

Two Nations under Darwin

The influence of religion on Dutch and American education and science

Author: Jules Zane
Student ID: 3244601
Research seminar III: Darwin
by Janneke van der Heide and Kariin Sundsback
at Universiteit Utrecht

Date: 15 juni 2011

Index

Index	2
Introduction	3
Influence of religion on primary and secondary education	5
<i>The Dutch road to college education</i>	6
<i>The American road to college education</i>	7
<i>The influence of religion on Dutch pre-college education</i>	9
<i>The influence of religion on American pre-college education</i>	11
The influence of religion on science	
<i>The influence of religion on science in The Netherlands</i>	17
<i>The influence of religion on science in the United States</i>	20
<i>Is academic freedom influenced by religion and political conservatism?</i>	23
Conclusion	31
Literature and sources	34

Introduction

The United States of America declared independence from the British Empire on the fourth of July 1776. It would mark the starting point of what many regard as our planet's only remaining superpower. A nation founded on principles of freedom and religion. Under the motto *In God We Trust*, and the often forgotten second motto *E Pluribus Unum* (*Out of Many, One*), the United States is known as *One Nation under God*. All mottos are vital to the questions I want to answer.

The United States have a very small group of native inhabitants. Everyone who is not of Indian nation blood is the child of an immigrant, although we all know not all of those immigrants voluntarily moved to the new continent. As the motto says, out of many, they are one: the Americans. And when Europeans try to analyze American society, they often come to conclusions that although we are both inhabitants of the Western world, we are not quite the same. This raises multiple questions and some of those questions I hope to answer in this paper, after laying down definitions of American people and European people by narrowing down to certain regions and a modern time frame.

Europe has been going through similar processes and changes as the United States. We both had our continental wars; we both industrialized and are now perceived as a unified Western world. The First World, a world of wealth and of striking examples of what democracy and everyday life could and should look like. However, there are differences amongst countries in the First World, two being the role of religion and the acceptance of modern science and discoveries. As Europe went through the process of *dechristianization* after the second World War swinging towards political liberalism and decreasing religious influences on politics, the United States continued to be an openly religious (Christian) nation. These differences reflect both in politics and everyday life.

The main question I want to answer in this paper is in which way religion influences present everyday life through education, science and politics, in the American state of Wisconsin and the European country of The Netherlands. I chose these two specific regions based not just on personal interest and knowledge of both, but also because Wisconsin and The Netherlands are great examples of the struggles that occur when politically liberal and progressive thoughts regularly clash with conservative and religious beliefs. Especially over recent months, both Wisconsin and The Netherlands have been the site of political turmoil with people reaching for both grassroots movements and a new found social liberalism. As both regions polarize more than ever before, both entities shift toward similar ideals and extremes, even though their problems do not appear to be similar at first glance. This story

will attempt to make sense of the recent, try to find similarities and, explain differences.

In order to keep the subject relevant, the story will focus on a time frame starting around November 6th 1998 - it will soon become clear why I chose this specific date - and will lead up to present day, being the month of May in the year 2011. This time frame allows me to show recent changes for both regions, although I will regularly reach to further back in time, to make sure the basics of laws and ideas are clearly explained. I have also chosen these two geographical regions, because The Netherlands is seen as a guiding nation for liberal politics in Europe and Wisconsin is a very typical American state, struggling with its polarity in politics and ideals, yet populated by many German, Dutch and Scandinavian immigrants. This offers an extra insight to show how cultures can grow into different ideals, despite both groups of inhabitants originating from the very same place.

This paper is based on two major themes, being education and science, but sometimes there is the necessary reaching out to politics, and I will describe how religion influences all three in recent times. I will do this by looking at different cases and collecting similar types of sources and information. These cases are the influence of religion on pre-college educational, the influence of conservative thought on scientific freedom using embryonic stem cell research as the main example and woven through these stories is the influence of religion on politics and liberal social policies and how progressive and conservative politics can influence education and science as well. Especially for Wisconsin these themes are very explicitly connected, but also in The Netherlands we cannot ignore the similarities among this trifecta of everyday life influences, which will continue to come forward through the cases I will research. To find answers to these questions primary sources and modern media will present current events, while secondary sources will explain the history of what lead up to recent problems and solutions. Laws and statistics will provide a clearer background and framework of the current situation. Here and there personal experiences from living in both The Netherlands and Wisconsin will be used to offer examples. Additionally, I conducted short interviews with two students who are familiar with science and education in The Netherlands and Wisconsin and whose insights contribute to the surprising conclusion I eventually hope to draw.

In short, this paper explains to its readers if, how, and when religion and conservative social and financial ideas influence modern day education, scientific research, academic freedom and politics, by comparing the European country of The Netherlands and American state of Wisconsin.

The influence of religion on primary and secondary education

At first, we are going to look at the cases of educational and scientific freedom. These cases will soon explain why I opted to note November 6th 1998 as a key date in my thesis to set the modern time frame I am using for information. The intention of the first case is to explain the different educational systems of the United States and The Netherlands and how the division between private and public education and the financing of religiously denominated schools on all levels of education are set up in contrasting ways. It is important to keep a close eye on who is paying the bills or who is financing the education and research, as it will show one of the key elements of the point I am trying to make. Public funding of an institution in the United States often restricts scientific researchers on a higher level, but is more likely to mean less religious influences on education at the younger level. In The Netherlands, public funding will prove to be no barrier for specific types of research, but will more importantly also be no reason to only teach evolution as a plausible theory.

On November 6th 1998, the internationally acclaimed scientific magazine *Science* published an article on research done by University of Wisconsin-Madison biologist James Thomson. He was the first researcher to isolate human embryonic stem cells. These cells are human cells which are able to endlessly divide, while continuing to hold their ability to create every other human cell type.¹ The work and discoveries by James Thomson² is considered to be the fastest way to finding a cure for many potentially fatal diseases and is one of the most prestigious discoveries ever made at the University of Wisconsin-Madison.

The university certainly agrees with that assumption and prides itself to be the institution linked to Thomson and his discovery, as is evident from their 2011 television commercial broadcasted nationwide to attract students and researchers. The school claims 'where others saw pieces, we unlocked the puzzle that could mean the end of paralysis and cancer'.³ Not only is that an arguably very forward claim, as no cure has yet been found It is also a risky claim, because the school excluded Thomsons research from government funding, due to an outcry of conservative organizations and politicians who did not want to see public funding spent on research that potentially ends the life of human embryos. It is very telling that the university had to set up a privately funded and officially external

¹ Junying Yu and James A Thomson, 'Embryonic Stem Cells', *Regenerative Medicine* (2006) 2-5

² James A. Thomson, 'Embryonic Stem Cell Lines Derived from Human Blastocysts', *Science* (6 November 1998) 1145-1147

³ University of Wisconsin-Madison, television commercial: *See The Right Thing*, (September 2010) <http://www.youtube.com/watch?v=H5etGdlUItE>

research laboratory and allowed Thomson to work with biotech firm Geron⁴ to continue this research in the city of Madison, but continues to claim that it was a university-backed discovery. It is a prime example of how scientific progress and education can be hampered by laws and politics, preventing the use of public money on what is considered by religious and conservative thinkers to be unethical and immoral research. An often used conservative argument believes that these biologists are tinkering with the work of a superior being.⁵ This is where religion comes in to play, as time and time again, those who stand against this research are considered to be those actively religious. But is this really the case? Are the numbers of those who oppose embryonic stem cell research Christians in majority, do they only interfere with academic science, are their beliefs also visible at lower levels of education and are there significant differences between the American and the Dutch funding and curriculum because of religious influence?

The Dutch road to college education

When comparing the Dutch and the American educational system, it is important to explain how each system is build up and who funds what. In order to fully explain the differences and possible religious influence on the curriculum, the following paragraphs are a global summary of Dutch and American educational options prior to reaching college.

In The Netherlands a child starts with going to school every weekday from the age of four and will remain in what is called 'basisschool' (translation: *basic school*) until the age of twelve. In these years a child learns how to read, do basic math and will learn about the world outside the classroom. Classes include geography, history, math, Dutch, English and religion. During these eight years the child is carefully monitored and in the seventh and eighth (final) year they do a test that will anonymously rank them nationwide with other young students. Based on this test and their teachers observations, they move on to one of the different levels of 'middelbare school' (translation: *middle school*), which is not one-on-one comparable to the American *middle school* idea and is more like *high school*. To graduate from Dutch *middle school* takes either until the age of sixteen, seventeen or eighteen, depending on what level of education the child, by then a teenager of course, is able to complete. Only the six year program, known as 'Voorbereidend Wetenschappelijk Onderwijs' or VWO (tr: *pre-academic education*), grants a teenager immediate access to every university in the country. In order to graduate all students take another standardized test and this test

⁴ Katherine Esposito, 'The Cell Scientist', *Isthmus* (September 2000) 10

⁵ Esposito, 'The Cell Scientist', 10

requires a certain score in order to pass. The fact that a student passed the test for the highest high school level, despite the grade, is considered sufficient proof of being capable to continue their education at any Dutch university. The difference with American high school testing will prove to be, that a top score is not necessary for a top university. A chance to pursue certain prestigious and popular university degrees might only be available for top students - with a grade average above 8.0 out of 10, which is similar to an A+ - but that is a specific demand for certain programs and never for the school as a whole.⁶ Keep in mind Dutch universities are all known for their high quality of education and that within the country no university is considered by the general public to be ranked higher than another for educational quality. It is important to note that the term “university” in The Netherlands is protected and that schools that could consider themselves a university in the United States, are known in The Netherlands as Hogeschool (tr: *higher colleges*) and offer an often less valuable degree as a school registered as a university. The Netherlands has 14 public universities⁷ and 1 private business university⁸ against 46 public *higher colleges*⁹ and 43 private *higher colleges*¹⁰. Some of these higher colleges are no regular liberal-arts oriented schools, but offer for example specific ballet, aviation or hotel management education at a higher level than other schools, as their one more level of education that’s ranked below universities and higher colleges. All degrees, no matter what specific school you went to, are usually treated as very equal on the Dutch job market. The same goes for high schools and most basic schools. The quality of education is under government control, closing low quality schools and keeping an eye on the curriculum, as they want all children and students to benefit from the governmental expenses on education.

