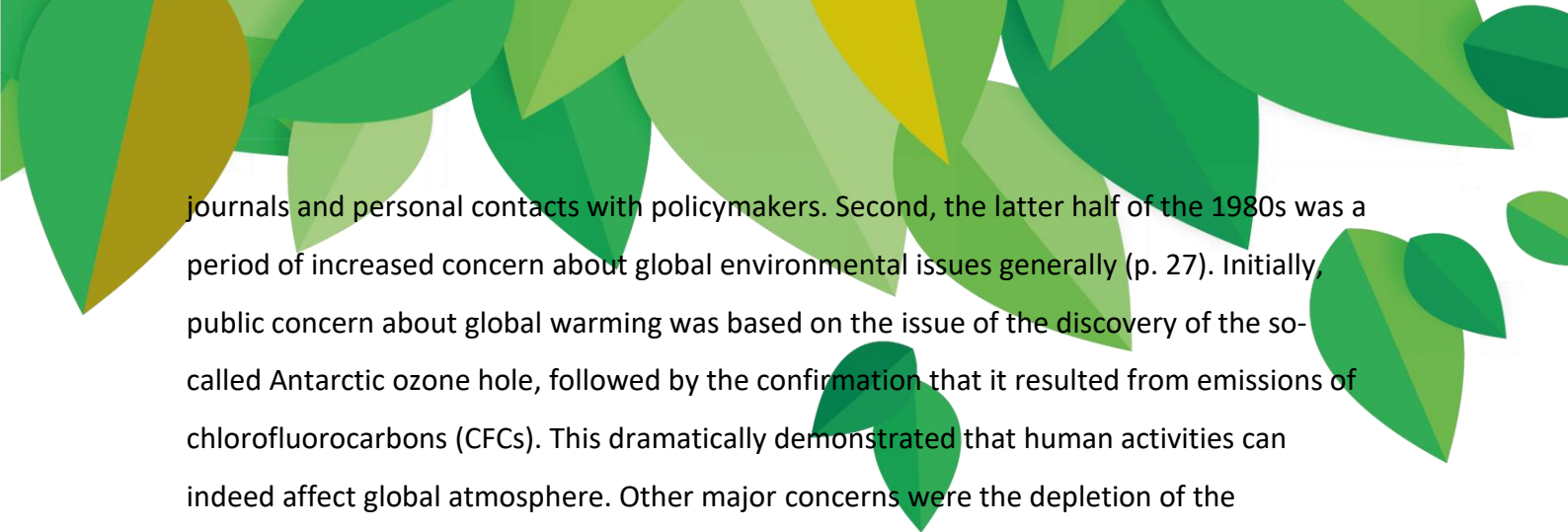
In order to understand why certain metaphors and themes in the discourse emerged, it is important to understand the developments in international climate change policy. Therefore, each section starts with a description of the history of international climate change policy in a certain period and links the metaphors and themes to the different stages in history. The chapter also provides the information needed on the context of my corpus, as in the description of the history of climate change policy I focus on the United Nations Climate Change Conferences, of the United Nations Framework Convention on Climate Change.

## 3.2   Creating an understanding: 1970 - 1992

Initially, the development of the climate change issue took place in the scientific arena. In 1979, the issue was discussed at the global level at the first World Climate Conference, which in its turn triggered a series of scientific and political conferences (Gupta, 2010, p. 636). However, these efforts to attract participation by policymakers proved unsuccessful, while scientific concern did grow (Bodansky, 2001, p. 24). Meanwhile, the understanding of the greenhouse problem improved. In the early 1960s, scientists established through careful measurements at remote observatories such as Mauna Loa, Hawaii, that atmospheric concentrations of CO2 are increasing (p. 24). The Keeling curve (1960), showing this rise, is until today one of the few undisputed facts in the climate change controversy, and led to the initial growth of scientific concern in the late 1960s and early 1970s (p.24).

The improvements in computer power in the 1970s and 1980s allowed scientists to develop much more sophisticated computer models of the atmosphere. While still subject to considerable uncertainty, this led to increased confidence by scientists in global warming predictions. After reviewing these models, a 1979 report of the U.S. National Academy of Sciences concluded that if CO2 in the atmosphere continued to increase, "there is no reason to doubt that climate change will result and no reason to believe that these changes will be negligible" (National Research Council 1979, vii). In the mid-1980s, the problem got even more serious than previously believed, when scientists recognized that anthropogenic emissions of other trace gases such as methane and nitrous oxides also contribute to the greenhouse effect (p. 26). Careful reassessment of the historical temperature record in the 1980s indicated that global average temperature had indeed been increasing since the middle of the century (p. 26).

From 1985 until 1988 climate change was transformed from a scientific into a policy issue, which can be delineated as the agenda-setting phase (Bodansky, 2001, p. 26-27). The scientific concerns about global warming grew during the 1980s and the increase in knowledge was significant in laying a foundation for the development of public and political interest. Moreover, three additional factors acted as direct catalysts for governmental change (p.26). First, a group of environmentally oriented Western scientists worked to promote the climate change issue on the international agenda. These scientists acted as "knowledge brokers" to help translate and publicize the emerging scientific knowledge about the greenhouse effect through workshops and conferences, articles in non-specialist

journals and personal contacts with policymakers. Second, the latter half of the 1980s was a period of increased concern about global environmental issues generally (p. 27). Initially, public concern about global warming was based on the issue of the discovery of the so-called Antarctic ozone hole, followed by the confirmation that it resulted from emissions of chlorofluorocarbons (CFCs). This dramatically demonstrated that human activities can indeed affect global atmosphere. Other major concerns were the depletion of the stratospheric ozone layer, deforestation, loss of biological diversity, pollution of the oceans, and international trade in hazardous wastes. Finally, the North American heat wave and drought in the summer of 1988 gave great support to the greenhouse warming proponents, especially in the United States and Canada (p. 27).

Bodansky calls the period from 1988 until 1990 a prenegotiation period, in which governments became heavily involved in the process (2001, p. 27- 31). Concerns of non governmental actors, especially environmentally oriented scientists spilled over into political concerns and emerged as an intergovernmental issue in 1988, when the WHO and the United Nations Environment Programme (UNEP) established the International Panel on Climate Change (IPCC) in order to investigate and report on scientific evidence on climate change and possible international responses (Dorward, 2014, p. 14). In 1989, the issue of climate change was firmly put on the agenda of politicians (Gupta, 2010, p. 637). In 1990, the World Meteorological Organization held the Second World Climate Conference, and key scientific concerns and political steps were identified at the meeting. By the end of the year IPCC published their first reports on the science, impacts and policy aspects of climate change (p. 637). The whole prenegotiation period was a transitional period in which governments began to play a greater role, but non-governmental actors still had considerable influence (Bodansky, 2001, p. 28). The IPCC reflected this ambivalence as their 1990 scientific assessment of global warming was a product more of the scientific community than of governments (International Panel on Climate Change, 1990).

The formal intergovernmental negotiation phase led to the adoption of the UNFCCC (Bodansky, 2001, p. 31- 34). In little more than three years of formal treaty-making process, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on May 9 1992, opened for signature at the Earth Summit in Rio de Janeiro in June 1992, and entered into force on 21 March 1994. Governments were very much in control during the negotiation of the UNFCCC, and nongovernmental actors played a quite limited role (p. 37).

26

The objective of the UNFCCC is to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (United Nations, 1992). The treatment sets non-binding limits on greenhouse gas emissions for individual countries without any enforcement mechanisms. It reflects a carefully balanced compromise with formulations that preserved positions on all sides, were deliberately ambiguous or deferred issues until the first meeting of the conferences of the parties (p. 34). These annual Conferences of the Parties (COP) were held from 1995 and after to assess progress in dealing with climate change.

### 3.2.1  The greenhouse effect

In the early period of climate change policy, the explanatory potential of metaphor may have played an important role in climate change policy, when the broad public was not yet familiar with the problem. Beside its potential to shape our perceptions of the problem, metaphor seems to play an important role in making the complexity of climate change tangible to the layperson. Most environmental problems are not immediately apparent to the human observer (Väliverronen & Hellsten, 2002, p. 229). Problems such as the detection of ozone depletion or global climate changes requires highly sensitive and sophisticated technical machinery, scientific theories, and mathematical models. Most metaphors that are used in the environmental debate originate in the domain of science (Väliverronen & Hellsten, 2002, p. 230). These metaphors gain popularity in the mass media, where metaphors are an integral part of journalistic practice. A number of studies have shown that metaphors were ubiquitous and varied in media representations of climate science and policy between the 1990s and early 2000s (Koteyo et al., 2010; Russill, 2010).

When the versatile problem of climate change moved from the scientific domain to the political domain around the mid 1970s, metaphors have rapidly played an important role in creating an understanding of the problem in the general public. Two very salient metaphors that still seems to appear in climate change discourse today are the greenhouse effect metaphor and the carbon footprint metaphor. Both metaphors have played an important role in shaping public images of climate change by evoking vivid understandings of what global warming means and how we should deal with it (Nerlich & Hellsten, 2014). The greenhouse metaphor became salient around 1988 when climate science became a political issue (p. 32). The news media took up the image of greenhouse effect that originated from
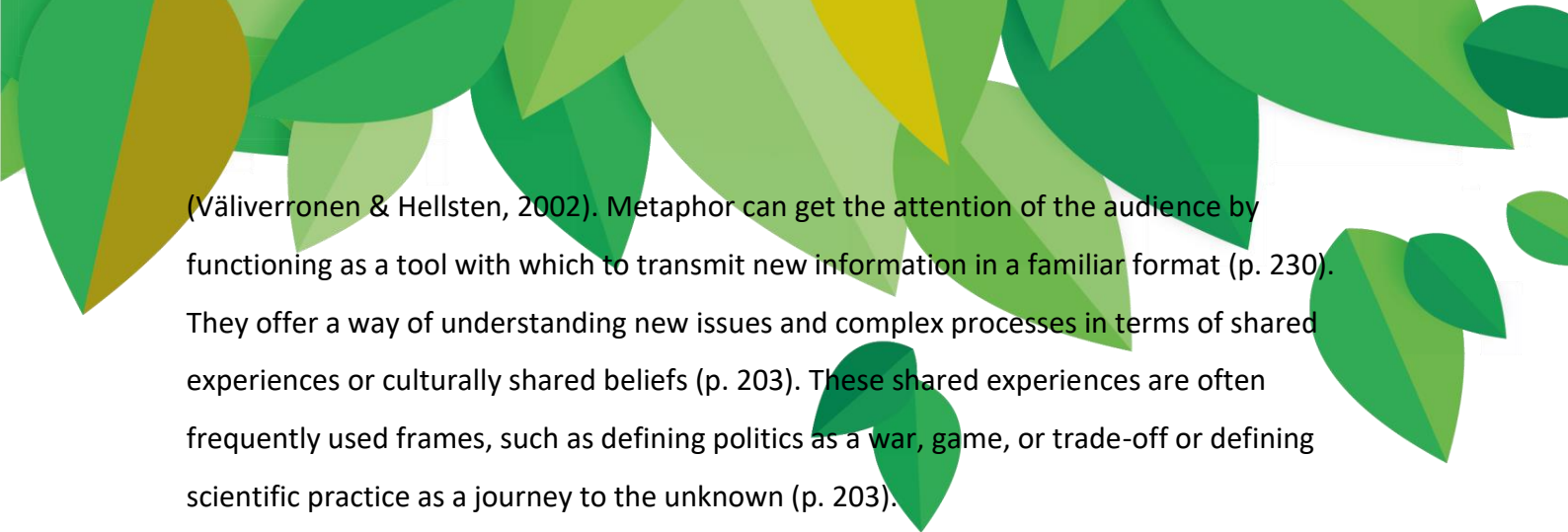
the sciences, because of the intriguing storyline and shared responsibility for the earth (p. 32).

Greenhouse gas began to tell a story about anthropogenic climate change and its possible impacts (Nerlich & Hellsten, 2014, p. 29). The greenhouse gas metaphor or more precisely the anthropogenic or enhanced greenhouse effect metaphor maps some of what we know about what happens in greenhouses (heat being trapped by the glass) onto what happens in the earth's atmosphere through human action (heat being trapped by gases). The early study of Romaine (1997) identified the wide use of the greenhouse gas metaphor to simplify and explain the mechanism of temperature change. The greenhouse effect attempts to provide a scientific account of how human activities such as the burning of fossil fuels and forest clearance are responsible for a steady and gradual rise in the temperature of the atmosphere, a rise in ocean levels, and related meteorological events, such as the greater rainfall in some areas and drought in others (Romaine, 1997). This way, the metaphor made the very complex topic of global warming imaginable by linking it to a familiar object. It also made the risks (overheating) clear for the planet (Nerlich & Hellsten, 2014, p. 32).

It is increasingly believed that to make people understand climate change better and encourage political action to prevent it, mitigate it or adapt to it, climate change should be framed in terms of risk (Painter, 2013). Nerlich & Hellsten (2014, p. 28) claim that through the use of the metaphors of the greenhouse effect and the carbon footprint, climate change has already, for quite a while, been implicitly framed as risk, both in terms of risk assessment and risk management. After the release of the first assessment report of the Intergovernmental Panel on Climate Change (IPCC) in 1990 and the first international Earth Summit in 1992, as the focus turned from scientific consensus on climate change to the need for policy consensus on mitigation efforts, the greenhouse gas metaphor also declined (Nerlich, as cited in Atanasova & Koteyko, 2017).

### 3.2.2  War and destruction

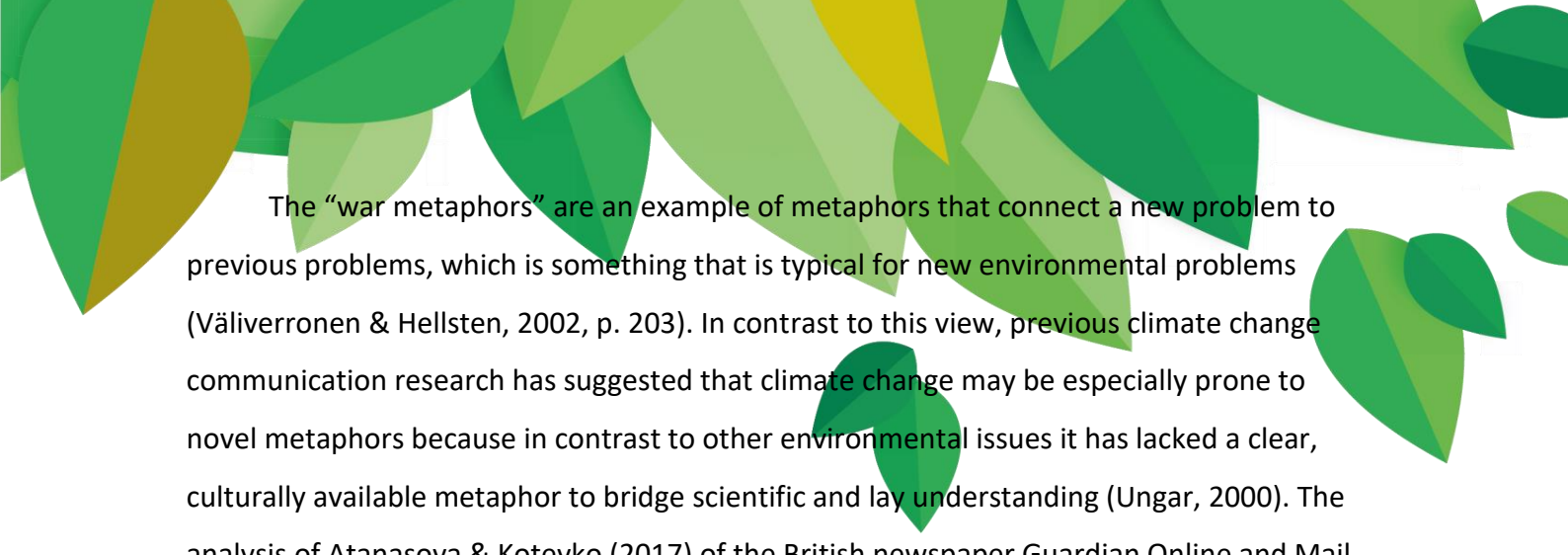Metaphors have an especially important role to play in the way people come to understand relatively novel phenomena, such as climate change. These novel phenomena are often understood in terms of familiar and shared ideas (Shaw and Nerlich, 2015, p. 36). It seems that metaphors about environmental issues, such as climate change, accordingly reflect existing views and experiences, especially from the domains of science and politics

(Väliverronen & Hellsten, 2002). Metaphor can get the attention of the audience by functioning as a tool with which to transmit new information in a familiar format (p. 230). They offer a way of understanding new issues and complex processes in terms of shared experiences or culturally shared beliefs (p. 203). These shared experiences are often frequently used frames, such as defining politics as a war, game, or trade-off or defining scientific practice as a journey to the unknown (p. 203).

Väliverronen & Hellsten (2002) are concerned with the role of metaphor in the communication of biodiversity loss and investigate how some popular metaphors are putting biodiversity loss on the global agenda. They describe two opposite narratives on environmental problems: an apocalyptic narrative of species extinction and a new narrative of hope that looks at genetic engineering. These first apocalyptic metaphors in the debate are martial metaphors and images of destruction that evoke emotions of fear and call for rapid action to save the environment (p. 230). In examples such as "the war against nature", "the battle over nature", and "the population bomb", they identify that the protection of our natural environment has often been described as a war or a battle. Väliverronen & Hellsten (2002, p. 237) describe the war metaphor as part of wider environmental narratives of extinction crises and apocalypse that appeared around the 1990s.
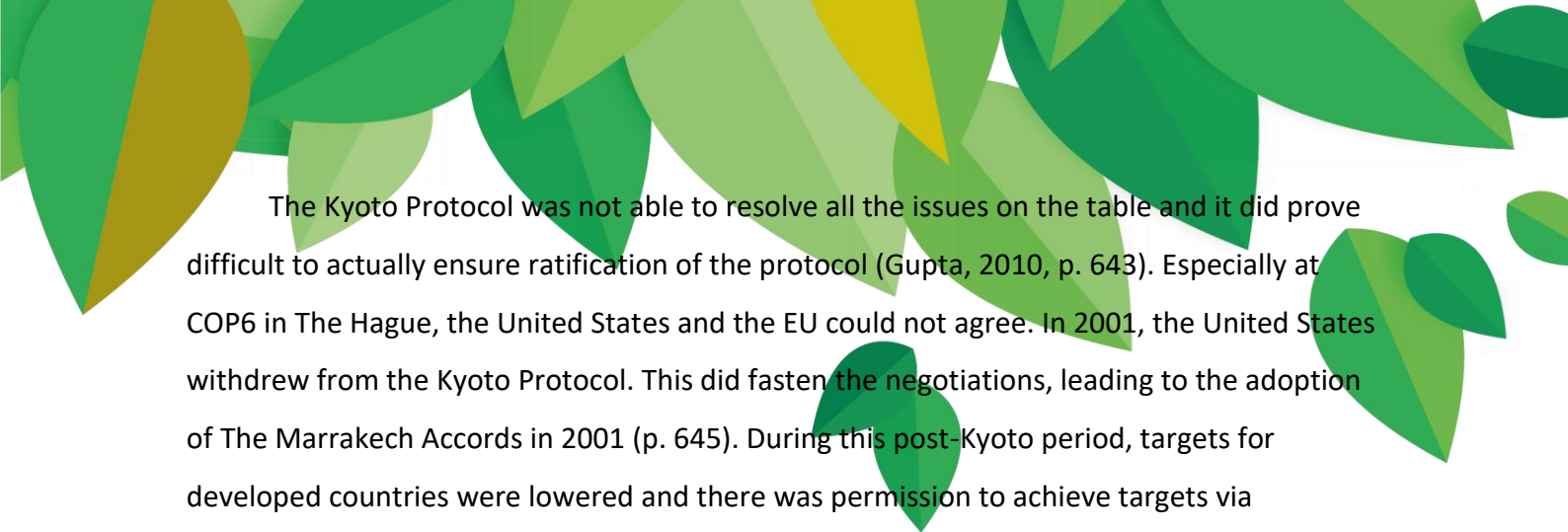
"War" is identified by Romaine (1997) as a prime source domain that is used to map onto the target domain of the environment. Scientists, politicians and journalists discuss the state of the environment in terms of a symbolic battle against perceived evil forces on circumstances (Romaine, 1997, p. 176). Shaw and Nerlich (2015. P. 28) describe the stark dichotomy of an "aggressive global coordination" using "command and control policies" to support efforts at "fighting", "combatting", and "attacking" climate change as responses that were required in the face of "Earth's early warning systems". These warlike metaphors were later contrasted with "global climate security" and "energy security". The apocalyptic narrative in the subject of biodiversity is found also in the fact that biodiversity is often metaphorized as a collection of valuables, most notably as a library of life (Väliverronen & Hellsten 2002, p. 235). In this metaphor, genes are the alphabet in the book of life and species the books in the library. The metaphor is used to evoke emotions of fear in the idea of the library that can be on fire. This is a powerful image of destruction: biodiversity is under threat and we need to take action (p. 236).

The "war metaphors" are an example of metaphors that connect a new problem to previous problems, which is something that is typical for new environmental problems (Väliverronen & Hellsten, 2002, p. 203). In contrast to this view, previous climate change communication research has suggested that climate change may be especially prone to novel metaphors because in contrast to other environmental issues it has lacked a clear, culturally available metaphor to bridge scientific and lay understanding (Ungar, 2000). The analysis of Atanasova & Koteyko (2017) of the British newspaper Guardian Online and Mail Online showed otherwise: they identified a predominant reliance on entrenched metaphors of war or religion, which have a history of use as sources of metaphors in climate change/ environmental communication. However, they did identify novel mappings in the context of metaphors of religion.

## 3.3   Measuring climate change: 1992 - 2010
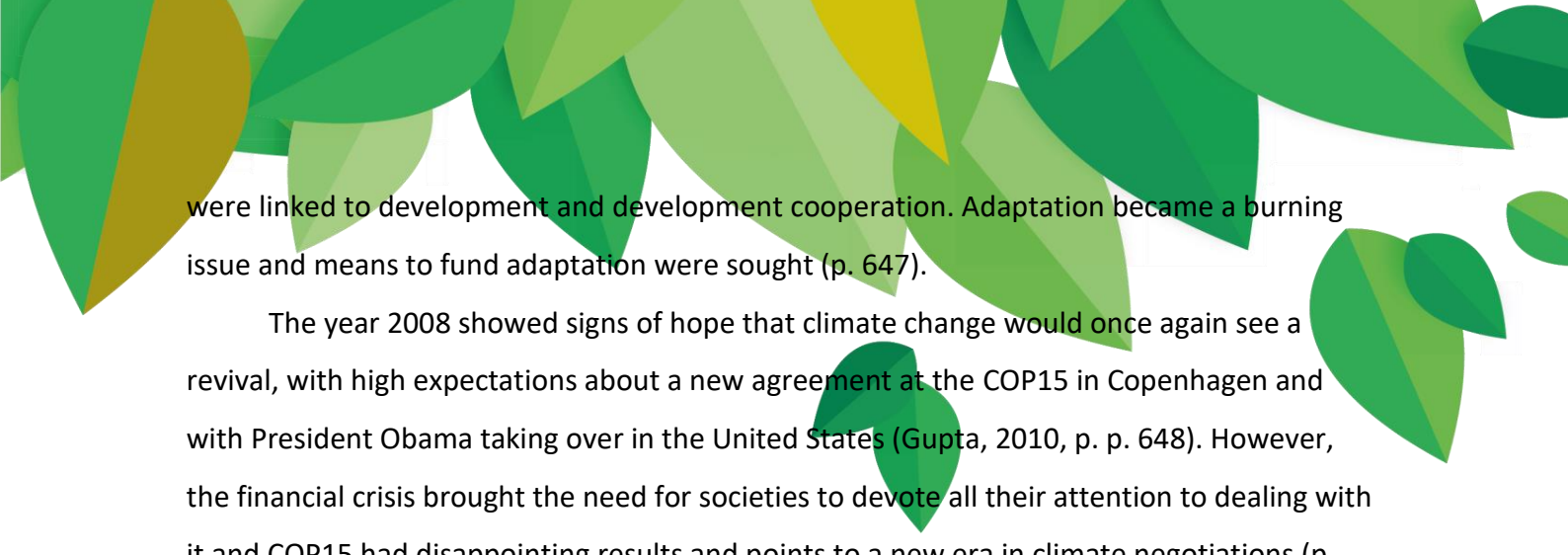
The period after the adoption of the FCCC focused on the elaboration and implementation of the agreement and the initiation of negotiations on additional commitments, leading to the adoption of the Kyoto Protocol in 1997 (Bodansky, 2001, p. 34- 37). By 1996, it had become clear that it would not be easy to decouple economic growth from GHGs (Gupta, 2010, p. 643). The costs associated with taking action for the United States increased. Therefore, prior to Kyoto, the United States adopted the Byrd-Hagel Resolution that called on the US not to accept any future binding quantitative targets until and unless the key developing countries also participate meaningfully (p. 643). This shattered the idea that developed countries should lead by reducing their emissions. Against all odds in these uncertain circumstances, the negotiations lead to the adoption of the Kyoto Protocol at COP3 in December 1997 (Bodansky, 2001, p. 35). The protocol recognized that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of 150 years of industrial industry. Therefore, it places a heavier burden on developed nations under the principle of "common but differentiated responsibilities" (United Nations Convention on Climate Change, 2018). Unlike the FCCC, the Kyoto Protocol specifies clear obligations for industrialized countries to limit and reduce their greenhouse gas emissions (Bodansky, 2001, p. 38). The adoption of the Kyoto Protocol in 1997 put the idea of carbon trading at the centre of global mitigation strategies (Kotekyo, 2012, p. 25).

