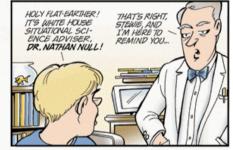
# **Mapping Controversies with Wikipedia** DMI summer school 09 - session 2 Sabine Niederer

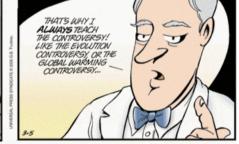
















## Controversies

- "from a heated debate to a very cool dispute" (Latour, DMI Summer School 2008)
- when there is uncertainty about facts
- a controversy refers to a range of attitudes, including consensus and agreement.
- consensus is one extreme of a controversy when they often abandon the controversy or agree.
- examples: tobacco, GM food, climate change, biofuels, etc.

## Detecting a good controversy

- heterogeneity of the sources of information
- dispute in various publications
- different disciplines
- heterogeneous types of data
- range of actors
- range of vocabulary
- how many people are involved (how many scientists)
- is it live? past / present

(Mapping controversies week, DMI summer school 08)

"(...) controversies mapping entails no conceptual assumptions and requires no methodological protocols. There are no definitions to learn; no premises to honor; no hypothesis to demonstrate; no procedure to follow; no correlations to establish. Researchers are not even asked to explain what they study, but only to observe a controversy and describe what they see. Like zooborn animals released in the wild, students entering cartographic projects report bewilderment and euphoria."

Tommaso Venturini (2009). Diving in Magma. How to Explore Controversies with Actor-Network Theory, Draft version to appear in *Public Understanding of Science*, <a href="http://www.ideaedi.it/2008/index.php?">http://www.ideaedi.it/2008/index.php?</a> <a href="page=exploring-controversies">page=exploring-controversies</a>.

# HOW THE SKEPTICS GOT ORGANIZED Climate change skeptics and their related issues

Research by Sabine Niederer and the Digital Methods Initiative, University of Amsterdam

## Climate Change Skepticism

- 1. Context: Mapping Controversies
- 2. How the Climate Change Skeptics got Organized
- 3. Comparing Climate Science with Climate Change Skepticism (Science?)
- 4. Climate Change Experts, or Professional Skeptics? On the Skeptics' Related Issues.

## 1. MAPPING CONTROVERSIES



Start of the Mapping Controversies Week @ DMI Summer School, Skype Conference Call with Bruno Latour.

## Climate Change Skeptics on the Web (S. Fred Singer)

Research Ouestion To what extent are climate change 'skeptics' present in the climate change spaces on the Web? Findings There is distance between the skeptics and the top of the search engine returns.

> epa.gov (0) bbc.co.uk (0) defra.gov.uk (0) unep.org (0) bom.gov.au (0) ipcc.ch (0) pewclimate.org (0) davidsuzuki.org (0) panda.org (0) mfe.govt.nz (0) ec.gc.ca (0) exploratorium.edu (0) climatechange.com.au (0) greenpeace.org (1) climatechallenge.gov.uk (0) guardian.co.uk (0) iisd.org (0) g8.gov.uk (0) campaigncc.org (1) foe.co.uk (0) state.gov (0) scidev.net (0) eea.europa.eu (0) whoi.edu (0) cbc.ca (0) energy.gov (0) marshall.org (0) climateark.org (1) un.org (0) dar.csiro.au (0) theglobeandmail.com (0) acfonline.org.au (0) royalsoc.ac.uk (0) gcrio.org (0) nature.com (0) grida.no (0) nature.org (0) ecokids.ca (0) climatechangecentral.com (0) iea.org (0) ecy.wa.gov (0) worldwildlife.org (0) ecn.ac.uk (0) realclimate.org (14) faqs.org (0) metoffice.gov.uk (0) open2.net (0) scienceagogo.com (0) eldis.org (0) ft.com (0) who.int (0) climatecrisis.net (0) ltscotland.org.uk (0) abc.net.au (0) climatechange.ca.gov (0) envirolink.org (0) mofa.go.jp (0)

sourcewatch.org (64)

ncdc.noaa.gov (0) dfat.gov.au (0) iucn.org (0) climatechangecollege.org (0) ciel.org (0) ucar.edu (0)

climatescience.gov (11)

Source\_google.com Query\_"Fred Singer" Method\_Search for query "Fred Singer" in top 100. Organized in order. Tools\_Google Scraper and Tag Cloud Generator Date 30 July 2007

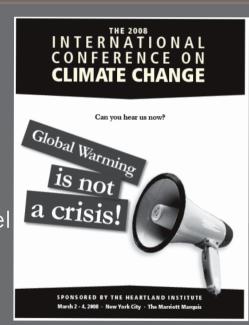
Product of the Digital Methods Initiative, dmi.mediastudies.nl. Analysis\_by Bram Nijhof, Richard Rogers and Laura van der Vlies. Design Anne Helmond.