The American road to college education

The American road to college education is a bit more complicated to explain or summarize and offers various possibilities and choices for both parents and students. Students are not obliged to follow education in school until a certain age. This is only the case in The Netherlands, where the government demands that students without a finished degree - suitable to find a job - have to stay in school until the age of eighteen. Homeschooling is

⁶ Arts in Spé.nl, *Numerus Fixus*, <http://artsinspe.artsennet.nl/actueel/dossiers/numerus-fixus.htm>

⁷ Vereniging Nederlandse Universiteiten, *Alle 14 universiteiten*, <http://www.vsnu.nl/Universiteiten/Alle-universiteiten.htm>

⁸ Nyenrode Business Universiteit, *About Nyenrode*, <http://www.nyenrode.nl/About/Pages/Default.aspx>

⁹ HBO Raad, *Overzicht Hogescholen*, <http://www.hbo-raad.nl/hogescholen/overzicht-hogescholen>

¹⁰ Wikipedia: Hogeschool, *Door de overheid erkende (“aangewezen”) maar niet bekostigde hogescholen*, http://nl.wikipedia.org/wiki/Hogeschool#Door_de_overheid_erkende_.28aangewezen.29_maar_niet_bekostigde_hogescholen

therefore an option in the United States and not illegal as it is in The Netherlands. There is not a clear curriculum, but there is plenty of advice for parents who consider homeschooling for whatever reason they might have. It does decrease the students chance to be admitted to a high ranked university. A to the National Education Association, America's largest labor union with over 3.2 million members. The NEA fears low quality education for students, decreasing numbers of enrolled students and funds for schools across the country. The National Center for Education Statistics provides a 2003 survey that offers the most important and interesting numbers on homeschooling. They claim that in 2003 around 2.2 percent of all American children were being homeschooled, of which the parents of 85 percent of those students said that an unsafe or unpleasant school environment was a reason and, as was to be expected around the theme of this paper, 72 percent said religious and moral values played an important role.¹¹ Considering it is hard to reach parents who home school, it is hard to determine more specific reasons, but with 72 percent listing religion as a reason the influence is unmistakable.

So with only two percent of all students homeschooled, a vast majority of American children are part of the regular elementary and secondary schooling system, of which the following paragraph is a summary that will explain the differences and how public and private schools can offer the same or different education, still resulting in access to colleges across the country. In the American system it is most common for children go to school from the age of six, through twelve grades, until the age of seventeen or eighteen. As they get older they advance through elementary school, middle school and high school, while taking several tests along the way to see how they perform and rank amongst other students in their state. Unlike the Dutch system, there is no clear difference in the level of education between specific types of high school programs. Some schools might be considered better or have considerably better average grades, but that is not the focus of this specific paper and often not the result of the chosen curriculum, but the location of the school in tax zones and financial background of the parents. Throughout their school programs students regularly, in most cases every two years, take proficiency tests. If they have the intention to attend college, they pay to participate in the American College Test (ACT) and in pre-SAT and SAT (Scholastic Aptitude Test) reasoning tests.¹² The scores of those tests and a motivational letter are usually what a student sends to a university in the hope of being admitted to the school of their choice. No matter what (high) school you went to, whether public or private, statewide standardized proficiency testing is always done, in order to keep track of school

¹¹ National Center for Education Statistics, *Homeschooling in the United States: 2003 – Statistical Analysis Report*, (2006) <http://nces.ed.gov/pubs2006/homeschool/index.asp>

¹² Princeton Review, *Test Prep: GMAT, GRE, LSAT, MCAT, SAT, ACT, and More*, <http://www.princetonreview.com/>

and student quality. In The Netherlands, as long as the program has not reached the quota of available spots or if there is no maximum number of students, a student is automatically accepted to the university of their choice. The American system obviously provides no such guarantees and students send their letters and test results to multiple universities, in case their top choice denies their admission. The better the university, the higher the SAT or ACT score has to be in order to be considered in the admissions process

The influence of religion on Dutch pre-college education

Now that it is a bit clearer how students reach college education and what the different options for parents and students are, we can take a look at how the curriculum is determined and whether religion does or does not play a role in all this.

In The Netherlands laws on education have been a point of political discussion for more than two centuries and the end of the so called 'schoolstrijd' (tr: *school battle*) is one of the key moments in Dutch political history, which lasted for over a hundred years, between the early nineteenth and early twentieth century. At first, in 1806, Dutch confessional parties of Christian denominations determined that education for children should be guarded by the state and should teach Christian values of the Dutch middle and upper class. When the Liberals took over in 1848 and wrote the Dutch constitution, they changed the law and determined that children of every religion should be able to follow similar education at every school that subsidized by the state. Instead of teaching specific Christian values, they only allowed public, non-denominated schools to be funded by the government. From that point on, a battle started in Dutch politics as confessional parties attempted to have both the liberal education public schools and their Christian schools subsidized by the state. In 1917 this was finally achieved after parties from all sides of the spectrum struck a deal.¹³ The system has remained in place ever since, meaning that every school in the country has the right to receive public funding. This wouldn't be the last time that a compromise was reached in The Netherlands that keeps almost every voter happy with the solution.

Dutch schools - *basic schools, middle/high schools* and universities - are subsidized by the state, no matter if they are public and non-religious, Christian, Islamic, Jewish or of whatever other religion, belief or education style, with Montessori and Dalton schools as two fairly common options. The law does require a specific curriculum to be taught, including evolution and the beliefs of different religions in addition to the religious values of the school. A Catholic basic school for example, has to teach about dinosaurs and about Islam or

¹³ Remieg Aerts and Henk te Velde, *Land van kleine gebaren*, (Nijmegen – Amsterdam 1990) 13-172

their state issued budget is potentially cut or stopped. State-guided testing of students is done to keep a close eye on the quality of the school, potentially closing a school if the quality is severely lacking.¹⁴ Schools have to teach children about evolution, often naming evolution the truth and religion a personal belief, because questions about theories that could be religiously controversial are asked in those tests. Recently though, it has been discovered that there are schools who teach that the evolutionary theory by Darwin is likely wrong and misguided and that creationism is the only truth.¹⁵ This is potentially against certain laws and not what the state expects a school to teach, but at least children are confronted with the existence of multiple theories. Strict religious but still governmentally funded (basic) schools do seem to exist however and with new proof of this issue released,¹⁶ it is interesting to see if and how the government will respond. A recent political change to more conservative politics however, could lead to no imminent action, as a proposed law change in favor of ending blasphemy was cancelled by the liberal party that issued it at first, in order to gain popularity with members of supporting confessional parties.¹⁷ This is a political change that will be addressed more thoroughly later on in this paper, but could influence and spark a new Dutch educational debate moving forward. Though it was only a few years ago the then present Dutch Minister of Education was scrutinized after suggesting she thought the theory of intelligent design should be taught as an equally plausible theory as the evolutionary theory by Darwin. The plan was then quickly brushed aside by media, politicians and scientists, with some suggesting they had never expected 'American situations and ideas' in the Dutch debate.

So far we have only looked at publicly funded schools, but private schools do exist, although they are hardly a factor in Dutch education. These schools are often considered elitist by a lot of people and only a few schools are considered to offer higher quality education than public schools. Considering several new private schools have been opened recently, they could be on the rise, but in 2009 there were only 24 private basic schools and 14 private high schools in all of The Netherlands.¹⁸ Just to put in perspective how low these numbers really are; in 2009 there were 7206 public basic schools and 657 high schools

¹⁴ Ministerie van Onderwijs, Cultuur en Wetenschap, *Besluit Vernieuwde Kerndoelen Wet Primair Onderwijs (WPO)*, as published January 28th 2011, http://www.st-ab.nl/wettennr06/0725-006_Besluit_vernieuwde_kerndoelen_WPO.htm

¹⁵ Erik Schoorl, 'Indoctrineer je kids: 'Bewijs van de schepping' lesje in groep 7 en 8', *GodVoorDommen.nl* (May 2011), <http://www.godvoordommen.nl/2011/05/23/indoctrineer-je-kids-bewijs-van-de-schepping-lesje-in-groep-7-en-8/>

¹⁶ Erik Schoorl, 'Indoctrineer je kids', *GodVoorDommen.nl*

¹⁷ ANP, 'VVD ziet af van voorstel godslastering', *KatholiekNederland.nl*, http://www.katholieknederland.nl/actualiteit/2011/detail_objectID728503_FJaar2011.html

¹⁸ Jasperien van Weerdt, 'Hoe kies je een goede particuliere school?', *Z24 Geld* (January 2009), http://www.z24.nl/z24geld/artikel_50977.z24/Hoe_kies_je_een_goede_particuliere_school

nationwide.¹⁹ Students at private schools still have to take standardized national tests in order to graduate. Parents will often decide to send their children to private schools, not based on religious values that might not be taught at public schools, but because private schools claim better guidance and education. The annual price tags for private basic schools are up to 19000 euro (\$27000 USD) and for high schools up to 30000 euro (\$42600 USD).²⁰ Publicly funded schools cost only 840 euro (\$1200 USD) a year, including books and other expenses and with no initial tuition fee charged, according to the Dutch National Institute for Budget Advice.²¹

Based on these facts, it is safe to conclude that Dutch education is influenced by religion. Even religious and private schools offer education on evolution and must follow the same educational guidelines as every other school in the country. Dutch law on education specifically explains the state believes that children are the consumers and civilians of the democratic civil society of the future and therefore all deserve to know about history, geography and various beliefs, in order to find their place on our planet.²² Considering the claimed separation of church and state in Dutch society and the very liberal and international image of The Netherlands, their laws on education seem to fit within that same image, as religious controversy seems to play no major role in the education debate because of its dismissal for discussion.. Possibly because, in fear of controversy or an ongoing debate, there are schools that fit the beliefs of nearly every parent, with the government paying for the expenses and only expecting the schools to guarantee the quality. On the other hand, how free and liberal is a situation for parents when the state is determining a majority of what children should learn and is that a true image of a non-religious and liberal Dutch society?