The Kyoto Protocol was not able to resolve all the issues on the table and it did prove difficult to actually ensure ratification of the protocol (Gupta, 2010, p. 643). Especially at COP6 in The Hague, the United States and the EU could not agree. In 2001, the United States withdrew from the Kyoto Protocol. This did fasten the negotiations, leading to the adoption of The Marrakech Accords in 2001 (p. 645). During this post-Kyoto period, targets for developed countries were lowered and there was permission to achieve targets via investments in other countries and inadequate resources for assistance (p. 645). The withdrawal from Kyoto by the United States made developing countries experience a lack of leadership, and assistance for developing countries was considerably weakened (p. 645). By the end of the decade, literature and policy processes were giving more emphasis to the links between climate change and developing issues and on adaptation, since the global community would already be facing certain impacts and there were increasing demands on adaptation (p. 645).

In the period after the Marrakech Accords, political dynamics of the negotiations changed (Gupta, 2010, p. 646). Since the United States had withdrawn from the Kyoto Protocol, the EU had to renew its efforts to convince other countries to ratify the Protocol and push implementation efforts further. It did its best to take the lead and push climate change discussions. Meanwhile, the US launched a number of bilateral and multilateral climate change-related activities with other countries. New actors emerged on the global stage during this period. Small Island Developing States (SIDS) became more vociferous in the climate change debate, trying to get their interests taken into account in the scientific and political process (p. 646). Other emerging actors included Al Gore with his road show and film, Bill Clinton with his global climate initiative, religious organizations such as the World Council of Churches, development organizations, women's groups and industry all became more influential actors during this period (p. 646).

The meetings of the COP led to incremental decision making, with key decisions being made at the Montreal (COP11) meeting, which marked the entry into force of the Kyoto Protocol, and the Bali (COP13) meeting. In the 2007 Bali meeting the Bali Action Plan was adopted, calling for decision regarding the deep cuts needed to keep climate change within safe limits. It called for "nationally appropriate mitigation actions" (NAMAs) to be adopted by developing countries, which recognizes that different countries might take different nationally appropriate action on the basis of equity. Many discussions during this period

were linked to development and development cooperation. Adaptation became a burning issue and means to fund adaptation were sought (p. 647).

The year 2008 showed signs of hope that climate change would once again see a revival, with high expectations about a new agreement at the COP15 in Copenhagen and with President Obama taking over in the United States (Gupta, 2010, p. p. 648). However, the financial crisis brought the need for societies to devote all their attention to dealing with it and COP15 had disappointing results and points to a new era in climate negotiations (p. 648). Around the time that COP15 was held, IPCC came under fire, as some mistakes in the IPCC data leaked out and were blown out of proportion in the media (p. 648). While many developed countries suffered tremendous economic backlashes, some countries in the developing world appeared to be steadily moving forward, namely Brazil, China and India. The pressure increased on these countries to take action, resulting as well from the realization that China's total GHG emissions had now overtaken those of the United States. At COP15, the parties could not agree on much and ultimately were only able to "note", not "adopt" a Copenhagen Accord. Still, the Accord is a breakthrough in accepting that average global temperatures should probably not be allowed to rise beyond 2 degrees in relation to pre-industrial levels.

The EU keeps trying to implement a leadership discourse as the only fair way to deal with the climate change problem, while other developed countries are backtracking fast (p. 649). The US has failed in demonstrating meaningful leadership from the start, while yet newspapers in the pre- and post-Copenhagen period point their fingers to China and others in the developing world as being the free riders that prevent the US from taking action.

In 2010, the Cancun Agreements made at COP16 marked a shift from a top-down architecture where an overarching goal is translated into individual country targets to one in which national pledges should add up to international effort (The Climate Policy Info Hub, 2018a). The Agreements invited countries to formulate national targets. Copenhagen and Cancun had shown that climate policy might be more acceptable, especially when aiming at involving developing countries in global climate policy, if climate actions are embedded in domestic sustainable development objectives.

### 3.3.1 Tipping point

A metaphor that fits perfectly in the dichotomous construction of climate change as described by Shaw & Nerlich (2015) is the tipping point metaphor. The tipping point refers to a sudden change in in our climate that is irreversible, leaving the world crucially impacted. Our target is thus avoiding this tipping point. Studies on climate change communication have elaborately described the possibility of a global tipping point (see for example Antilla, 2008; Russill 2015). The metaphorical language involved in tipping points is described by Russill & Nyssa (2009) and Van der Hell, Hellsten & Steen (2018). Russill and Nyssa (2009), following Schon (1979) identify the climate change tipping point as a generative metaphor, since the term is used in "an effort to solve a policy problem by re-structuring public perceptions in a new and substantive way" (p. 341). Hell, Hellsten & Steen (2017) add that in other words, talking about climate change in terms of tipping points illuminates aspects that were not part of the debate before, and suggests other responses to climate change than were considered previously, making this a classic case of metaphorical framing (cf. Burgers, Konijn, & Steen, 2016).

The cross-domain mapping of the tipping point metaphor is described by Hell, Hellsten and Steen (p. 606). The source domain in the tipping point metaphor involves the physical domain in which concrete entities such as a chair or a glass of water are tipped over when its centre of gravity passes the balance point and it falls (p. 606). In this process, the object is displaced from a state of stable equilibrium into a new equilibrium state that is qualitatively different and typically worse from the initial state. Things do not tip over of their own accord but it takes a force to tip them over. Cross-domain mapping can now yield insights about the target domain – in this case the climate system – that are driven by our knowledge of the source domain –in this case concrete objects that are in a state of (im)balance in physical space. If the climate system is conceptualized as an object with a tipping point, substantial questions are to be considered such as what that balance point is, how the centre of gravity of the complete climate system can be determined, what it means for it to tip, how and when this system will tip and with what consequences.

Russill and Nyssa (2009) describe the introduction and increasing prominence of tipping points as a metaphor in communication about climate change in the news media and science between 2005 and 2007. Van der Hell, Hellsten & Steen (2018) follow up on Russill and Nyssa (2009) and explore how the meaning and use of the tipping point metaphor in
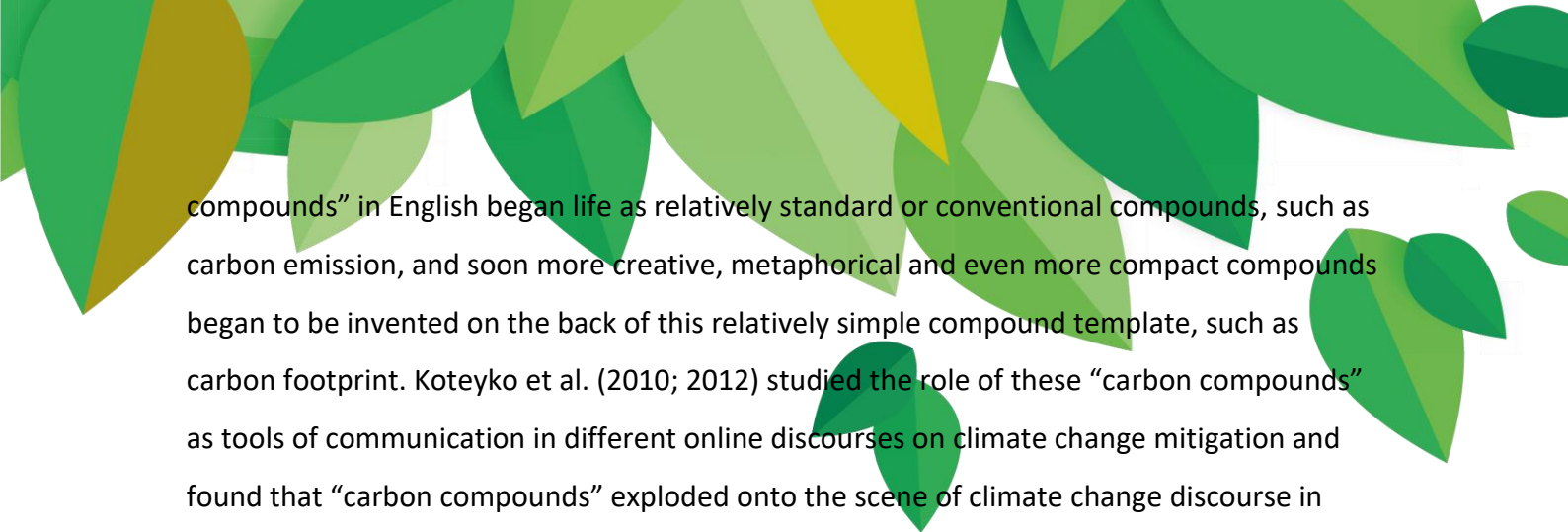
science and the news media developed over the years between 2005, when it was first introduced, until 2014. They describe how the tipping point metaphor is a highly versatile concept and expression, allowing it to be used for various communicative purposes by distinct stakeholders in different contexts. Van der Hell, Hellsten and Steen (2018) show how the metaphor was first used from 2005 onwards as deliberate metaphorical language by climate scientists explaining tipping points as motion in space and later, from around 2011, evolved to become a conventionalized idea for important impending change, no longer drawing attention to the metaphorical status of the phrase.

### 3.3.2 Carbon compounds

The period after the FCCC agreement shows how policymakers were increasingly activated to take action on the climate change issue. When policymakers began to explore new options to measurably reduce greenhouse gas emissions and carbon dioxide in particular, the carbon footprint metaphor became salient, some 15 years later than the greenhouse gas metaphor (Nerlich et al., 2011; Keteyko, 2010; Keteyko, 2012). The metaphor became immensely popular after 2004. As mentioned above, Nerlich and Hellsten (2014. p. 32) argue that both the greenhouse effect metaphor and the carbon footprint metaphor can be seen as reasonable steps in risk reduction. The greenhouse effect metaphor exposed the risks posed by climate change and allowed scientists to *assess* the risks associated with climate change. The carbon footprint metaphor makes visible and allows measuring and *managing* the risks associated with climate change (p. 32). In contrast to the greenhouse effect metaphor, this metaphor opened up a market-based policy vision of how to deal with carbon emissions and a way of allocating individual and group responsibility for risk reduction (p. 32). The carbon footprint metaphor maps some of what we know about footprints and their impact onto what we want to happen to the earth atmosphere through individual and collective actions (Nerlich & Hellsten, 2014, p. 28). This metaphor made it possible to imagine individuals' own contributions to the greenhouse effect and the risks it poses (p. 32). Risk-based framing might help to break out of political paralysis in climate action, as the frame seems to induce a connotation of a manageable problem.
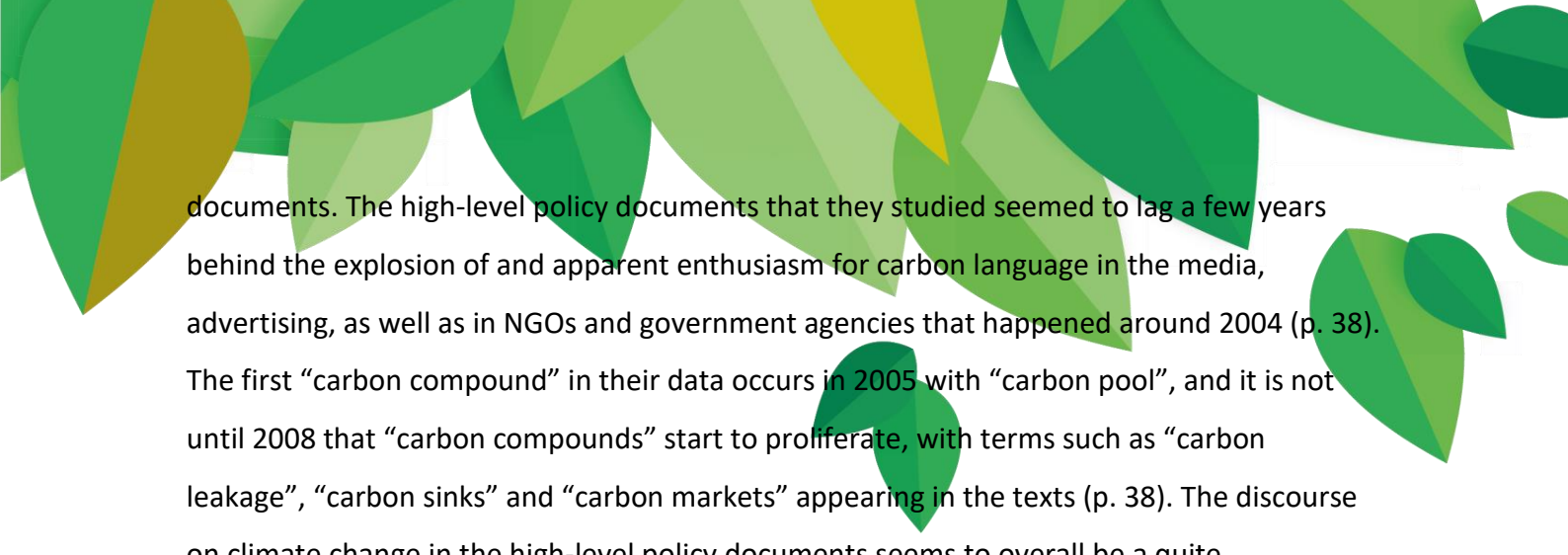
The carbon footprint metaphor is part of a broader type of language of metaphorical "carbon compounds" in the sense of linguistic combinations of two or more words around "carbon" as a lexical hub. Nerlich et al. (2011) argue that these so-called "carbon

compounds" in English began life as relatively standard or conventional compounds, such as carbon emission, and soon more creative, metaphorical and even more compact compounds began to be invented on the back of this relatively simple compound template, such as carbon footprint. Koteyko et al. (2010; 2012) studied the role of these "carbon compounds" as tools of communication in different online discourses on climate change mitigation and found that "carbon compounds" exploded onto the scene of climate change discourse in around 2004. They identified three clusters of compounds focused on finance, lifestyle, and attitudes. Financial compounds, such as "carbon currency" and lifestyle compounds, such as "carbon diet" were mostly used between 1990 and 2005, when hopes were high that political and economic solutions could mitigate climate change. Increasing moralization of the climate change issue led to the use of religious metaphors in metaphorical compounds such as "carbon morality" and "carbon indulgences" (Nerlich & Keteyko, 2009), in an effort to cut down carbon dioxide emissions.

Levy and Spicer (2013) highlight the role of what they call competing "imaginaries" in shaping climate policy: "widely shared, highly emotive, yet often conflicting understandings of this complex issue" of climate change. The authors analyse how different groups of actors – NGOs business and state agencies – have employed these imaginaries at different stages in history of climate policy negotiations. They propose three distinct phases in the history of climate politics since 1990: 1990-1998, the "Carbon Wars", was a period when incumbent powerful fossil fuel regimes, against rising concerns about climate change, worked to keep climate change off the policy agenda. 1998-2008 was a period of "Carbon Compromise" when the inevitability of carbon regulation was accepted. Since 2009, we have been in a period of "Climate Impasse" (Levy and Spicer, 2013, p. 660). Liverman's study of international climate policy identifies three key narratives in the period up to 2008 which emerge in the public discourse: that "dangerous climate change" is to be avoided, that the responsibility for climate change is "common but differentiated", and that the market, in the form of carbon trading, is the best way to reduce the danger (Liverman, 2009, p. 295).

However, Shaw and Nerlich (2015) found in their analysis that the different, but sometimes overlapping histories that Levy and Spicer (2013) identified did not emerge in the policy documents that they studied. On the contrary, the corpus of policy documents studied by Shaw and Nerlich (2015) revealed a strong constancy in the dichotomous structure of metaphor over the twenty year time period and across the different climate change policy
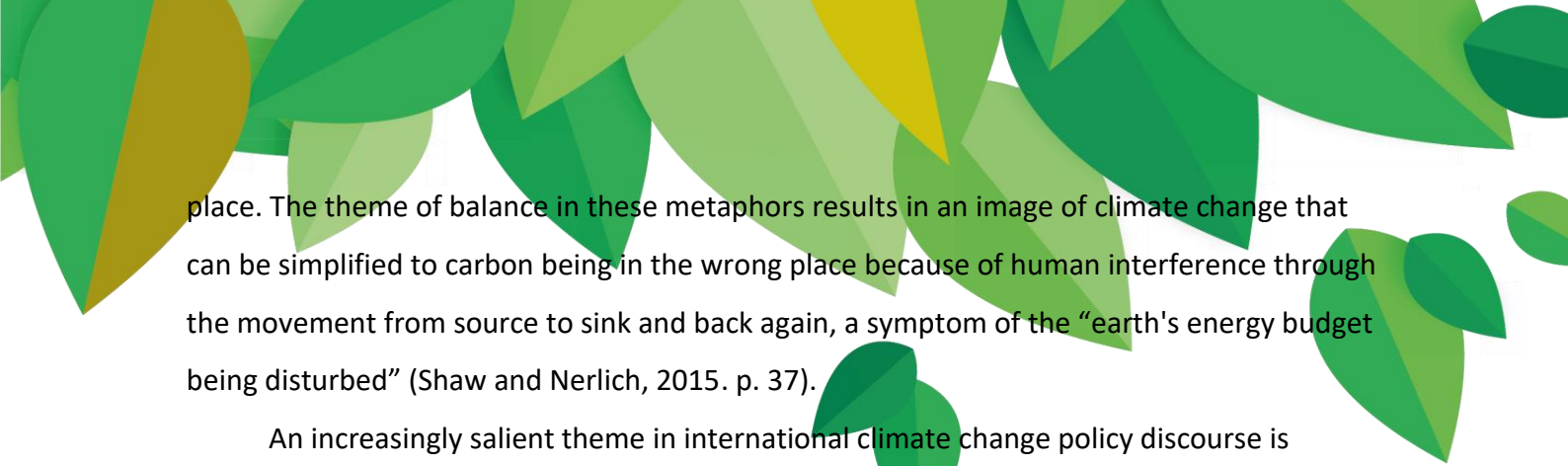
documents. The high-level policy documents that they studied seemed to lag a few years behind the explosion of and apparent enthusiasm for carbon language in the media, advertising, as well as in NGOs and government agencies that happened around 2004 (p. 38). The first "carbon compound" in their data occurs in 2005 with "carbon pool", and it is not until 2008 that "carbon compounds" start to proliferate, with terms such as "carbon leakage", "carbon sinks" and "carbon markets" appearing in the texts (p. 38). The discourse on climate change in the high-level policy documents seems to overall be a quite conservative one and one closed to change: it is not flexible, dynamic and open to different frames or different voices (p. 39). At the policy level that Shaw and Nerlich described, they can thus not detect the competing imaginaries that Levy and Spencer (2013) or Liverman (2009) observed over time. Instead, they found a single imaginary of climate change in their discourse that they described as a dichotomous impacted/ non-impacted scenario.

The use of the "carbon language" was also clear in the results of the analysis of Shaw and Nerlich (2015). The "low carbon societies", "low carbon economies" and "low carbon technologies" that were salient in their data suggest the dominant imaginary is one where nothing in the world has changed except the amount of carbon emitted by the activities that define late neo-liberal patterns of economic activity, they state (p. 38). The "carbon compounds" are thus a clear example of the dichotomy articulated in the climate change policy discourse.

### 3.3.3  Sustainable development

The "carbon compounds" that evoke an image of a measurable problem fit into a broader economic frame in climate change discourse. Many metaphors identified by Shaw and Nerlich (2015) fit into this frame that is connected to the themes of balance, sustainable development and ledgers. Balance is a theme that Shaw and Nerlich (2015) identified in the policy documents on climate change that they studied. Different from the metaphors discussed above, the metaphors that fit into the balance theme pose no threat to the continuance of existing social and economic activity and thus focus on the non-impacted side of the dichotomous representation of climate change. Metaphors that fit in this theme are for example "sources and sinks" and "sources and reservoirs", which reinforce the importance of balance. This reminds Shaw and Nerlich (2015) of the cultural analysis of environmental politics that Douglas published in 1966, wherein pollution is a matter out of
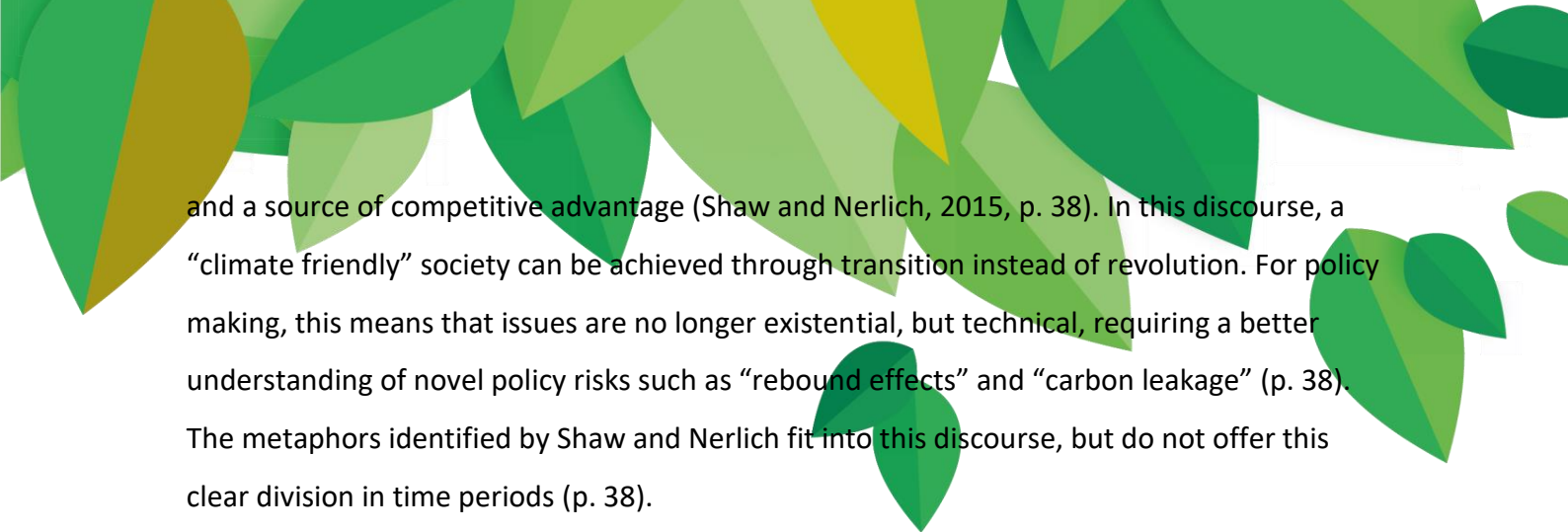
place. The theme of balance in these metaphors results in an image of climate change that can be simplified to carbon being in the wrong place because of human interference through the movement from source to sink and back again, a symptom of the "earth's energy budget being disturbed" (Shaw and Nerlich, 2015. p. 37).

An increasingly salient theme in international climate change policy discourse is "sustainable development". As it is connected to the balance theme, sustainable development likewise focuses on the non-impacted side of the dichotomous representation of climate change. This description for economic activity allows for "business as usual" whilst preventing the earth from crossing the threshold into an impacted state (Shaw and Nerlich, 2015, p. 37). Shaw and Nerlich (2015, p. 38) argue that the sustainable development theme is connected to the idea of a painless "transition" to a low carbon world free of climate impacts. This idea contrasts with the stark dichotomy of the war metaphors described in the previous section.

However, sustainable development is still a dichotomous representation of the world, as it connects with another key dichotomy in climate discourse, namely "cost-benefit". Calculations of costs versus benefits will be necessary for "stable, balanced and sustainable growth" (Shaw and Nerlich, 2015, p. 37- 38). Sustainable development is constituted in the balance frame which fits the previously discussed view of the world where nothing has changed except the amount of carbon emitted by the activities which define late neo-liberal patterns of economic activity (Shaw and Nerlich, 2015, p. 38).

Finally, a connected theme in the economic frame of climate change discourse is the image of the climate system as a ledger, and the double entry bookkeeping method of accountancy (Shaw and Nerlich, 2015, p. 38). The two discourse metaphors of sources and sinks and of costs and benefits fit in this image. Bookkeeping demands every entry to an account to be matched with a corresponding and opposite entry to a different account (p. 38). Costs can only be justified with a corresponding benefit, and the proper state of affairs is for carbon leaving a source to be matched with carbon entering a sink, or a reservoir (p. 38).

