

When green rhetoric and cognitive linguistics meet: President G. W. Bush's environmental discourse in his State of the Union Addresses (2001-2008)¹

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Abstract

This paper pioneers a new field of research as its aim is to apply the cognitive linguistic tools to the analysis of green rhetoric. The corpus data is composed of President G. W. Bush's eight State of the Union Addresses (SOTUA). Through a statistical analysis, the paper throws light on the importance attached to environmental issues and climate change in comparison with the text dedicated to the War on Terror theme. The paper then champions that Bush's green rhetoric is based on narrative structures and a process of storytelling (Poletta, 2006) which allow the Bush Administration to strategically frame, in Lakoff's sense (2004), climate change in order to influence the way the issue is then conceptualized by the American people. The concept of greenwash (Greer and Bruno, 1996) –or how posing as environmentally friendly can be used as a way of promoting another type of a not so eco-friendly reality– is finally called upon to highlight what those actual framing processes wishes to obliterate and why.

Der vorliegende Beitrag leistet Pionierarbeit in einem neuen Untersuchungsfeld: Ziel ist die Anwendung von Methoden aus der kognitiven Linguistik auf die Analyse grüner Rhetorik. Das Korpus setzt sich zusammen aus den acht *State of the Union Addresses* (SOTUA) von Präsident George W. Bush. Mittels einer statistischen Analyse zeigt der Beitrag die Bedeutung, die Umweltfragen und dem Thema des Klimawandels im Vergleich zum Anti-Terror-Krieg beigemessen wird. Im Beitrag wird die These vertreten, dass Bushs grüne Rhetorik auf narrativen Strukturen und einem Prozess des ‚Geschichtenerzählens‘ (*storytelling*, Poletta, 2006) beruht, der es der Bush-Administration ermöglicht, im Lakoffschen Verständnis (2004) Klimawandel strategisch abzubilden (*frame*), um so die Art und Weise zu beeinflussen, in der die amerikanische Bevölkerung das Thema konzeptualisiert. Schließlich wird auf das Konzept des ‚greenwash‘ (Greer and Bruno, 1996) – oder: wie eine umweltfreundliche Selbstdarstellung als Mittel fungieren kann, andere weniger ökologische Realitäten voranzutreiben – zurückgegriffen um hervorzuheben, was durch die gegenwärtigen *framing*-Prozesse verdeckt werden soll und warum.

1. Aim of this analysis, theoretical background, and corpus data

Over the past few years, the mass media in the United States has described increased interest on the part of the public in ‘turning green’. Stories that use terms such as *climate crisis*, *global warming*, *greenhouse gas emissions*, *sustainable forestry*, *renewable energy*, *cap and trade system*, *green jobs*, *hybrid cars* have

¹ The author would like to thank Eve Sweetser for her useful comments and advice (personal conversation in Berkeley, July 2008).

become part of the daily news cycle. Climate change and greenhouse gas emissions are also receiving ever-growing attention from American politicians as the 2008 American presidential campaign clearly demonstrates. In fact, one page on Republican candidate John McCain's official campaign website² is dedicated to this issue. The page, illustrated by photos of windmills, cyclones and a green tree standing in the middle of a field, contains eco-friendly campaign spots with sentences and expressions such as: "Our environment in peril"; "I believe that climate change is real. It's not just a green house gaz issue. It's a national security issue."; "secure our energy future". As for Democratic candidate Barack Obama's environmental policy, in June 2008 he stated³: "[...] a green renewable energy economy isn't some pie in the sky for our future. It is now." And further down in the speech transcription, Obama explicitly puts at stake the current Bush Administration's responsibility in this area over the past eight years:

"What Washington has done is what Washington always does. It's peddled false promises, irresponsible policy and cheap gimmicks that might get politicians through the next election but won't lead America towards the next generation of renewable energy. And now, we're paying the price."

The present paper undertakes a detailed analysis of President Bush's environmental rhetoric in his eight⁴ State of the Union Addresses (SOTUA). This paper will only focus on the issue of climate change and leave out domestic environmental issues such as conservation, fires and sustainable forestry, etc. This type of speech was chosen because it offers the possibility of establishing a corpus of quality and stability as the SOTUAs vary little in terms of form and meaning structure from one year to the other. They are aimed⁵ at a very specific addressee i.e. the U.S. Congress. They serve the same purpose each year since they are a general presentation of the President's agenda for the year to come regarding political, social and economic priorities,

² <http://www.johnmccain.com> (20.06.2008).

³ Speech delivered in Las Vegas, Nevada, June 24, 2008: <http://www.cfr.org/publication/16627/> (28.06.2008).

⁴ It should be noted that the speech President Bush delivered in front of Congress in 2001 was actually not a State of the Union Address *per se* as G.W. Bush had just been inaugurated. He actually did a « budget message » instead which has the same intents and purposes. For further details see <http://www.presidency.ucsb.edu/sou.php> (28.06.2008).

⁵ For further details, see the US Constitution, Art II, section n°3.

at home and abroad, as well as a detailing of the President's legislative proposals. All these speech transcriptions are available on the internet and can be downloaded for free.

The corpus was done manually as these eight speeches had to first be read so that the parts dedicated to environmental issues could be properly delineated. The segments which refer to environmental issues were then gathered and grouped in a linear and chronological order.

The main objective of the analysis is to pin down the rhetorical devices at work regarding environmental issues and to measure their potential power and impact on the mental screen of the American citizens. Hence, this paper finds itself at the intersection of several disciplines (Peterson, 2004:3-33), namely environmental communication and presidential rhetoric (Medhurst, 1996) on the one hand and cognitive linguistics on the other.

The fact that these speech segments can be looked at diachronically should allow us to answer the following questions: Is the SOTUA's environmental rhetoric based on similar ideas, claims, reasoning from one year to the other? Were some years 'greener' than others? And, if so, which ones and why?

The analysis rests on the theoretical framework of cognitive linguistics and more precisely on Lakoff and Johnson's works on metaphor and metonymy (1980), and on Lakoff's investigation of frames (1996, 2004). The analysis also calls upon Johnson (1993) and Turner's (1996) works on narrative structure.

The objective of this analysis is to throw light on how American and international environmental issues are conceptualized by the current Bush Administration and then put into words in front of Congress. In other words, is there a recurrent rhetorical pattern that could be based on conceptual metaphorical and metonymical networks, on the activation of specific frames, on narrative or parabolic structure? The article will also throw light on the relatively new concept of "greenwash" as defined by Greer and Bruno (1996) and, more recently, by Pearsall (1999) as follows: "[d]isinformation disseminated by an organization so as to present an environmentally responsible public image... Origin from green, on the pattern of whitewash". As one of the key issues of this article will deal with President G. W. Bush's image enhancement via environmental concern, we will thus reflect on the

possible application of this term to these speeches so as to determine on which cognitive linguistic/stylistic grounds greenwash talk can be based.

A rapid survey of the use and importance of environmental rhetoric at the White House from 1989 to 2008 will be presented in order to put President Bush's rhetoric back into chronological context. The selected corpus data will then be examined through statistics and charts. This investigation will allow us to gauge the place occupied by environmental issues in President Bush's speeches over these eight years of presidency and also to look at the potential differences existing between the President's first and second terms. The article will then zoom in on the words and expressions used in the segments under study so as to analyze how global environmental key issues are conceptualized by the Bush Administration.

2. A brief survey of former Presidents G. H. Bush and Clinton towards environmental issues

During his presidential campaign in 1988, George H. W. Bush presented himself as the "environmental president", turning away from Reagan's eight years of "symbolic environmental legacy" which mostly centered on conservation and resulted in inaction (Brant Short, 2004:134-54). In 1990, George H. W. Bush signed the Clear Air Act but Carcasson (2004:258-87) points out that with the beginning of a recession in the U.S. in 1991, the first President Bush's commitments to environmental policy rapidly dwindled which lead him to shift his position from environmental activism to economical protectionism as the following excerpt of a speech given that same year illustrates⁶:

"Most of us want a lot of the same things. Around here, for instance, everyone wanted to preserve the Canyon and the local economy. And no one wants an environmental policy that permits the wanton destruction of our natural treasures. And nor can we afford a policy that makes the American worker **an endangered species**. Our policies should promote economic growth, create new jobs, and still let everyone enjoy the grandeur of the outdoors. And, believe me, it can be done. It is being done".