The influence of religion on American pre-college education

On the previous page, we noted Dutch politicians and scientists heavily criticized a Minister of Education for supporting intelligent design as a plausible explanation for the creation of the world. These highly educated men and women said they feared 'American situations', implying that in the United States the situation was or is significantly different than in The Netherlands.²³ More precisely, it implies that in the United States the problematic

¹⁹ Centraal Bureau voor de Statistiek, 'Schoolsoorten: onderwijssoort en grondslag', *CBS Statline* (December 2010), available at <http://statline.cbs.nl>

²⁰ Jasperien van Weerd, 'Hoe kies je een goede particuliere school?', *Z24.nl*

²¹ Nationaal Instituut voor Budgetvoorlichting, 'Schoolgaande kinderen: de kosten van Joris (16)', NIBUD.nl (last checked May 2011), <http://www.nibud.nl/uitgaven/kinderen/schoolgaande-kinderen.html>

²² Ministerie van OCW, *Besluit Vernieuwde Kerndoelen WPO*.

²³ Buskes, Chris, *Evolutionair denken: De invloed van Darwin op ons wereldbeeld* (Amsterdam 2006) 270

acceptation of Darwin's ideas and the influence of religion on education is supposedly far more evident. Writer and philosopher Chris Buskes, a professor at the Radboud University in Nijmegen, wrote his book 'Evolutionair Denken; De invloed van Darwin op ons wereldbeeld' (tr: *Evolutionary Thinking: The Influence of Darwin on our View of the World*) as an amusing, philosophical approach to the many questions regarding Darwin and what his theories did for our society. Claims and facts from his book serve as a guide for the following points, but nuances will certainly be added along the way, because facts and statistics point out the assumptions made by Dutch critics of the incorporation of intelligent design into the United States educational system.

Evolutionary Thinking raises many questions and highlights various ideas and events, but the most relevant section to answer some of my questions is the chapter on Evolution & Religion. This chapter offers a sub-chapter with the fairly obvious title 'American situations'; a title derived from opinions during the anti-intelligent design outcry in Dutch media back in 2005. Considering the appraisal Buskes got for his book from a broad audience of scholars and media in The Netherlands, it appears as if the opinions voiced in the book are those of many. If that is the case, and I truly believe it is, many people in The Netherlands are convinced the acceptance and introduction of Darwin's evolutionary theory is a problematic case in the United States. Buskes backs up this claim by giving results from a recent survey by *Gallup Poll*, a polling agency known as one of the biggest and best in the United States. One question asked to an average American crowd was this: "Can you tell us which of the following claims comes closest to your beliefs on the origins and development of mankind as a species? A) God created mankind close to its current appearance, somewhere within the last 10000 years, B) Mankind has developed over millions of years, originating from more primitive life forms, or C) Mankind has developed over millions of years, originating from more primitive life forms, but guided by the hand of God." The results are so telling that they can't be ignored. 46 percent agreed with option A, 40 percent went with option C, leaving only nine percent to agree most with option B and five percent refused to answer or said to have no opinion.²⁴ The American statistics are stunning, especially in comparison to The Netherlands, where the National Bureau of Statistics reported in 2007 that 44 percent of the Dutch consider themselves non-religious, being either atheist or agnostic implying that they don't believe a superior being influenced the creation of the world.²⁵ Numbers like these lead me to reason why the Dutch think there is such a thing as an 'American situation' when it comes to a debate on whether or not to teach about Darwin's theory of evolution in either

²⁴ Buskes, *Evolutionair Denken*, 272.

²⁵ Centraal Bureau voor de Statistiek, 'Kerkelijke Gezindte en Kerkbezoek; vanaf 1849; vanaf 18 jaar of ouders', *CBS Statline* (October 2010), available at <http://statline.cbs.nl>

public and private schools. However, the truth is the current situation in the United States is quite similar to The Netherlands, which is a controversial point in the eyes of religious parents on either coast.

Charles Darwin shared his theory of evolution with the world back in 1859 with his famous work *On the Origin of Species*. Due to its controversial message, it took quite a while for it to be accepted as the truth or even just a potential truth. In 1925, Tennessee school teacher John Scopes was sued for telling children in his class about the possible existence of evolution, instead of the world and mankind being created by God. The trial that followed was known as the 'Monkey Trial', as parents believed and feared that if their children would be taught they originated from animals, they might start behaving like animals. John Scopes was eventually legally obligated to a fine under the Butler Act; a law in Tennessee and several other states prohibiting teachers from teaching evolution. Due to a technicality during the court's decision, Scopes never actually paid the set amount, but the damage had been done to both sides of the courtroom.²⁶ Evolutionists knew they could not legally teach their ideas, but creationists struggled with a growing attention for theories with no Biblical proof and plenty of scientific proof.

It then took until 1967 for Tennessee legislators to withdraw the laws denying teaching creationism in fear of a Supreme Court case. In the court case that eventually followed in 1968, the United States Supreme Court ordered that restricting teachers in teaching evolution was a violation of the First Amendment; teaching evolution as the only scientifically proven theory was freedom of speech and was no longer to be prohibited. In the following decades several court cases attempted to appeal, but the Supreme Court's decision still stands. I argue the US offers a more secular and scientific approach than the Dutch law. Even when those who oppose the teaching of evolution joined forces in support of so-called Creation Science, the Supreme Court stood their ground in 1982 and ruled it unconstitutional to tell children that creationism or intelligent design is science. Creationism is not forbidden to be taught in schools, as the American Supreme Court and the American people consider freedom of religion one of their most important rights, but it is never to be presented as being anything other than a religious idea. A teacher is not allowed to claim creationism is proven by science and nationwide standardized testing includes questions on evolution, presenting evolution as the only proven theory.^{27 28}

One would think this would close the case and all schools would teach evolution as

²⁶ Buskes, *Evolutionair Denken*, 273.

²⁷ *Ibidem*, 273.

²⁸ Wikipedia; *Creation and evolution in public education*,
http://en.wikipedia.org/wiki/Creation_and_evolution_in_public_education

the truth, but this is not quite the situation yet. You could say that ‘American situations’ do exist in education, as there is even a complete Wikipedia document dedicated to keeping track of court cases and potentially controversial political decisions regarding evolution in education. Due to Wikipedia’s nature, the page is possibly not written by an academic scholar or person specialized in this field, but its numerous references provide stunning examples of ‘American situations’. For example, the state of Texas commands their teachers to be ‘neutral’ on intelligent design, Florida and Kentucky go back and forth between state administrations who change the standard wording from “evolution” to “change over time”, implying a potential faulty theory of evolution. The Wikipedia page also lists several states all over the country – ranging from Pennsylvania to California and Ohio to Louisiana - in which changes in laws have been made, and reversed, and made again, and often reversed again, after ongoing attempts to promote evolution as ‘just a theory’ and just as wrong or right as intelligent design or creationism. The state of Wisconsin is not named in these lists, but considering the importance of understanding the controversy, these other states were included to compare general differences between the United States and The Netherlands.²⁹ In the end, the original Supreme Court decision stands and no publicly funded school is currently allowed to teach creationism or intelligent design as science.

What does this mean for the popularity of private schools? Private schools might be restricted just as much as public schools in not being allowed to present creationism or intelligent design as science, but that does not restrict a religious private school from stating that creationism is the truth or at least plausible. The fact that this is allowed may be one of the reasons why private schools are more popular in the US than in The Netherlands. In the fall of 2010 a total of 49.4 million students attended public schools across the nation, but an additional 5.8 million students attended private schools. There are a total of 98,706 public schools in the United States and 33,740 private schools.^{30 31} These are quite different numbers in comparison to the 38 private schools, split between basic and high schools, and nearly 8000 public schools in The Netherlands. American private schools appear to be a lot smaller in terms of student enrollments – with only 10.5 percent of students attending 25.5 percent of all schools - and the private schools influence on education as a whole is probably not as big as the number of schools they represent. Parents may decide to send their children to private school for other than to religious issues, because they want more personal

²⁹ Wikipedia; *Creation and evolution in public education*, list; recent developments in state education programs.

³⁰ National Center for Educational Statistics, *Fast Facts*, (2010)
<http://nces.ed.gov/fastfacts/display.asp?id=372>

³¹ National Center for Education Statistics, *Private School Universe Survey*, (2008)
http://nces.ed.gov/surveys/pss/tables/table_2008_14.asp

education and guidance for their child or because area public schools are not to their standards. Something parents obviously pay a certain price for, with public schools charging no tuition and often only a school determined extra charge for sports or school trips, but private high schools costing an average 12.250 euro (\$17,500 USD) per year, according to the American National Association of Independent Schools. How many private schools teach the words of the Bible as truth is hard to determine, as a school will likely not publicly state this, but we can assume that religion plays a role at many private schools after taking a look at the membership numbers of associations for independent schools across the United States. Of all 33,740 private schools, 11,282 have no official association, 4472 are with a non-specified association and for example 1360 are Montessori schools. Numbers do get interesting when 6251 private schools are listed as members of the National Catholic Educational Association, another 3551 are with the Association of Christian Schools International and 6050 schools are with other religious associations.³² Over half of all private schools in the United States are schools of Christian values and background and are all less restricted in what they teach, and how to teach that, when it comes to evolution and the ideas of Charles Darwin. Keeping in mind that 86 percent of all Americans believe that God had a hand in the creation of the world, I think these numbers are no surprise. The numbers could potentially be even higher if private schools were not as expensive and therefore exclusive as they are. After all, how many parents would send their child to a school that teaches a theory they see as incorrect, over a school which teaches the religious beliefs they have themselves, if both would cost the same in tuition? This would also make Bible studies or extra religion classes after going to public school redundant, because there would be no “faulty theory” for them to compensate for.