In the greater discourse of climate change communication, the period from 2005 and onwards marks the appearance of terms such as "green growth", "clean energy" and "transitions". There is a very strong sense that climate change mitigation is no longer in opposition to the imperative of economic growth, but instead is becoming a driver of growth
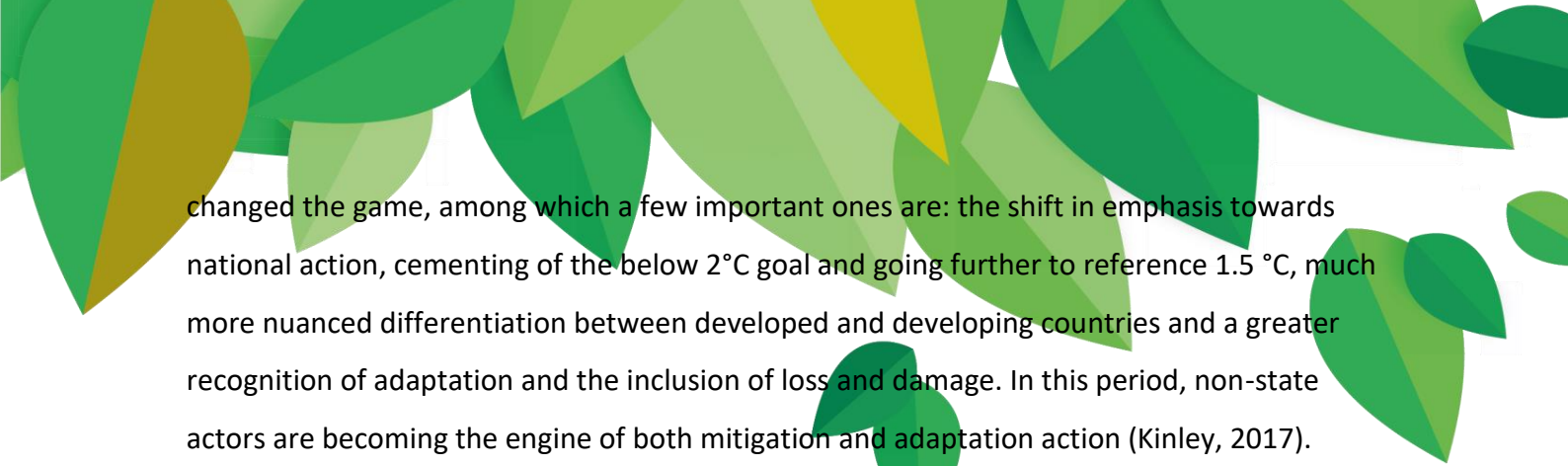
and a source of competitive advantage (Shaw and Nerlich, 2015, p. 38). In this discourse, a "climate friendly" society can be achieved through transition instead of revolution. For policy making, this means that issues are no longer existential, but technical, requiring a better understanding of novel policy risks such as "rebound effects" and "carbon leakage" (p. 38). The metaphors identified by Shaw and Nerlich fit into this discourse, but do not offer this clear division in time periods (p. 38).

### 3.3.4  Increasing ambition: 2010 - 2017

In 2013, the IPCC Fifth Assessment Report (AR5) presented evidence that emission trends and estimates of the effects of existing and proposed policies still lead to a potential average global temperature increase of 4°C above pre-industrial levels by 2100 (IPCC, 2017). Even if Parties fully implemented their pledges, the temperature increase was estimated to reach 3.3°C. The so-called "ambition gap" has became a core negotiations topic, with the aim to close the gap in 2020. The Warsaw COP19 in 2013 brought an important change: a consensus was reached that countries would submit their emission reduction pledges as "intended nationally determined commitments" (INDCs), while allowing for differentiation between developed and developing countries. COP20 in Lima prepared the ground for a legally binding agreement to be taken in Paris with some important decisions: adaptation was recognized as important as mitigation, the National Adaptation Plans were recognized as a way to deliver resilience with tools linking them to the Green Climate Fund and further progress was made in monitoring the INDCs.

COP21 in Paris was the most successful climate change conference ever (Kinley, 2016). This historic meeting in 2015 succeeded in bringing 195 nations under one framework for global decarbonisation. The Paris Agreement sets a target of limiting a global temperature increase to "well below 2°C" and acknowledges the need to aim for a limit of 1.5°C, taking into account the needs of the most vulnerable island nations (the SIDS). The strength of this conference was ensuring that the process towards the agreement was inclusive, resulting in a truly multilateral agreement (The Climate Change Info Hub, 2018b). It succeeded in reaching an agreement by both enough flexibility to bring all Parties on board and maintaining several aspects of the agreement as legally binding.

The Paris Agreement set in motion the right approach and increased ambition level on a large multilateral scale. Kinley (2017) lays out key ways in which the Paris Conference
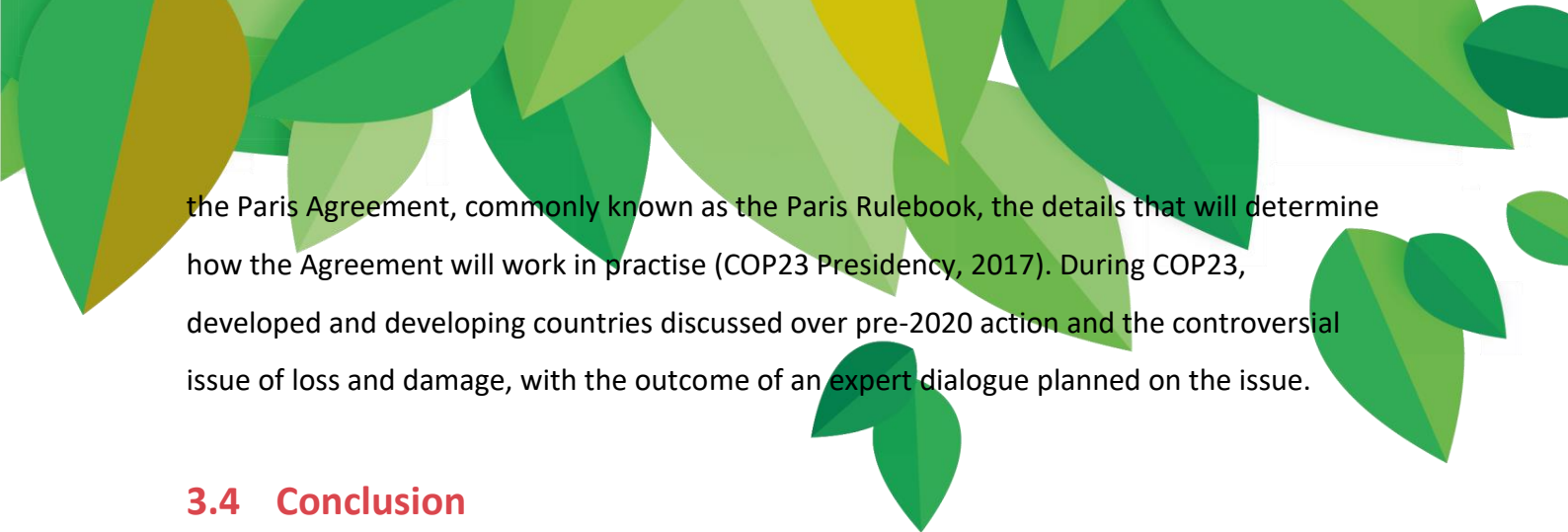
changed the game, among which a few important ones are: the shift in emphasis towards national action, cementing of the below 2°C goal and going further to reference 1.5 °C, much more nuanced differentiation between developed and developing countries and a greater recognition of adaptation and the inclusion of loss and damage. In this period, non-state actors are becoming the engine of both mitigation and adaptation action (Kinley, 2017).

However, many challenges on core aspects of the implementation of the Paris Agreement remain unclear (The Climate Change Info Hub, 2018b). All Parties will need to translate the agreement into concrete actions, with the support of civil society and the business sector. One key tension in the Agreement is the difference between the two global temperature targets referenced namely 2°C and 1.5 °C (Viñuales, 2017, pp. 1-2). The compromise wording in the Paris Agreement of holding the increase of global average temperature to "well below" 2°C as compared with pre-industrial times and "pursuing efforts" to limit the increase to 1.5°C, may potentially have dramatic socio-economic consequences (in case of drastic limitations), or may have major consequences for low-lying small island nations (in case of a higher increase) (Viñuales, 2017, p. 2). In sum, the Paris Agreement provides the directional signal, but it is through its implementation that its ultimate success will be judged (Kinley, 2017).

Since the Paris Agreement, two Conferences of the Parties were held, the COP22 in Marrakech and the COP23 in Bonn. The United Nations Climate Change Conference in Marrakech was also the the first meeting of the parties for the Paris Agreement (CMA1). It was generally considered to be the first practical test, especially after the rapid ratification of the Agreement, which caused it to go into force before the Marrakech meeting. Criticism on this meeting was the inclusion of fossil fuel lobby groups with observer status (Slezak, 2016). The election of Donald Trump in the 2016 United States Presidential race just happened before the meeting and led to talk about what will happen if America abandons climate policy (Victor, 2016).

In 2017, Fiji presided over the COP23 meeting, which was held at the UN campus in Bonn. This was the first time a Small Island Development State (SIDS) assumed the presidency of a UN climate conference. Considering the dramatic consequences for island states, this was an important issue to be raised. This conference was the first conference of the parties since President Donald Trump announced that the U.S. would withdraw from the agreement. During the conference, progress was made in the implementation guidelines for
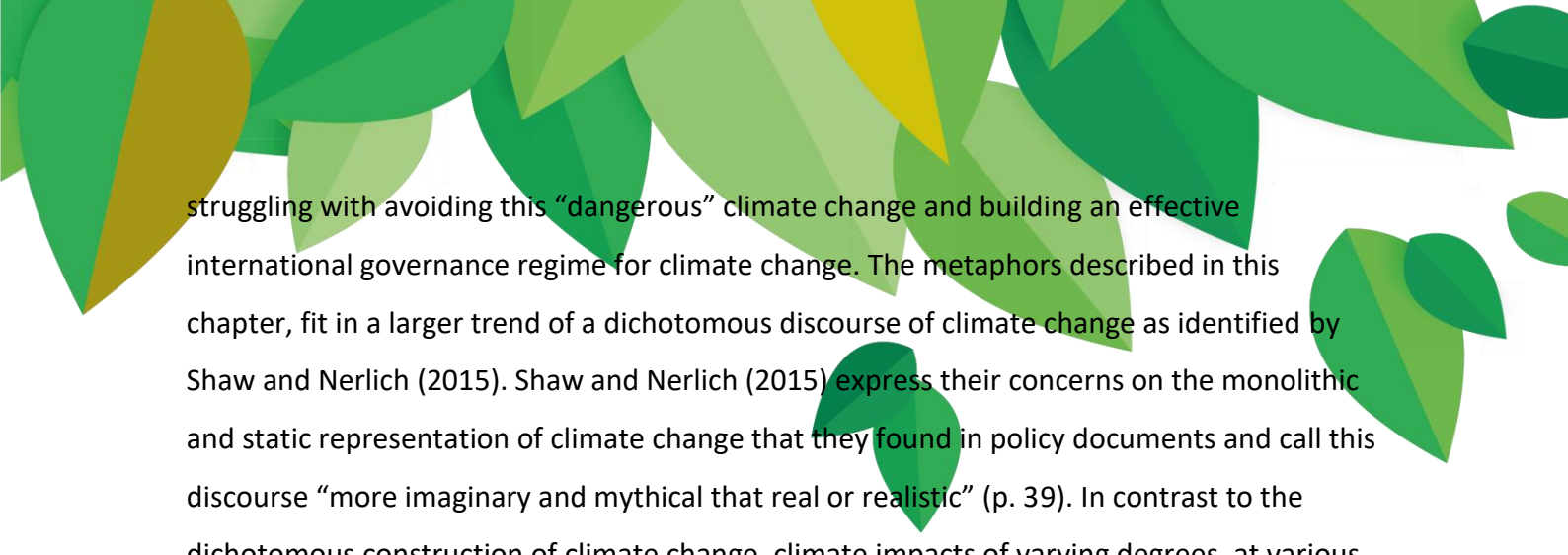
the Paris Agreement, commonly known as the Paris Rulebook, the details that will determine how the Agreement will work in practise (COP23 Presidency, 2017). During COP23, developed and developing countries discussed over pre-2020 action and the controversial issue of loss and damage, with the outcome of an expert dialogue planned on the issue.

## 3.4   Conclusion
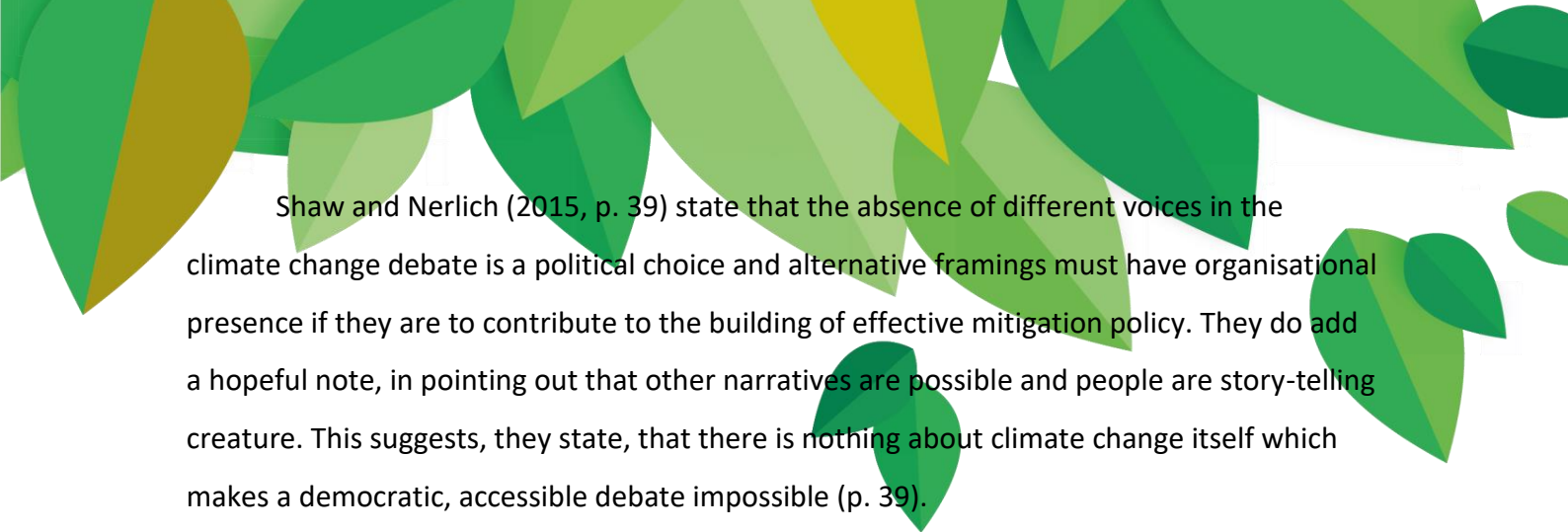
This chapter described the relatively short history of climate policy. This history is marked by some important landmarks, among which are the agreement on the Climate Change Convention at the Earth Summit, which in turn led to the Kyoto Protocol and finally to the Paris Agreement. The historical process of the climate change negotiations that led to these agreements can be described to have had strengths and weaknesses, as pointed out by Gupta (2010, p. 650). He praises the bodies and procedures set up by the negotiation, ensuring that the issue remains on the agenda, and the original Climate Change Convention, which had all the ingredients that could allow the negotiation process to develop and modernize as new scientific information became available and as political will allowed for. On the negative side, he mentions that although this is a global problem, reaching agreement is still subject to state willingness to accept far-reaching measures and there has been no way to actually force states to set targets as justified by the scientific outcomes or implement their commitments. The lack of real statesmanship in the regime has implied poor quality leadership from the developed countries and a reluctance to engage constructively in emission reduction measures by the developing countries. Gupta (2010, p. 651) argues that the climate change will only be addressed "if the laggards turn leaders". Beside the international policy making, Gupta (2010, p. 651) points out that in the process more and more cities and sub-national government authorities were getting involved in developing policies on climate change and there has been increasing recourse to national courts on various legal grounds.

The climate problem becomes more and more serious and international cooperation is crucial. The aim of keeping climate change within 2 degrees celsius has been firmly entrenched in policy discourses since it was originally set in the UNFCCC in 1992 and it is now included in the historic Paris Agreement. However, the likelihood of achieving it has been increasingly called into question (Jordan et al., 2013). Policymakers seem to be

struggling with avoiding this "dangerous" climate change and building an effective international governance regime for climate change. The metaphors described in this chapter, fit in a larger trend of a dichotomous discourse of climate change as identified by Shaw and Nerlich (2015). Shaw and Nerlich (2015) express their concerns on the monolithic and static representation of climate change that they found in policy documents and call this discourse "more imaginary and mythical that real or realistic" (p. 39). In contrast to the dichotomous construction of climate change, climate impacts of varying degrees, at various times and at various places are already assumed to have begun (IPCC, 2014).

The existing metaphors give life to this particular apocalyptic narrative, as we have seen in most metaphors in this chapter. The greenhouse gas metaphor arrived early in climate policy history and mainly had an explanatory function. However, the metaphor might be seen as a starting point of the apocalyptic narrative, as the greenhouse effect and the carbon footprint metaphor have been identified as a way framing climate change in terms of risk and thus already started to focus on the dangers of the problem. While the risk reduction frame in these two salient metaphors seem to induce a connotation of a manageable problem, it does already evoke the dichotomous narrative of climate change in the discourse, as it is a representation of the non-impacted state of the problem, where climate change simply results from carbon being in the wrong place. The tipping point metaphor also build on the narrative of a single dichotomous impacted/ non-impacted scenario. Furthermore, this division between impacted and non-impacted has been displaced onto the two-degree "dangerous limit" and marginalises discussion of impacts that may manifest prior to this level of warming (p. 37). This has the consequence that all effort is to be directed at avoiding the passing of this threshold of two degrees of warming, through the adoption of new technologies, harnessed through a marketisation of carbon. The war metaphors make clear you are either with us or against us. Finally, we saw in this chapter that the dichotomous structure of climate change discourse shows the dominance of economic frames, such as appears from the image of climate change as a ledger or a cost-benefit analysis. Shaw and Nerlich (2015, p. 35) argue that there is nothing intrinsic to anthropogenic changes in the chemical composition of the atmosphere which demands that decisions about whether and how to respond should be made solely through economic frames. Rather, they suggest that focusing attention on climate change as an economic problem is a conscious political act, performed primarily through language.

Shaw and Nerlich (2015, p. 39) state that the absence of different voices in the climate change debate is a political choice and alternative framings must have organisational presence if they are to contribute to the building of effective mitigation policy. They do add a hopeful note, in pointing out that other narratives are possible and people are story-telling creature. This suggests, they state, that there is nothing about climate change itself which makes a democratic, accessible debate impossible (p. 39).

The constancy of the dichotomous metaphors in policy reports raises the question whether the same pattern will be shown in speeches at the UNCCC COP-meetings. This might be expected, since these policy reports form the fundamental input of the meetings. The public of these speeches is twofold: they are not only held for climate change policymakers at the conference itself, but are often (or parts or soundbites out of them) picked up by the media. This twofold public might mean that the language used in the policy reports are not mainly defining the content of the speeches, but the language is geared towards a broader public. The metaphor analysis in this thesis will focus on this question: do the speeches in the UNCCC COP-meetings show a constancy in dichotomous metaphors over time or is there a greater variety in competing frames?

# 4 Methods

## 4.1 Introduction
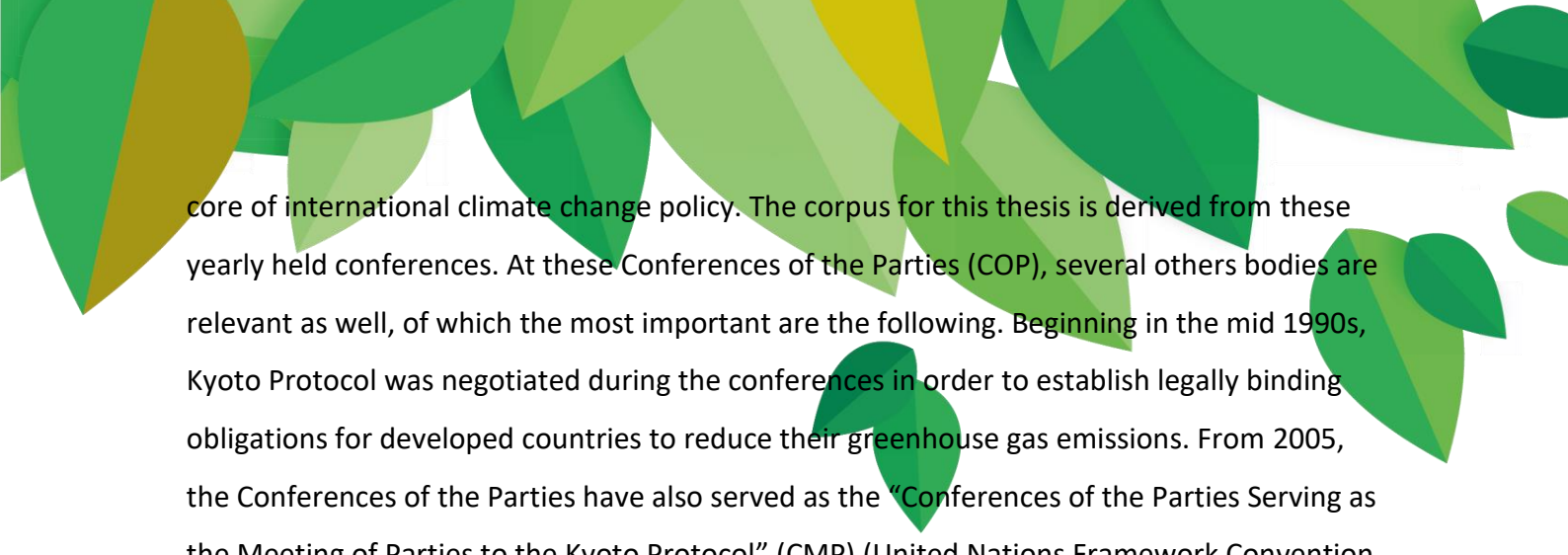
In this chapter, I present the outline of the method I used in order to analyse metaphor in a corpus of speeches. This method is a combination of the tool that Steen et al. (2010) presented for linguistic metaphor analysis, the MIPVU, and qualitative thematic analysis as described by Braun and Clarke (2006). By using these methods in conjunction, my analysis aims not to give an exhaustive inventory of metaphors used in my corpus, but instead aims to detect the most salient discourse metaphors. In this way, I hope to come to a better understanding of the role of metaphor in the discourse of climate change policy.

The chapter is structured as follows. In 4.2, the corpus of speeches is described. In 4.3, the methods for analysis used, MIPVU and qualitative thematic analysis, are explained. In 4.4, I discuss the choices that I made during the analysis of the corpus by means of a few examples.

## 4.2 The corpus

The corpus in this thesis consists of speeches held at the Conferences of the Parties (COP) to the United Nations Framework Convention on Climate Change. The transcripts of the speeches are provided by the United Nations Climate Change Convention and are available on their website (UNCCC, 2018). These speeches are held by world leaders, among whom are both high UN-officials and presidents of participating countries. The time span covered by the speeches analysed is 2013 until 2017, starting with the COP19 in Warsaw finishing with the COP23 in Bonn. This timeframe is chosen because 2013 is the first year after the launch of the international sustainable development goals (SDG's) at the 2012 United Nations Conference of Sustainable Development (also commonly called the RIO+20 or Rio Earth Summit 2012), and because the time span now includes the years before and after the Paris Agreement at the COP21 in 2015. The corpus includes speeches available from the conferences, covering speeches of the opening ceremonies and the high-level segment statements at leader's events. Only speeches that are available in English are included.

As described in 3.1, the formal meetings of the United Nations Convention on Climate Change Parties to assess progress in dealing with climate change have since long been the

core of international climate change policy. The corpus for this thesis is derived from these yearly held conferences. At these Conferences of the Parties (COP), several others bodies are relevant as well, of which the most important are the following. Beginning in the mid 1990s, Kyoto Protocol was negotiated during the conferences in order to establish legally binding obligations for developed countries to reduce their greenhouse gas emissions. From 2005, the Conferences of the Parties have also served as the "Conferences of the Parties Serving as the Meeting of Parties to the Kyoto Protocol" (CMP) (United Nations Framework Convention on Climate Change, 2018a). Parties to the Convention that are not parties to the Protocol can participate in Protocol-related meetings as observers. From 2011, the meetings have also served to negotiate the Paris Agreement until its conclusion in 2015. From 2016, the Conferences of the Parties have also served as the Meeting of Parties to the Paris Agreement (CMA) (United Nations Framework Convention on Climate Change, 2018a).

The corpus determined consists of 25 speeches, all within the period 2013 until 2017. The list of speeches can be found in Annex 1. My considerations in identifying the corpus were the following. First, there were practical limitations: not all speeches held at the conference were always made available on the UN-website; this varies from year to year. Also speeches by some countries were held in their native language (Arabic, Spanish etc.), and my thesis aims to investigate the English discourse. Thus, this selection of speeches is not an exhaustive list of all speeches held at the UN climate conferences, but rather a representative selection of the speeches held in these years.

Second, I included speeches from UN-leaders in the same position over the course of the years. The UN represents the common voice of all participating countries and is the institution that is leading in global climate policy. They are therefore the main source of information on climate policy for media and other organizations that engage in the debate. The speeches of the UN and UNFCCC were held during the opening ceremonies of the conferences.

Third, I selected speeches from both developed and developing countries that are in line with the polluting countries and the victims of the pollution. I chose these countries, because they have one thing in common: their stakes are up high. These countries are the ones that will be involved in the negotiations and the debate most, and the language in the speeches held by these countries will be picked up by media most. For COP23, speeches of heads of state were not available on the UNFCCC website, so speeches from countries in this

year are absent in my corpus.

For the countries that are most polluting, I consulted the data of Climate Watch, an online platform with open climate data managed by the World Resources Institute (World Resource Institute, 2017). It lists China as the largest emitter on global greenhouse gases, followed by the United States. Therefore, these are the countries that I collected speeches of. In 2014, at COP20, China's speech was held in Chinese, and therefore not used in my corpus. Under China in the list of biggest polluters was the EU, followed by India. Since the EU statement in this year is very short and India seemed interesting being both a great polluter and a victim of pollution, I chose the speech of India in this year.