## 2. The Skeptics got Organized

In March 2008, the Heartland conference organized the first international climate change skeptics conference.

The "2008 International Conference on Climate Change," was a three-day event, with panels, keynote speakers, three parallel tracks, and proceedings.



## 2. The Skeptics got Organized



Joseph L. Bast:

"These scientists and economists [attending the conference, SN] have been published thousands of times in the world's leading scientific journals and have written hundreds of books.

If you call this the fringe, where's the center?".

Question: What is the place and status of climate change skepticism?

- > 1. Do the climate change skeptics have a similar distribution of disciplines as the non-skeptics?
  - 2. Are skeptics indeed mainstream?
  - 3. Are they climate change experts, or professional skeptics?

Question: Do the climate change skeptics have a similar distribution of disciplines as the non-skeptics?

1. Compile a list of important climate change skeptics.

The list of climate change skeptics is derived from three sources: sourcewatch.com, motherjones.com, wikipedia.org.

Subsequently, the keynote speakers of the Heartland Conference were added, which lead to the following shortlist:

Sallie Baliunas, Joseph Bast, Paul Driessen, William Gray, Sherwood Idso, Vaclav Claus, Richard Lindzen, Patrick Michaels, Steven Milloy, Frederick Seitz †, S. Fred Singer, Willie Soon, Roy Spencer, John Stossel, James M. Taylor.

Question: Do the climate change skeptics have a similar distribution of disciplines as the non-skeptics?

- 2. Query ISI web of science for the skeptics shortlist and download the articles' data and citations.
- 3. Query ISI web of science for all articles about Climate Change and download the articles' data and citations.

Result file: data of 15.877 articles about climate change, cited at least 3 times.

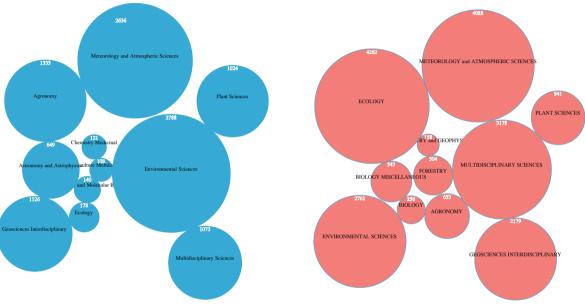
#### **Does Climate Change Skepticism resemble Climate Change Science?**

Question\_Does the composition of climate science mirror that of skeptic climate science?

In other words, is skeptic climate science in its own field, in the sense of the particular distribution of disciplines?

**Method**\_Here we compare the disciplines of the journals in which significant climate change articles appear with those of the skeptics.

Findings\_The top 5 disciplines in the Climate Sciences are among the top 10 disciplines in the skeptics' sciences.



Articles per Discipline	Discipline (Skeptics List)	Articles per Discipline	Discipline (Climate Sciences)		
2788 2636 1333 1126 1073 1024 649 178	Environmental Sciences Meteorology & Atmospheric Sciences Agronomy Geosciences, Interdisciplinary Multidisciplinary Sciences Plant Sciences Astronomy & Astrophysics Ecology	4262 4088 3178 2761 2179 941 653	Ecology Meteorology & Atmospheric Science Multidisciplinary Sciences Environmental Sciences Geosciences, Interdisciplinary Plant Sciences Agronomy Biology, Miscellaneous Forestry Engineering, Environmental	Climate Change Skeptics and Science Discipling the Change Skeptics and	August 08
140 121	Biochemistry & Molecular Biology Chemistry, Medicinal	543 504 396		Analysis by Sabine Niederer, Bram Nijhof, Andrei Mogoutov and Richard Rogers.	
				Visualization by Sabine Niederer	

# Question: What is the Place and Status of Climate Change Skepticism?

- Do the climate change skeptics have a similar distribution of disciplines as the non-skeptics?
- > 2. Are skeptics indeed mainstream?
  - 3. Are they climate change experts, or professional skeptics?