Those who are reading this and feel like an American school type was left out are correct. The fairly new charter school system has not yet been discussed. Charter schools are schools with less restrictive district laws and sometimes a more specific curriculum, offering for example Montessori, Dalton or more college style education, but based on their charter they receive public funding. Their funding is often lower per pupil than for standard public schools, but charter schools have the right to accept donations in order to bridge that gap. They are therefore in some cases viable options for parents who want more freedom when choosing a school for their child, without having to pay the high tuition fees of private schools. Basically, charter schools opt to receive more freedom to teach, in exchange for the addition of certain accountability, but are not allowed to charge tuition due to the fact they are publicly funded. Only universities are allowed to operate as a hybrid receiving direct public and private funds. Because charter schools are a school type which stands somewhat

³² NCES, *Private School Universe Survey*.

between the Dutch model of public schools and the American standard public schools, their numbers were taken in to account with all other US public schools, as the curricular rules and funding for public schools apply to charter schools too. It was important to note that not all publicly funded schools are based on the same managerial system, but the laws regarding the curriculum appear to be equal.³³

Comparing the Dutch laws to the American laws on funding and the curriculum given, it is somewhat surprising that Dutch politicians and scholars believe that there is such a thing as a negative 'American situation' when it comes to teaching evolution. In The Netherlands schools of religious denominations receive public funding, even though that money pays for religious classes which could potentially teach religious ideas as a truth. In the United States any school that receives public funding is only allowed to teach Darwin and his theory of evolution as the scientific truth and in all classes regarding creationism and intelligent design it has to be clearly stated that this is a belief and not scientifically proven. It is true that American private schools have more freedom and their curriculum is not as strict, but they are not allowed to teach intelligent design as a science. One can never prevent teachers or schools from deciding to teach otherwise, but the law is clear on what is allowed and what is not. The Dutch system states that all children should know about evolution, but has no law preventing other classes from being taught too. At least, Dutch laws are not nearly as clear. It is therefore that the before mentioned Wikipedia page on evolution in education states that in The Netherlands some factions can teach creationism for fact and evolution as wrong.³⁴ Yes, the controversy about this is more evident in the United States and there are far more Americans who believe the evolutionary theory by Darwin is incorrect or at least incomplete. On the other hand, we can only wonder how big the controversy would be if Dutch religious schools were no longer to receive public funding and would be told the stories they now teach have to continuously be explained as a belief instead of a potential truth. Would we be speaking of 'Dutch situations' if that was the case? I believe so, for parts of the 'American situation' are unquestionably the answer to a very strict Supreme Court ruling on what is science, what is no science and what should be taught as truth. A surprising decision in a country as Christian as the United States, but also a judgment that goes with their progressive ideas on research and innovation. This progression in science may potentially relate to the Cold War, during which non-religious communists appeared to advance faster than the religious Americans, who were held back by laws restricting the teaching of specific scientific advancements.³⁵ No matter what the reason is; the acceptance and representation of evolution in American pre-college education has been a difficult, loud,

³³ US Charter Schools, *Overview*, http://www.uscharterschools.org/pub/uscs_docs/o/index.htm

³⁴ Wikipedia; *Creation and evolution in public education*.

³⁵ Buskes, *Evolutionair denken*, 273

and long process, but has eventually led to a much clearer situation than the one in The Netherlands. However, this does not mean that researchers and institutions nationwide are allowed to do their jobs free from religious controversy and intervention; a facet that will be addressed in the following pages, comparing Dutch universities to the University of Wisconsin for reasons that will come forward soon enough.

The initial introduction of the paper promised a comparison written on The Netherlands and the American state of Wisconsin. So far, it has been more of a comparison between The Netherlands and the United States in general, as the laws discussed are nationwide and with no clear differences between decisions and laws in Wisconsin when compared with the American laws on pre-college education. The following section of this story however will indeed be more focused on Wisconsin and Dutch laws. Not only because every American state has a chance to decide for itself when it comes to influence on science, college education and related issues, but also because the University of Wisconsin-Madison is a perfect example of what a progressive school experiences in an often conservative state. As in previous sections of the thesis, I will look at the Dutch situation first and will then compare this to the United States and Wisconsin. The main focus continues to be the influence of religion and how Darwin and other modern theories and techniques are used in education and research.

The influence of religion on science

The influence of religion on science in The Netherlands

As a historian, it is often somewhat difficult to clearly explain the problems scientists run in to when it comes to governmental and religious influence, especially in a country like The Netherlands, where the rules aren't as clear cut and obviously influenced as they will later turn out to be in Wisconsin. In order to seek clarification and to fully understand the nuances within what little restrictions there are, I talked to a student and researcher who would be able to clarify some of the questions I had. Maarten Coorens is a young graduate of the Maastricht University in The Netherlands in molecular life sciences and has years of experience with the rules regarding experiments and scientific freedom in college laboratories. "Science in The Netherlands knows certain strict rules. Those rules concern safety, subject of research and the way to report your findings. For as far as I know and have experienced, religious beliefs play no role in this", he explains. "Certain people might consider specific research unethical, which is most often when testing on animals is involved.

This might come from religion for some, but those who are against it form one group and they don't use religion as an argument."

However, not just the people might be against it. Dutch political parties seem to have issues with for example embryonic stem cell research. Embryonic stem cell research will be the main point of focus in the following sections, as it is one of the most controversial scientific and medical breakthroughs of the last fifteen years and it has been under great criticism from religious and conservative politicians and lobby groups. This article will sidestep to other rulings on science, but stem cell research is a focused example. The biggest Dutch political party of Christian denomination is the Christen Democratisch Appèl or CDA (tr: *Christian Democratic Call*). In 2003, their scientific institute released document on how to humanely handle modern biotechnology. The document is a very clear, but sometimes philosophical and Christian, approach on ethical concerns with the main message being that the CDA regards human life as exceptionally important and the Dutch Embryo Law is a concern, because without obvious scientific and medical progress with embryonic stem cell research, there should be no such research at all.³⁶ The more conservative, smaller parties ChristenUnie (tr: *Christian Union*) and Staatkundig Gereformeerde Partij or SGP (tr: *Reformed Political Party*) – note that the term Reformed doesn't concern the party, but their Calvinist beliefs – are far more clear on this matter. They are against all embryonic research and their combined party for the European Union wants a ban on European or national subsidization of embryonic stem cell research. Other important parties like the libertarian and liberal right wing Volkspartij voor Vrijheid en Democratie or VVD (tr: *People's Party for Freedom and Democracy*), currently the biggest party in the Dutch parliament, and the second biggest Partij van de Arbeid or PvdA (tr: *Labor Party*) are all in favor of the current law, as are most other parties. The quickly rising conservative right wing Partij voor de Vrijheid or PVV (tr: *Freedom Party*) has no clear statement on these issues yet, but their Jewish and Christian traditional approach and recent statements on abortion lead to the expectation they will lean to the conservative side of the debate. The point is a majority of Dutch political parties and voters are in favor of the current Embryo Law, written in 2002.³⁷

A major factor and influence on Dutch political decisions regarding health care and medical science is the Gezondheidsraad (tr: *Health Council*), which is a council that has given the parliament and cabinet of ministers advice on medical issues and questions for over a century, with their history ranging back to 1902. Maarten Coorens explains: "The Dutch Health Council states the rules and offers advice on the use of certain technologies and discoveries, like stem cell research or new vaccines. They are a group of people from the

³⁶R.H.M.V. Hoedemakers, *Humane Biotechnologie*, (CDA Instituut 2003)
<http://www.cda.nl/Upload/wi/2003%20MRT%20Humane%20biotechnologie2.pdf>

³⁷ Summary of information on general websites of all political parties listed.

sector whom are asked to respond to health care and medicine related issues. These specialists will then discuss and report to politicians explaining their ideas on the matter. Their decision is sometimes abstract, but they are asked to not just consider researchers and progress, but also possible ethical questions or opinions among the public and in politics, in order to come to the best possible decision. The council will try to judge in favor of the majority, using their know-how as the biggest guideline.” The Health Council explains on their website that their council exists of 200 scientists and doctors to have specialists on every question and to guarantee their independence and integrity as a third party.³⁸ The council was one of the main advocates on stem cell research, as it was their judgment which claimed that embryonic stem cell research would potentially lead to major medical breakthroughs.³⁹ This was one of the most important questions that had been answered positively prior to instating the Dutch law on the use of embryos.

The Embryo Law is the Dutch governmental statement and current law on how to deal with issues regarding embryos. The main points of the law are prohibiting the cloning of human embryos, a complete ban on influence on the sex of an embryo before *in vitro fertilization* (IVF) and prohibiting combinations of human and non-human cells for scientific purposes. It also bans using embryonic stem cells for non-proven or experimental therapies, unless decided otherwise by the Centrale Commissie Mensgebonden Onderzoek or CCMO (tr: *Central Committee on Human-related Research*). Due to the ban on cloning embryos, researchers are not allowed to create new embryos for stem cell research, but embryos created for IVF and left over after successful fertilization are not restricted from being used for research. Those embryos are also used for donation to other couples of whom one or both parents are infertile and for other forms of research. Research is only allowed if the CCMO have given their approval, after they have judged whether there is no better alternative and whether scientific and medical progress is guaranteed or at least highly likely. Therefore Dutch law allows embryonic stem cell research under specific rules and gives no restriction on where it should be conducted, except for the fact that it has to be done by specialists.⁴⁰ This means the law offers approval of stem cell research at public universities and using public and federal funding. The same restrictions apply to privately funded research too, creating no research difference between various forms of funding.