For the countries that are the largest victims of pollution, I consulted two resources, representing both the direct and the indirect effects of climate change. I define direct effects of climate change as weather-related loss events. For these effects, I used the Global Climate Risk Index, an annually published report published by non-governmental organization Germanwatch. In the years 1997 to 2016, they identified Honduras, Haiti and Myanmar as the most affected countries in the 20-year period (Eckstein, Künzel and Schäfer, 2017, p. 9).They are followed by Nicaragua, the Philippines, and Bangladesh. In this order, I searched for the speeches of the representatives of these countries on the UN climate change conferences. Some were not suitable for the reason of language (Honduras' Nicaragua's speeches were held in Spanish, the speeches of Haïti in French) bringing Myanmar on the top of my list. Their speech at the COP21 is not made available online, which is why I chose the speech of the Philippines in that year.

I defined indirect effects of climate change as drought and food scarcity, in these cases that they are likely to be attributed to climate change. A region in which droughts have become more widespread, prolonged and frequent in the past four decades, is the MENA region (Middle East and North Africa). Recent scientific studies published in Nature Climate Change show that extreme temperatures are likely to approach and exceed a critical threshold in this region under the business-as-usual scenario of future greenhouse gas concentrations, severely affecting human habitability in the region (Pal and Eltahir, 2016). Since many of the countries in this region published their speeches in their native language, my selection in these speeches was mainly based on whether the speech was held in English. I selected speeches from a different countries to cover the region as well as possible, making a selection of speeches from Iran, Saudi Arabia, Egypt and the United Arab Emirates. These

countries have their stakes up high in the climate policy debate for another reason, being large oil producers and having their economies highly depending on this industry.
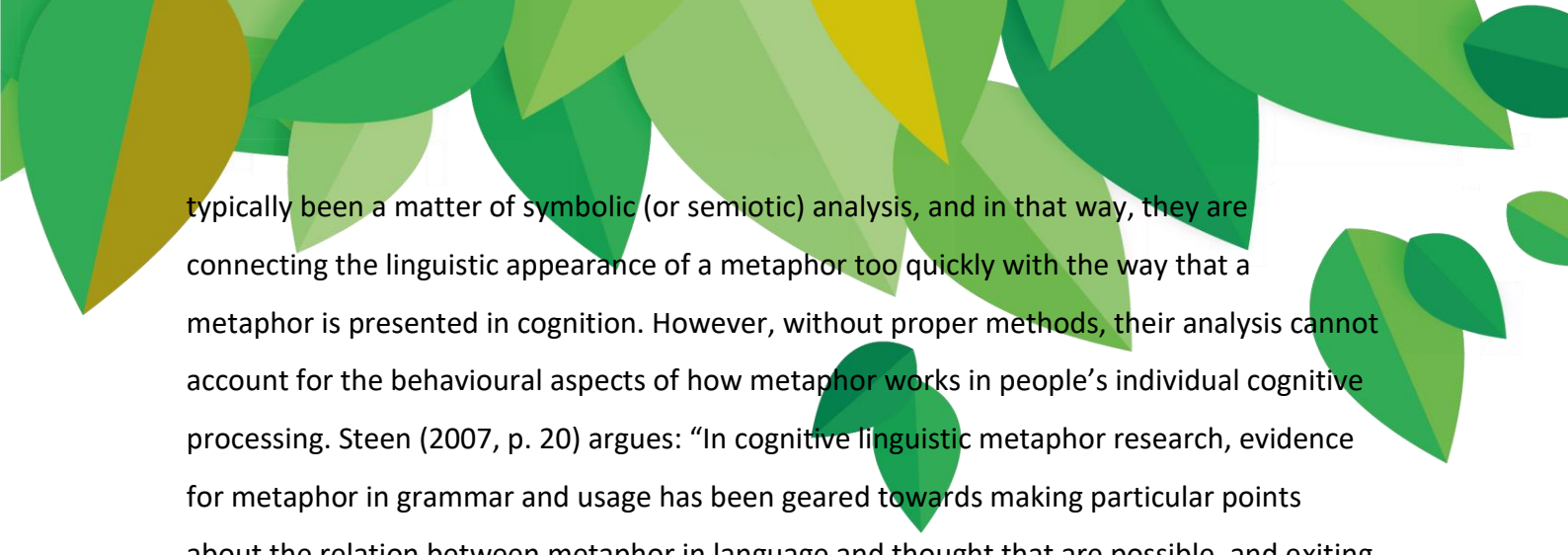
## 4.3 Analysis

The 25 speeches were analysed using metaphor analysis as described by Steen et al. (2010) in their tool for metaphor analysis, MIPVU. This method focuses on linguistic rather than conceptual metaphor and I especially focused on policy-relevant metaphors, or generative metaphors in Schön's terms. I used this metaphor analysis in conjunction with qualitative thematic analysis as described by Braun and Clarke (2006) in order to identify both metaphors and themes. This combination of metaphor and thematic analysis is something I adopted from Shaw & Nerlich (2015), who are focusing on policy-relevant metaphors as well, in their case in climate change policy reports.

The reason that combined metaphor analysis with a qualitative thematic discourse analysis is that it will better serve my goal to better understand the discourse in which climate change is discussed at United Nations climate change conferences. Themes and metaphors strongly interact and what is a theme for one reader might be a metaphor for another. While making an analysis of policy-relevant metaphors, often the key metaphors identified show many similarities with overarching themes. The reason that these metaphors and themes are interesting for analysis is similar as well: they open up a new perspective in the world, generate new ways of seeing, speaking and acting. Shaw & Nerlich (2015, p. 37) state about these themes and metaphors: "They should not remain tacit, as they form the discursive background if not bedrock against which or on which climate change policies are made".

### 4.3.1 MIPVU
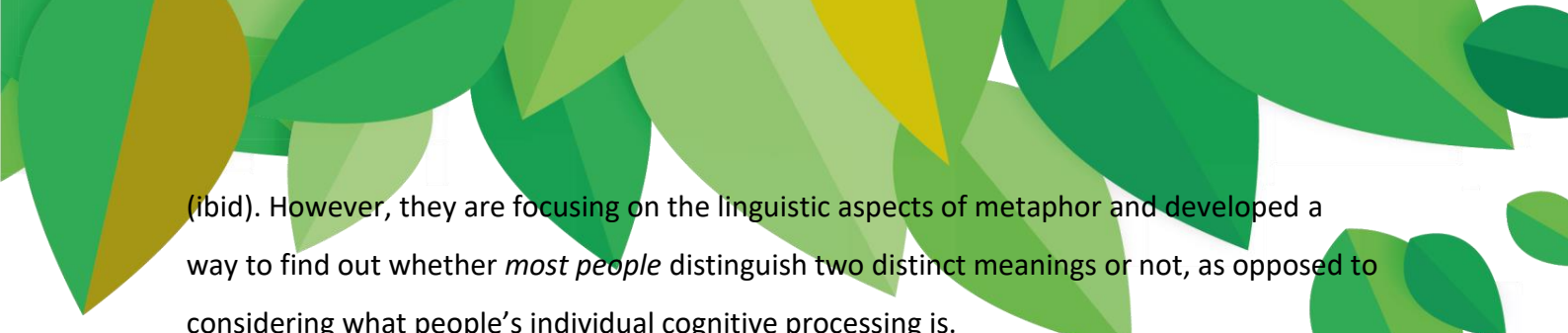
In chapter 2, I described how Steen (2008) clearly separates three dimensions of metaphor: the linguistic form, the conceptual structure and the communicative function. Steen (2008) argues that not all metaphors are necessarily processed metaphorically by setting up a cross-domain mapping (by comparison). This complicates the analysis of cognitive metaphor, reflected in fundamental methodological criticism that has been voiced about the most influential school of metaphor since the 1980s, cognitive linguistics (Steen et al. 2010, pp. 1-2; cf. Richie, 2004; Haser, 2005). A main critique is that cross-domains mappings have

typically been a matter of symbolic (or semiotic) analysis, and in that way, they are connecting the linguistic appearance of a metaphor too quickly with the way that a metaphor is presented in cognition. However, without proper methods, their analysis cannot account for the behavioural aspects of how metaphor works in people's individual cognitive processing. Steen (2007, p. 20) argues: "In cognitive linguistic metaphor research, evidence for metaphor in grammar and usage has been geared towards making particular points about the relation between metaphor in language and thought that are possible, and exiting, but these are not inevitable, or even self-evident".

Steen et al. (2010) argue that it is important that metaphor identification meet some generally accepted standards for metaphor quality. Their suggestion is that empirical research should treat symbolic (linguistic) and behavioral (cognitive) aspects of metaphor as competing accounts. In this thesis, I do not specify the nature of underlying conceptual structures, but instead focus on the linguistic forms of metaphor. Steen et al. (2010) present their own tool for large-scale linguistic metaphor identification in natural discourse that is valid and reliable, the Metaphor Identification Procedure-Vrije Universiteit (MIPVU). The research in this thesis makes use of this tool for the identification of metaphor. The basic idea of this method is that it counts an expression as metaphorical when the expression includes an indirect meaning and the occurrence of these two meanings can be explained by the fact that there is some sort of similarity between the two meanings and it is likely that these meanings are connected in cognition by cross-domain mapping.

In order to present a valid and reliable method for linguistic metaphor identification, Steen et al. (2010) make some assumptions about metaphor. I will shortly discuss the ones relevant for my research here. First, as said, MIPVU focuses on the linguistic analysis of metaphor. The definition for metaphorical meaning in linguistic analysis is "indirect meaning which is potentially motivated by similarity or cross-domain mapping" (Steen et al., 2010, p. 9). The emphasis is on "potentially", which involves investigating whether there is some contrast between two different meanings in the potential metaphor (a conceptual meaning and a more basic meaning, this will be explained later) (p. 9). A subsequent conceptual analysis would have to show that there are indeed two conceptual domains, but this is not the goal of Steen et al. (2010). This does not mean that they exclude all conceptual issues (2010, p. 9). All comparison is a conceptual act, including comparison between word senses, and theoretically, metaphor is defined as a mapping across distinct conceptual domains
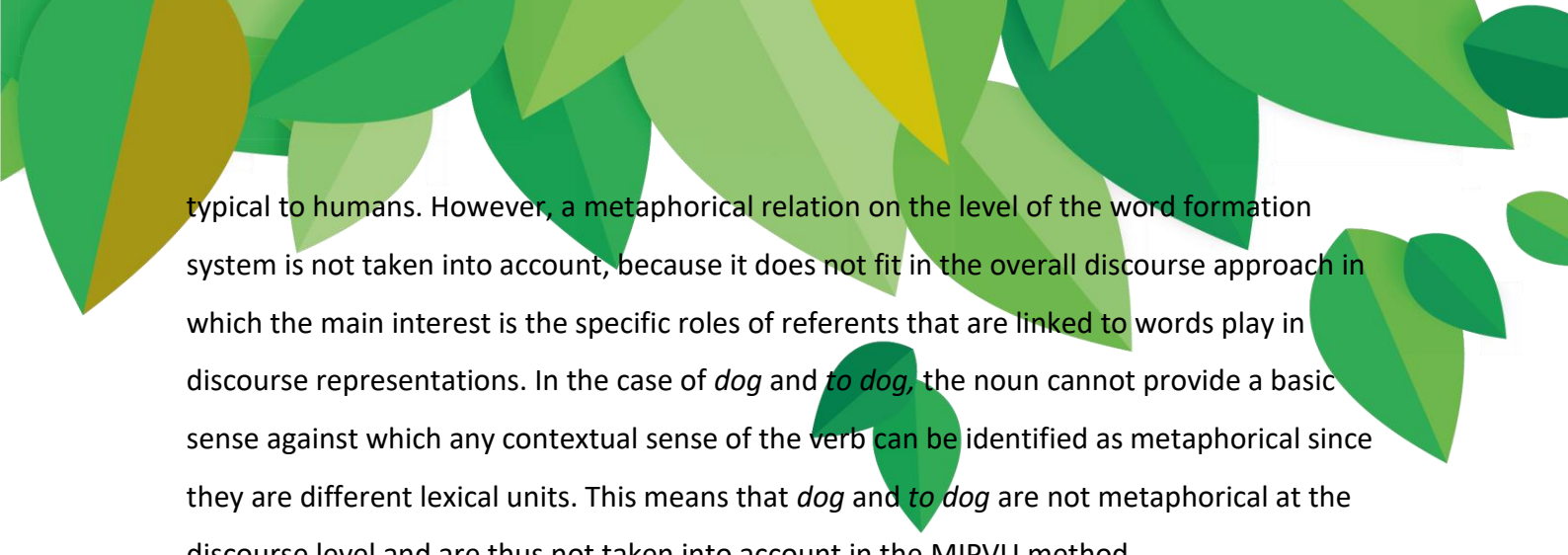
(ibid). However, they are focusing on the linguistic aspects of metaphor and developed a way to find out whether *most people* distinguish two distinct meanings or not, as opposed to considering what people's individual cognitive processing is.

Secondly, they approach the cognitive processing of *most people* as closely as possible by adopting the position that their language user is the idealized contemporary native speaker of English as represented in the description of English by the dictionary of a particular period. The complete and culturally sanctioned representation of the knowledge about the English lexicon is reflected in a dictionary. Therefore, I have chosen to use a corpus-based learners' dictionary *Macmillan English Dictionary for Advanced Learners* (MEDAL) (Rundell and Fox, 2002) in my analysis of metaphor. This means that neither historical metaphor nor metaphor in morphology, phraseology, and syntax are considered in the MIPVU procedure, since the more basic senses of the basic meanings of these are simply not available to the typical contemporary language user (Steen et al., 2010, p. 33). Only the level of the word, or lexical unit, is considered in this thesis.

Thirdly, in order to capture all linguistic forms of metaphor, Steen et al. (2010) do not restrict their attention to indirect language use, but also include direct expressions (including other forms of metaphor such as simile, analogy, and so on) and implicit expressions (by substitution and ellipsis). In cases of a direct or implicit linguistic form, there is still an indirect conceptualization that causes some form of referential discontinuity in discourse. This may happen in explicit invitations for comparison, as in Shakespeare's "Shall I compare thee to a summer's day?" it may extend across a number of utterances in a row or may be marked by metaphor markers such as "like". Indirect conceptualization may even remain implicit. An example by Steen et al. (2010, p. 15) of implicit metaphor is from the British National Corpus (file A9J): "Naturally, to embark on such a step is not necessarily to succeed immediately in realising it ". Here *step* is related to metaphor, and *it* receives a code for implicit metaphor. The language of it does not signal the need for nonliteral comparison, but the position of the cohesive element, referring to the previous metaphorical concept, makes it metaphorical.

Finally, in the MIPVU tool adopts a discourse approach, which means they analyse word classes and not lemmas (Steen et al., 2010, p. 16). For example, the relation between a noun such as *dog* and the verb *to dog* is clearly metaphorical at the level of the language system, as the noun posits an animal referent, while the verb refers to some action that is
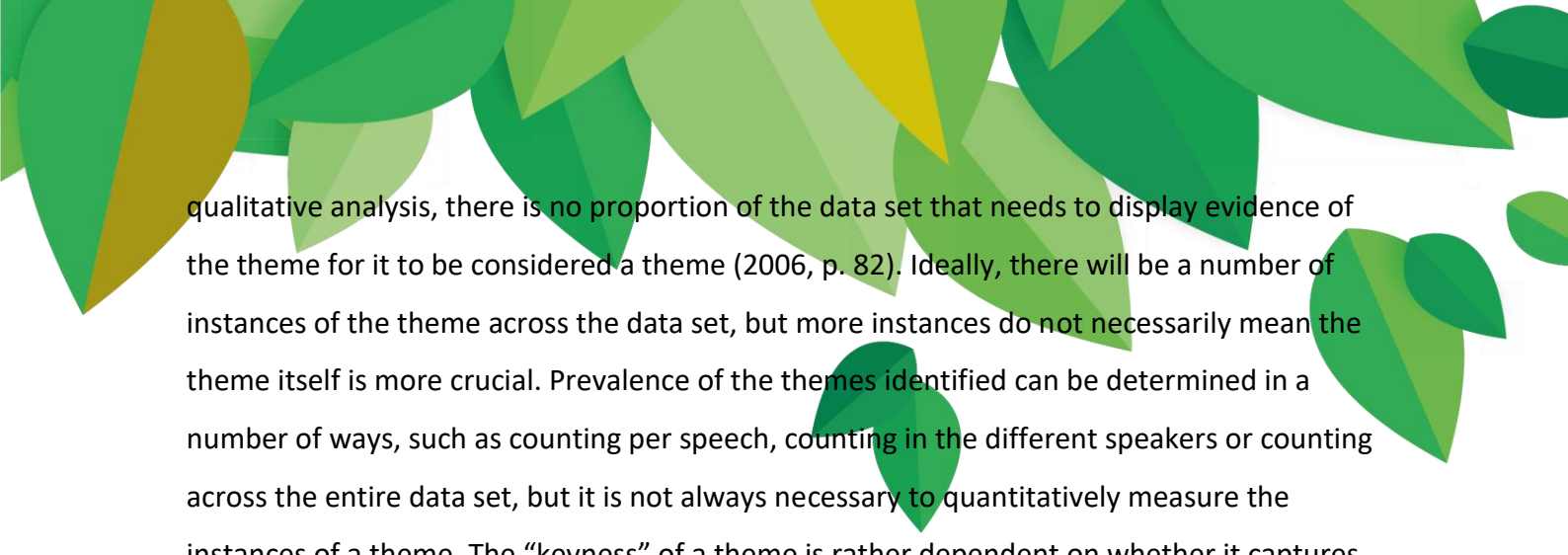
typical to humans. However, a metaphorical relation on the level of the word formation system is not taken into account, because it does not fit in the overall discourse approach in which the main interest is the specific roles of referents that are linked to words play in discourse representations. In the case of *dog* and *to dog,* the noun cannot provide a basic sense against which any contextual sense of the verb can be identified as metaphorical since they are different lexical units. This means that *dog* and *to dog* are not metaphorical at the discourse level and are thus not taken into account in the MIPVU method.

The metaphor identification procedure presented by Steen et al. (2010) is an application and refinement of the first explicit and systematic procedure for linguistic metaphor identification in language usage that has been tested for its reliability, the Metaphor Identification Procedure, or MIP, developed by the Pragglejaz Group (2007). The research of Steen et al. led to an extended version, which they call MIPVU; VU being an abbreviation of Vrije Universiteit, the Dutch name of the university at which the research was carried out. MIPVU is the most precise method for the identification of linguistic metaphor in discourse, which is why it was used for the research executed in this thesis. Steen et al. (2010, pp. 25-42) present a complete procedure for finding "metaphor-related words" as an autonomous tool. With "metaphor-related words" (MRW) they mean "all words in discourse that can be taken to be lexical expressions of underlying cross-domain mappings". They suggest it may be used as a reference manual by anyone who aims to find metaphor-related words in usage (p. 25). The goal of finding metaphor in discourse can be achieved in systematic and exhaustive fashion by adhering to a basic set of guidelines. In the analysis of my thesis, I used these guidelines (described in Steen et al., 2010, pp. 25-42).

### 4.3.2  Qualitative thematic analysis
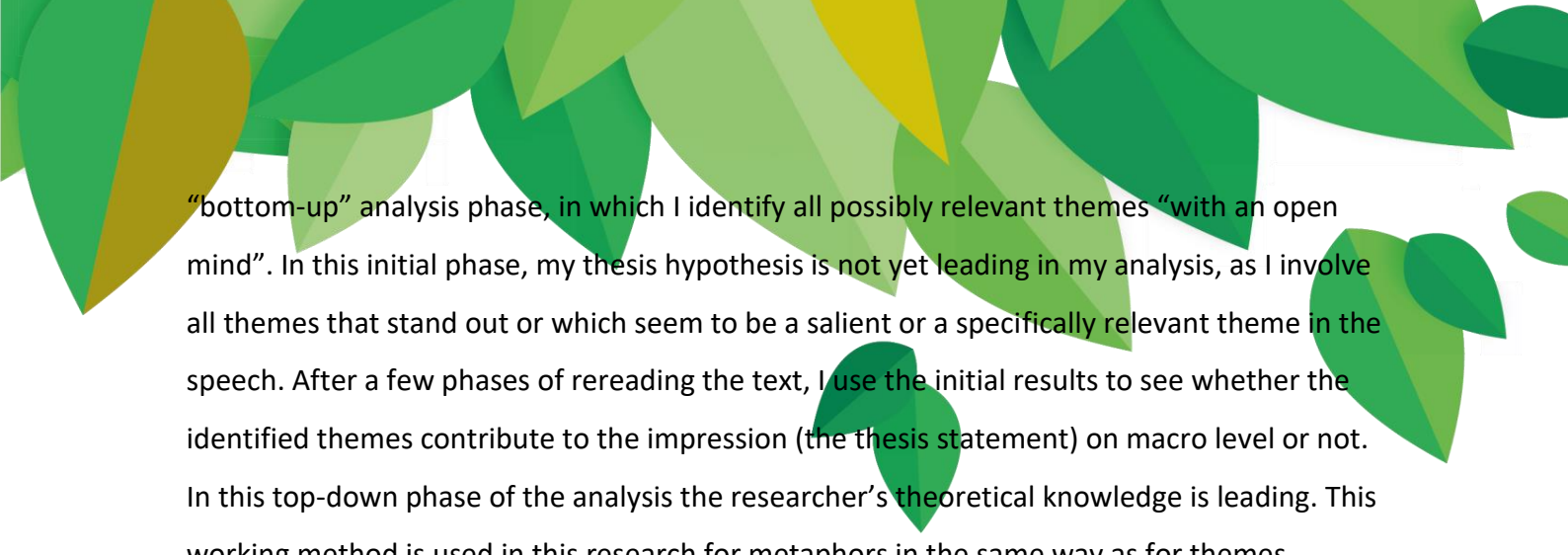
Thematic analysis should, according to Braun and Clarke (2006, p. 78), be seen as a foundational method for qualitative analysis. Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail (2006, p. 79). A theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set (Braun and Clarke, 2006, p. 82).

In qualitative thematic research, a few decisions need to be made before analysis of the data begins. An important question to address is what counts as a theme. As this is

qualitative analysis, there is no proportion of the data set that needs to display evidence of the theme for it to be considered a theme (2006, p. 82). Ideally, there will be a number of instances of the theme across the data set, but more instances do not necessarily mean the theme itself is more crucial. Prevalence of the themes identified can be determined in a number of ways, such as counting per speech, counting in the different speakers or counting across the entire data set, but it is not always necessary to quantitatively measure the instances of a theme. The "keyness" of a theme is rather dependent on whether it captures something important in relation to the overall research question (p. 82). This means that when a speech contains a certain key phrase multiple times, I only write it down once in my results. Braun and Clarke (2006, p. 82) state that researcher judgement is necessary to determine what a theme is and their initial guidance around this is that you need to retain some flexibility, and rigid rules really do not work. Just like the MIPVU method of Steen (2010), Braun and Clarke (2006, p.87) provide a step-by-step guide for doing thematic analysis, that consists of five steps: familiarizing yourself with your data (1), generating initial codes (2), searching for themes (3), reviewing themes (4), defining and naming themes (5) and producing the report (6). A more detailed description can be found in Braun and Clarke (2006, p. 87).

Another methodological decision to be made is whether the identification of the themes is done in an inductive or "bottom-up" way, or in a theoretical or deductive or "top down" way. Where an inductive analysis is a data-driven process of coding, without trying to fit into pre-existing coding frame or the researcher's analytic preconceptions (Braun and Clarke, 2006, p. 83), a theoretical thematic analysis would tend to be driven by the researcher's theoretical or analytic interest (p. 84). For my analysis, I use a method that is described by Van Leeuwen (2015) (based on Leech & Short, 2007, pp. 66-94) for a stylistic analysis which combines different methodological principles and is characterized by combining systematic bottom-up and top-down analysis. The approach is intended for those cases in which a macro-level impression is leading for the analysis (Van Leeuwen, 2012, p. 36). This is a useful working method for the research in this thesis, since my research derives from such an impression on macro level, namely the thesis hypothesis: *Metaphors in speeches on the United Nations climate change conferences are part of a dichotomous discourse of climate change communication*. At the same time, this method does allow for a systematic analysis of the corpus. What this means for my analysis, is that I start with a
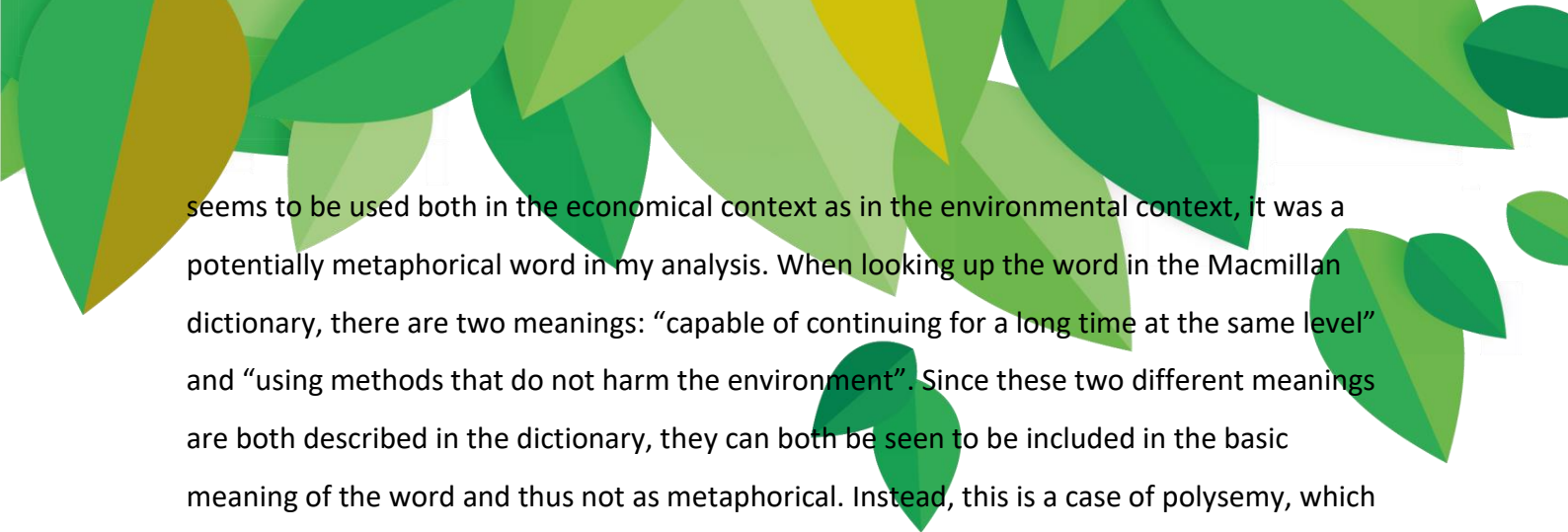
"bottom-up" analysis phase, in which I identify all possibly relevant themes "with an open mind". In this initial phase, my thesis hypothesis is not yet leading in my analysis, as I involve all themes that stand out or which seem to be a salient or a specifically relevant theme in the speech. After a few phases of rereading the text, I use the initial results to see whether the identified themes contribute to the impression (the thesis statement) on macro level or not. In this top-down phase of the analysis the researcher's theoretical knowledge is leading. This working method is used in this research for metaphors in the same way as for themes.