## Question: Are the skeptics indeed mainstream?

Take the result files and use ReseauLu to compare:

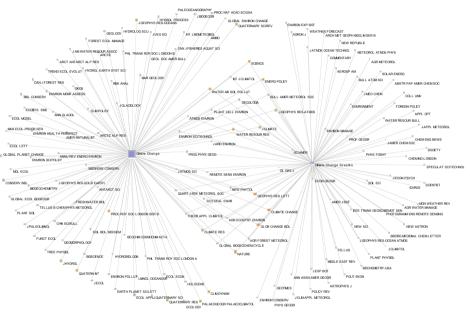
- 1. which journals do **not** publish the skeptics at all,
- 2. which ones **only** publish the skeptics,
- 3. and which journals publish **both** skeptics as well as non-skeptics

#### How 'mainstream' or 'fringe' is Climate Change Skepticism in the field of Climate Change Science?

Question\_Do the climate change skeptics publish in the same journals as the climate change scientists?

Method\_Here we compare the journals in which significant climate change articles appear with those of the skeptics.

Findings\_The climate change skeptics and non-skeptics publish in the same top four climate change-related journals.



Nr. of Citations 32558 26361 13586 10572 9424	32558 Nature 26361 Science 13586 J Climate 10572 Geophys Res Lett	Name Journal Skeptics Science Nature J Climate Geophys Res Lett J Atmos Sc	335 294 287 267 241 23		
8868		J Appl Meteorol Mon Weather Rev		Climate Change Skeptics and Science Journals	
6183		B Am Meteorol Soc Agron J		Digital Methods Initiative, 2008. http://dmi.mediastudies.nl	August 08
5048		Mon Wea Rev J Geophys Res		Analysis by Sabine Niederer, Bram Nijhof, Andrei Mogoutov and Richard Rogers.	
		Climatic Change		Visualization by Sabine Niederer, using ReseauLu.  © 2008	

Question: What is the place and status of climate change skepticism?

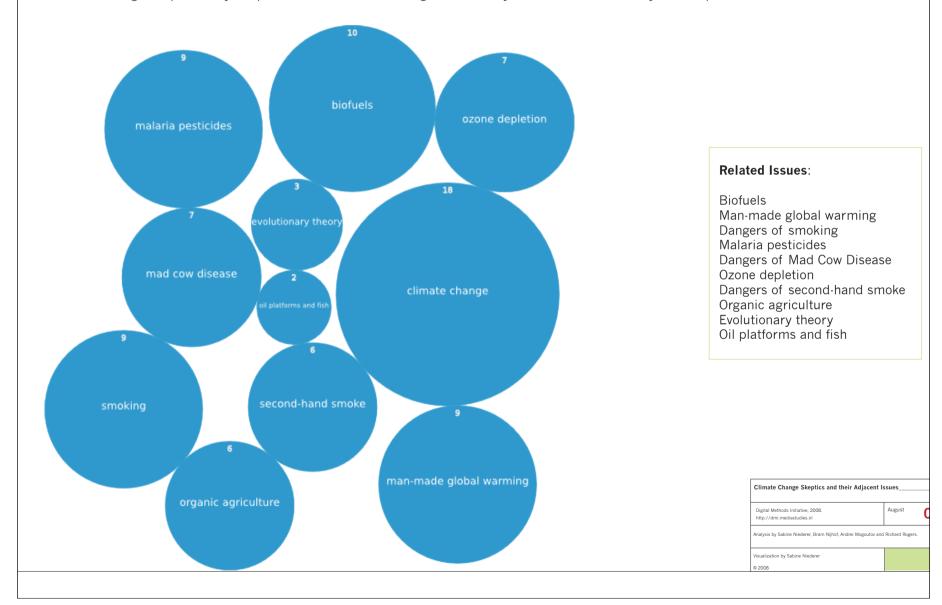
- Do the climate change skeptics have a similar distribution of disciplines as the non-skeptics?
- 2. Are skeptics indeed mainstream?
- > 3. Are they climate change experts, or professional skeptics?

# Question: Are the Skeptics Climate Change Experts, or are they Professional Skeptics?

- Visit the homepages of each of the skeptics on the shortlist, and list the other 1. issues they are skeptical about.
- 2. Check 'skeptical' publications for each of the skeptics in Google Scholar.
- 3. Go back to the lists on sourcewatch, wikipedia and motherjones and add issues.
- 4. Count related issues and create a Dorling map.

## **Climate Change Skeptics and their Adjacent Issues**

Are climate change skeptics only skeptical about climate change? Or do they have other issues they are skeptical about?