³⁸ Gezondheidsraad, *Over Ons*, <http://www.gezondheidsraad.nl/nl/over-ons/de-raad>

³⁹ Gezondheidsraad, *Stamcellen: samenvattingen, conclusies en aanbevelingen*, http://www.gezondheidsraad.nl/sites/default/files/samenvatting%20stamcellen_0.pdf

⁴⁰ Nederlandse Overheid, *Embryowet*, as published on June 20th 2002, http://wetten.overheid.nl/BWBR0013797/geldigheidsdatum_15-06-2011

The influence of religion on science in the United States

Now we are going to take a look at the situation in Wisconsin, finally bringing us back to the story this paper started with. After all, the University of Wisconsin-Madison was the institution where the first human embryonic stem cell was isolated and where the controversy surrounding this research was evident following the discovery. Considering the discovery was made only in November of 1998, most laws and decisions on this matter are fairly new and the debate is still going on today. Publicly funded scientific institutions and public universities feel restricted in their abilities to conduct research, while conservatives still struggle with the idea that their tax money could potentially be used for research which includes the possible destruction of human embryos. This ongoing debate and the controversy surrounding it is carefully discussed and explained in a 2005 article by Robert Best and George Khushf called *The Stem Cell Controversy in the United States: Scientific, Philosophical, Political and Theological Aspects*. The title itself gives away how many different factors are problematic in the American approach of stem cell research and Best and Khushf do an adequate job explaining who thinks what and why. The article's quality is confirmed, as it was not only published in the much applauded Bender, Hauskeller and Manzei bundle of articles called *Crossing Borders* on stem cell research worldwide, it is also the main article used by Wisconsin's History of Science professor Richard Staley in his class on the history of modern scientific research. Several arguments made in the article will be linked to the situation in Wisconsin and to the current jurisdiction on embryonic (stem cell) research.

Focusing on the religious influence on the stem cell research funding debate, the article thoroughly explains that stem cell funding is a mere branch of a broader debate on religion within the public sphere. The points they dare to make in the first lines of this section of the article are key observations in the American political spectrum. Not only is the US constitution an incredibly delicate document balancing religious freedom and personal freedom along with the separation of church of state, but also one should never forget those who take a conservative position in politics are almost always people associated with conservative Christian traditions. There may be a correlation to the statistics on the acceptance of evolution mentioned earlier in this article. Those who are politically conservative are nearly always Christians and their argument equates embryonic stem cell research with the destruction of potential human life, a tenant they protested against long before stem cell research was invented, as they tried to prohibit public funding of abortion. Now this is where the American constitution comes back in to play, as Best and Khushf argue that although the First Amendment restricts laws from being based on religious beliefs therefore restricting the freedom of others, the Constitution never says that moral views

based on religion can't be used as fair arguments to prohibit medical action or scientific research. Therefore, new interpretations of the US constitution and laws on recent discoveries carefully balance never forcing worried, conservative Americans to pay through their tax money for research they consider immoral, but also never restricting researchers from doing their job and losing their scientific freedom out of fear that the United States will fall behind in scientific innovation.⁴¹

The current situation is a result of mixed opinions and decisions created during the administrations of Democratic president Bill Clinton, a member of a Baptist church, and Republican president George W. Bush, an Episcopalian until 1977 then later joined the United Methodist Church. In 1995, during Clinton's first term as president, the National Institutes of Health advised Clinton to allow federal funding on embryonic stem cell research with embryos left over after successful IVF, in order to potentially cure major diseases affecting families all over the United States and the world. Clinton acted as advised⁴², but the members of Congress were not convinced and quickly filed the Dickey-Wicker amendment which prohibited the destruction of embryos for scientific research, no matter what the source of those embryos was.⁴³ It was therefore that Wisconsin scientist James Thomson made his discovery with private funding, which sparked a new debate on what to allow and what not. As was the case under Clinton, George W. Bush allowed restricted federal funding on stem cells, as long as stem cell lines used were created prior. The situation would stay the same until 2004-2005, when the House of Representatives voted in favor of lifting the ban on the scientific use of embryos originally created for IVF. President Bush announced before the vote, that he would veto the plan at all times and he did indeed do so by the time he had to sign this bill.⁴⁴ He also vetoed a Senate initiative in 2006, which would also have lifted bans on the use of IVF embryos, but he did allow the law to pass which prohibited the creation, growth and abortion of fetuses for scientific purposes – as this was in line with his conservative and religious stance - and he endorsed the law which would promote the focus on adult stem cells and pluripotent cells, which are embryonic-like but do not involve the destruction of an embryo. President Bush did allow more funding on adult stem cells, but throughout his presidency he continued to veto and amend in favor of funding any embryonic stem cell research using newly created stem cell lines. Many conservative voters

⁴¹ Robert Best and George Khushf, 'The Stem Cell Controversy in the United States, Scientific, Philosophical, Political and Theological Aspects', in Wolfgang Bender, Christine Hauskeller and Alexandra Manzei, eds. *Crossing Borders: Cultural, Religious, and Political Differences Concerning Stem Cell Research. A Global Approach*, (Münster: agenda, 2005) 247-250.

⁴² Best and Khushf, *Stem Cell Controversy*, 250-259.

⁴³ Sheryl Gay Stolberg, 'Obama Is Leaving Some Stem Cell Issues To Congress', *New York Times* (March 2009), http://www.nytimes.com/2009/03/09/us/politics/09stem.html?_r=2

⁴⁴ Laurie Kellman, 'Senate Approves Embryo Stem Cell Bill', *Associated Press* (July 2006), http://www.breitbart.com/article.php?id=D8IUKSRO0&show_article=1

and groups argued there have not been enough breakthroughs regarding embryonic stem cell research to warrant and claim that this type of research has the future. They can also make the factual claim that adult stem cell research has led so far to far greater discoveries. This is indeed the truth, but in many ways the logical result of the restrictions on embryonic research. After all, far more schools and institutions have had the possibility to do adult stem cell research due to the availability of federal public funding, where as embryonic stem cell research has to be conducted with solely private funding, which is indeed harder to find for controversial research. If more money and more scientists are working on adult stem cells for a much longer time than on embryonic stem cells, it is no surprise that they discovered more. I find this argument used by conservative groups is flawed and an unfair interpretation of the truth to support their claims against research involving embryos.

When President Barack Obama - who is listed as Christian with no specific denomination, except for unfounded claims he is supposedly a Muslim - became president in 2009, he almost immediately ordered to lift bans on the public funding of embryonic stem cell research. The law change he ordered offers researchers the possibility to use existing stem cell lines created elsewhere and after November 1st 2001, which was previously banned. No other changes concerning federally funded embryonic stem cell research can be made however as long as the Dickey-Wicker amendment remains in place.⁴⁵ The law prohibiting the use of public funding for “the creation of a human embryo or embryos for research purposes” and also “research in which a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses in utero”, as it is literally described in the amendment.⁴⁶

Not only has the federal government had a say in this case, also individual states have been imposing laws regarding this controversial type of research. Often these states move back and forth if they change from Democratic to Republican majorities, with most Republicans opposing embryonic research and Democrats often allowing and even supporting it. States like Wisconsin, California and Massachusetts have been leading states when it comes to opening up resources to allow embryonic stem cell research within the federal laws. Most likely because they are the home states to university institutions like the University of Wisconsin-Madison, the University of California-Berkeley and Yale, Harvard and the Massachusetts Institute of Technology; all leading universities in scientific research. States known to be more conservative have been attempting or were successful in banning or restricting stem cell research regardless of federal law. Among those states were Arkansas, Virginia, North and South Dakota and surprisingly Michigan in 2004, which is

⁴⁵ Sheryl Gay Stolberg, *'Obama Is Leaving Some Stem Cell Issues To Congress'*.

⁴⁶ Wikipedia; 'Dickey-Wicker Amendment', http://en.wikipedia.org/wiki/Dickey-Wicker_Amendment

home to the high ranked and well regarded University of Michigan in Ann Arbor.⁴⁷ However, as has been proven in previous cases and when discussing pre-college education, state laws change far more easily when new governors or representatives take office and looking at change over time. It did for example in Michigan, where by 2008 voters were in favor of protecting the right to conduct embryonic stem cell research for as far as the federal law would fund and allow; one of only three American states to do so officially.⁴⁸

Looking at state specific situations takes us once again to the state of Wisconsin. Wisconsin is a swing state, where Democrats and Republicans regularly switch between taking charge and leading the opposition, as voters in the state often vote with very small margins in favor the victors. With sometimes less than two percent voting change, these changes can have tremendous consequences for the future of liberal social policies, scientific funding, and freedom in this state. A problem that seems less evident in The Netherlands, even though voters tend to change in much higher percentages with every following election, but due to the big number of parties a consensus is often reached that will not deviate from previous laws and policy. However, that was the past trend and now in both Wisconsin and The Netherlands major changes are happening with more radical and outspoken politicians taking the reins to maneuver themselves in to more influential positions. What could this mean to scientific and academic freedom?

Is academic freedom influenced by religion and political conservatism?