### 4.3.3  Illustration of analysis

Analysing the data with the combination of metaphor analysis and qualitative thematic analysis means that I read all the speeches in my corpus and then extracted keywords of themes and candidate metaphors. Before I started the analysis, I read the corpus a few times to familiarize myself with the data. While doing this, I highlighted the first instances of candidate themes and metaphors that I recognized. I color-coded the themes in orange, the metaphors in purple and the instances of doubt in pink. In the process of rereading the corpus, the prominent themes in the discourse became clearer. I used the MIPVU method to establish which metaphors I included in my results. After this initial phase, I systematically extracted the themes and metaphors identified from the speeches and entered them into a spreadsheet in which the rows represented the speeches and the columns were filled with the instances of themes and metaphors. When all themes and metaphors were gathered in the spreadsheet, I started to identify certain patterns in the data. The overview of pervasive themes and metaphors in the speeches showed recursive terms and groups of themes and metaphors that are related.

In this process, the distinction between overarching themes and metaphors is not always easy to make. What was leading in my decision to code a word as metaphorical was whether I could find a more basic meaning of the word in the dictionary, different from the contextual meaning in the speech, following the MIPVU method. In deciding whether the contextual meaning is different from a basic meaning of the word, I consulted the Macmillan English Dictionary for Advanced Learners (MEDAL) (Rundell and Fox, 2002). When there is a more basic meaning, it should be sufficiently distinct from the contextual meaning, and it should be possible to relate it to the contextual meaning by some form of similarity.

An often-used term in the climate change discourse is "sustainability". Since the word

seems to be used both in the economical context as in the environmental context, it was a potentially metaphorical word in my analysis. When looking up the word in the Macmillan dictionary, there are two meanings: "capable of continuing for a long time at the same level" and "using methods that do not harm the environment". Since these two different meanings are both described in the dictionary, they can both be seen to be included in the basic meaning of the word and thus not as metaphorical. Instead, this is a case of polysemy, which could have been the result of a career of a metaphor that has now been conventionalized (see chapter 2.3), but is now not a case of cross-domain mapping on a linguistic level. Another example of where I was not sure whether to code a word as metaphor, was in the expression "to tackle climate change", I initially identified "to tackle" as being part of the "war theme" that are often used to describe our efforts to reduce climate change. However, while consulting the Macmillan dictionary, I learned that one of the meanings is "to make an organized and determined attempt to deal with a problem, often a social problem such as crime or unemployment". This meaning corresponds with the contextual meaning of "to tackle" that I found in the speech, and so I did not include it as a metaphor. I did not include phrases with "to tackle climate change" in the war theme category at all either, because none of the meanings of "to tackle" in the dictionary had any relation to war. This is different for the word "fight", which was also often used in my corpus in combination with climate change, where "fight a war/ battle" was part of the first meaning of the word in the Macmillan dictionary. Thus I did include this phrase in the war theme category, however not as metaphor, as another meaning of "fight" in the Macmillan dictionary corresponded to the contextual meaning of "fighting climate change": namely "to try in a very determined way to achieve something".

In contrast, I did code "pathway" as a metaphor. This word is widespread in the speeches to describe a certain sequence of actions, a way of working towards a common goal. Although initially I thought that this meaning might be a basic meaning listed in the dictionary, the only meaning I found in the Macmillan dictionary is "a path that you can walk on". In this case there clearly is a more basic meaning that is different from the contextual meaning, and these meanings can be related to each other in some form of similarity (they are both describing a continuum with a starting point and a destination). Therefore, I coded this word as a metaphor.

# 5    Results

## 5.1   Introduction

This chapter describes the results that followed from my metaphor and qualitative thematic analysis of 25 speeches held at the United Nations climate conferences in the year 2013 - 2017. In general, I found that the most salient dominant metaphors and themes in the corpus fitted in the dichotomous discourse that was formulated in my thesis hypothesis. In line with what Shaw and Nerlich (2015) found in policy documents, the 25 speeches analysed represented a binary representation of the world. The themes and metaphors draw on the clear division between a world that is impacted by climate change and a world that is not impacted by it. On the one hand, bringing to mind a peaceful image of a non-impacted state of the climate in which, through "sustainable development" we will be able to keep "business as usual" by a harmonious transformation that will simply put the carbon that was out of place back to a state of balance. On the other hand, evoking the image of an impacted world to mind, leads to using metaphors and themes that aim at avoiding at all cost to hit a "threshold" or "two degree dangerous limit", building on an ominous feeling what might happen then without actually describing it, marginalising discussions of impacts that might actually happen prior to this. This involves suggestions to doom scenarios, a single target approach focusing on the destination more than on the journey and putting the huge burden of responsibility to avoid all this on the shoulders of the policymakers. In section 5.2 and 5.3, respectively, the different themes and metaphors related to either a narrative of a non-impacted state or a narrative of an impacted state is described. Further considerations on results that came out of the analysis are described in 5.3.

Since the results in this chapter are results from a qualitative analysis, I cannot assure that another researcher would come up with the exact same themes and metaphors, nor that it is an exhaustive list. I presented the themes and metaphors alternately, because I based the sequencing of the sections in the chapter on salience in the corpus. I assessed a phrase to be metaphorical when it meets the criteria set up by the MIPVu method as described in chapter 4. Selection of themes was made following the qualitative thematic analysis by Braun and Clarke (2006) (see chapter 4), being not only based on quantitative

criteria, but also on its relation to the research question. The description of the results are illustrated with quotes from the speeches that represent the themes and metaphors as accurate as possible. I added italics to these quotes to emphasize the relevant parts.
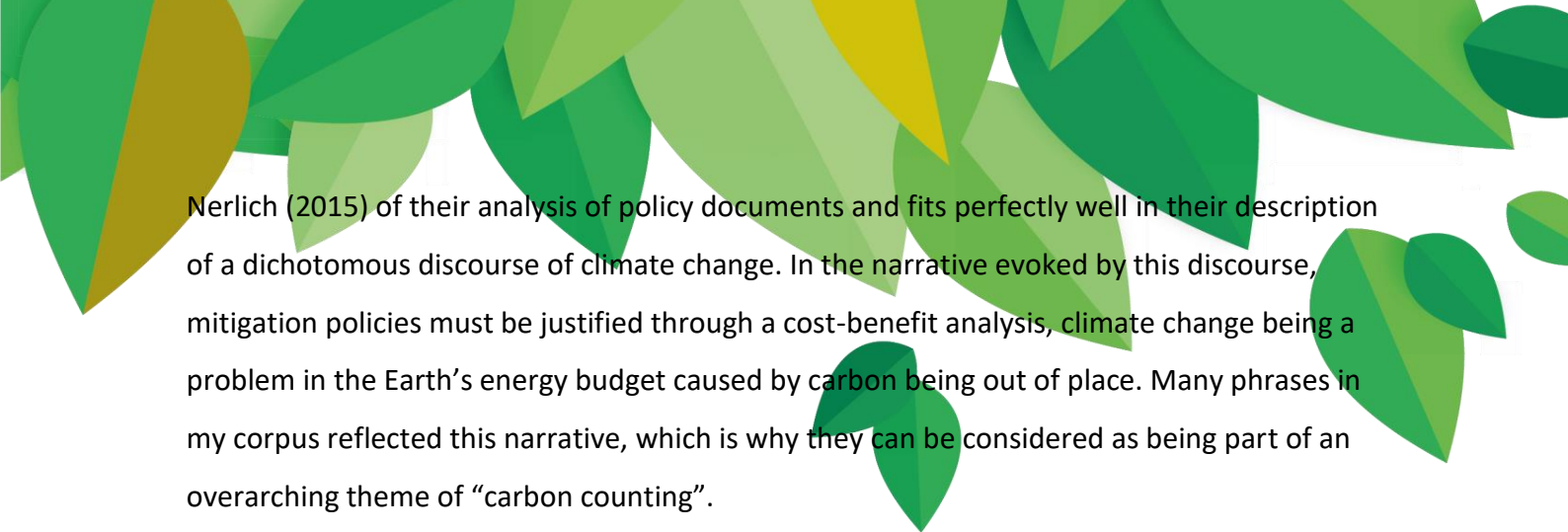
## 5.2 The non-impacted state

### 5.2.1 Carbon counting

In the speeches, the dichotomous discourse is constructed partially by themes and metaphors that represent a world that is not impacted by climate change. In this world, the climate change problem is very manageable. It sketches an image of the world where nothing in the world has changed except the amount of carbon emitted by economic activities. Climate change is due, in this narrative, to a budget being disturbed, which can be solved by simply changing the budgets with a cost-benefit analysis. In this way, climate change discourse stays within the economics frame, suggesting that economic activity is not in opposition to mitigating climate change.

The use of "carbon compounds" was described in chapter 3 as linguistic combinations of two or more words around "carbon" as a lexical hub. While Koteyko et al. (2010; 2012) identified that these "carbon compounds" proliferated around 2004, the high-level policy documents that Shaw and Nerlich (2015) studied seemed to lag a few years behind the explosion of and apparent enthusiasm for carbon language in the media, advertising, as well as in NGOs and government agencies, as they found an increase in the compounds from 2008 onwards. My corpus showed "carbon compounds" spread out through the years. Examples of the two-word-compounds include "carbon pollution", "carbon intensity", "carbon sinks", "carbon space", "carbon emissions", "carbon market", "carbon pricing" and "carbon footprint". Many more three-word combinations are made as well, mostly including "low carbon…", such as "low carbon consumption mode", "low carbon economy", "low-carbon future", "low carbon development pathways", "low carbon green growth" and "carbon market development".

The "carbon compounds" in de corpus are thus diverse and salient throughout the data. They all seem to fit in a narrative where the market, in a form of carbon trading, is the best way to reduce the climate change danger. This corresponds to the results of Shaw and

Nerlich (2015) of their analysis of policy documents and fits perfectly well in their description of a dichotomous discourse of climate change. In the narrative evoked by this discourse, mitigation policies must be justified through a cost-benefit analysis, climate change being a problem in the Earth's energy budget caused by carbon being out of place. Many phrases in my corpus reflected this narrative, which is why they can be considered as being part of an overarching theme of "carbon counting".
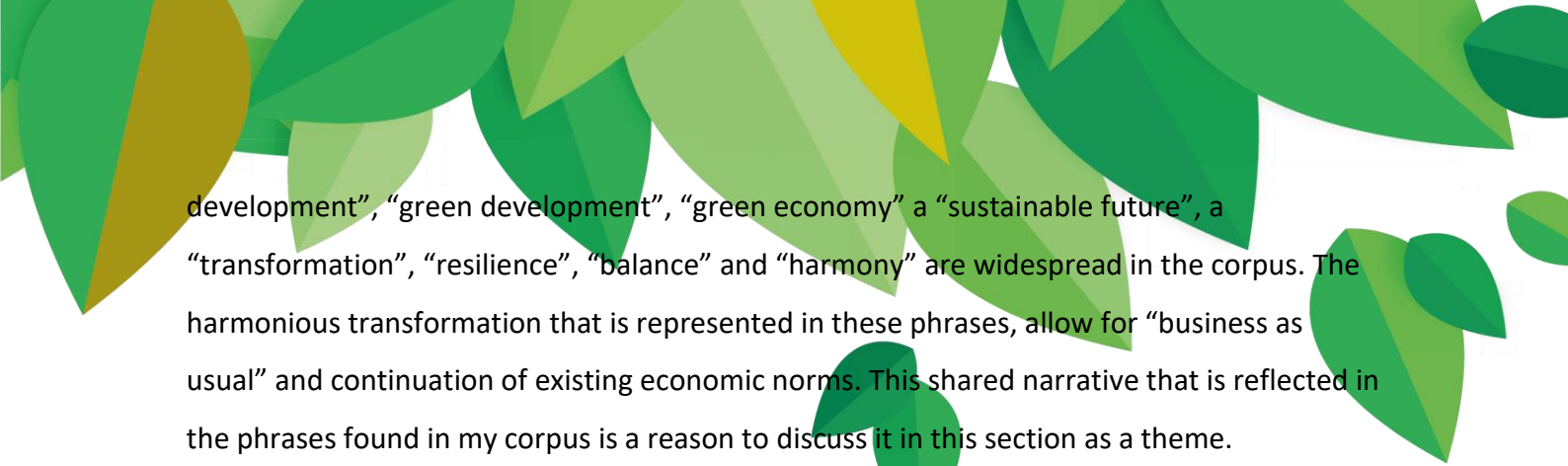
Beside "carbon compounds", many other phrases in the corpus fit well in this theme of "carbon counting" because they reflect the same cost-benefit perspective on climate change. Examples are talking about "emissions reductions" or "energy efficiency". The president of the Philippines says in his COP21 speech: "I believe the real challenge begins with the accounting of capacities" and talks about "the economic costs of climate change" later in the speech. In this discourse on changing energy budgets as a solution to climate change, "clean energy" pops up throughout the corpus. United States delegate Jonathan Pershing describes this "transition to clean energy" in his country: "U.S. business leaders are nearly unanimous in their view that the transition to *clean energy* provides vast economic growth potential and the transition to *clean energy* is inevitable." Talking about "clean energy" as opposed to referencing to using less energy indicates that such regulation will have to take place within a paradigm of continued increases in energy use, as noted by Shaw and Nerlich (2015, p. 38). This denies the idea that economic growth might be in opposition to policy measures that are necessary for climate change mitigation. Alongside terms as "clean energy", terms like "clean technologies", "green growth" and "transformation" appear, creating a narrative of a harmonious transition into a world that is mitigated to climate change. This is discussed in the next section.

### 5.2.2 A harmonious transformation

In chapter 3, it was described that the period from 2005 and onwards marks the appearance of a very strong sense that climate change mitigation is no longer in opposition to the imperative of economic growth, but instead is becoming a driver of growth and a source of competitive advantage (Shaw and Nerlich, 2015, p. 38). In this discourse, a "climate friendly" society can be achieved through transition instead of revolution, and terms such as "green growth", "clean energy" and "transitions" start to appear in the discourse of climate change policy. This trend is clearly still visible in my corpus. Expressions such as "sustainable

development", "green development", "green economy" a "sustainable future", a "transformation", "resilience", "balance" and "harmony" are widespread in the corpus. The harmonious transformation that is represented in these phrases, allow for "business as usual" and continuation of existing economic norms. This shared narrative that is reflected in the phrases found in my corpus is a reason to discuss it in this section as a theme.

At COP20, Hrin Nei Thiam, Head of Delegation of Myanmar, speaks of "identifying low carbon development pathways that promote *win-win synergies between the climate and the economy*", and emphasizing that "Myanmar supports the shift towards *low carbon green growth*". The story that is told in this frame is that economic growth and climate change mitigation go hand in hand. Just some adjustments in the amounts of carbon emissions need to be made to prevent the planet of crossing the threshold into an impacted state. It is also a way of drawing attention to responsibility of individuals. H. E. Xie Zhenhua, Head of Delegation of China, talks about the launch of the National Low Carbon Day, which aims to mobilize society to practise "a green and low carbon consumption mode and way of life".

The "climate friendly" society that is created in this frame, does not require a revolution, but instead comes in a natural way, in harmony between men and nature. Christina Figueres describes this in her COP20 opening address in connecting the target domain of climate change policy in the source domain of planting seeds:

"The ancient calender of the Inca characterizes this time of the year as *a season for planting*, and so it is for us. For here in Lima we must *plant the seeds* of a more secure, just and prosperous world for all. [...] The calendar of political will has undoubtedly been *fertilizing the ground*. [...] Ambitious decisions, leading to ambitious actions on climate change, will *transform growth-opening* opportunity [...]."

Instead of a drastic change, climate change mitigation is achieved in this frame through transition or transformation. In the corpus, Massoumeh Ebtekar, representative of Iran at COP19, speaks about "a *transformation* of global development policy". The president of Egypt hopes to address the "desired *balance*" between economic development, social development and environment protection. Xie Zhenhua, China's representative at COP22, talks about "promoting green and low-carbon *transition*".

### 5.2.3  The planet is a patient

Another recurrent metaphor that emerged from the corpus is one where the earth or planet is a patient that needs to be "saved". The source domain here is the patient, the target domain the planet. The earth or societies are being conceptualized as being ill because of an overload of carbon or the impacts of other human activities. Ban Ki-Moon speaks about "healthier societies" and "a healthy planet" in his COP20 and COP23 speeches. Different speeches talk about "saving", "safeguarding" and "protecting" the planet. It is our task to protect our "only home" and safeguard its inhabitants.
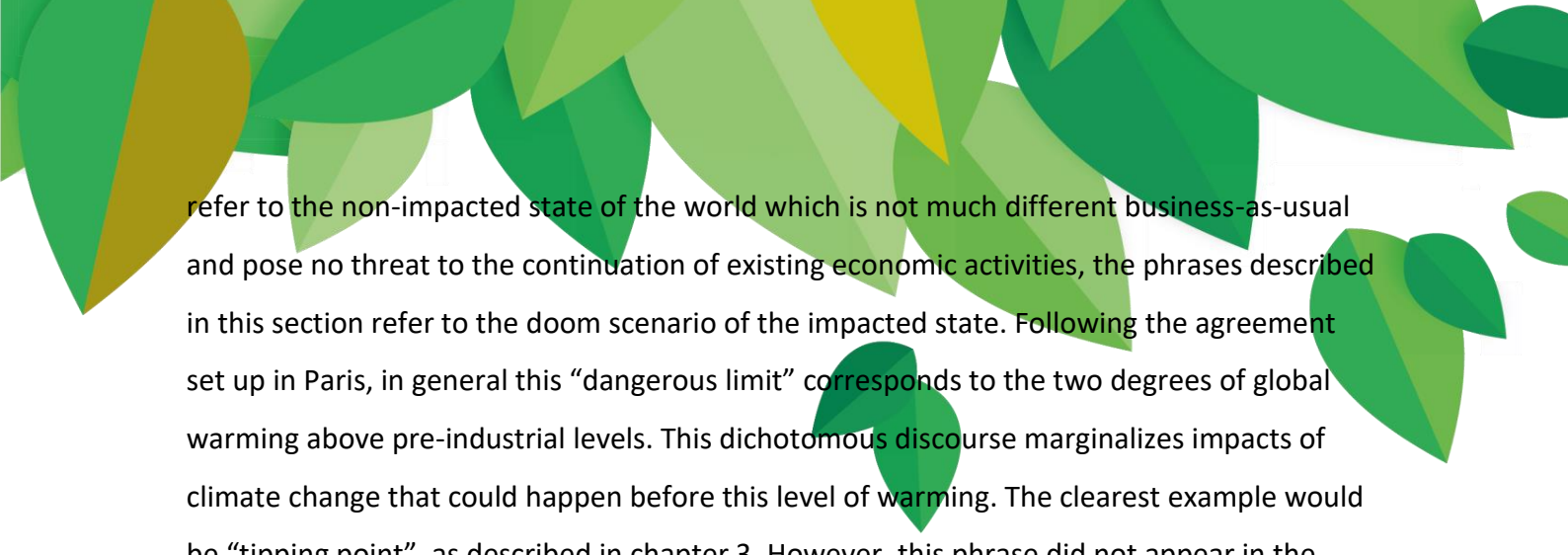
The metaphor of the planet as a patient seems to fit into the themes and metaphors that represent the non-impacted state of the world in the dichotomous discourse in the speeches, because being unhealthy is generally seen as something to recover from. Health can be improved by changes in your lifestyle, just as a "healthier planet" can be achieved by taking care better of the planet. Treating a planet seems manageable: by taking these measures for the planet or societies, the world can go back to the healthy status quo. But still, it does require some effort. As opposed to the themes discussed above, this metaphor does steer towards action: to recover from sickness it is wise to treat the patient well. Therefore, I think this metaphor might work well. Health is a shared value for all humans, and therefore relatable.

A comparable effect is evoked is when Barack Obama uses the related metaphor of a "broken" planet (as opposed to an "ill planet") when he says he does not want to leave the next generation to "a planet that's beyond its capacity to repair" (in his COP21 speech). This metaphor differs from the "planet is a patient" metaphor in that something broken cannot be repaired. It is thus more a reflection of the binary impacted/ non-impacted scenario.

## 5.3  The impacted state

### 5.3.1  Urgency

One category of phrases in the corpus refers to the theme of the urgency of the climate change problem, emphasizing the fact that action should happen now, that we are almost too late and making suggestions as to what will occur in the case of inaction or not enough action. These phrases are the clearest examples of a clear division between an impacted and a non-impacted world, due to climate change. Where the themes described in section 5.2
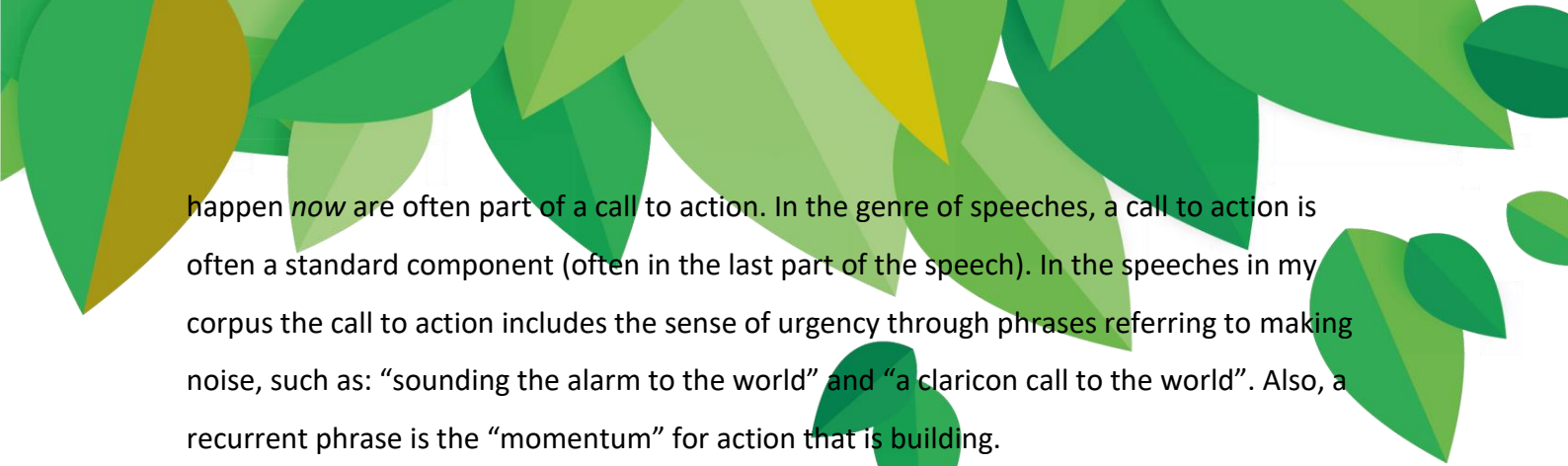
refer to the non-impacted state of the world which is not much different business-as-usual and pose no threat to the continuation of existing economic activities, the phrases described in this section refer to the doom scenario of the impacted state. Following the agreement set up in Paris, in general this "dangerous limit" corresponds to the two degrees of global warming above pre-industrial levels. This dichotomous discourse marginalizes impacts of climate change that could happen before this level of warming. The clearest example would be "tipping point", as described in chapter 3. However, this phrase did not appear in the corpus. What did appear were the following examples.

The delegate from Iran, H.E. Dr. Massoumeh Ebtekar, is clearly warning for a critical turning point in climate change effects in his 2013 speech as he says: "[...] the temperature rise trend to the end of the current century is *extremely alarming*. [...] Water resources availability in Iran has reached its *critical limit*." UN Secretary-General Ban Ki-Moon speaks in his 2014 speech about a "ceiling", reflecting the target of a less than 2 degrees Celsius global temperature rise. The ceiling suggests a situation where as long as we stay below that ceiling we will be all right. The president of Egypt hopes in his 2015 speech that the conference "proves to be a turning point".