## **Biofuels vs. Food Crisis?**

Research Question\_Where is food crisis mentioned in the top 100 Google results for the query biofuels? Findings\_In the top 100 Google results, mainly newspapers pay attention to the food crisis debate.

terrulative energy resear. Into (4) terruparation for foreign affairs. org (16) to proper terruparation to biofuels journal.com (11) Washir	igtonpost.com (76) nytimes.com (100)					
iht.com (102) guardian.co.uk (102) blotuelwatch.org.uk(13)						
timesonline.co.uk (90) (36)						
cnn.com (100) bloomberg.com (102)						
alternet.org (84) npr.org	(100) time.com (100)					
- independent.co.uk	theaustralian.news.com.au (56)					
grist.org (49)	echnology-releasion (3) <b>6UTACTIX.COTT (8)</b> resource-begins are (5) association.lam (5) between (5) between (5) and are (5) and stated are (5) and stated are (5)					
biofuelsdigest.com (19) reason.com (14)	abc.net.au (100)					

Source\_http://www.google.com

Query\_biofuels

Method\_Scrape the top 100 Google results for the query biofuels in the Google Scraper for "food crisis". Scale and cloud results.

Result\_Ordered cloud of all related urls i

Date\_18 May 2008

Product\_of the Digital Methods Initiative, dmi.mediastudies.nl.

'. Analysis\_by Sabine Niederer. Design\_by Sabine Niederer and Anne Helmond.



CC\_BY:NC:SA





**Figure 3:** One Query, Two Depictions of Biofuels. For the query of biofuels in Google Images, on the left is result number one, on the right result number 75. The first results for this query provide green biofuels imagery, whilst result number 75 refers to the food shortage and raising food prices, with a picture of a woman and starving child. (Source: Google Images, 26 May 2008)

## Is Wikipedia a good place to study controversies?

- an encyclopedia is a neutral, de-politicized space;
- one of Wikipedia's core principles is NPoV (the other two: verifiability and no original research)
- Wikipedia makes use of technical tools and content agents to deal with vandalism and dubious content.

## Wikipedia is often studied:

- as a group effort: an example of collaborative knowledge production or wisdom of the crowds thanks to an open editing system;
- by questioning its 'encyclopedia-ness,' by comparing it to Encyclopedia Britannica.
- by researching bias/spin: by revealing who has been editing certain articles (by way of the Wikiscanner).
- Technicity of content: how dependent are the various user groups and the Wikipedia content on the (underlying) technology. Arguably, the technology helps shape the content, not only by a system of notifications and tools, but also by Wikipedia's non-human content agents, the bots.
- A next step in Wikipedia research could put Wikipedia to use as a space for societal controversy diagnostics.

How to recognize controversy on Wikipedia?

- NPoV list
- history / talk pages
- stats pages
- most edited wikipedia articles
- articles on 'controversial' topics

## **NPoV**

The neutral point of view is a means of dealing with conflicting <u>verifiable</u> perspectives on a topic as evidenced by <u>reliable sources</u>. The policy requires that where multiple or conflicting perspectives exist within a topic each should be presented fairly.

(http://en.wikipedia.org/wiki/NPOV)

Hockwold cum Wilton = Template:POV-section/sandbox L. Brooks Patterson Wikipedia:Template messages/Disputes Talk:Pete Wilson J. Z. Knight Wikipedia:WikiProject Neutrality R James the Just 2 Talk:John Pickstone User:Refsworldlee Talk:2009 flu pandemic Line of contact ■ Talk:September 11 attacks User talk: Ashe the Cyborg Sibley-Ahlquist taxonomy User:Liz Beres/KEIGWIN+COMPANY SmartWay Transport Partnership M В Wikipedia:Sockpuppet investigations/Ravichandar84/Report Talk:Brad Barkley Talk:Erwin McManus Talk:Mongolia Movement for the Survival of the Ogoni People Talk:Tailings User:Cailil/acid Wikipedia:Template messages/Cleanup Ν Canadian Union of Public Employees Wikipedia:Templates for deletion/Log/2006 August 22 Wikipedia:NPOV dispute Travunia D Named pipe User:Triwbe/Bookmarks Wikipedia:Dispute templates ■ Wikipedia:Neutrality templates Walter Winchell User:Fahadsadah/cleanup Template talk:POV Talk:Freq Nasty Template:POV-intro Template:POV-section Zachlumia Britney Gallivan н http://en.wikipedia.org/wiki/Category:NPOV\_disputes Wikipedia:Help desk/Archive 44 History of animal testing