⁶ Remarks at an Environmental Agreement Signing Ceremony at the Grand Canyon, Arizona, Sept. 18th, 1991 : <http://www.presidency.ucsb.edu/ws/print.php?pid=19994> (16.03.2008).

The U.S. is depicted as finding itself caught between economic recession on the one hand and environmental issues on the other. According to Carcasson (2004:258-87), President Bush's main rhetorical strategy lies in quietly removing climate change issues from the realm of reality and placing them within the virtual realm. The danger of losing at-risk natural resources thus remains only potential and is rhetorically kept at bay. The expression *endangered species* as associated to the American worker goes well beyond a possible mapping process since the way President Bush puts it, American workers could literally become an endangered species. In fact, the expression *endangered species* draws its rhetorical power directly from the frame that the expression activates. In Lakoff's own terminology (2004), a word once said, heard, written or heard, activates a frame i.e. a network of extra linguistic knowledge attached to this particular word. This notion differs from that of reference as the sign *elephant* does not only refer to the grey mammal. It also triggers related background knowledge as described in section 4. Hence, *endangered species* activates the knowledge we have of the laws evolution and survival on the planet. However, the expression is usually applied to the animal kingdom and not to a specific group of human beings as is precisely the case in this speech. Therefore, in order for the American workers to survive on the planet, the Administration has to promote economic growth and not, as anyone would naïvely think according to the activated frame, to preserve the environment in which the American worker lives. As Carcasson (2004:270) sums up:

“Bush's political position concerning the environment was evidenced more by his silence than his rhetoric. [...] the issue was barely mentioned in his state of the union addresses. [...] in 1992 SOTUA -with the Earth Summit, the largest international environmental conference in history [...]- not a word was said concerning environmental issues.”

In 1992, Senator Albert Gore, Jr. published *Earth in the Balance: Ecology and the Human Spirit* which addressed the main ecological issues America had to face. Shortly after, he was elected Vice President and served eight years in the Clinton White House. From the outset, the Clinton administration was thus perceived by environmentalists as very proactive towards environmental issues and global warming. However, the administration was rapidly criticized for not putting their words into action. Carcasson (2004:270)

provides us with a telling discrepancy between rhetoric and facts as, in June 1997, President Clinton declared that the environment had “moved to the top of the international agenda” at a United Nations session on environment. Then he gave a speech at the White House Conference on Climate Change where he acknowledged that global warming was “real” and that the U.S. had to curb its emissions. However, in December of the same year, he decided not to ratify the Kyoto treaty. Cox (2004: 161-63) uses the words “disillusionment and betrayal” to sum up the general feelings shared by American environmentalists about the Clinton administration’s attitude regarding national and global environmental issues following his first term.

Carcasson (2004:259) henceforth argues that, when retrospectively focusing on George H. W. Bush and Clinton’s environmental speeches and concrete proposals, the proactive stance to confront climate change adopted by the first and even more so by the latter was “severely limited”:

“Although Clinton’s rhetoric represented a significant improvement over that of the Bush administration, both presidencies exhibited a clear avoidance of the most difficult issues of the international crisis and a continuing reliance on both a nationalistic and economic paradigm.”

George H. W. Bush and Clinton invested their faith mostly in scientific research⁷ and technological advances. However, their support of these initiatives was essentially a “procrastination device” (Carcasson 2004:71).

This device is again activated during George W. Bush’s presidency as shall be demonstrated in the present article (see section 7.4). During the current President Bush’s first term, denial regarding global warming also played an important role on the rhetorical stage as, on many occasions, the President officially rejected scientific findings on climate change as being real. In *An Inconvenient Truth*, Al Gore (2006:264-65) reminds his readers of the scandal disclosed by the *New York Times* in 2005 regarding Philip Cooney, a former Petroleum Institute lobbyist appointed chief of the White House Environment Office by President Bush in 2001 and whose unofficial mission was to misinform the American people regarding global warming via a constant editing job in the media and science publications over the course of four years.

⁷ Whose definition, in such a context, can be debatable.

3. A statistical approach to the corpus data

This corpus is composed of eight speeches which extend over two presidential terms and which, once combined, is seventy pages long. In order to get a general view of the corpus, statistics were considered as a necessary step within the elaboration of the discourse analysis.

The figures should unveil (i) how much space is occupied by these green segments as compared to the space dedicated to the SOTUAs' key issues from 2002 onwards i.e. the War on Terror Program (WOT) and the war in Iraq. They should also disclose (ii) whether there are significant differences regarding green talk from one year to the other or, in other words, whether some years are greener than others.

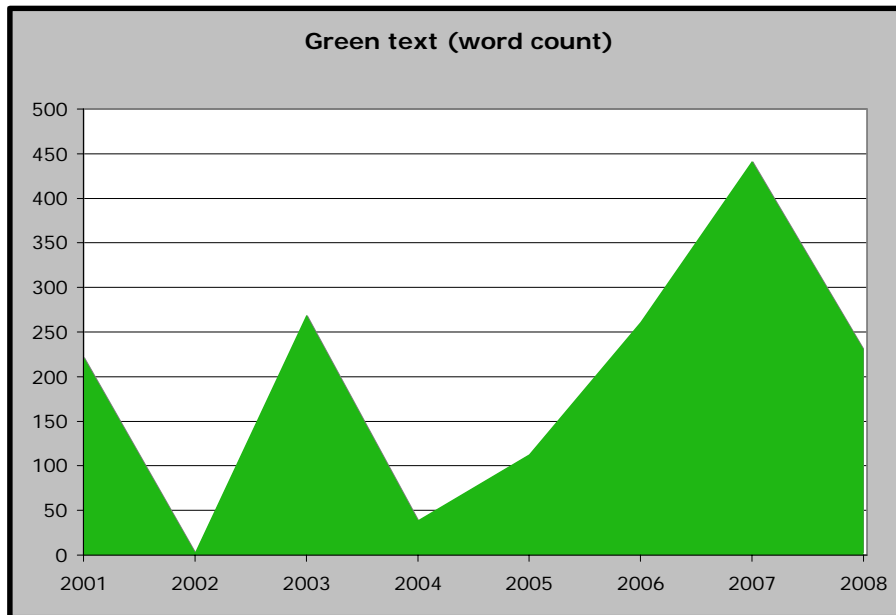
To delineate what we chose to call the green segments, the speeches were carefully read and the underlined segments thus obtained were then grouped together per year (see appendix). One may wonder about the parameters chosen to decide which parts were considered as being green and which parts were not. All the paragraphs which hint at the price of energy, energy plan, national parks, the protection of the environment, Clear Skies legislation, Healthy Forests Initiative, hybrid cars, oil and alternative fuels, were selected. They usually occur once in the speech, in a linear way, which is why this speech format facilitates this type of analysis. The SOTUAs cover many areas but, for each theme (health, economy, retirement, education, etc.) the remarks are grouped together and extend over a few paragraphs or pages. It should be noted that these green segments encompass the expected lexicon as well as all other parts of speech which link those green words and expressions together.

3.1 Word count: amount of green text per year

The following table indicates the amount of text (all parts of speech included) contained in the selected green segments each year:

year	2001	2002	2003	2004	2005	2006	2007	2008
words	222	3	269	39	113	261	442	231

The results of this word count are summed up in the chart below. The X-axis represents the years while the Y-axis refers to the amount of green text found in each SOTUA:



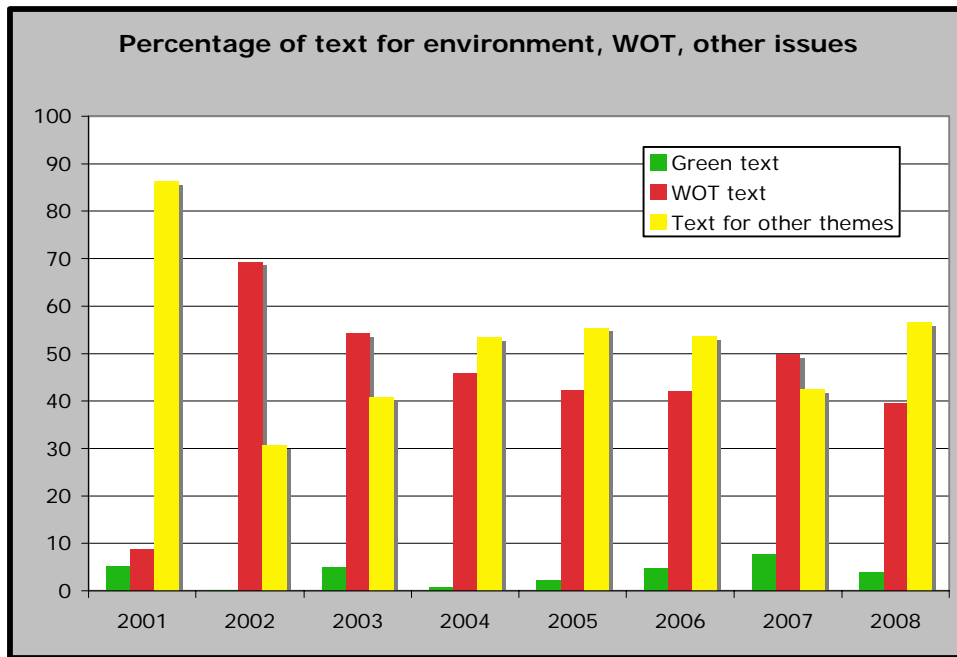
Turning this word count into percentage would not have proved very informative since the objective is not to compare these figures against others belonging to another area. What the diagram clearly shows is that some years are definitely greener than others. And if these years are put in decreasing order, we get the following:

2007 > 2003 > 2006 > 2008 > 2001 > 2005 > 2004 > 2002

Thus, the greenest year is 2007 (then comes 2003) and the least green year is 2002 (followed by 2004). For the purpose of the present article, we deliberately chose to explain why some years are greener than others in the last section of our article which centers on the concept of greenwash.

3. 2 Percentage of green text, WOT text and text for other issues per year

From 2002 onwards, the recurrent major issue in President Bush's SOTUAs is the War on Terror program, including the war in Iraq. In order to gauge the importance attached to the environmental issue during George W. Bush's two terms, the following chart compares three elements: the percentage of text dedicated to the environmental issue, the percentage of text dedicated to WOT and the percentage of text for the rest of the political and social issues broached in these eight speeches.



The most striking fact is that green talk is far from being the dominant issue in those speeches as their percentage usually oscillates between 0 - 0.76% and 4 - 5 % with an exception of 7.8 % in 2007. Besides, one may be surprised by the fact that only 4 % of the 2008 SOTUA are green words, at a time when the media are even more inclined to take climate change stories into consideration. Although the explanation cannot be firmly established, we posit that since SOTUA 2008 was President Bush's last speech of the sort, he did not feel any obligation to show himself eco-friendly any longer. We may also reach the conclusion that G. W. Bush, by showing his true colors regarding climate change and its causes, strategically helped Mc Cain look even more committed to environmental issues.

Even though the 2001 SOTUA⁸ occurred before the terrorist attacks of September 11, it is interesting to note that references about potential threats of a similar nature are hinted at by President Bush in his first SOTUA from a retrospective point of view, including foreboding expressions and key words such as:

“We should also prepare for the **unexpected**, for the **uncertainties of the future**. We should approach our nation's budget as any prudent family would, with a **contingency fund for emergencies or additional spending needs**.”

⁸ Which, as mentioned above, should in fact be called a “budget message”.

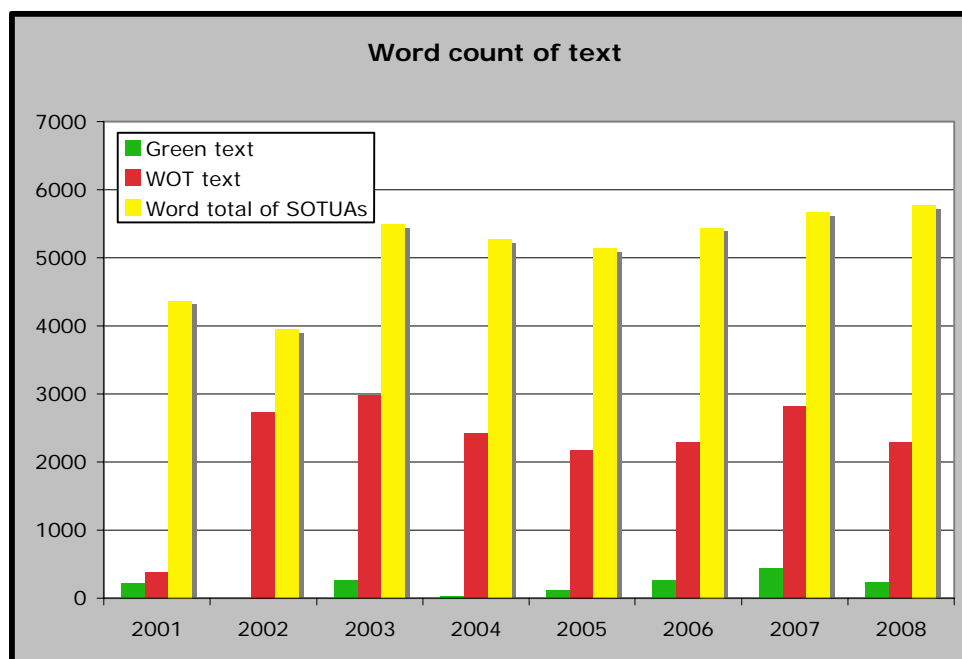
[...] I've asked the Secretary of Defense to review America's Armed Forces and prepare to transform them to meet **emerging threats**.

Our nation also needs a clear strategy **to confront the threats of the 21st century — threats that are more widespread and less certain. They range from terrorists who threaten with bombs to tyrants in rogue nations intent upon developing weapons of mass destruction.**”

Interestingly, in January 2001 the percentage of words related to this issue already exceeds the percentage of green words. In 2002, the three words dedicated to the environmental issue, “a cleaner environment”, are barely visible on the chart. Not surprisingly, the WOT words amount to seventy percent of the whole speech. 2003 SOTUA is still dominated by WOT segments with a slight decrease in 2004 which corresponds to reelection year where the Bush Administration decided to play down the WOT program during the presidential campaign. But broadly speaking, between 2004 and 2008, the percentage of WOT words does not vary much, oscillating between 40 and 50 %, with a significant jump in 2007.

3.3 Word count: green text and WOT text against totality of speech text

The following chart aims to put into perspective the green text total and the WOT text total against the total of SOTUAs' text per year:



In this particular case, we chose to represent word count instead of percentage as the word total for SOTUAs would then have corresponded to 100 %, a figure which – even though far from tampering with the data – is actually not accurate as the amount of SOTUA text does vary from one year to another.

This chart takes the result of the last diagram one step further because it enables us to see the importance attached to the WOT issue in all the SOTUAs of Bush's eight years of presidency. The results obtained for 2001 and 2002 are the easiest ones to interpret as the first occurred before September 11 and the latter was delivered the year following the terrorist attacks. Not surprisingly, the WOT text still occupies almost three quarters of SOTUA 2003. In 2004, the WOT issue is dedicated a little less than half of the SOTUA and from then on the amount of WOT text decreases (in relation to the word total of SOTUA text) although the chart clearly shows that six years after SOTUA 2002, and at a time when the media attach an ever growing attention to the Americans' interest in environmental issues and climate change, the WOT theme still occupies more than a third of the entire SOTUA 2008 text.

4. Framing as a rhetorical device

In *War of Words*, Silberstein (2002:1) reminds her readers that “through the use of language, we create and recreate particular worlds of understanding”. In cognitive linguistic terms, when a speaker uses specific words and expressions in a particular context, he or she activates frames. According to Lakoff (2004: 3), if one is asked to think of an elephant, not only will he obtain a mental image of it with specific characteristics (largest living land animal, big floppy ears, a trunk, tusks, a slow pace, round feet, thick skin) but he might also trigger bits and pieces of background knowledge against which an elephant can appear: circus and zoo, India and Africa, old Tarzan movies, etc. The frame can also contain more mythical knowledge about its impressive long-term memory, its connection to wisdom in Asian cultures, and the fictional place known as the elephant's graveyard which is a well-known metaphor in both the French and English languages.