The Netherlands was long considered the ultimate welfare state where everyone was welcome and no one was left to fend for themselves. That is still the case in comparison to many countries and even within the European Union, but overly enthusiastic government spending has lead to an increasing national debt and immediate problems. Conservative right wing Freedom Party leader Geert Wilders and others have been claiming a major part of the problem is mass immigration and that refusing new Islamic inhabitants of The Netherlands to integrate is crippling the Dutch economy. He has also stated that The Netherlands should stick with its Jewish and Christian historical traditions and should stop giving in to Islamic wishes.⁴⁹ These ideas, voted for by 15.4 percent of the Dutch voters, are clearly fed by a certain fear of the establishment of a new religion among the historically

⁴⁷ Martin Kasindorf, 'States play catch-up on stem cells', *USA Today* (December 2004), http://www.usatoday.com/news/nation/2004-12-16-stem-cells-usat_x.htm

⁴⁸ Michigan Citizens for Stem Cell Research & Cures, 'Michigan's Current Law', <http://www.stemcellresearchformichigan.com/currentlaw.html>

⁴⁹ Partij voor de Vrijheid, 'Verkiezingsprogramma 2009', <http://pvv.nl/index.php/visie/verkiezingsprogramma.html>

more common religions in Dutch society, which are all quickly losing ground to atheism in general. The Freedom Party stands somewhere in between all other parties, borrowing conservative fiscal ideas from parties between left and right, joining Christian parties on social issues, but reaching out the libertarian Liberals in order to gain more influence. Eventually they were the key in a unique parliamentary majority construction in which the liberal but fiscal conservative VVD and Christian-Democratic CDA backed by the Freedom Party (PVV) in order to form a more conservative right-wing majority in parliament. Their main plans concern restricting immigration, acting fiscally responsible and apparently cutting down on public funding for education and health care in order to push people to work harder and pay for their own future.⁵⁰ These ideas sound very similar to the ideas that new Wisconsin governor Scott Walker brings forward in order to defend his budget cuts for universities and public schools, restricting collective bargaining rights and offering more freedom to corporations in order to support the economy.⁵¹ Both new Dutch and Wisconsin administrations claim that being fiscally conservative and clinging to conservative social ideas will bring forward the stability needed in time of a financial crisis. As a historian and not an economist, it is difficult to judge whether they are right or wrong, but I do see how their ideas potentially hurt students and schools to research and to keep education affordable and unaffected under new conservative policies.

In The Netherlands the government decided to change the system that pays for college education, cutting down the overall university budgets by 300 million euro (\$439 million USD) and completely scrapping the financial support graduate school students used to receive while studying.⁵² All Dutch students, depending on where they live and what their parents earn, receive public funding to cover some of their expenses and for 2010 they pay only 1672 euro (\$2445 USD) in tuition for a full year of university. This is significantly lower than the University of Wisconsin-Madison tuition fees, which are 6143 euro (\$8983 USD) for Wisconsin residents, 7415 euro (\$10844 USD) for Minnesota residents and 16570 euro (\$24233 USD) for all other out-of-state students. Obviously these differences stem from the different fiscal ideas and taxation in both countries, but brings forward the idea that college education is more of a luxury in the United States than in The Netherlands, where every student gets financial support, low tuition fee and cheap student loans at less than two percent interest rate over a twenty five year span to pay back the loaned amount. This offer is changing however and tuition fees could be on the rise in The Netherlands too, but so far increases are minor and universities appear to be set on keeping education available to

⁵⁰ Centraal Planbureau, 'Analyse Economische Effecten Financieel Kader', (CPB 2010).

⁵¹ Scott Walker, 'Issues', (Milwaukee 2010) <http://www.scottwalker.org/issues>

⁵² Anton Franken and Bas Ibelings, 'Bezuinigingen op hoger onderwijs zijn funest voor de kenniseconomie', *Landelijke Beta-Actie* and *Opinie NRC* (January 18th 2011).

everyone. Also, Dutch students appear to be willing to pay more for their education and invest in their future, especially if the quality gets even better over the years by restricting and lowering the number of graduate students per program.⁵³ In Wisconsin the University of Wisconsin-Madison struggles finding a way to deal with proposed budget cuts by new governor Scott Walker, while also keeping control of their policies without losing their status as an affordable and reputable public institution. The New Badger Partnership, as the new policies are called, is still under consideration, but a university website was launched to bust myths regarding the new budget and explain to students how and why the university having this conversation. Fears among students include a likely 25 percent increase in tuitions, the Madison campus turning private instead of public, and the University of Wisconsin-Madison considering cutting ties from the UW-system, which is a statewide system of over a dozen universities of which Madison is the flagship campus.⁵⁴ Losing Madison as a member of their system would not only hurt the UW-system image and students options to transfer from smaller schools to the top campus, it would also hurt a century old tradition and idea known across America as the Wisconsin Idea. The university describes the Wisconsin Idea as one of its longest and deepest traditions, meaning in short that education should influence people's lives beyond the boundaries of the classroom. The whole state of Wisconsin, through other schools the whole country and through a network of ideas the world should profit from what universities like Wisconsin can teach their students.⁵⁵ The idea was often defended as, for example, when the Board of Regents juried the case of professor Richard T. Ely, who in 1894 was tried by Law School colleagues to prohibit him from teaching socialist doctrines. The Board of Regents defended Ely while defending academic freedom and spoke the legendary words found cast in bronze on the administrative building: "Whatever may be the limitations which trammel inquiry elsewhere, we believe that the great state University of Wisconsin should ever encourage that continual and fearless sifting and winnowing by which alone the truth can be found."⁵⁶ They were right, academic freedom is important and the Wisconsin Idea was ahead of its time and it will hopefully prevail, as professors, researchers and students must rally for academic freedom and the right to teach everything they know to be true. Not only are financial cuts a problem for the University of Wisconsin-Madison, as governor Walker is not just a member of the Republican Party but also known as a follower of the new Tea Party, who are seen as America's new conservative grassroots movement.

The Tea Party name derives from the Boston Tea Party event in 1773, when

⁵³ Stichting Onderwijs Evaluatie Rapport, *Masterkeuze: de invloeden*, (Utrecht 2011).

⁵⁴ University of Wisconsin-Madison and System, 'Busting Myths about the New Badger Partnership', <http://budget.wisc.edu/budget-news/busting-myths-about-the-new-badger-partnership/>

⁵⁵ University of Wisconsin-Madison, 'The Wisconsin Idea', <http://www.wisconsinidea.wisc.edu/>

⁵⁶ University of Wisconsin Library, 'Sifting and Winnowing', <http://www.library.wisc.edu/etext/WIReader/Contents/Sifting.html>

American colonists stood up against British taxation, one of the main issues the modern Tea Party has with current federal policies. They are socially conservative, with the influential financial magazine Bloomberg going as far as calling the Tea Party a group containing almost a majority of conservative “Christian fundamentalists”. Quite a daring comment to make, but based on the statistic that 44 percent of Tea Party members are born-again Christians, a term most commonly used for devout Christians in the United States who often found their religion at a later age. Only 33 percent of all Americans, not just Tea Party followers, consider themselves to be part of that group.⁵⁷ The Tea Party is somewhat split over certain issues, but they are all supporting an overhaul of the American fiscal policy, demanding more conservative decisions in the economy, using the original US constitution as a guideline, but also clinging to conservative social ideas with their most well-known leaders, such as Sarah Palin and Ron Paul, being vocal opponents of abortion and embryonic stem cell research. Surprisingly enough, Sarah Palin did run for vice-president with senator John McCain, who is known as one of the few Republicans in favor of expanding stem cell research laws in America. This would not have included all embryonic research, but he did support a proposal in favor of the use of newly created stem cell lines for American research institutions.⁵⁸

This is the case in Wisconsin too, where Governor Scott Walker was heavily endorsed by anti-embryonic stem cell research, anti-planned parenthood (no sexual education and no contraception for any students out of public funding) and anti-abortion groups Pro-Life and Right To Life. Those groups even went as far as claiming that the University of Wisconsin-Madison should be stopped to do embryonic stem cell research and prohibit they perform abortions at Madison’s UW Hospital.⁵⁹ Democratic governor Jim Doyle and 2010 Democratic candidate Tom Barrett not only refused to prohibit abortion, they even promoted and supported these social and academic freedoms. So far, Governor Walker has not specifically intervened with stem cell research at the university, but his budget cuts are hurting the university nonetheless and could possibly restrict them from performing their most expensive and unique experiments. However, without completely banning embryonic stem cell research in all of Wisconsin Walker is unable to prohibit the schools researchers from doing this work, because from the start of James Thomson’s research funding was provided by the Wisconsin Alumni Research Foundation. WARF collects donations from Wisconsin alumni in order to privately fund research that Wisconsin scientists are not allowed to do with public funding. Potential profits from discoveries are then used to invest in other or

⁵⁷ Heidi Przybyla, ‘Tea Party Advocates Who Scorn Socialism Want a Government Job’, *Bloomberg.com* (March 2010).

⁵⁸ Richert, Scott P., ‘Where do John McCain and Sarah Palin Stand on Embryonic Stem Research?’, *About.Com: Catholicism*, http://catholicism.about.com/od/thechurchintheworld/p/Republican_ESCR.htm

⁵⁹ Pro-Life Wisconsin, ‘Deadly Research at UW-Madison’, <http://www.prolifewisconsin.org/projects/uwAlumniForLife.asp>

similar research, creating a hybrid in which the school can perform potentially controversial research without using public funds to do so; a system known as a revolving wheel fund. WARFs influence is best described by simple statistics and facts, as they have granted more than \$1 billion dollars to researchers since 1928, leading to groundbreaking discoveries as the existence of Vitamin D and of course the isolation of embryonic stem cells.⁶⁰ It is important though to look at what WARF means within the American law; schools cannot fund certain scientific research with public funds, so external funds linked to the school supplement the rest of the necessary budget. This creates a hybrid in which public funding is used for general research and education and private funding is used to exploit the far reaching academic freedom offered within the American rules on what is allowed in private and public university laboratories across the country. This issue does not exist in The Netherlands, due to compromises between different political parties and the fact that they agreed that public funding is allowed for everyone as long as they play by the rules. Rules that were written after lengthy debate and after being influenced by scientific progression.

The University of Wisconsin-Madison will likely hold on to their position as a world leader in research and as one of the best public universities in the world. If only, because times have changed before and they have been able to do their work when governed by both Democrats and Republicans in the past. Democratic governors helped the school more, as is evident when you look at who paid for the new Wisconsin Institutes for Discovery, a campus building which provides laboratories, discussion halls, lecture rooms and even a museum on science for students, scholars, scientists and regular visitors together.⁶¹ This building was funded by the school, WARF and the state government, though it was greatly opposed by the before mentioned pro-life movements, who were shocked the governor would fund a building in which stem cell research would be conducted. The research will not happen under governor Walker, but the school is aiming to find a way to continue doing what it does best. When the time comes that people have to work harder, dig deeper and address much needed issues, they often can move forward when they join forces. Although the Dutch government will likely not cut budgets as severely as the new Wisconsin administration has, it is hopeful to see students and scholars willing to pay more for their future and the future of education in order to retain academic freedom and innovation.