Many phrases in the corpus refer to a sense of urgency formulated in terms that relate to time-related concepts. Ban Ki-Moon states in his COP21 speech "The *clock is ticking* towards climate catastrophe". Patricia Espinosa emphasizes in her COP23 speech "We no longer have *the luxury of time*. We must act *now*". Barack Obama formulates the sense of urgency in the following quote from his COP21 speech:

> "For I believe, in the words of Dr. Martin Luther King, Jr., that there is such a thing as being *too late.* And when it comes to climate change, *that hour* is almost upon us. But if we act here, if we act *now*, if we place our own short-term interests behind the air that our young people will breathe, and the food that they will eat, and the water that they will drink, and the hopes and dreams that sustain their lives, then we won't be *too late* for them."

This quote also reflects the Greek rhetorical trope of *kairos*: referring to the time and place in which you are saying something. This draws the attention of the audience to what you are about to say and makes them feel involved in it. These phrases referring to what should
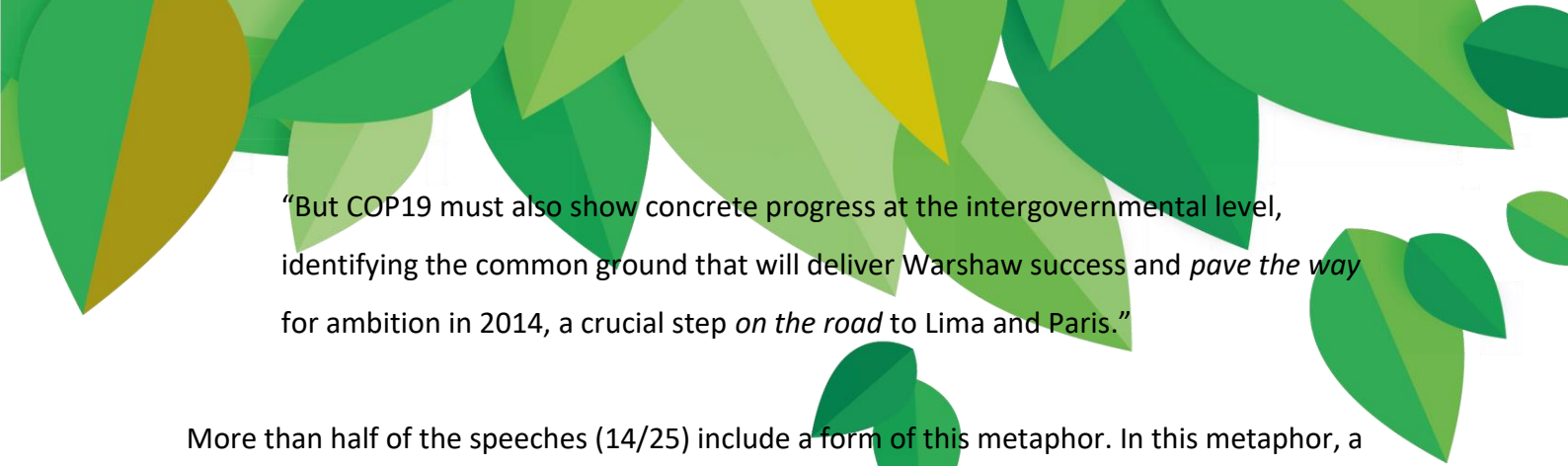
happen *now* are often part of a call to action. In the genre of speeches, a call to action is often a standard component (often in the last part of the speech). In the speeches in my corpus the call to action includes the sense of urgency through phrases referring to making noise, such as: "sounding the alarm to the world" and "a claricon call to the world". Also, a recurrent phrase is the "momentum" for action that is building.

Another way to emphasize the urgency of the climate change problem is with referring to a natural disaster that has taken place or might take place for which it is likely that it is (partially) induced by climate change effects. Bringing up these disasters served as putting up a big red warning sign, by sketching doom scenarios of where our world might be heading. In these mentions of natural disasters, emphasis was not on the description of what had happened, what is happening now, or what might be the different stages of effects caused by climate change, but rather on an ominous scenario of what might happen in the future. That is reflected in phrases as "Science and reality have shown us that climate change has become *a real and severe threat* to sustainable development [...]" (Xie Zhenhua, head of delegation of China, COP19), "We have sown *the seeds of our own destruction*" (Ban Ki-Moon, COP21), and "glaciers are melting at a pace *unprecedented*" (Barack Obama, COP21).

Interestingly, natural disasters are used as the source domain in a metaphor twice in the corpus. Ban Ki-Moon speaks of a *tsunami of support* for a strong, universal agreement in his COP21 opening address, expressing the burden that lays on the shoulders of the policymakers in the negotiation halls. President Obama, at the same 2015 Paris conference, sums up the effects of climate change and adds: "Political disruptions that no longer trigger new conflict, and even more *floods of desperate peoples* seeking the sanctuary of nations not their own".

### 5.3.2  The road

One of the most salient metaphors in the corpus of speeches is what I will call "the road metaphor". An example is the following quote by Christina Figueres, Executive Secretary of the UNFCCC, when she formulates the road metaphor in her speech at the COP19 in Warshaw:

"But COP19 must also show concrete progress at the intergovernmental level, identifying the common ground that will deliver Warshaw success and *pave the way* for ambition in 2014, a crucial step *on the road* to Lima and Paris."

More than half of the speeches (14/25) include a form of this metaphor. In this metaphor, a certain path or road is described to be followed. These pathways or roads all imply a certain goal or destination at the end of the road. This road towards a destination serves as the source domain of the metaphor, with the target domain is the large and fragmented amount of actions to be taken in order to reach a common goal of reducing climate change effects. The metaphor seems to work well in the context of the UNFCCC conferences, where in particular many actors are involved in working on small parts of the solution, and the UNFCCC tries to imply a feeling of a shared goal. The metaphor can more precisely be analysed as having two important parts: the journey itself and the destination, or goal. The concept of a "journey" is a source domain that corresponds to a target domain of "the complex process of climate policy negotiations". "The goal" of this journey is a source domain that is often used to express the target domain of "climate change policy targets", made in the various agreements (but, most often, the two-degree target). The goal in the road metaphor seems to change over the years. The metaphor fits well in the target approach that is in the part of the dichotomous discourse where climate change leads to an impacted state of the world. The emphasis in this part of the discourse is on achieving the target or destination, and ignoring the impacts of climate change that might happen before that. The road metaphor does describe the journey, but only with reference to steps to be taken in policy in order to reach the goal, and not the consequences or impacts of climate change on the world while being *on the road*.

Before the Paris conference in 2015, this goal is often the next conference, and the steps to be taken before that. Dr. Hrin Nei Thiam, Head of Delegation of Myanmar, uses the road metaphor at COP19:

"We need to act urgently and we hope this COP as *a stepping-stone* into this urgently needed action, as well as *paving the way* to Paris, where the world expects to agree on a new agreement to deal with this urgency. It is very important to having *a clear*

*roadmap* for negotiating the planning, scope, structure and design of the new 2015 agreement."

Ali L. Al-Naimi, representative of Saudi Arabia, likewise speaks about "*paving the way* for a new agreement to put into action the obligations set forth in the Framework Convention on Climate Change" in his COP20 speech.
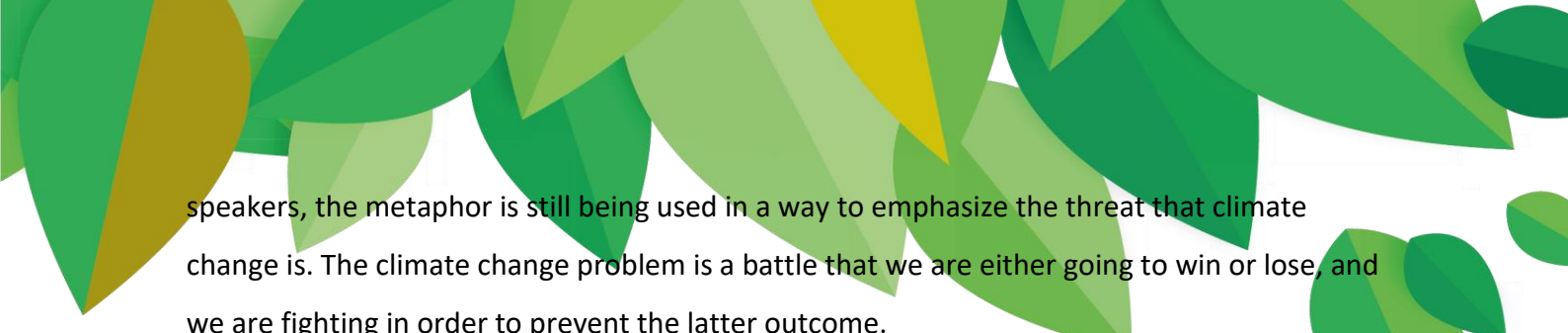
In 2015, at the Paris conference, the tension over whether it will be possible to reach an agreement and the feeling of urgency to do so is reflected in the road metaphor. H.E. Xi Jinping, president of China, is speaking about "The conference is also expected to [...] and *explore pathways* and governance models for mankind to achieve sustainable development". The president of Egypt, H.E. Abdelfatteh Al Sisi says in his speech, "We are facing a *crucial juncture* in our international endeavor [...]".

From COP21 onwards, the metaphorical road most of the time leads towards the target set in the Paris agreement of avoiding the passing of the threshold of two degrees of warming. UN Secretary-general Ban Ki-Moon, for example, says in his COP22 speech: "We need to get on *a global emissions pathway* that limits warming this century to well below 2 degrees Celsius and as close to 1.5 as possible". Patricia Espinosa, UNFCCC Executive Secretary, talks about the Paris agreement as well in her COP23 speech when she says: "And together with the Sustainable Development Agenda, we have *a clear path forward* to truly address climate change and sustainable development. Yet it is an incomplete *journey*".

The road metaphor suggests that there is a clear ultimate goal on the road that we are working towards. The question here is whether we are going to make it to the end of the road or not. Taking the right path leads to reaching the goal and we should aim to avoid going down the "wrong" path. Also, the road metaphor seems to suggest that there is only one, clear and delineated, path to follow. In this way, the metaphor fits into the dichotomous discourse described by Shaw & Nerlich (2015).

### 5.3.3 War

The "war metaphor" has a long history in climate change discourse. In 1997, "war" was already identified by Romaine (1997) as a prime source domain that is used to map onto the target domain of the environment. In my corpus likewise, "war" is still a present metaphor. However, it is not very widespread in my corpus. Still, in various years and in various
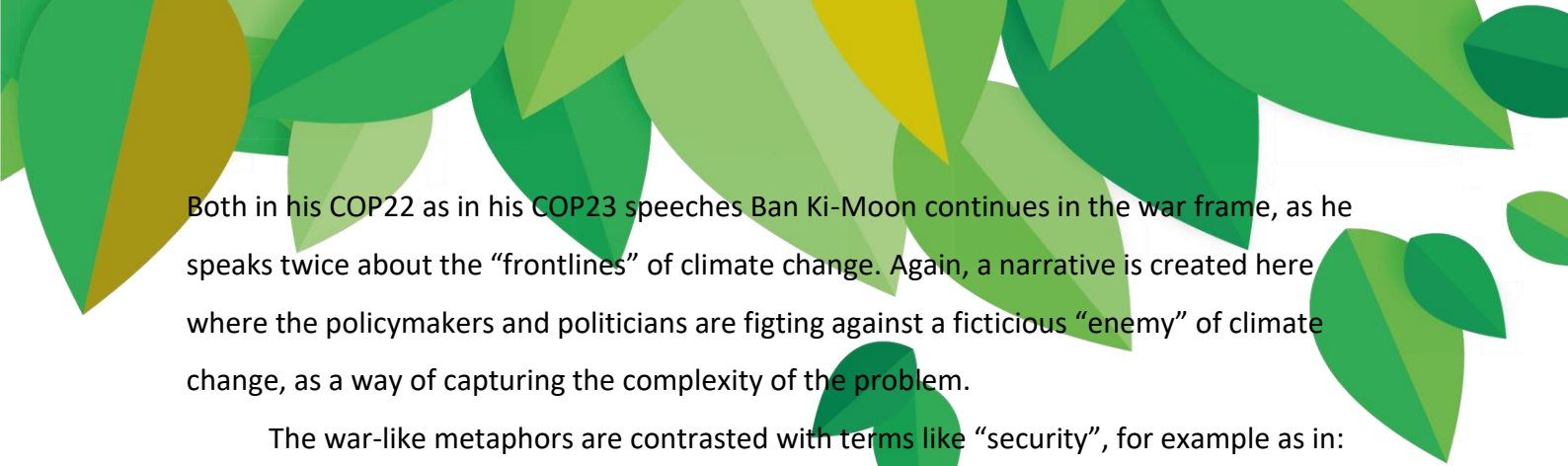
speakers, the metaphor is still being used in a way to emphasize the threat that climate change is. The climate change problem is a battle that we are either going to win or lose, and we are fighting in order to prevent the latter outcome.

As described in 3.2.2, the concept of war is an example of a frequently used frame. For example, politicians speak of politics as a war, or people speak of an argument in terms of a war (he *attacked* my point of view; you claims are *indefensible*). This is because war is an example of a culturally shared experience. Väliverronen & Hellsten (2002) claim that metaphors offer a way of understanding new issues and complex processes in terms of these shared experiences or culturally shared beliefs (p. 203).

The metaphors used by the speakers of the speeches in my corpus have their source domains in the familiar concept of war in order to better understand the complex target domain of climate change policy. Dr. Hrin Nei Thiam, Head of Delegation of the Republic of the Union of Myanmar concludes his COP19 speech with "Myanmar reassures that we stand united with all nations in *combating* the climate change and protecting the environment". Here, the illusion of an enemy that needs to be combatted is created. Obviously, "the climate change problem" in itself is not an actual entity that can be seen as an enemy, but by creating the "war frame" with corresponding metaphors, the complex problem is made more comprehensible. The source domain *to combat* corresponds to target domain *to solve the problem.* Vice-President of Iran H.E. Dr. Massoumeh Ebtekar likewise concludes in his COP19 speech that Iran is committed to "the UN lead efforts to *combat* climate change driven impacts".

When Benigno S. Aquino III, president of the Philippines talks about climate injustice relating to island nations whose existence is threatened by rising water levels in his COP21 speech, he argues that "Their extinction will be a certainty, unless we pursue realizable goals that acknowledge that, for some nations, *the fight against climate change is a matter of survival.*" Ban Ki-Moon, in his COP20 speech, formulates the following:

"*Combating* climate change is an essential part of the foundation of sustainable development. We cannot treat it as a separate issue, or we risk *losing the hard-won* development gains of past decades."

Both in his COP22 as in his COP23 speeches Ban Ki-Moon continues in the war frame, as he speaks twice about the "frontlines" of climate change. Again, a narrative is created here where the policymakers and politicians are figting against a fictitious "enemy" of climate change, as a way of capturing the complexity of the problem.
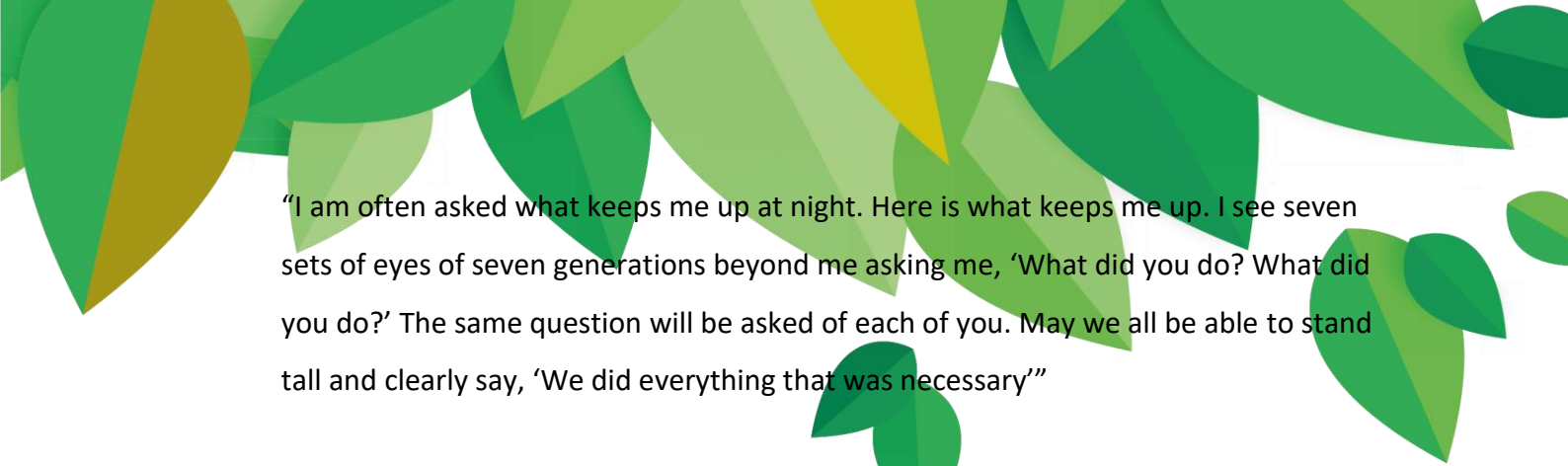
The war-like metaphors are contrasted with terms like "security", for example as in: "Our collective *security* depends on our ability to act" (Philippines, COP21), or "Ultimately, there is only one ambition that matters – to build a *secure world* of peace, prosperity, dignity and opportunity for all people on a healthy planet" (Ban Ki-Moon, COP23).

### 5.3.4 Responsibility for future generations

A clear and recurrent theme in the speeches is to refer to our responsibility to future generations. Children and grandchildren are frequently brought up in a way to keep in sight the long-term goals as opposed to short-term goals. In the quote given in section 5.3.1 Barack Obama accordingly sketches how to take the necessary actions in order to keep sight of our long-term goals. The speech that he gave at COP21 was full of references to the next generation. Earlier in the speech, when he speaks about climate effects in Alaska, he describes this as "And it was a preview of one possible future – a glimpse of our children's fate if the climate keeps changing faster than our efforts to address it". Then, he quotes "one of America's governors that has said 'We are the first generation to feel the impact of climate change, and the last generation that can do something about it'".

The reference to future generations imposes a feeling of guilt about what action we owe to the next generation. The wellbeing and life of our children and grandchildren is something many people can relate to and feel very strongly about. By referring to this feeling in combination with a future scenario, a "what if…"-scenario is incited, comparable to the doom scenarios in the urgency frame. The emphasis of the climate change problem is here on what happens when we cross a threshold and the world gets impacted by climate change.

The majority of the other speeches in the corpus refer to "our shared future" or "the many generations to come". Ban Ki-Moon (COP22) states, "We have no right to gamble with the fate of future generations". Christina Figueres formulates our responsibility for future generations in the following way at the end of her COP21 speech:

"I am often asked what keeps me up at night. Here is what keeps me up. I see seven sets of eyes of seven generations beyond me asking me, 'What did you do? What did you do?' The same question will be asked of each of you. May we all be able to stand tall and clearly say, 'We did everything that was necessary'"
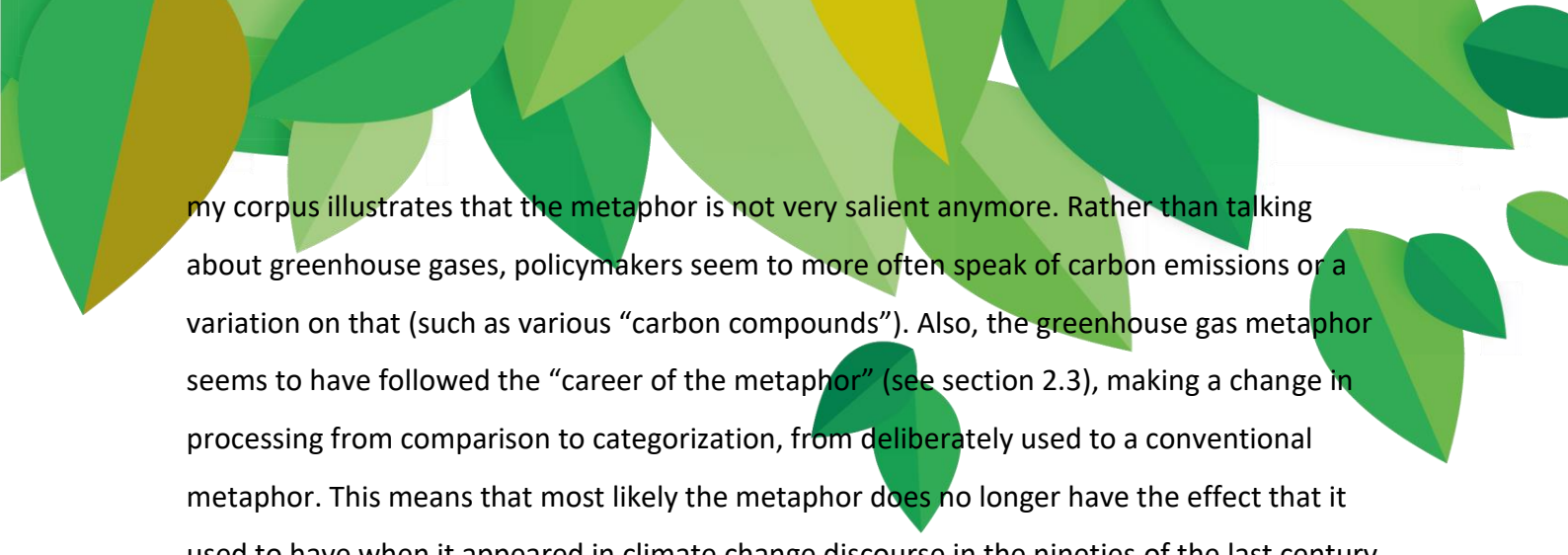
Others that refer to the next generation are the head of delegation of Myanmar in 2014, calling to "protect the climate system for the benefit of present and future generations of humankind" and the delegate of the United Arab Emirates in 2016, who talks about ensuring "a sustainable future for generations to come".

Bringing up the future generations in the last part of her speech works as a call for action, which is often situated at the end of a speech. In this way, the speech zooms out of all the details of the complex problem that climate change is and brings the crowd back to core motivation for working on the climate change problem: we might not be here to experience all the effects of climate change, but we have a duty to leave the planet a good place for future generations.

Further emphasizing the responsibility of the policymakers at the conference, Barack Obama also uses the metaphor of the eyes (as the source domain) to describe how next generations will hold the present generation accountable for handling the climate change problem: "And let there be no doubt, the next generation is *watching* what we do." This metaphor of the eyes was more often used at the Paris conference in 2015. Ban Ki-Moon alerts the policymakers in his speech with "The *eyes* of the world are upon you" and later "There can be no mistaking the peril before our *eyes*. But far more than that, we can *see* the new world that can be ours." Likewise, President Xi Jinping of China brings forward the metaphor: "All *eyes* are now on Paris."

## 5.4   Final observations from the corpus

Beside the most dominant themes and metaphors found in the corpus, there are a few other observations and remarks made during the analysis that are worth mentioning. First of all, I did not include the greenhouse gas metaphor in my results, because the whole corpus has only four instances of the greenhouse gas metaphor. However, I would like to reflect on this, considering the relative attention it got in chapter 3. The relative absence of the metaphor in

my corpus illustrates that the metaphor is not very salient anymore. Rather than talking about greenhouse gases, policymakers seem to more often speak of carbon emissions or a variation on that (such as various "carbon compounds"). Also, the greenhouse gas metaphor seems to have followed the "career of the metaphor" (see section 2.3), making a change in processing from comparison to categorization, from deliberately used to a conventional metaphor. This means that most likely the metaphor does no longer have the effect that it used to have when it appeared in climate change discourse in the nineties of the last century to simplify and explain the mechanism of temperature change.

Second, it is worth noting that during my analysis I became cautious of the fact that the speeches in my corpus were held all within the same context of the institutional framework of the United Nations climate negotiations, which is reflected in the discourse. The environment, audience and place of the speeches is important to keep in mind while reading the speeches, because the speeches held by the climate negotiators at these conferences are influenced by the discourse of international climate change policy. Considering the context, it is not surprising that language in the speeches reflect the policy measures made within the UNFCCC framework. Therefore, certain words or phrases might occur recursively in the speeches, because they are part of important policy regulations or agreements. It is important to be alert on these phrases, because the fact that they are part of a rule of agreement should be included in the interpretation of their widespread use.

A first one of these recurrent phrases is *technology, finance and capacity building*. This is the name of the UN climate change secretariat that supports the mobilization of financial resources, international cooperation on technology development and transfer, capacity building. An example of how this tricolon is used in a speech is by the delegate of the United Arab Emirates at COP23: "At the same time, the developed world has a responsibility to honor its commitments to extend financial support to developing countries, and help them in capacity building and climate change adaptation through technology transfer mechanisms."