It should be noted that the definition of frame can vary a little in the literature as explained by Tannen ed. (1993). “Frame” originally stems from anthropology and was then exploited in sociology by Goffman (1974), in

cognitive linguistics by Fillmore (1976), and in psycholinguistic by Tannen (1993).

What should be emphasized is that each time a frame is activated, the same ideas are once more invoked and thus reinforced in the hearer's mind. Therefore, framing any idea but particularly a political issue, has a strategic and manipulative dimension that can devolve into outright propaganda. And if you are asked not to think of an elephant, the first thing you are bound to do is just the opposite as the neuroscientist Edelman points out in the incipit of his famous book *Bright Air, Brilliant Fire* (1992: 3). Hence, denying the frame that needs to be discarded by syntactically negating it is therefore not recommended since negating it means activating it once again in the first place.

Lakoff (2004:4) reminds his readers of the way in which the George W. Bush Administration chose to frame tax cuts for the rich. The expression *tax relief* was deliberately coined by the conservatives in order to activate a specific process of conceptualization in the American citizens' minds:

“When the word tax is added to relief, the result is a metaphor: TAXATION IS AN AFFLICTION. And the person who takes it away is a hero, and anyone who tries to stop him is a bad guy. This is a frame. It is made up of ideas, like affliction and hero. The language that evokes the frame comes out of the White House, and it goes into press releases, goes to every radio station, every TV station, every newspaper. [...] And soon the Democrats are using tax relief – and shooting themselves in the foot.”

The only way to reject the framing of an issue is therefore to reframe it i.e. to frame it differently.

Based on this definition and illustration, the next section is dedicated to the frames activated in the green segments of Bush's eight SOTUAs.

5. The elaboration of a frame or how do the words energy, dependence and clean connect with environment?

Three key words enable the reader to get access to these SOTUA green segments and, therefore, to the domain of environmental issues. Where one would have expected to find the now familiar expressions *global warming* and *climate change*, the words *energy* and *dependence* and *clean* are used. As the

paper will demonstrate, these words are actually inserted in a highly structured and ever-evolving narrative made up of several characters, a plot and a climax.

5.1 The frame of dependence

The word *environment* is often accompanied by the notions of protection, improvement and cleanliness⁹. The table below displays the number of occurrences of *environment* per year (word count), as well as those of *energy* and *dependence*:

	2001	2002	2003	2004	2005	2006	2007	2008
environment	2	1	4*	Ø ¹⁰	1*	1	3*	1
energy	5	Ø	3	2	2	2	1	2
dependence*	1	Ø	2	1	1	1	4	1

As noted in section 3, the 2007 and 2003 SOTUAs are the greenest years while 2002 and 2004 are the least green. The term “environment” occurs 13 times in total across the eight years.

In contrast, the word *energy* appears thirty-eight times in these green segments. As for *climate change* and *global climate change*, they are only found once, in 2007 for the first and in 2008 for the latter. Even though it is believed that George W. Bush’s position towards climate change/crisis evolved dramatically over his eight years of presidency, it should be noted that the phrase *global warming* is not used once. The word *energy* mainly refers to oil and petroleum hence more or less directly to the economy of the U.S., to the automobile industry and, more broadly, to the importance attached to cars in American daily life.

The following table gathers all the SOTUA occurrences of *energy* and *dependence/independence*, as well as the related adjectival realizations of the latter:

⁹ Where the asterisk appears, the occurrences include one different syntactic realization i.e. *environmental* or *environmentally*, *independent*, etc.

¹⁰ Wherever the symbol Ø is used in the present paper, it stands for no occurrence.

2001	<i>Rising energy prices;¹¹ high cost of energy; a serious energy problem; our energy demand outstrips our supply; we can produce more energy at home; America must become more energy-independent</i>
2002	Ø
2003	<i>Promote energy independence; produce more energy at home; make our country much less dependent on foreign sources of energy</i>
2004	<i>Need reliable supplies of energy; make America less dependent on foreign sources of energy</i>
2005	<i>Reliable supplies of affordable environmentally responsible energy; make America more secure and less dependent on foreign energy</i>
2006	<i>Keeping America competitive requires affordable energy. And here we have a serious problem: America is addicted to oil, which is often imported from unstable parts of the world. The best way to break this addiction is through technology; more reliable alternative energy sources; move beyond a petroleum-based economy and make our dependence on Middle East a thing of the past</i>
2007	<i>Stable supply of energy; for too long our nation has been dependent on foreign oil and this dependence leaves us more vulnerable to hostile regimes, and to terrorists – who could cause huge disruptions of oil shipments, and raise the price of oil, and do great harm to our economy; Achieving these ambitious goals will dramatically reduce our dependence on foreign oil; America is on the verge of technological breakthroughs that will enable us to live our lives less dependent on oil.</i>
2008	<i>To build a future of energy security; our security, our prosperity, and our environment all require reducing our dependence on oil; the US is committed to strengthening our energy security and confronting global climate change</i>

The substantives *dependence* and *independence* and their related adjectival form occur ten times in these green segments. But in which particular context do they appear? These nouns and adjectives refer, more or less explicitly, to the type of link or relationship between the U.S. and the Middle East where most of the imported oil comes from. In President Bush's way of presenting the facts, this state of dependence constitutes the reason why new energies have to be found and developed at home so that the bonds with the Middle East are broken. In order to be independent and freed from the Middle East, America

¹¹ Wherever the semicolon is used in such a table, it means that the text found before and after it is not part of the same sentence in the speech. The excerpts sometimes belong to different paragraphs but are always part of the green text i.e. they were not imported from paragraphs dedicated to other issues such as the economy, retirement, etc.

thus needs to rethink energy in terms of its supplies. Moreover, the President insists on the fact that these new types of energies will also have to be *cleaner*.

5.2 On Cleanliness

As the table below sums up, the substantives *energy* and *environment* but also *technology*, *automobiles*, *air*, *coal*, *diesel* are often associated to the adjective *clean* or to its comparative form which therefore implies, on a semantic level as well as on a grammatical one, that those various elements are already clean but can be made even cleaner by the Bush Administration provided that Congress is on their side.

2001	<i>A cleaner environment</i>
2002	<i>A cleaner environment</i>
2003	<i>To develop cleaner technology; America can lead the world in developing clean, hydrogen-powered automobiles; to make our air significantly cleaner</i>
2004	<i>∅</i>
2005	<i>Safe, clean nuclear energy; clean coal</i>
2006	<i>To develop cleaner, cheaper, and more reliable alternative energy sources; increase in clean-energy research; clean, safe nuclear energy</i>
2007	<i>To keep America's environment clean; clean coal technology; clean, safe nuclear power; expand the use of clean diesel</i>
2008	<i>A new generation of clean technology; let us create a new international clean technology fund; clean energy sources; the development of cleaner and more energy-efficient technology</i>

The adjective *clean* activates a conceptual network of knowledge such as purity, freshness, hygiene and, to a certain extent, safety. According to Lakoff (2004:22-23), these terms are mostly used to attract environmentalists' attention:

“People who support environmentalist positions like certain words. They like the words *healthy*, *clean*, and *safe* because these words fit frames that describe what the environment means to them. Therefore, Luntz says, use the words *healthy*, *clean*, and *safe* whenever possible, even when talking about coal plants or nuclear power plants. It is this kind of Orwellian weakness that causes a piece of legislation that actually increases pollution to be called the Clear Skies Act.”

From a technological point of view, however, the noun phrases *clean coal*, *clean diesel* and *clean nuclear power* could be considered as misuse of language as coal, diesel, and nuclear power are fossil energies which, by definition, cannot be considered green.

5.3 The frame of safety

One final adjective that should be looked at with great care is *safe*. It surfaces in 2005, 2006 and 2007 through the expression *safe nuclear energy*. The association of *nuclear energy* to *safety* might go beyond the need of revamping the common poor reputation of this source of energy due to the major nuclear power accident on Three Mile Island, Pennsylvania in 1979. Poletta (2006:9) also focuses on this adjective when she mentions what the American media referred to as Ashley's story. In the 2004 election, one of Bush's TV spot depicted President Bush meeting with Ashley, an American teenager who lost her mother in the September 11 attacks:

“Especially interesting [...] is how the story turned on the ambiguity of the word *safe*. Ashley Faulkner said, ‘He’s the most powerful man in the world and all he wants to do is make sure I’m safe, that I’m okay.’ Safe from what? The word means free from danger or injury, which we usually think of as physical. But *safe* also has a therapeutic meaning: *safe* in the sense of emotionally secure.”