I did want to learn more about what students eventually mean and think at the University of Wisconsin-Madison and how important they believe it to be to hang on to the Wisconsin Idea and academic freedom on campus. I talked to Grace Latz, a student who

⁶⁰ Wisconsin Alumni Research Foundation, 'Our History', <http://www.warf.org/about/index.jsp?cid=26>

⁶¹ Wisconsin Institutes for Discovery, 'About Us', <http://discovery.wisc.edu/home/discovery/about-us/about-us.cmsx>

recently graduated from the University of Wisconsin-Madison, who was an active student leader on campus, co-founder of ReThink Wisconsin, an organization for implementing sustainable change in the university, and also winner of a 2010 Student Athlete Community Service Award and member of the Iron Cross honor society. The point of Iron Cross was of great interest to me, as in The Netherlands honor societies aren't nearly as common or important as in the United States, creating an interesting extra to student involvement. "The Iron Cross is an honor society of student leaders," Latz explained. "The members of an Iron Cross class are kept secret until they graduate. These students are from different parts of campus, representing many different student perspectives and are the university's most active students, as Iron Cross members are often also leaders of other student organizations at UW-Madison. Being the active students they are, they helped create for example the Student Union and they, so it is rumored, helped create the Wisconsin Idea. Through the structure of Iron Cross, members have their opinions heard as a unified student voice without distinguishing individuals." It is evident that the school greatly appreciates student input and that students on their part, are glad to advise the school. Grace Latz later told me the school still rallies around the Wisconsin Idea and it is what makes the school stand out. "The Wisconsin Idea is the idea that our university prepares the students for the world outside, so that not just students but also the state, the country and ideally the world will benefit from the impact of liberally educated students. It's important for the school and a major part of the Wisconsin Idea relates to research and how amazing professors are. Professors and the university administration still rally around the Idea as a concept to guide the university, so that what the university does benefits the public good. This is a big part of Wisconsin and academic freedom fits in perfectly, so it will always be upheld." To have a student leader like Latz believe this is hopeful, as it appears that American universities and students believe in the freedoms they have, whether the school is public, a private and public hybrid or completely private. Academic freedom is something the students will go a long way for, as was proven by protests of up to a hundred thousand students and public employees rallying around the state capitol in Madison to protest against the budget cuts announced by the new governor.⁶² It was to no avail, as the new policies were rushed through votes and no plans truly changed, but that doesn't mean that the university will just give in. As long as they can survive financially, they will protect the Wisconsin idea, the valuing of academic freedom and denying influence by religion or people who disagree with science for whatever other reason. An idea that will likely succeed and prevail in The Netherlands with laws protecting academic freedom and freedom of speech.

⁶² Kelleher, James B., 'Up to 100,000 protest Wisconsin law curbing unions', *Reuters* (March 2011), <http://www.reuters.com/article/2011/03/13/us-wisconsin-protests-idUSTRE72B2AN20110313>

However, the hope of the same thing happening in Wisconsin recently took a painful and sensitive hit when Republican administrators decided to make an open records request on the files of internationally renowned environmental historian William Cronon. Professor Cronon's article in the New York Times exposed lawmakers and corporations pushing governor Walker to order the implementation of the controversial anti-union laws and budget cuts concerning education and public workers in Wisconsin. This request sparked a new debate on academic freedom, with the university backing Cronon but having to give in to the request due to state laws, but not before they had blocked the publication of many of Cronon's emails which concerned students, fellow scholars or academic ideas that had not yet been published. Academic freedom and the right to speak your mind were suddenly the main topic of debate in major newspapers and on the internet, with some scholars and journalists going as far as claiming that the Republican party was aiming to intimidate and silence colleagues who criticized their new plans.⁶³ Now the debate hasn't settled yet, but it is strange indeed to see the administration of a governor who is a follower of a movement that claims to be so close to the constitution, use a law to scrutinize scholars who use their freedom of speech, Professor William Cronon himself was clear and outspoken after the request, having this to say in a statement on his website: "It is chilling indeed to think that the Republican Party of my state has asked to have access to the emails of a lone professor in the hope of finding messages they can use to attack and discredit that professor. It makes me wonder if they have given even the slightest thought to what would happen to the reputation of this state and of its universities if they were to succeed in such an effort. It also makes me wonder how a [Republican] party so passionate in its commitment to liberty and to protecting citizens from abuses of state power can justify resorting to this particular exercise of state power with the goal of trying to silence a critic of its own conduct."⁶⁴ Now religion is likely not of direct influence in this decision and debate, but academic freedom is an important right and something that is protected by the US constitution. However, what happens when publicly funded professors have to resort to moving to private universities and funding in order to be able to work without potentially having their private conversations shared with the media and outsiders? Academics doing controversial research are therefore proven not to have just been under pressure and scrutiny in the past, but also in the present day. What these open record requests and budget cuts will do to public education in the long run is hard to determine, but we can only hope that academic freedom

⁶³ Nichols, John, 'Wisconsin GOP Seeks to Silence Distinguished Dissenter. McCarthyism is Back.', *The Nation* (March 25th, 2011), <http://www.thenation.com/blog/159489/wisconsin-gop-seeks-silence-distinguished-dissenter-mccarthyism-back>

⁶⁴ Cronon, William, 'Abusing Open Records to Attack Academic Freedom', *Scholar as Citizen*, (March 24th 2011), <http://scholarcitizen.williamcronon.net/2011/03/24/open-records-attack-on-academic-freedom/>

is protected, that professors retain the right to freely speak their mind and that schools have to teach the scientific truth. Whether those beliefs come from the conservative or progressive side and whether they are lead by religious beliefs or financial plans; academic and educational freedom is important for the future of our world, because we all have the right to hear the truth, to gather from newly acquired academic knowledge and to benefit from discoveries that will be made in the future. No one's personal beliefs should be a reason to obstruct the work of someone else, although that does not mean that we should just allow everything. Albert Einstein said it best, when it comes to religious and moral influence on education and more importantly science: "A man's ethical behavior should be based effectually on sympathy, education, and social ties; no religious basis is necessary. Man would indeed be in a poor way if he had to be restrained by fear of punishment and hope of reward after death." *I believe* he was right.

Conclusion

Times have changed, that much is evident. Current Dutch leading political parties are known as either fiscal conservatives, social conservatives and likely both. This is also the case in Wisconsin, but changes in The Netherlands do not happen as quickly as in Wisconsin or the United States in general. This is the result of the multi-party system the Dutch have used for many years and in which compromises and general consensus play such a large role, that rules set out decades ago are often hard to change. The fact that in the 1960s and 1970s the Dutch opted to instate many groundbreaking liberal laws has led to an image of freedom from religion and major academic freedom at universities nationwide. Even after clear political changes from liberal to conservative over the last decade, the Dutch have held on to their compromises and to the laws they wrote after everyone had their say and an agreement was made that was supported by a majority. The agreements led to a system in which religion is allowed to play a surprisingly large role in education, as all primary and secondary schools are publicly funded, as well as all universities who ask for a government budget. Religion classes are paid for by the government, religious schools are federally funded, but so is controversial research and this creates a balance in which the state instead of funding no one, funds everyone.

This is different in the United States, where due to a two-party system the new leaders almost always work with a majority that is able to change laws and policies quickly. With major differences in the ideals of the Democrats and Republicans, the Supreme Court and 1787 US Constitution continue to play an important role in the American policies on education, scientific research and social issues. Instead of paying for everyone's school and almost all research, the First Amendment is used to restrain the federal funding of schools that teach and favor religion, as well as to restrict the federal funding of research that goes against the beliefs of what is considered to be a majority of the American public. In the end we can conclude that today the influence of religion is far greater in Dutch primary and secondary schools, than it is in the United States. When it comes to the funding and rules regarding scientific research, it is quite the contrary. The Dutch government pays for most expenses, but banned the most extreme and controversial parts of the research – like the creation of cells containing human and non-human traits - in order to find a compromise between conservatives and progressives. In the United States, there is no compromise. The state will not pay for controversial research, but if you pay for it yourself, you are free to do what you want to do.

Where this difference originates from is eventually easy to conclude. When our European forefathers set sail for the new continent across the Atlantic Ocean, most of them were looking for freedom of religion and freedom in general. Eventually they had to fight hard to find both the religious freedom they were looking for, as well as the freedom to lead their country in the way they believed was right. Free from taxation of the British Empire and French king and free from the rules the European elite and royals had set for so long. These beliefs still echo through in the US Constitution and the American laws. You are free to believe what you want to believe, free to teach your children what you want to teach them and free to research what you want to know, but no one is going to pay for it. What will be paid for are the most common things and whatever is proven by scientific experiments and personal experiences that the common man cannot ignore. No one will pay for your beliefs, but the state will pay for common knowledge.

The Dutch however went through different times, times in which royals and their enemies had to find new ways to help the people. The Dutch were controlled and governed by their own royals, by the French crown, by a German dictator and they had to rebuild their country and their social structures after the second World War. It created a country that believes in compromises and that the majority of the country deserves to benefit from government spending and the wealth the country as a whole still has. It has led to laws that pay for everyone, because that is freedom according to the Dutch ideals, but why go too far? That idea has restricted the excessive regions of research, the borders of what is right should not be searched for, but one can make great discoveries by working with what we already have and the government is willing to pay for that, because a majority of the Dutch would benefit from a great advancement.