Another one of these phrases is "*common but differentiated responsibilities"* (CBDR) which is a principle formalized in the UNFCCC at the Earth Summit in 1992 and that acknowledges all states have shared obligation to address environmental destruction but denies equal responsibility of all states with regard to environmental protection. The principle is referred to in the speeches in the corpus 8 times, both by polluted and polluting
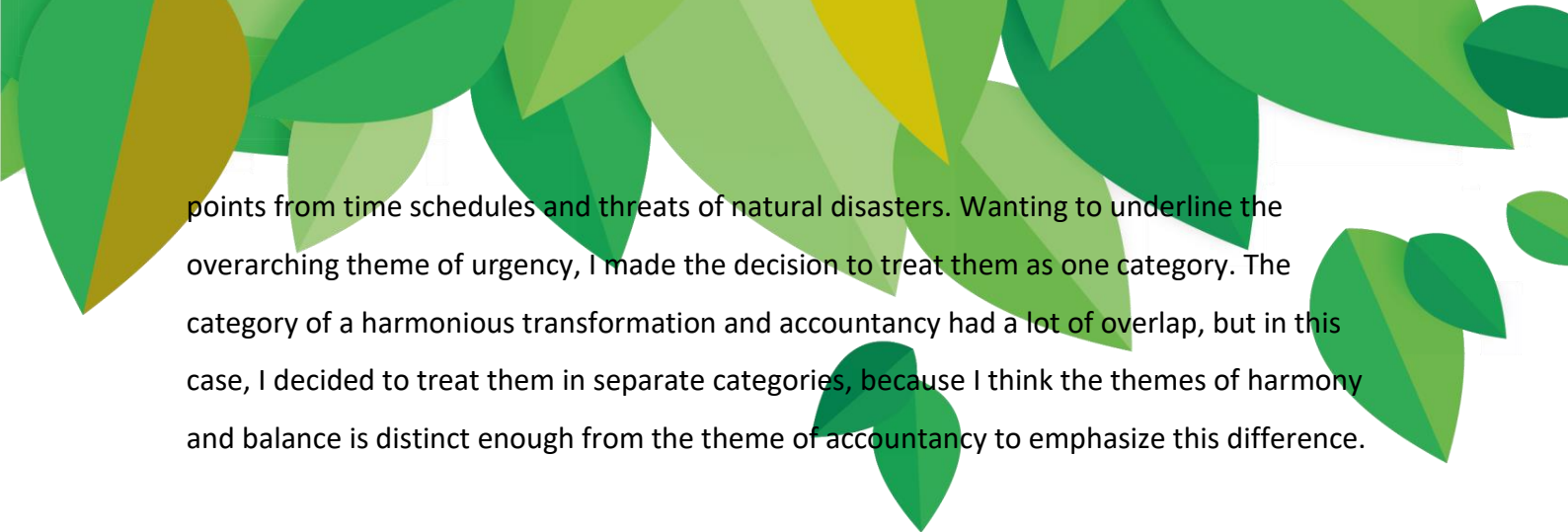
countries.

Another important phrase in climate change policy is *loss and damage*. Loss and damage refers to negative effects of climate variability and climate change that people have not been able to cope with or adapt to (Warner & Van der Geest, 2013, p. 369). Often being associated with liability and compensation, the topic can be a sensitive issue, which might be a reason for it not to appear in the public speeches analysed. The UNFCCC has developed a work programme on the topic, addressing the issue that developing countries are particularly vulnerable to the adverse effects of climate change.

A phrase that is used much in the corpus is "ambition". This is a word often used in the context of UNFCCC. According to the World Resource Institute, while most people think of ambition as a strong desire to achieve something, the word has a more specific meaning when it comes to international climate action (WRI, 2012). They state that in the climate negotiations, "ambition" refers to "countries' collective will—through both domestic action and international initiatives—to cut global greenhouse gas emissions enough to meet the 2°C goal". Ambition further represents the actual steps countries are taking to meet that temperature goal. This word is therefore a last example of how climate change policy has its own jargon, which is important to be careful of when analysing its documents.

Third and last in my observations of this section, I would like to give a few examples of how, in analysing the speeches, the categories were not always clear-cut as the different (sub)sections above might suggest. The different themes and metaphors were often used closely together, in the same sentence or even in the same phrase. An example of the latter is when Ban Ki-Moon speaks in his speech at COP21 about how we have "sown the potential seeds of our own destruction". In this phrase, the theme of a harmonious transformation that is planted by seeds emerges, while at the same time the doom scenario of destruction that evokes the urgency of the impacted state is mentioned just after. In "clean and low carbon intensity energy" (Massoumeh Ebtekar, COP20), both the category of a harmonious transformation, because of the "clean energy", and the category of "carbon compounds", in "low carbon intensity energy", are combined in one phrase. And "urgency for transformation" (Christina Figueres, COP20) includes both the category of urgency with the category of a harmonious transformation. Furthermore, broader or more specific classifications could have been made. For example, the category of urgency was initially divided in different categories, separating phrases that have to do with specific turning
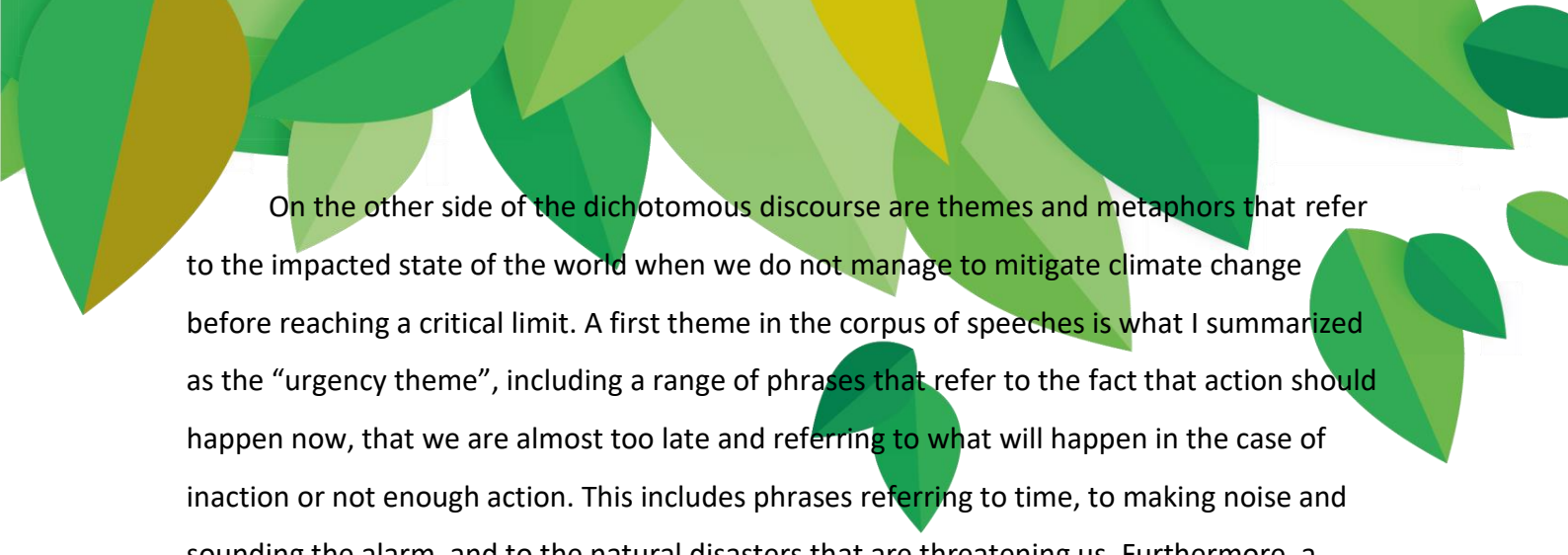
points from time schedules and threats of natural disasters. Wanting to underline the overarching theme of urgency, I made the decision to treat them as one category. The category of a harmonious transformation and accountancy had a lot of overlap, but in this case, I decided to treat them in separate categories, because I think the themes of harmony and balance is distinct enough from the theme of accountancy to emphasize this difference.

# 6    Conclusion and discussion

## 6.1   Main results

This thesis demonstrated that the language used by world leaders at the United Nations climate conferences reflect either a scenario of great danger and threat or a scenario of a harmonious transition, allowing for the continuation of existing norms. Neither seem to incite a good incentive for action (this is discussed in 6.2.2). I found this impacted/non-impacted dichotomy in a corpus of 25 speeches held at the United Nations climate change conferences in the years 2013 until 2017. This dichotomous discourse fits a target approach of the climate change problem. Whether we will be able to stay under this target, will determine if the world will be in an impacted or non-impacted state. The two-degree line is the concrete realisation of this target. The danger lies on the other side of this line, where climate change becomes a threat. Removing this threat will allow the world to return to a stable and balanced norm, which will be achieved through a quiet transition to a clean energy economy and sustainable development.

The dichotomous discourse in the speeches is partially constructed by metaphors and themes that represent the scenario of the non-impacted state of the world. In this scenario, climate change is manageable: it is simply a problem of a budget being disturbed; nothing in the world has changed except the amount of carbon emitted by economic activities. A recurrent theme in the corpus of speeches was the counting of carbon and emissions in general, using "carbon compounds" and talking about efficiency measures as the solution. Phrases like "clean energy" and "green growth" deny the idea that economic growth might be in opposition to climate change mitigation measures. This is part of another theme that is part of this non-impacted scenario, where we will go through a harmonious transition to a world that is mitigated to climate change. Part of this theme are expressions that express the continuation of existing economic norms, allowing for "business-as-usual", such as "sustainable development", "green development", "green economy" a "sustainable future", a "transformation", "resilience", "balance" and "harmony". In this non-impacted scenario, the planet is also framed as a patient, being sick of the carbon overload that needs to be "saved" in order to return to the healthier status quo.
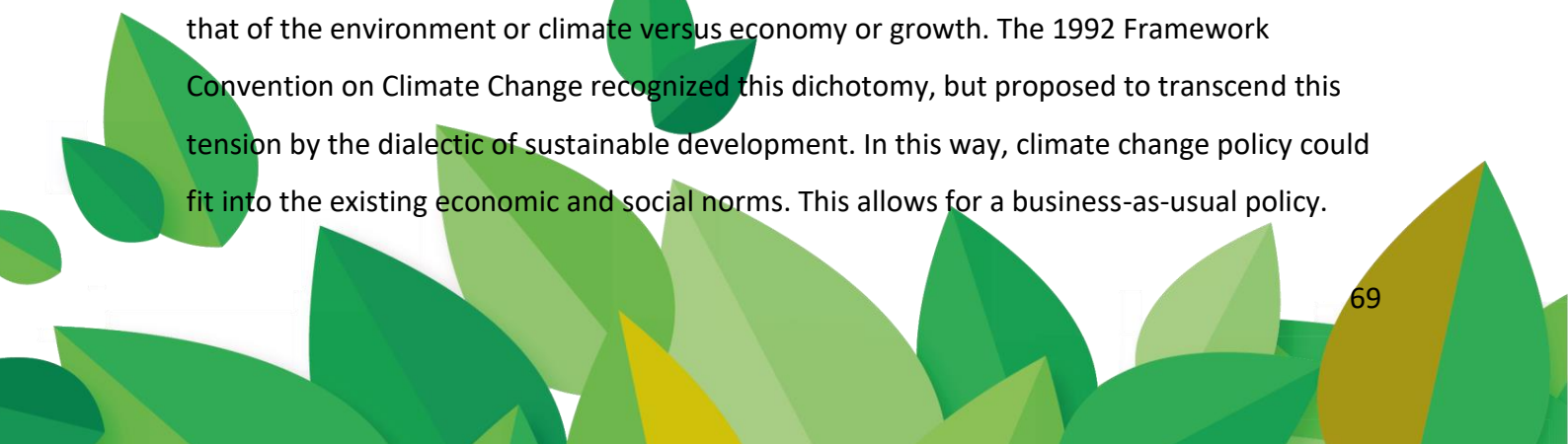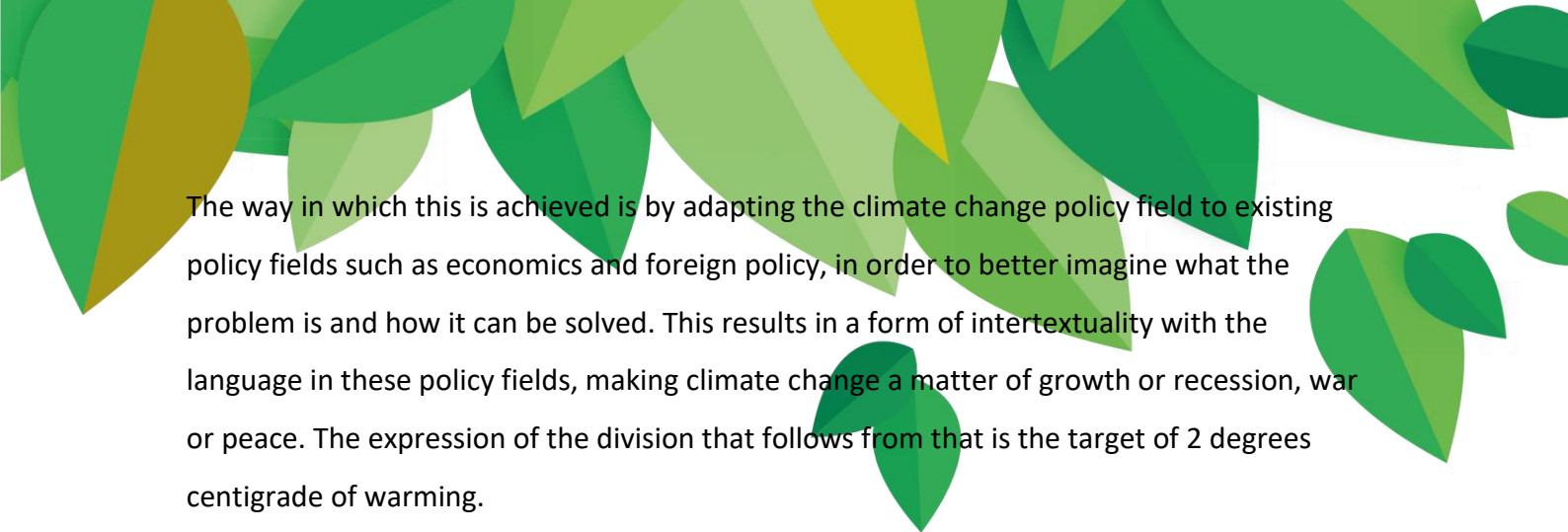
On the other side of the dichotomous discourse are themes and metaphors that refer to the impacted state of the world when we do not manage to mitigate climate change before reaching a critical limit. A first theme in the corpus of speeches is what I summarized as the "urgency theme", including a range of phrases that refer to the fact that action should happen now, that we are almost too late and referring to what will happen in the case of inaction or not enough action. This includes phrases referring to time, to making noise and sounding the alarm, and to the natural disasters that are threatening us. Furthermore, a recurring metaphor in the corpus that evokes the image of the impacted world after passing the threshold of climate change mitigation is the road metaphor. The road metaphor fits into the target approach, with the journey on the road only being in service of reaching the destination of the road, negating the consequences of the impacts of climate change that might happen while being on the road. The classic war frame in climate change discourse is also part of the corpus of speeches, emphasizing the great threat that needs to be fought. We are either going to win or to lose, and we are fighting to avoid the latter result. A last pervasive theme is representing a more far away target to avoid: the irreversible effects of climate change that the next generations has to deal with. We owe it to them to carry our responsibility in the climate change problem. There are certain actions that only we can take, and it will be too late for the next generation to take them. This reference to our children and grandchildren seems to be the most pervasive way to convince people of the urgency of the climate change problem.

## 6.2   Interpretation of results

### 6.2.1  One single narrative

The dichotomous discourse emerging from the speeches is one earlier identified by Shaw and Nerlich (2015) in their review of policy documents, and that has an early history in climate change policy. Maybe counterintuitively, Shaw and Nerlich (2015, p. 38) recognize that the dichotomous discourse is part of a way to overcome another dichotomy, namely that of the environment or climate versus economy or growth. The 1992 Framework Convention on Climate Change recognized this dichotomy, but proposed to transcend this tension by the dialectic of sustainable development. In this way, climate change policy could fit into the existing economic and social norms. This allows for a business-as-usual policy.
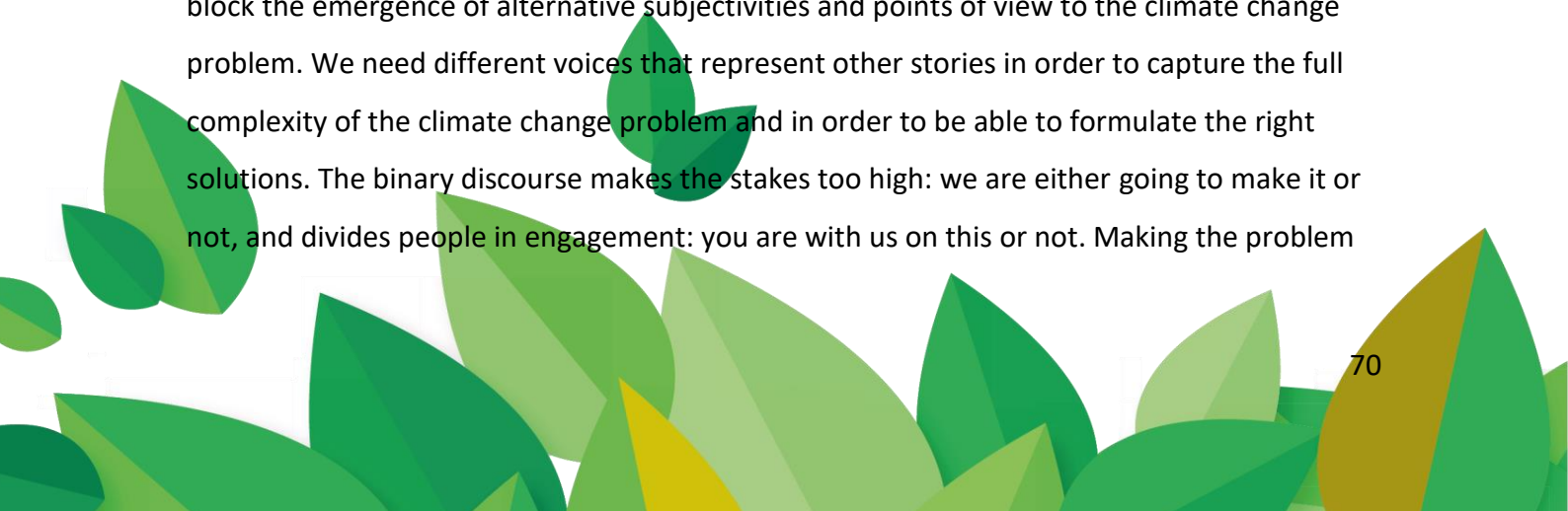
The way in which this is achieved is by adapting the climate change policy field to existing policy fields such as economics and foreign policy, in order to better imagine what the problem is and how it can be solved. This results in a form of intertextuality with the language in these policy fields, making climate change a matter of growth or recession, war or peace. The expression of the division that follows from that is the target of 2 degrees centigrade of warming.

Given that policymakers have the best intentions to solve the climate change problem, the question remains why they create a binary discourse that clearly does to represent reality (since climate change impacts of varying degrees, at different places, are already beginning (IPCC, 2014). Shaw and Nerlich (2015, p. 39) explain this with our need to anchor our understanding of novel risks in pre-existing concepts and narratives. They argue that the dichotomous narrative is a powerful one that draws on the mythical structure of stories, which, in one form or another, prevail in our popular culture and political discourse. In these stories, there is a threat to be fought, before returning to the old order. In reflecting the discourses of popular culture and other policy arenas, these discourses make themselves easily understood by the intended audience, and define the limits of what is possible to do in response to climate change (p. 39). These responses are now: either staying with the save and good existing norms, or fall into something worse. At the root of the climate change policy discourse, this seems to match to the idea that our current linear pattern of economic activity is the best we can hope for and we must strive to maintain it.

The language used in the speeches of policymakers at the UN climate conferences has important implications. While all effort is directed at avoiding the passing of the critical limit, attention is derived from dealing with the many impacts of climate change that are already happening. And as these speeches are used as important journalistic source, they have the capacity to shape downstream climate change discourses. When the dichotomous discourse in the speeches of climate change leaders are adopted in all of these discourses, it might block the emergence of alternative subjectivities and points of view to the climate change problem. We need different voices that represent other stories in order to capture the full complexity of the climate change problem and in order to be able to formulate the right solutions. The binary discourse makes the stakes too high: we are either going to make it or not, and divides people in engagement: you are with us on this or not. Making the problem

that big might feel overwhelming, preventing public engagement. Whether this is the case, is discussed in the next section.

### 6.2.2 Alarmist or alarming?

Shaw and Nerlich (2015, p. 39) state that the dichotomous construction of climate change prevents positive public engagement by blocking the emergence of alternative subjectivities (p. 39). However, whether the discourse of abrupt climate change is an effective one in terms of mobilizing people to climate action is a question under discussion in the literature. Research has both argued that projections of a more gradual change could give a feeling of empowerment to be able to make a change, and on the other hand could fool society into a false sense of security. Some argue that the use of this sense of urgency is not alarmist but "alarming," since most of the terms do seem to be consistent with scientific evidence (Risbey, 2008).

The effect of empowerment through a discourse of urgency seems to be true for the war metaphor (Flusberg et al, 2017; Cohen, 2011). Flusberg et al. (2017) investigated the role of the metaphorical frames of a war or race against climate change and found that the war metaphor made people perceive more urgency and risk surrounding climate change and express a greater willingness to increase conservation behaviour. While the war metaphor describes a very stark dichotomy, a war is still something that can be won. Cohen (2011) has suggested that war metaphors may create the necessary conditions for policymakers to advocate ambitious proposals for dealing with climate change such as greenhouse gas-reduction strategies. Werner et al. (2013) state that social-political thresholds, tipping and turning points provide an important entry point for a dialogue between science and policy, since the identification of thresholds helps in mapping practical adaptation pathways.
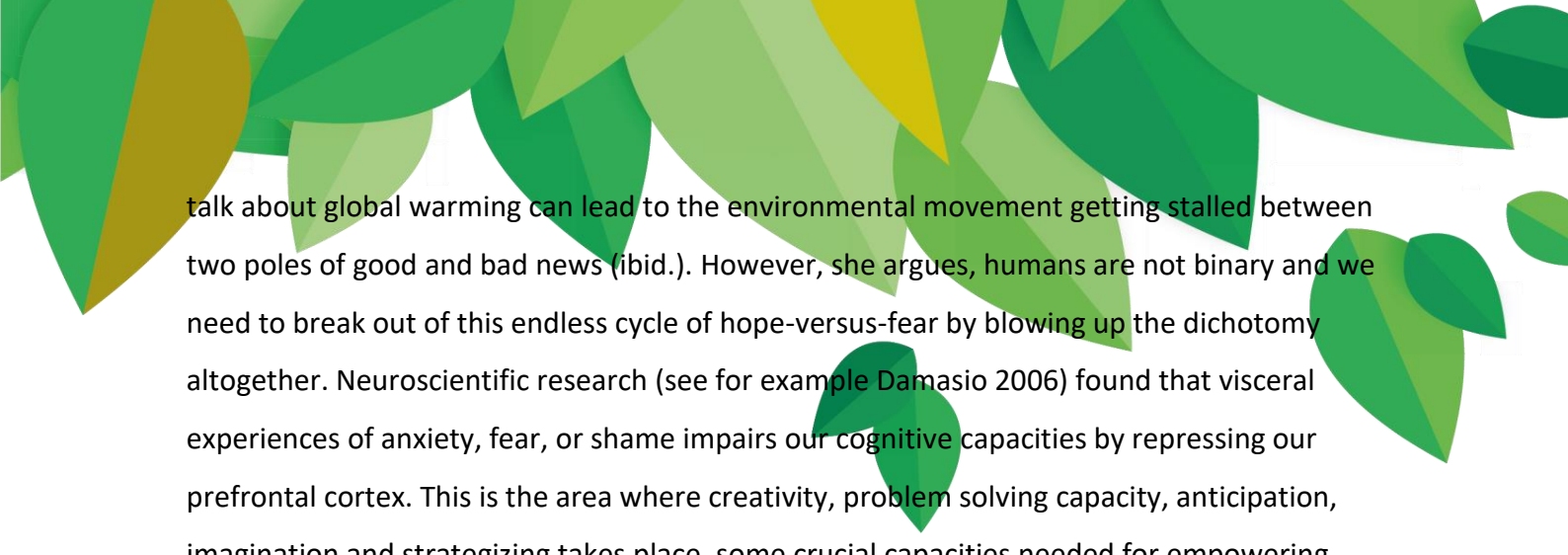
On the other hand, others argue that constructing an apocalyptic rhetoric gives rise to an implicit sense of helplessness and fatalism (Skrimshire, 2011; Hulme, 2008; Nuttall, 2012). Hulme (2008) argues that the tipping point concept is used to nourish the discourse of global climate catastrophe, based on fear for an unknown future. Nuttall (2012) sees in the tipping point phrase a revival of determinism, with human agency being left defenceless against the risks of climate change. Atanasova and Koteyko (2017) point out that the war metaphor in the context of climate change might actually backfire and fail to increase feelings of urgency. The consequences would be denial and apathy. In addition, they point out (p. 463) that the

use of war metaphors to refer to climate politics represents a typical use of war metaphors in political communication where politics is conceptualized as a battle and has little to do with instigating action on climate change. Moreover, research has also shown that efforts to induce behavior change through fear appeals is often an ineffective tool for motivating personal behaviour (O'Neill and Nicholson-Cole, 2009). If the external danger - in this case the impacts of climate change - cannot be controlled or is not perceived to be controllable, individuals will attempt to control their internal emotions such as worry, concern, or fear and not take climate action (p. 363).