In the 2008 SOTUA, the adjective *safe* is no longer used but it is interesting to note that the term *security*, which belongs to the same semantic field, occurs three times as the following expressions illustrate:

- (i) ... to build a future of energy security
- (ii) Our security, our prosperity, and our environment all require reducing our dependence on oil.
- (iii) ... strengthening energy security

Hence, what is at stake now regarding *safety* or *security* is no longer nuclear energy but the country. Over the years 2005-2008, a semantic shift took place where the notion of security activated in the SOTUAs slowly moved from one specific area, nuclear energy, to another i.e. America as a whole. As mentioned in the introduction, McCain also calls upon this discourse strategy towards environmental issues in his current campaign ads. McCain¹² can be heard

¹² <http://www.johnmccain.com> (22.06.2008).

saying the following in one TV spot: "I believe that climate change is real. It's not just a greenhouse gas issue. It's a national security issue", and the expression "secure our energy future" in another.

The frame of safety is therefore currently activated by the Republicans in the domain of green rhetoric. As previously underlined, the War on Terror waged on September 12, 2001 along with the USA PATRIOT Act¹³ signed into a law in October 2001 were mainly built on the justification that the country and its borders needed to be made much more secure in order to preserve American citizens' safety. The notions of threat and potential danger are now activated in a different context and, to a certain extent, a specific type of rhetoric is applied to a new political issue. To put it differently, the safety frame is being applied to environmental issues and was activated for the same purpose from 2005 onwards in Bush's SOTUAs.

6. Fairy tale structure and storytelling

In a subpart of one of Lakoff's articles entitled "The fairy tale of the just war" (1992: 466-67), the author outlines the main ingredients of a successful fairy tale. The cast of characters usually contain a villain, a victim and a hero. The scenario often revolves around a crime that has been committed by the villain against the victim. But how exactly does the tale get started?

"The offense occurs due to an imbalance of power and creates a moral imbalance. The hero gathers helpers or decide to go it alone. The hero makes sacrifices; he undergoes difficulties, typically making arduous heroic journey, sometimes across the sea to a treacherous terrain. The villain is inherently evil, perhaps even a monster, and thus reasoning with him is out of the question. The hero is left with no choice but to engage the villain in battle. The hero defeats the villain and rescues the victim. The moral balance is restored. Victory is achieved."

For the sake of historical perspective in this area of research, it should be pointed out that twenty years earlier, Todorov (1971:50) investigated the recurrent structure of a tale and its main archetypal elements. And the notion

¹³ The Act was named as an acronym: "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism". Silberstein (2002 :166-171) sees this act as part of the elaboration of a rhetorical ground by the White House and entitled the subpart dedicated to this analysis: The USA PARTIOT Act: fighting fear with fear".

of imbalance already prevailed in fairy tale structure. With these tools that originally stemmed from literary research, Lakoff (1992) demonstrated that the prototypical fairy tale structure as described above was actually mapped onto the first Gulf war by George H. W. Bush's administration in order to justify its pressing necessity. Johnson (1993) and Turner's (1996) works contributed to establishing narrative structure and parabolic thinking as human basic cognitive capacities that allow human beings to tie up segmented or unconnected events into coherent wholes. Bonnefille (2001) undertook a similar investigation with an analysis of the metaphorical and metonymic mappings activated by the American and British press during the Kosovo crisis and another (2002) centered on the mappings and blendings activated in the press to describe the state of the American economy after September 11 terrorist attacks. Other similar analyses were conducted such as Nerlich, Hamilton and Rowe (2002)'s analysis of the conceptualization of Foot and Mouth Disease or the investigation of metaphorical networks and narrative structures in debates about Europe presented by Mussolf (2004).

Over these past few years, scholars have been paying an ever-increasing amount of attention to the use of narrative structure in the media as well as in politics through a process known as storytelling. This concept is a trendy communication tool whose psychological and pedagogical effects are celebrated as much as they are criticized and feared. Storytelling is used in many areas, as Poletta explains (2006:8), so much that, scholars now agree on the following:

“The lines that rhetorical scholars once drew between prose and poetic discourse and between epideictic, deliberative, and forensic forms of persuasive rhetoric are now recognized as not so neat. People tell stories when making speeches and logical arguments, when deliberating, and when interpreting scientific phenomena”.

For example, in 2008, storytelling in the French presidential arena has been revolving around the President's new wife, a former supermodel, and her way of handling specific political events such as the meeting with Queen Elizabeth (03/26/08), the arrival at the Villacoublay airbase of the former hostage Ingrid Betancourt freed by the farc rebels (07/02/08) or the meeting with the Dalai Lama at the opening of a new Buddhist temple in the South of France (08/22/08). In such cases, storytelling is framed by what is now often called celebrity politics or, in cognitive linguistics terms, by a fairy tale structure. The

French media relies on the narrative the Sarkozy administration chooses to give them and on how it decides to stage the various events to activate a specific mode of conceptualization at a time when France's First Lady invites a comparison between herself and Jackie Onassis (<http://www.vanityfair.com>, September 2008, 25.08.2008).

7. From green talk to green tale

We posit that President Bush's environmental talk rests on such a narrative processes in these eight SOTUAs. Storytelling is called upon in order to achieve specific political goals which are pinned down in the following sections. Let us begin with describing the cast of characters selected by George W. Bush's administration for this green fairy tale.

7.1 America: from dominated character to victim

What first strikes the reader is how America is depicted by George W. Bush in the selected speech segments. The main linguistic devices used to refer to the United States of America are: *We, America, at home, our country, the US*. More precisely, the beginning of the narrative (SOTUA 2001) discloses that American citizens are *struggling* with the ever increasing price of energy/oil while America has "a serious energy problem". In addition, more broadly, this energy problem has repercussions on the West which finds itself in a state of *uncertainty*.

The table below gathers all the relevant references to America.

2001	<i>[...] many citizens are struggling with the high cost of energy. We have a serious energy problem that demands a national energy policy. The West is confronting a major energy shortage that has resulted in high prices and uncertainty; Our energy demand outstrips our supply; We can promote alternative energy sources and conservation, and we must; America must become more energy-independent, and we will.</i>
2002	Ø
2003	<i>Our third goal is to promote energy independence for our country [...]; Join me in this important innovation to make our air significantly cleaner, and our country much less dependent on foreign sources of energy.</i>
2004	<i>[...] I urge you to [...] make America less dependent on foreign sources of energy.</i>

2005	<i>Four years of debate is enough: I urge Congress to pass legislation that makes America more secure and less dependent on foreign energy.</i>
2006	<i>[...] we have a serious problem: America is addicted to oil, which is often imported from unstable parts of the world. The best way to break this addiction is through technology; Breakthroughs on this and other new technologies will help us reach another great goal: to replace more than 75 percent of our oil imports from the Middle East by 2025. By applying the talent and technology of America, this country can dramatically improve our environment, move beyond a petroleum-based economy, and make our dependence on Middle Eastern oil a thing of the past.</i>
2007	<p><i>Extending hope and opportunity depends on a stable supply of energy that keeps America's economy running and America's environment clean. For too long our nation has been dependent on foreign oil. And this dependence leaves us more vulnerable to hostile regimes, and to terrorists -- who could cause huge disruptions of oil shipments, and raise the price of oil, and do great harm to our economy; It's in our vital interest to diversify America's energy supply -- the way forward is through technology; Achieving these ambitious goals will dramatically reduce our dependence on foreign oil, but it's not going to eliminate it. And so as we continue to diversify our fuel supply, we must step up domestic oil production in environmentally sensitive ways.</i></p> <p><i>And to further protect America against severe disruptions to our oil supply, I ask Congress to double the current capacity of the Strategic Petroleum Reserve; America is on the verge of technological breakthroughs that will enable us to live our lives less dependent on oil. And these technologies will help us be better stewards of the environment, and they will help us to confront the serious challenge of global climate change.</i></p>
2008	<p><i>To build a future of energy security, we must trust in the creative genius of American researchers and entrepreneurs and empower them to pioneer a new generation of clean energy technology.</i></p> <p><i>Our security, our prosperity, and our environment all require reducing our dependence on oil; The United States is committed to strengthening our energy security and confronting global climate change.</i></p>

The United States needs to stop the fires “that devastate (their) countries”, to cut air pollution and improve the health of its citizens. But the main point focused on over these green segments is the state of dependence that America finds itself in regarding the oil supply. In 2006, Bush goes even further with the sentence “America is addicted to oil” where he begs Congress to help the White House break this addiction that makes America more “vulnerable”

towards “hostile regimes and terrorists” (SOTUA 2007). Gradually, the state of dependence is presented as a real danger for the country: “It’s in our vital interest to diversify America’s energy supply” (SOTUA 2007). Henceforth, the President claims that “a future of energy security” (SOTUA 2008) needs to be built. It would be an exaggeration to say that America perfectly fits the role of the victim until the actual 2005 SOTUA. Before 2005, the country is presented mainly as playing the part of the dominated character in a relationship of domination where the Middle East¹⁴ has the upper hand. However, from 2005 onwards, corresponding to George W. Bush’s second term, America is explicitly portrayed as an innocent victim whose health is at risk.