Both countries eventually hit a bump in the road and both countries are finding a way out of the financial crisis by holding on to conservative beliefs, because they worked in the past and will hopefully work in the future. What we have to hope for as scientists, academic students and scholars, is that one day and hopefully soon we can let go of restrictions of the past, because being conservative and discarding specific yet important types of science and research as immoral or unethical will lead to a world that cannot advance and there is so much more left to discover. Maybe not by the students or scientists of today, but maybe one day by our children or their children and mankind will no doubt regret it if education became so expensive and restricted so that even some of our most brilliant minds will not reach their full potential. If religion is important to you, that is your right and we should never lose or restrict social and cultural diversity or religious freedom. However, if we allow everyone to believe what they want to believe as long as they live by the rules of our constitutions and laws, it would be quite the contradiction if we would than

allow religious freedom and beliefs to severely influence the freedom of others. The First Amendment clearly makes sure that that will indeed never happen in our modern times, but if conservative politicians continue to cut budgets for public schools and great universities than academics could still lose. American college students and scholars and even their Dutch colleagues can only hope that the Tea Party and others listen to the wise words of Founding Father Thomas Paine, who once said that "one good schoolmaster is of more use than a hundred priests." *I believe* he was right.

Literature and sources

Aerts, Remieg and Ten Velde, Henk, *Land van kleine gebaren – Een politieke geschiedenis van Nederland 1780-1990* (Nijmegen / Amsterdam 1990).

Algemeen Nederlands Persbureau, 'VVD ziet af van voorstel godslastering' (released May 22nd 2011), as to be found on several media outlets including:
http://www.katholiek nederland.nl/actualiteit/2011/detail_objectID728503_FJaar2011.html

Arts in Spé.nl, 'Numerus Fixus', <http://artsinspe.artsennet.nl/actueel/dossiers/numerus-fixus.htm>

Best, Robert and George, Khushf, 'The Stem Cell Controversy in the United States, Scientific, Philosophical, Political and Theological Aspects', in: Wolfgang Bender, Christine Hauskeller and Alexandra Manzei, eds. *Crossing Borders: Cultural, Religious, and Political Differences Concerning Stem Cell Research. A Global Approach*, (Münster: agenda, 2005) 241-261.

Buskes, Chris, *Evolutionair denken: De invloed van Darwin op ons wereldbeeld* (Amsterdam 2006).

Centraal Bureau voor de Statistiek, 'Schoolsoorten: onderwijssoort en grondslag', *CBS Statline* (December 2010), available at <http://statline.cbs.nl>

Centraal Bureau voor de Statistiek, 'Kerkelijke Gezindte en Kerkbezoek; vanaf 1849; vanaf 18 jaar of ouders', *CBS Statline* (October 2010), available at <http://statline.cbs.nl>

Centraal Planbureau, 'Analyse Economische Effecten Financieel Kader', (CPB 2010).

Cronon, William, 'Abusing Open Records to Attack Academic Freedom', *Scholar as Citizen* (Madison, March 24th 2011), <http://scholarcitizen.williamcronon.net/2011/03/24/open-records-attack-on-academic-freedom/>

Esposito, Katherine, 'The Cell Scientist', *Isthmus* (September 2000) 9-10.

Franken, Anton and Ibelings, Bas, 'Bezuinigingen op hoger onderwijs zijn funest voor de kenniseconomie', *Landelijke Beta-Actie and Opinie NRC* (January 18th 2011).

Gay Stolberg, Sheryl, 'Obama Is Leaving Some Stem Cell Issues To Congress', *New York Times* (March 2009), http://www.nytimes.com/2009/03/09/us/politics/09stem.html?_r=2

Gezondheidsraad, 'Over Ons', <http://www.gezondheidsraad.nl/nl/over-ons/de-raad>

Gezondheidsraad, *Stamcellen: samenvattingen, conclusies en aanbevelingen*, http://www.gezondheidsraad.nl/sites/default/files/samenvatting%20stamcellen_0.pdf

HBO Raad, 'Overzicht Hogescholen', <http://www.hbo-raad.nl/hogescholen/overzicht-hogescholen>

Hoedemakers, R.H.M.V., *Humane Biotechnologie*, (CDA Instituut 2003)
<http://www.cda.nl/Upload/wi/2003%20MRT%20Humane%20biotechnologie2.pdf>

Kasindorf, Martin, 'States play catch-up on stem cells', *USA Today* (December 2004), http://www.usatoday.com/news/nation/2004-12-16-stem-cells-usat_x.htm

Kelleher, James B., 'Up to 100,000 protest Wisconsin law curbing unions', *Reuters* (March 2011), <http://www.reuters.com/article/2011/03/13/us-wisconsin-protests-idUSTRE72B2AN20110313>

Kellman, Laurie, 'Senate Approves Embryo Stem Cell Bill', *Associated Press* (July 2006), http://www.breitbart.com/article.php?id=D8IUKSRO0&show_article=1

Michigan Citizens for Stem Cell Research & Cures, 'Michigan's Current Law', <http://www.stemcellresearchformichigan.com/currentlaw.html>

Ministerie van Onderwijs, Cultuur en Wetenschap, *Besluit Vernieuwde Kerndoelen Wet Primair Onderwijs (WPO)*, as published January 28th 2011, http://www.st-ab.nl/wettennr06/0725-006_Besluit_vernieuwde_kerndoelen_WPO.htm

National Center for Educational Statistics, *Fast Facts*, (2010) <http://nces.ed.gov/fastfacts/display.asp?id=372>

National Center for Education Statistics, *Homeschooling in the United States: 2003 – Statistical Analysis Report*, (2006) <http://nces.ed.gov/pubs2006/homeschool/index.asp>

National Center for Education Statistics, *Private School Universe Survey*, (2008) http://nces.ed.gov/surveys/pss/tables/table_2008_14.asp

Nationaal Instituut voor Budgetvoorlichting, 'Schoolgaande kinderen: de kosten van Joris (16)', NIBUD.nl (last checked May 2011), <http://www.nibud.nl/uitgaven/kinderen/schoolgaande-kinderen.html>

Nederlandse Overheid, *Embryowet*, as published on June 20th 2002, http://wetten.overheid.nl/BWBR0013797/geldigheidsdatum_15-06-2011

Nichols, John, 'Wisconsin GOP Seeks to Silence Distinguished Dissenter. McCarthyism is Back.', *The Nation* (March 25th, 2011), <http://www.thenation.com/blog/159489/wisconsin-gop-seeks-silence-distinguished-dissenter-mccarthyism-back>

Nyenrode Business Universiteit, 'About Nyenrode', <http://www.nyenrode.nl/About/Pages/Default.aspx>

Partij voor de Vrijheid, 'Verkiezingsprogramma 2009', <http://pvv.nl/index.php/visie/verkiezingsprogramma.html>

Princeton Review, 'Test Prep: GMAT, GRE, LSAT, MCAT, SAT, ACT, and More', <http://www.princetonreview.com/>

Pro-Life Wisconsin, 'Deadly Research at UW-Madison', <http://www.prolifewisconsin.org/projects/uwAlumniForLife.asp>

Przybyla, Heidi, 'Tea Party Advocates Who Scorn Socialism Want a Government Job', *Bloomberg.com* (March 2010).

Richert, Scott P., 'Where do John McCain and Sarah Palin Stand on Embryonic Stem Research?', *About.Com: Catholicism*, http://catholicism.about.com/od/thechurchintheworld/p/Republican_ESCR.htm

Schoorl, Erik, 'Indoctrineer je kids: 'Bewijs van de schepping' lesje in groep 7 en 8', *GodVoorDommen.nl* (May 2011),
<http://www.godvoordommen.nl/2011/05/23/indoctrineer-je-kids-bewijs-van-de-schepping-lesje-in-groep-7-en-8/>

Stichting Onderwijs Evaluatie Rapport, *Masterkeuze: de invloeden*, (Utrecht 2011).

Thomson, James A., 'Embryonic Stem Cell Lines Derived from Human Blastocysts', *Science* (6 November 1998) 1145-1147.

University of Wisconsin Library, 'Sifting and Winnowing',
<http://www.library.wisc.edu/etext/WIReader/Contents/Sifting.html>

University of Wisconsin-Madison and System, 'Busting Myths about the New Badger Partnership', <http://budget.wisc.edu/budget-news/busting-myths-about-the-new-badger-partnership/>

University of Wisconsin-Madison, Commercial: '*See The Right Thing*', (September 2010)
<http://www.youtube.com/watch?v=H5etGdlUItE>

University of Wisconsin-Madison, 'The Wisconsin Idea',
<http://www.wisconsinidea.wisc.edu/>

US Charter Schools, 'Overview',
http://www.uscharterschools.org/pub/uscs_docs/o/index.htm

Vereniging van Universiteiten, 'Alle 14 Universiteiten',
<http://www.vsnu.nl/Universiteiten/Alle-universiteiten.htm>

Walker, Scott, 'Issues', (Milwaukee 2010) <http://www.scottwalker.org/issues>

Weerdt, Jasperien van, 'Hoe kies je een goede particuliere school?', *Z24 Geld* (January 2009),
http://www.z24.nl/z24geld/artikel_50977.z24/Hoe_kies_je_een_goede_particuliere_school

Wikipedia; 'Creation and evolution in public education',
http://en.wikipedia.org/wiki/Creation_and_evolution_in_public_education

Wikipedia; 'Dickey-Wicker Amendment', http://en.wikipedia.org/wiki/Dickey-Wicker_Amendment

Wikipedia; 'Hogeschool, Door de overheid erkende("aangewezen") maar niet bekostigde hogescholen',
http://nl.wikipedia.org/wiki/Hogeschool#Door_de_overheid_erkende_.28.22aangewezen.22.29_maar_niet_bekostigde_hogescholen

Wisconsin Alumni Research Foundation, 'Our History',
<http://www.warf.org/about/index.jsp?cid=26>

Wisconsin Institutes for Discovery, 'About Us',
<http://discovery.wisc.edu/home/discovery/about-us/about-us.cmsx>

Yu, Junying and Thomson, James, 'Embryonic Stem Cells', *Regenerative Medicine* (2006) 2-13