The dichotomous view of the climate change problem maintains one of the main reasons for inaction: cognitive dissonance. This is the psychological tension that results from the holding of two (or more) conflicting beliefs simultaneously. With a binary representation of the climate problem, people are overwhelmed by the problem and the impact of it on their lifestyles. People may care about the planet and protecting it to make it habitable for future generations, but they also do not want their lives to be as impacted as it will be when it is restrained from all the benefits that have come with industrialization and fossil fuels. When confronted with these consequences, they feel personally criticized. As a result, people jump into the defence mode and try to justify their non-climate friendly lifestyle. Moreover, the policy measures that follow from the dichotomous view of the world offer a solution to this feeling of unease and a way give legitimation to a high carbon lifestyle or high carbon, namely with the governance mechanism of offsetting. This is represented in economic frames of bookkeeping, such as in the emission governance where climate change is framed in a way that it is simply a problem of carbon being in the wrong place. Shaw and Nerlich (2015. p. 39) argue that this happens both at the individual level, where the concerned citizen can pay to have some trees planted to soak up the carbon from their plane flight or at the international level through joint implementation mechanisms. Although these measures might create the illusion of action and responsibility over the problem, it creates a false illusion of the scope of the problem and prevents organisations and individuals from further action.

Climate psychologist Renee Lertzman researches the psychological mechanisms to cope with environmental and climate problems for individuals and discusses the same dichotomy in climate communication that resulted from the research in this thesis (Lertzman, 2010; Lertzman, 2017). She states that the preoccupation with how exactly to
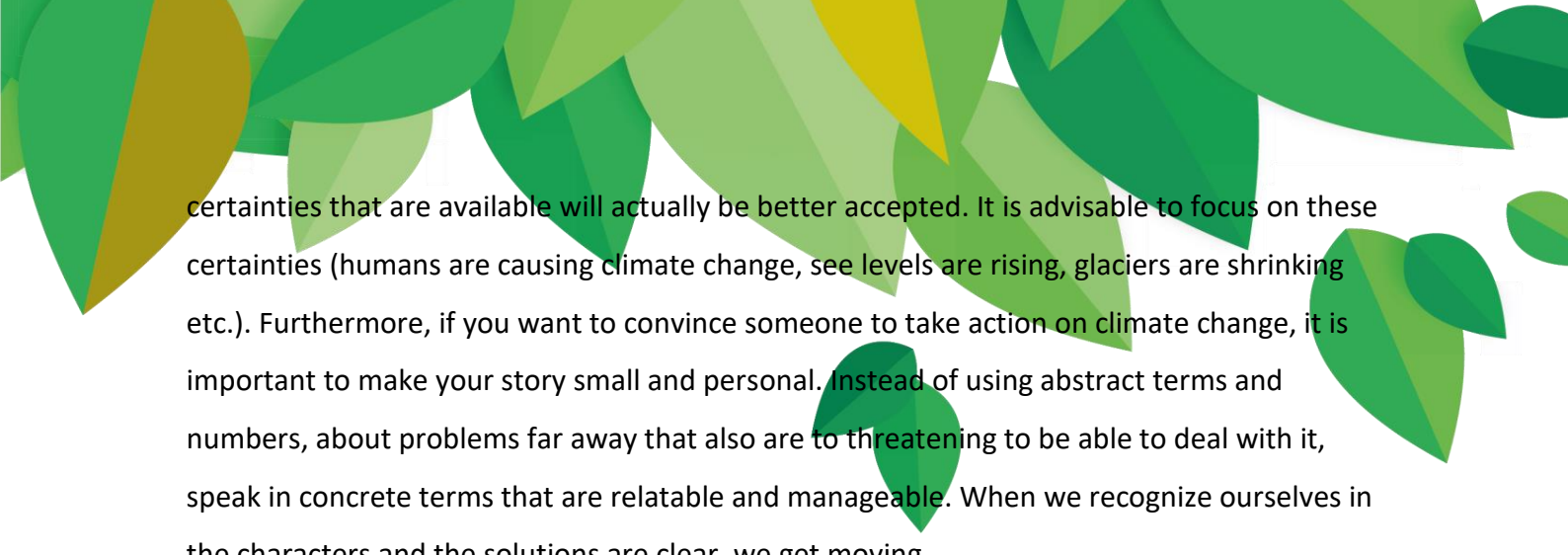
talk about global warming can lead to the environmental movement getting stalled between two poles of good and bad news (ibid.). However, she argues, humans are not binary and we need to break out of this endless cycle of hope-versus-fear by blowing up the dichotomy altogether. Neuroscientific research (see for example Damasio 2006) found that visceral experiences of anxiety, fear, or shame impairs our cognitive capacities by repressing our prefrontal cortex. This is the area where creativity, problem solving capacity, anticipation, imagination and strategizing takes place, some crucial capacities needed for empowering people into climate action (Lertzman, 2017).

## 6.3   Recommendations

The results of the analysis of the speeches given at the UN climate conferences show that some of the most influential leaders on the global climate change problem are speaking in a static and monolithic discourse that gives a binary representation of climate change and possible solutions to the problem. My recommendations to policymakers would be to give room to alternative stories and framings of climate change in order to contribute to an effective mitigation policy that takes into account all impacts of climate change, at various degrees, at various times and places. Also, since the speeches are an important source for other climate change discourses that reaches the general public, it it important to make the debate tangible, accessible in order to increase engagement of individuals. Following Renee Lerzman, I advocate for a more nuanced, authentic mode of communication to enhance people's capacities for response. However, it is not needed that climate communicators need to tell only positive stories and avoid all apocalyptic narrative, since fear also offers an opportunity to emphasize and strategize (Lerzman, 2017). It is about finding the middle path - one that welcomes fear but does not dwell there. Other frames and metaphors to talk about climate change which are less apocalyptic, more creative, more positively engage the audience and empower them to take action, are needed (on frames, see Nisbet, 2009).

Climate change is a subject on which debate has quickly intensified and the pressure to provide answers and solutions is on the shoulders of scientists and policymakers. Instead of either dramatizing or justifying the problem, it would be more convincing to sketch a realistic state of affairs. Even though policymakers might feel the expectation to give definite answers, it is more convincing to admit that there are still uncertainties. In that way, the

certainties that are available will actually be better accepted. It is advisable to focus on these certainties (humans are causing climate change, see levels are rising, glaciers are shrinking etc.). Furthermore, if you want to convince someone to take action on climate change, it is important to make your story small and personal. Instead of using abstract terms and numbers, about problems far away that also are to threatening to be able to deal with it, speak in concrete terms that are relatable and manageable. When we recognize ourselves in the characters and the solutions are clear, we get moving.

Also, be alert to the metaphors and frames of others. When using their words, you tell their story, while you might want to highlight a whole other perspective of the story. Thus, it it advisable to not negate their words, but carefully use your own words. Do not use their frame if it is not useful for your own story. For example, the "war frame" is one that will describe the nuanced story you want to convey. So, do not say we courageously will win the war, but use a whole other frame that fits the identity of your audience. People want to act consistently with their values. For example, the "planet is a patient" refers to the ubiquitous value of health, so use this existing frame to your advantage. Instead of focusing on a sick planet, make the message positive and speak about the benefits of a healthy planet. Furthermore, the different UN countries might have independence as a country high in their value list. One way to talk about solutions for climate change could then to emphasize that sustainable energy sources make us independent of oil countries. In addition, these leaders of countries would want to know what is in it for them: so focus for example on export opportunities and jobs that climate change measures will evoke.
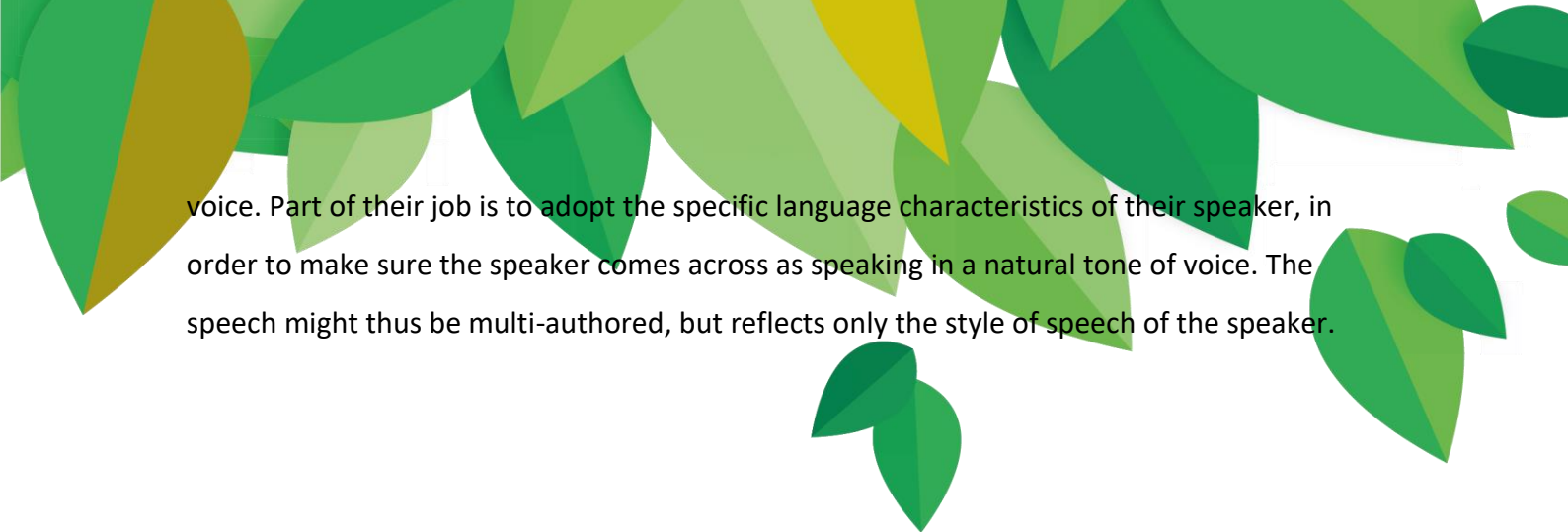
The research in this thesis investigated one particular context, the one of speeches at UN climate change conferences. Further research on the climate change discourse different contexts would be interesting, such as the discourse in national governments, in NGOs or in other organizations. In addition, it would be interesting to conduct further research in other genres than the genre of speeches, such as policy documents, websites, social media, or in the journalistic genre. Even though it would be rather difficult, it would be worth to conduct experimental research in order to find out what the effects of the dichotomous discourse are on people's willingness to take climate action or advocate for more far-reaching policy measures.

## 6.4   Limitations

From the qualitative nature of the method used for the research described in this thesis follows that the results are illustrative. Because the analysis relies on interpretative reasoning, other researchers analysing the role metaphors play in constructing certain perspectives in international climate change policy may look at a different corpus and identify different metaphors and themes. I do not believe that undermines the validity of the results. Alternative results from the same discourse would only demonstrate the indeterminate and broad nature of the climate change problem. The qualitative nature of the analysis meant that the research went beyond the inventorisation of individual widespread metaphors and could identify larger and overarching trends that emerged from the text.

What is furthermore important to note, is that the metaphor analysis conducted in this research is on a linguistic level and does not make any claims about the cognitive dimension of metaphor, on a general or on an individual level. This means that the results do not tell anything about the extent to which the metaphors used by the speakers of the speeches are deployed consciously and strategically. As discussed in chapter 2, rather much critique has been made about the metaphor research that has been making claims about the way metaphor works in cognition. A method for this might be in-depth interviews with the speakers of the speeches. Another option could be experimental research, in which you could let people hear the speeches and measure the reaction times afterwards to certain words, in order to measure which categories are aroused in cognition by the metaphors used. These methods have their own limitations. If it would be possible at all to make any claims about metaphor processing, this would only involve deliberate metaphors, and many of the metaphors described in this thesis might already be on this point in the "career of the metaphor" that they are conventional and used non-deliberately.

A final consideration in in reading this thesis might be the fact that the speeches in the corpus assessed are multi-authored texts, as pointed out in chapter 2. Speeches are written by speechwriters in cooperation with the politician or policymaker. This might raise the question of whose words I have analysed in this research, and whether the words in these speeches represent the language that the speakers would use in other contexts. However, even though speechwriters surely are the ones who carefully constructed the words in the speeches, these professionals are trained to express the speaker's vision in the speaker's

voice. Part of their job is to adopt the specific language characteristics of their speaker, in order to make sure the speaker comes across as speaking in a natural tone of voice. The speech might thus be multi-authored, but reflects only the style of speech of the speaker.

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# Annex 1: List of the speeches

| | Conference | Date | Speaker | Organization/ country | Words |
|---|---|---|---|---|---|
| 1 | COP19 | 19 november 2013 | Christiana Figueres, Executive Secretary | United Nations Framework Convention on Climate Change | 452 |
| 2 | COP20 | 9 december 2014 | Christiana Figueres, Executive Secretary | United Nations Framework Convention on Climate Change | 506 |
| 3 | COP21 | 7 december 2015 | Christiana Figueres, Executive Secretary | United Nations Framework Convention on Climate Change | 528 |
| 4 | COP22 | 15 november 2016 | Patricia Espinosa, Executive Secretary | United Nations Framework Convention on Climate Change | 476 |
| 5 | COP23 | 6 november 2017 | Patricia Espinosa, Executive Secretary | United Nations Framework Convention on Climate Change | 744 |
| 6 | COP20 | 9 december 2014 | Ban Ki-Moon, Secretary General | United Nations | |
| 7 | COP21 | 7 december 2015 | Ban Ki-Moon, Secretary General | United Nations | 830 |
| 8 | COP22 | 15 november 2016 | Ban Ki-Moon, Secretary General | United Nations | 769 |
| 9 | COP23 | 15 november 2017 | Ban Ki-Moon, Secretary General | United Nations | 1454 |
| 10 | COP19 | 21 november 2013 | Unknown representative of the U.S. government | United States of America | 667 |
| 11 | COP19 | 20 november 2013 | H.E. Xie Zhenhua, Head of Delegation | People's Republic of China | |
| 12 | COP20 | 10 december 2014 | Unknown representative of the U.S. government | United States of America | 415 |
| 13 | COP20 | 9 december 2014 | Mr. Prakash Javadekar, Hon'ble Minister of State with independent Charge for | India | 1179 |

| | | | Environment, Forests & Climate Change | | |
|---|---|---|---|---|---|
| 14 | COP21 | | President Barack Obama | United States of America | 1744 |
| 15 | COP21 | 30 november 2015 | H.E. Xi Jinping. President of the People's Republic of China | People's Republic of China | 1507 |
| 16 | COP22 | | Jonathan Pershing, U.S. Special Envoy for Climate Change | United States of America | 499 |
| 17 | COP22 | 16 november 2016 | H.E. Xie Zhenhua, Special Representative on Climate Change Affairs | People's Republic of China | |
| 18 | COP19 | | H.E. Dr. Massoumeh Ebtekar, Vice-President & Head of Department of Environment | Islamic Republic of Iran | 1280 |
| 19 | COP19 | | by Dr. Hrin Nei Thiam, Head of Delegation of the Republic of the Union of Myanmar, | the Republic of the Union of Myanmar | 927 |
| 20 | COP20 | 10 december 2014 | Ali I. Al-Naimi, Minister of Petroleum and Mineral Resources | Saudi Arabia | 652 |
| 21 | COP20 | | Ms. Hrin Nei Thiam, Head of Delegation of the Republic of the Union of Myanmar | the Republic of the Union of Myanmar | 802 |
| 22 | COP21 | 30 november 2015 | Benigno S. Aquino III, president of the Philippines | The Philippines | 825 |
| 23 | COP21 | 30 november 2015 | H.E. Abdelfattah Al Sisi, President of Egypt | Egypt | 898 |
| 24 | COP22 | | His Excellency Dr. Thani Ahmed Al Zeyoudi, Minister of Climate Change & Environment | United Arab Emirates | 796 |
| 25 | COP22 | 16 november 2016 | H.E U Ohn Winn, Union Minister, Ministry of Natural Resources and Environmental Conservation | the Republic of the Union of Myanmar | 488 |

# Annex 2: Results of analysis

*See legenda on page 91*

| Year | Country/organization | | | | | |
|------|---------------------|---|---|---|---|---|
| 2013 | UN | a claricon call | ravaged by the impacts of climate change | pave the way for ambition | on the road to Lima and Paris | political momentum | low-carbon |
| | | loss and damage | ambition | low-emission, post-2020 economy | | | |
| | US | fundamentally disruptive | children and grandchildren | carbon pollution | substantial energy efficicency efforts | ambitious | common but differentiated responsibilities |
| | | momentum | greenhouse gas emissions | mutual responsibilities | | | |
| | China | urgency | a real and severe threat | sustainable development | CBDR | translate the outcomes into actions | technology development, capacity building |
| | | a clear roadmap | raise mitigation ambition | emission-cutting commitments | emission-cutting targets | gap in emission-cutting effort | energy saving |
| | | carbon intensity | a green and low carbon consumption mode | carbon market development | capacity building | | |
| | Iran | sustainable development | a transformation of global development policy | ambitious mitigations | extremely alarming | critical limit | critical condition |
| | | serious threats | common but differentiated responsibilities | emissions reductions | clean and low carbon intensity energy | clean and envionmentally friendly energy production | technology, capacity building and finance |
| | | responsibilities and obligations | devastating environmental effects | combat climate change | present and future generations | | |
| | Myanmar | climate change induced disasters | disaster reduction | present and future generations | common and differentiated responsibilities | greenhouse gases | green economy |
| | | low carbon economy | technology, capacity building and financial support | urgently needed action | stepping-stone | paving the way to Paris | a clear roadmap |
| | | loss and damage | combating the climate change | | | | |

| Year | Speaker | | | | | | |
|---|---|---|---|---|---|---|---|
| 2014 | Christiana Figueres, UN | **a season for planting** | **we must plant the seeds** | a much more secure world | the **calender** of science, [...] finance, [...] political will | **fertilizing the ground** | fundamental transformation |
| | | ambitious decisions, ambitious actions | **growth-opening** opportunity | safeguarding resources | stewards of our shared future | urgency for transformation | plant the seeds of a new, global construct of high quality **growth** |
| | | greenhouse gases to reduce | the future is yours to create | | | | |
| | Ban Ki-Moon, UN | resilient | **healthier** societies | the **ceiling** of a less than 2 degrees Celsius global temperature rise | the window of opportunity is fast closing | a time for transformation | momentum for action |
| | | **combating** climate change | **stepping up** | ambition | positive steps | **a pathway** | loss and damage |
| | | the race is on | a low carbon climate resilient future | **combating** climate change | sustainable development | **losing all the hard-won** developent gains | **to write a new history** for our planet |
| | US | a straight line path | a 2 degree path | a major step forward | effiiency standards | reduce the emissions | the US is **moving** |
| | | the path to a successful agreement | how much is at stake and not lose the forest for the trees | | | | |
| | India | on the path to an ambitious agreement | clean technologies | carbon sinks | energy efficiency | benefits of pollutions reduction | India is also **at the frontlines** of facing the impacts of climate change |
| | | lowering of the energy intensity of our economic growth | increasing energy efficiency | disasters | to put in place the stepping stones | carbon space | common but differentiated responsibilities |
| | | sustainable development | the global warming threat | ambition | finance, technology and capacity building | a balance | the global fight against climate change |
| | Saudi Arabia | **paving the way** | common but differentiated responsibility | ambition | sustainable development | emissions reduction procedures | energy efficiency |
| | | clean energy | | | | | |
| | Myanmar | stabilizing **greenhouse gas** concentrations | present and future generations | natural disasters | harmony between economic development and environmental protection | sustainable development | common but differentiated responsibilities |
| | | capacity building, finance an technologies | mitigate climate change without stifling economic growth | low carbon development **pathways** | win-win synergies between climate and the economy | low carbon green growth | loss and damages |

| 2015 | Christiana Figueres, UN | a claricon call to the world | political stewardship | safeguards the most vulnerable | sustainable future | in harmony with nature | the call of history |
|---|---|---|---|---|---|---|---|
| | | seven sets of eyes of seven generations | | | | | |
| | Ban Ki-Moon, UN | the defining issue of our time | our very future | to define our own destiny | sustainable foorting for generations to come | work to remove any roadblocks | strong ambition |
| | | curbing greenhouse gas emissions | strenghtening resilence | to **translate** this historic call for action | **tsunami** of support | **the floor** not **the ceiling** for efforts | the low-emissions transformation |
| | | loss and damage | we have also **sown the potential seeds** of our own destruction. | **The clock is ticking** towards climate catastrophe | transformative agreement | Paris must put the world on track | **reverberate** down through the ages |
| | | **The eyes of the world** are upon you | they are **sounding the alarm** to the world | sustainable future | clean energy revolution | the peril before our eyes | we can **see** the world that can be ours |
| | | shared future | | | | | |
| | US | building the future we want for our children | those who would **tear down** our world | the growing threat of climate change | a turning point | save our planet | urgency |
| | | 2015 is on pace to be the warmest year of all | glaciers are melting at a pace unprecedented | a glimpse of our children's fate | **floods** of desperate peoples | generation | clean energy |
| | | energy efficiency | carbon pollution | stong economic growth and a safer environment | no longer have to conflict with one another | in concert | one of the enemies we'll be fighting |
| | | America is **on track** | reduce our carbon emissions | low-carbon future | secure an agreement that builds in ambition | progress **paves the way** | clean energy innovation |
| | | its most destructive effects | clean energy technologies | the global economy is on **a firm path** towards a low-carbon future | a planet that is beyond its capacity to **repair** | the next generation is watching what we do | being too late |
| | | **that hour** is almost upon us | moments of **victory** | our children and our grandchildren | | | |
| | China | ambitious | explore **pathways** | sustainable development | green development | **greenhouse gases** | green, circular and low-carbon development |
| | | financial and technical support | climate-friendly technologies | build green economy | common but differentiated responsibility | green, circular and low-carbon growth | harmony between man and nature |
| | | innovative, coordinated, | low-carbon energy system | green building | low-carbon transportation | carbon emission trading market | clean energy |

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| | | green, open and inclusive development | | | | |
| | | all eyes are now on Paris | | | | |
| | Philippines | all voices to be heard | accounting of capacities | the economic costs of climate change | whose existence is threatened by rising water levels | the fight against climate change is a matter of survival | carbon footprint |
| | | **greenhouse gas** emissions | finance, technology development, and capacity building | collective security | safeguard the welfare of our citizens | the many generations to come | |
| | Egypt | our common fight | crucial juncture | turning point | common goal | the next generations | balenced international agreement |
| | | sustainable development | desired balance | common but differentiated responsibilities | financing, capacity building, and advanced technology | transform our economies to achieve susainable development | sustainable development |
| | | brighter future [...] for the future generations | | | | | |
| 2016 | Patricia Espinosa, UN | the transformation to truly sustainable development | a low-emission and resilient world | a balance | **a healthy planet** | harmony | transformation |
| | | the call of history | | | | | |
| | Ban Ki-Moon, UN | **a new dawn** for global cooperation on climate change | **translate** words into effective policies and actions | protect our planet, safeguard the most vulnerable | low-emissions development | climate resilience | its **frontlines** |
| | | the danger zone | raise ambition | a global emissions **pathway** | catastrophic climate impacts for thousands of years to come | the transition to clean energy | enormous responsibility |
| | | to **gamble** with the fate of future generations | carbon **footprint** | resilience | protecting our only **home** | | |
| | US | momentum | **moving** | **translating** their pre-Paris climate goals | cut carbon pollution | resilience | to **combat** this global challenge |
| | | transitioning to a clean energy economy | market-based changes | low-carbon solutions | clean energy industry | clean energy investment | global transition |
| | | **move forward**, and ensure non of us **fall behind** | challenges to **wrestle** with | | | | |

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|---|---|---|---|---|---|---|---|
| | China | the speed | green and low-carbon transition | momentum | future generations | common but differentiated responsibilities | emission reduction ambitions |
| | | finance, technology and capacity building | sustainable development | responsibility | carbon emission trading market | green and low-carbon transition | |
| | United Arab Emirates | **translate** outcomes into successful actions | sustainable future | for generations to come | urgent action | financial support, capacity building, technology transfer | transition |
| | | hydro-carbon focused economy | clean energy sector | improve energy efficiency | transition to a low-carbon economy | green growth | a promising future for us and for our coming generations |
| | Myanmar | urgent and immediate actions by all | ambitious goals, targets and commitments | a sustainable future | loss and damage | extreme weather events | climate resilience |
| | | finance, technology transfer and capacity building | climate action | | | | |
| 2017 | Patricia Espinosa, UN | a clear **path** | sustainable development | **journey** | urgency | extreme weather events | to meet climate targets |
| | | luxury of time | ambition | | | | |
| | Ban Ki-Moon, UN | ambition | **on the frontlines** | catstrophic effects | the defining threat of out time | future generations | the safety zones |
| | | **the window** of opportunity to meet the 2-degree target may **close** | to bend the emissions curve | de-couple emissions from economic growth | on track | | to close the emissions gap |
| | | strengthen resilience | sounded the alarm about climate change | grow their economies cleanly | low-carbon, climate-resilient future | the devastation of climate change impacts | climate-friendly development |
| | | energy efficiency | carbon pricing | driving down **greenhouse gas** emissions | emissions trading systems | energy transformation | green economy |
| | | climate friendly land use | low-emissions economy | momentum | set the world on **the right path** | **combatting** entrenched interests | world for our children |
| | | the **path** to progress | to build a secure world | a **healthy** planet | | | |

**Legenda**

| A harmonious transformation | The road metaphor | Responsibility | jargon | The planet is a patient |
|---|---|---|---|---|
| Accountancy | urgency | greenhouse | war | |