7.2 The Middle East or when the villain surfaces between the lines

During the first term, the villain is not explicitly mentioned but only hinted at very indirectly. Hence, to actually see him appear, the segments need to be looked at retrospectively from 2008 to 2001:

2008	<i>Strengthening our energy security</i>
2007	<i>Foreign oil; vulnerable to hostile regimes, and to terrorists; all the oil we now import from the Middle East; foreign oil</i>
2006	<i>[oil] often imported from unstable parts of the world: oil imports from the Middle East; make our dependence on Middle Eastern oil a thing of the past</i>
2005	<i>[...] legislation that makes America more secure and less dependent on foreign oil energy</i>
2004	<i>Make America less dependent on foreign sources of energy</i>
2003	<i>[make] our country much less dependent on foreign sources of energy</i>
2002	∅
2001	<i>America must become more energy-independent</i>

The adjective *foreign* most frequently refers to an element coming from outside one’s country which can be presented either as attractive or, because of the differences it implies, as a potential threat. This semantic *double entendre* is also at work with the word *security* since, on the one hand there is a will to place the given country or person on the safe side but on the other, the notion of danger is activated. Where security is needed, danger usually lies dormant in the background. In America, the word *security* is also still strongly connected to the War on Terror program and to the September 11 terrorist attacks, even

¹⁴ Which, as shown in the following section, is never explicitly named.

more so when used by a Republican president. Therefore, we posit that a subliminal connection is established in these speeches between the words *dependence (on oil)*, *Middle East*, *security* and *terrorism*. It should hence be noted that in the SOTUAs from the second term, the green talk bears a strong resemblance to the WOT rhetoric.

7.3 President Bush as the hero and Congress as the helper

Clearly, the doer of the story is the President. Whenever the pronouns *we*, *us* and *you* are used, they refer to Congress and the White House or to the first one only:

“My budget will improve our environment; I propose we make; I have sent you legislation; I’m proposing; join me in this important innovation; My Clear Skies legislation; my budget provides; we can/we need/we must/we will; it is in our vital interest; Let us; to further protect America; The US is committed to strengthening our energy security; Together”.

In fact, the President’s tone blends two rhetorical dimensions. The dominant one can be described as the firm will of moving the country forward on energy independence with the use of modal auxiliaries, verbs of action and a few performative verbs as well as with the use of the pronouns *I* and *My X*. The second rhetorical dimension is that of urgency and pressure put on the addressee and which comes as no surprise since it corresponds to the main purpose of this type of speech:

2003	<i>I have sent you (various plans); I urge you to pass these measures; I ask you to take a crucial step; join me in this important innovation</i>
2004	<i>I urge you to pass legislation</i>
2005	<i>I urge Congress to pass legislation</i>
2007	<i>I ask Congress to join me; I ask Congress to double...</i>
2008	<i>I asked you to pass legislation; you responded; together we should; let us fund; let us increase; let us continue; let us create; let us complete</i>

The Congress thus plays the part of the potential helper that needs to be convinced of the necessity to engage in the fight and also strategically be begged and/or flattered by the hero. If this character sides with the hero, then they will help the hero perform its mission. Or as Lakoff (1992:466) puts it, in a prototypical tale scenario, “the hero gathers helpers or decides to go it alone”.

Henceforth, should this character not help the hero, then he or she would automatically turn into the hero's opponent from the perspective of the American people. The hero would thus have to gather his strength and courage and "to go it alone".

7.4 Scientific research and technological advances as the hero's weapons

In order for the hero to achieve victory over his enemy, he needs to be properly armed. Metonymically, President Bush's main objective is to put an end to America's state of dependence caused by the import of foreign oil. Hence, the weapons he calls upon in the selected green segments can be gathered under the words *technology* and *research*. But more specifically, how is President Bush's green program put into words? The table below sums up the various references made to his proposed environmental solutions:

2001	<i>Land and Water conservation Fund; construction of new energy sources; alternative energy sources; National energy policy</i>
2002	Ø
2003	<i>Comprehensive energy plan; Clear Skies legislation; Healthy Forests initiative; technology and innovation; research funding; hydrogen-powered automobiles; our scientists and engineers</i>
2004	<i>To modernize our electricity system¹⁵</i>
2005	<i>Comprehensive energy strategy; Clear Skies legislation; budget for research on clean cars; hydrogen and ethanol; clean coal</i>
2006	<i>Alternative energy sources; we are on the threshold of incredible advances; Advanced energy initiative; clean-energy research; zero-emission coal-fired plants; revolutionary solar and wind technologies; clean, safe nuclear energy; research in better batteries (cars); hydrogen; ethanol; breakthroughs</i>
2007	<i>Clean coal; solar and wind energy; clean, safe nuclear power; battery research for plug-in and hybrid vehicles; clean diesel vehicles and biodiesel fuel; new methods of producing ethanol; America is on the verge of technological breakthroughs; technology (5 times)</i>
2008	<i>Energy security; trust in the creative genius of American researchers; capturing carbon emissions; renewable power and emissions-free nuclear power; renewable fuels (for car and trucks); a new international clean technology fund; an international agreement that has the potential to slow, stop, and eventually reverse the growth of greenhouse gases; technology (8 times)</i>

¹⁵ President Bush's reference to electricity system in 2004 SOTUA is related to the major blackout which occurred in the northeast part of the USA in August 2003.

For sake of brevity, the present article cannot extend over the definitions of the various expressions mentioned in these segments such as Healthy Forests initiative or Clear Skies legislation, and which encapsulate laws, programs, steps taken (or not taken, for that matter) by the White House since then. Lakoff (2004, DVD) focuses on some of these Republican expressions which are now subsumed under the label “Orwellian language” i.e. “language that means the opposite of what it says” such as: *Compassionate conservative*, *War on Terror*, *tax relief* but also *Clear Skies legislation* and *Healthy Forests initiative* which Lakoff (as seen in section 4), suggests not to use in a debate as their use automatically activates a frame of thinking which should precisely be avoided.

The references to what we decided to call scientific research and technological advances enable the President to shape his green rhetoric with tangible facts. However, the strong belief in sciences and technology as displayed in these eight SOTUAs cannot replace firm action and could once more be perceived as “procrastination device”, to borrow Carcasson’s expression (2004:271).

8. Conceptual scenarios and mapping processes at work to frame climate change

The paper highlights that beyond the connections which are established between one domain of experience and another regarding the main characters of these green segments, two metaphorical scenarios are activated: (i) the DEPENDENCE scenario and (ii) the SECURITY scenario. Both are respectively based on the following conceptual metaphors:

- (i) The DEPENDENCE scenario
AMERICA IS THE DEPENDENT CHARACTER
THE MIDDLE EAST IS THE VILLAIN
THE PRESIDENT IS THE SAVIOR
CONGRESS IS THE SAVIOR’S ALLY/ENEMY
THE SAVIOR’S WEAPONS ARE SCIENTIFIC RESEARCH &
TECHNOLOGY

The victim finds himself trapped in a relationship of dependence towards the villain and this pernicious bond is getting stronger and stronger. The state of dependence the victim is in makes him weaker and hence more vulnerable. This reduces him to a state of slavery or beggary since the villain now is in possession of a substance that the victim needs in order to feel serene and lead a normal life. By a natural process of scales, the weaker the victim gets, the

stronger the villain becomes. Therefore, the victim has to be freed by the savior. As the years pass, the urgency becomes greater.

The scenario then evolves towards the DRUG ADDICT story where the U.S. needs oil to function daily. Its economy is in bad shape because of this addiction and could get worse easily. Through the following mappings, the U.S. is depicted as becoming physically weaker and thus even more prone to this addiction.

- (i)' AMERICA IS A DRUG ADDICT/VICTIM
THE MIDDLE EAST IS THE DRUG DEALER
OIL IS DRUG
THE STATE OF THE U.S. ECONOMY IS THE VICTIM'S HEALTH
WEAK ECONOMY IS SERIOUS PHYSICAL CONDITION
RECESSION IS SERIOUS HEALTH CRISIS
DANGER FOR AMERICAN ECONOMY IS VICTIM'S HEALTH RISK
THE PRESIDENT & CONGRESS ARE THE DOCTORS
SCIENTIFIC RESEARCH & TECHNOLOGY ARE THE MEDICAL
PROTOCOL

The victim needs to be cured urgently because he will not be able to pay for his drug much longer. In this type of scenario, the day the drug addict cannot pay the dealer anymore, he might be forgotten but in most cases, he is simply killed.

- (ii) The SECURITY scenario

The security scenario, although less delineated narrative-wise, finds its rhetorical strength in the frame that is being activated, namely the September 11 terrorist attacks and the War on Terror program set up soon after by the White House to secure the country and its borders.

AMERICA IS THE VICTIM
THE MIDDLE EAST IS THE ENEMY
OIL IS THE MIDDLE EAST'S WEAPON
THE PRESIDENT AND CONGRESS ARE THE PROTECTORS
CLEAN AMERICAN ENERGY IS THE WHITE HOUSE'S WEAPON

Both scenarios imply serious danger for the American citizens and thus maintain a state of fear over the country.

Each country frames the increase of the price of oil story its own way depending on political and cultural backgrounds and on its position on the international stage. Recently a journalist announced on the French radio

France Inter¹⁶ that the international community was going to gather *au chevet du pétrole* which could be translated by “at the bedside of oil”. The conceptual mappings OIL IS A PATIENT, HIGH PRICE IS AN ILLNESS, THE INTERNATIONAL COMMUNITY IS A PANEL OF EXPERTS, THE POLITICAL MEETING IS A MEDICAL GATHERING, FINDING SOLUTIONS IS ESTABLISHING A MEDICAL PROTOCOL and so on, orient the story totally differently as the increase of the price is no longer caused by certain groups of people, ways of living and consuming energy but rather, thanks to some mysterious metonymical process, turns out to be inherent to oil itself.

9. The economic crisis and the process of greenwash: what the story hides

One last key word which needs to be looked at is economy and the semantic field that is related to it. Interestingly enough, the word occurs in the green segments from 2003 onwards and just once each time with the exception of two occurrences in 2007.

The urge expressed by Bush for Congress to pass new legislation in the field of environment does not have to do with climate change *per se*, as demonstrated above, but with the scenario of dependence. Now the final question we may ask ourselves is what this scenario truly hides. To put it differently, what is this chosen scenario not telling Congress and, hence, the American people? Why choose to depict America as being caught in a relationship of dependence for eight years? On the surface, two main reasons can be found: the Middle East and climate change. But when one takes a closer look at the segments, Bush avoids mention of economic reasons to a curious extent. In fact, the scenario of dependence is a way of hiding the difficult situation America finds itself in, an economic crisis which turned into a recession in late 2007. Climate change and dependence are therefore used as an elaborate greenwash strategy. As defined by Greer and Bruno (1996:11), greenwash happens when, for instance, “a corporate leader in ozone destruction takes credit for being a leader in ozone protection”. Such corporate leaders “are preserving and expanding their markets by posing as friends of the environment”. For the

¹⁶ <http://www.radiofrance.fr/franceinter/accueil/> 25.06.2008.

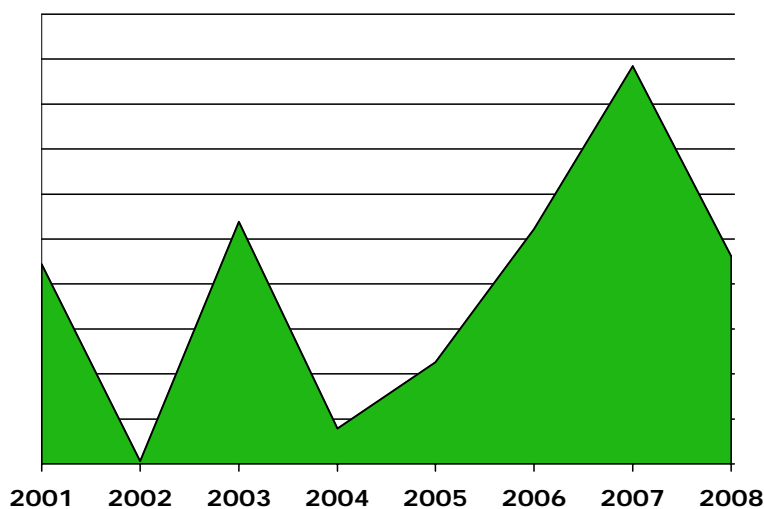
purpose of the present analysis, posing can very well be understood as “talking green”. The need for the U.S. to produce more energy at home is always coupled with the fact that these new energy sources also have to be clean i.e. environmentally friendly. A very telling and recurrent equation can be highlighted in these segments where the economy and the environment seem to share an intimate relationship. In SOTUA 2001¹⁷, we find “rising energy prices” on the one hand” and “a cleaner environment” on the other. In SOTUA 2003, “promote energy independence” is followed by “while dramatically improving the environment”. We also come across the expressions “for the good of both our environment and our economy” and “make our air significantly cleaner, and our country much less dependent on foreign sources of energy”. In SOTUA 2005, we find the association of “to keep our economy growing” with “we need [...] environmentally responsible energy”. And again in 2007, we can highlight the association of “a stable energy-supply of energy that keeps America’s economy running” with “and America’s environment clean” or “we must step up domestic oil production” with “in environmentally sensitive ways”. Through these expressions and their syntactic coordination, economy and the environment seem to naturally belong to a single domain of experience.

The urgency and difficulty expressed in SOTUA 2001 are implicitly related to the state of America’s economy. The expressions *struggle*, *uncertainty*, *serious problem*, *major shortage*, *to speed construction of new energy*, are all semantically loose enough to activate a state of urgency more or less linked to climate change and the Middle East without directly mentioning an economic recession. In the same vein, we find “it’s in our vital interest to diversify America’s energy supply” in SOTUA 2007.

It should also be noted that the main access to economy and consumption is the word *car* which, especially in the U.S., inevitably evokes the price of oil. From SOTUA 2003 onwards, the President insists on the fact that technological advances must and will be made in the powering of “clean, hydrogen-powered automobiles”. If acting green usually means recycling, driving one’s bike more often, investing in solar panels, etc. talking green however can totally be equated with driving one’s pollution-free car which makes the air “significantly cleaner” (SOTUA 2003).

¹⁷ Which is not a SOTUA *per se* but rather a “budget message”.

In section 3, we chose to leave the question of why should certain years be greener than others unanswered because the answer is connected to the strategy of greenwash. The following charts share interesting common points as to the evolution of the increase represented by the following curves. The first one stands for the increase of oil prices and the 2001-2008 part of the graph should be the one focused on. The curve of the second graph is a reminder of a chart that was already commented upon in section 3, namely the amount of text dedicated to environmental issues and climate change in each SOTUA between 2001 and 2008.



We therefore posit that the price of oil also played a very significant role in the Bush Administration's choice of talking green. To put it differently, one can easily notice a striking resemblance between both curves which could be summed up as: the more expensive the oil barrel gets, the greener the SOTUA is.

10. Conclusion

The main objective of this paper was to apply cognitive linguistic tools such as conceptual metaphor networks, narrative structure and frame to green talk in politics. We chose to take a closer look at the conceptualization of environmental issues in the selected SOTUAs because at a time when climate change meets reality, green rhetoric is gaining ground worldwide in the media as well as in the political arena. The tools we used to dissect the corpus data enabled us to reach an unprecedented level of precision and awareness in how green issues, and more specifically climate change, can be conceptualized for political purposes. The analysis also called upon the relatively new concept of "greenwash" whose efficiency, as the present investigation shows, actually rests on rhetorical devices in the first place.

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Corpus data

<p>2001 18222</p>	<p>rising energy prices a cleaner environment</p> <p>My budget will improve our environment by accelerating the cleanup of toxic brownfields. And I propose we make a major investment in conservation by fully funding the Land and Water Conservation Fund. Our national parks have a special place in our country's life. Our parks are places of great natural beauty and history. As good stewards, we must leave them better than we found them. So I propose providing \$4.9 billion over five years for the upkeep of these national treasures.</p> <p>As we meet tonight, many citizens are struggling with the high cost of energy. We have a serious energy problem that demands a national energy policy. The West is confronting a major energy shortage that has resulted in high prices and uncertainty. I've asked federal agencies to work with California officials to help speed construction of new energy sources, and I have direct Vice President Cheney, Commerce Secretary Evans, Energy Secretary Abraham and other senior members in my administration to develop a national energy policy. Our energy demand outstrips our supply. We can produce more energy at home while protecting our environment, and we must. We can produce more electricity to meet demand, and we must. We can promote alternative energy sources and conservation, and we must. America must become more energy-independent, and we will.</p>
<p>2002 3</p>	<p>a cleaner environment</p>
<p>2003 269</p>	<p>Our third goal is to promote energy independence for our country, while dramatically improving the environment. (Applause.) I have sent you a comprehensive energy plan to promote energy efficiency and conservation, to develop cleaner technology, and to produce more energy at home. (Applause.) I have sent you Clear Skies legislation that mandates a 70-percent cut in air pollution from power plants over the next 15 years. (Applause.) I have sent you a Healthy Forests Initiative, to help prevent the catastrophic fires that devastate communities, kill wildlife, and burn away millions of acres of treasured forest. (Applause.)</p> <p>I urge you to pass these measures, for the good of both our environment and our economy. (Applause.) Even more, I ask you to take a crucial step and protect our environment in ways that generations before us could not have imagined.</p> <p>In this century, the greatest environmental progress will come about not through endless lawsuits or command-and-control regulations, but through technology and innovation. Tonight I'm proposing \$1.2 billion in research funding so that America can lead the world in developing clean, hydrogen-powered automobiles. (Applause.)</p>

¹⁸ Total number of words per green segments.

	<p>A single chemical reaction between hydrogen and oxygen generates energy, which can be used to power a car -- producing only water, not exhaust fumes. With a new national commitment, our scientists and engineers will overcome obstacles to taking these cars from laboratory to showroom, so that the first car driven by a child born today could be powered by hydrogen, and pollution-free. (Applause.)</p> <p>Join me in this important innovation to make our air significantly cleaner, and our country much less dependent on foreign sources of energy. (Applause.)</p>
<p>2004 39</p>	<p>Consumers and businesses need reliable supplies of energy to make our economy run -- so I urge you to pass legislation to modernize our electricity system, promote conservation, and make America less dependent on foreign sources of energy. (Applause.)</p>
<p>2005 113</p>	<p>To keep our economy growing, we also need reliable supplies of affordable, environmentally responsible energy. (Applause.) Nearly four years ago, I submitted a comprehensive energy strategy that encourages conservation, alternative sources, a modernized electricity grid, and more production here at home -- including safe, clean nuclear energy. (Applause.) My Clear Skies legislation will cut power plant pollution and improve the health of our citizens. (Applause.) And my budget provides strong funding for leading-edge technology -- from hydrogen-fueled cars, to clean coal, to renewable sources such as ethanol. (Applause.) Four years of debate is enough: I urge Congress to pass legislation that makes America more secure and less dependent on foreign energy. (Applause.)</p>
<p>2006 261</p>	<p>Keeping America competitive requires affordable energy. And here we have a serious problem: America is addicted to oil, which is often imported from unstable parts of the world. The best way to break this addiction is through technology. Since 2001, we have spent nearly \$10 billion to develop cleaner, cheaper, and more reliable alternative energy sources -- and we are on the threshold of incredible advances.</p> <p>So tonight, I announce the Advanced Energy Initiative -- a 22-percent increase in clean-energy research -- at the Department of Energy, to push for breakthroughs in two vital areas. To change how we power our homes and offices, we will invest more in zero-emission coal-fired plants, revolutionary solar and wind technologies, and clean, safe nuclear energy. (Applause.)</p> <p>We must also change how we power our automobiles. We will increase our research in better batteries for hybrid and electric cars, and in pollution-free cars that run on hydrogen. We'll also fund additional research in cutting-edge methods of producing ethanol, not just from corn, but from wood chips and stalks, or switch grass. Our goal is to make this new kind of ethanol practical and competitive within six years. (Applause.)</p> <p>Breakthroughs on this and other new technologies will help us reach another great goal: to replace more than 75 percent of our oil imports from the Middle East by 2025. (Applause.) By applying the talent and</p>

	<p>technology of America, this country can dramatically improve our environment, move beyond a petroleum-based economy, and make our dependence on Middle Eastern oil a thing of the past. (Applause.)</p>
2007 442	<p>Extending hope and opportunity depends on a stable supply of energy that keeps America's economy running and America's environment clean. For too long our nation has been dependent on foreign oil. And this dependence leaves us more vulnerable to hostile regimes, and to terrorists -- who could cause huge disruptions of oil shipments, and raise the price of oil, and do great harm to our economy.</p> <p>It's in our vital interest to diversify America's energy supply -- the way forward is through technology. We must continue changing the way America generates electric power, by even greater use of clean coal technology, solar and wind energy, and clean, safe nuclear power. (Applause.) We need to press on with battery research for plug-in and hybrid vehicles, and expand the use of clean diesel vehicles and biodiesel fuel. (Applause.) We must continue investing in new methods of producing ethanol -- (applause) -- using everything from wood chips to grasses, to agricultural wastes.</p> <p>We made a lot of progress, thanks to good policies here in Washington and the strong response of the market. And now even more dramatic advances are within reach. Tonight, I ask Congress to join me in pursuing a great goal. Let us build on the work we've done and reduce gasoline usage in the United States by 20 percent in the next 10 years. (Applause.) When we do that we will have cut our total imports by the equivalent of three-quarters of all the oil we now import from the Middle East.</p> <p>To reach this goal, we must increase the supply of alternative fuels, by setting a mandatory fuels standard to require 35 billion gallons of renewable and alternative fuels in 2017 -- and that is nearly five times the current target. (Applause.) At the same time, we need to reform and modernize fuel economy standards for cars the way we did for light trucks -- and conserve up to 8.5 billion more gallons of gasoline by 2017.</p> <p>Achieving these ambitious goals will dramatically reduce our dependence on foreign oil, but it's not going to eliminate it. And so as we continue to diversify our fuel supply, we must step up domestic oil production in environmentally sensitive ways. (Applause.) And to further protect America against severe disruptions to our oil supply, I ask Congress to double the current capacity of the Strategic Petroleum Reserve. (Applause.)</p> <p>America is on the verge of technological breakthroughs that will enable us to live our lives less dependent on oil. And these technologies will help us be better stewards of the environment, and they will help us to confront the serious challenge of global climate change. (Applause.)</p>
2008 231	<p>To build a future of energy security, we must trust in the creative genius of American researchers and entrepreneurs and empower them to pioneer a new generation of clean energy technology. (Applause.) Our security, our prosperity, and our environment all require reducing our dependence on oil. Last year, I asked you to pass legislation to reduce oil consumption over the next decade, and you responded. Together we should take the</p>

next steps: Let us fund new technologies that can generate coal power while capturing carbon emissions. (Applause.) Let us increase the use of renewable power and emissions-free nuclear power. (Applause.) Let us continue investing in advanced battery technology and renewable fuels to power the cars and trucks of the future. (Applause.) Let us create a new international clean technology fund, which will help developing nations like India and China make greater use of clean energy sources. And let us complete an international agreement that has the potential to slow, stop, and eventually reverse the growth of greenhouse gases. (Applause.)

This agreement will be effective only if it includes commitments by every major economy and gives none a free ride. (Applause.) The United States is committed to strengthening our energy security and confronting global climate change. And the best way to meet these goals is for America to continue leading the way toward the development of cleaner and more energy-efficient technology. (Applause.)