## page history

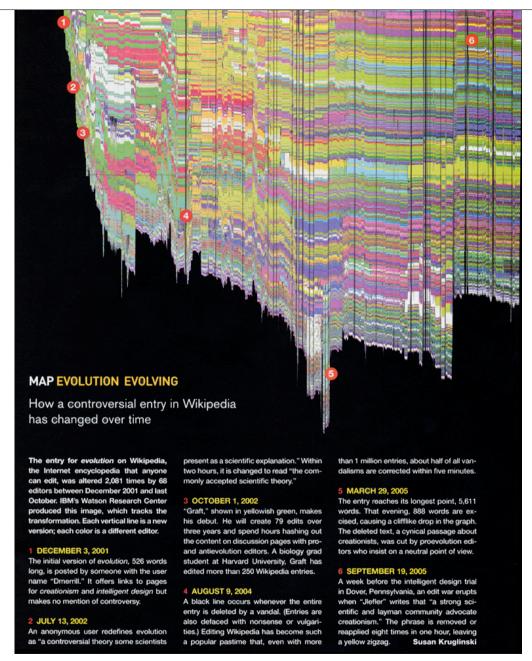
(arc) (bs) (cs) (de) (dsb) (en) (es) (fi) (fr) (gl) (grc) (gsw) (he) (hi) (hsb) (hu) (ia) (id) (it) (ja) (ksh) (lb) (nl) (no) (oc) (pl) (pt) (ru) (tr) (vi)  WikiBlame					
Language	en				
Project	wikipedia				
Page	Biofuel				
Search for	food				
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Ignore first x versions	0				
Versions to check	50				
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Order	latest first  oldest first				
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	ignore minor changes (experimental)				
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<ul> <li>15:30, 3 July 2009 OOO</li> <li>15:25, 3 July 2009 OOO</li> <li>15:09, 3 July 2009 OOO</li> <li>15:07, 3 July 2009</li> </ul>					

http://wikipedia.ramselehof.de/wikiblame.php?article=Biofuel

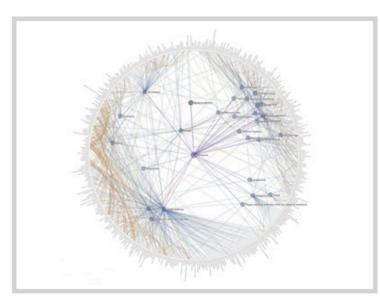
John Udell, Heavy Metal Umlaut

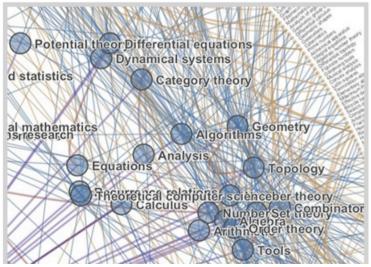
How articles evolve on Wikipedia

http://jonudell.net/udell/gems/umlaut/
umlaut.html



http://www.research.ibm.com/visual/images/discover\_mag.jpg





### ClusterBall: Visualizing Wikipedia

Author(s):

Chris Harrison

Institution:

(unknown)

Year:

2007 URL:

http://www.chrisharrison.net/projects/clusterball/

#### Project Description:

Chris Harrison is a prolific researcher who has done some great data visualization projects. Among them is ClusterBall. This visualization shows the structure of three levels of Wikipedia category pages and their interconnections. Centered in the graph is the parent node, in this case, Medicine (first image). Pages that are linked from this parent node are rendered inside the ball. Finally, pages that are linked to the latter (secondary) nodes are rendered on the outer ring. Links between category pages are illustrated by edges, which are color coded to represent their depth from the parent node. Nodes are clustered such that edge lengths are minimized. This forces highly connected groups of pages to clump together, essentially forming topical groups. The center acts as an anchor while the ring provides a fixed perimeter. This allows the secondary, super-categories to "float" above clusters.

The clustering component of this visualization is vital. As Chris explains: "The mere presence of information isn't all that interesting; there is no context or relevance to be gleaned. However, the structure of information is revealing about where fields intersect and diverge, and ultimately about how humans organize information".

The first image shows <u>Medicine</u> as the parent node, while the second features a detail view into the Mathematics category page.

#### Easy Mind Mapping Tool

Make Great Mind Maps in minutes See Examples, Free Trial!

#### Thinkmap Visualization

Software facilitates communication, learning, and discovery.

< >

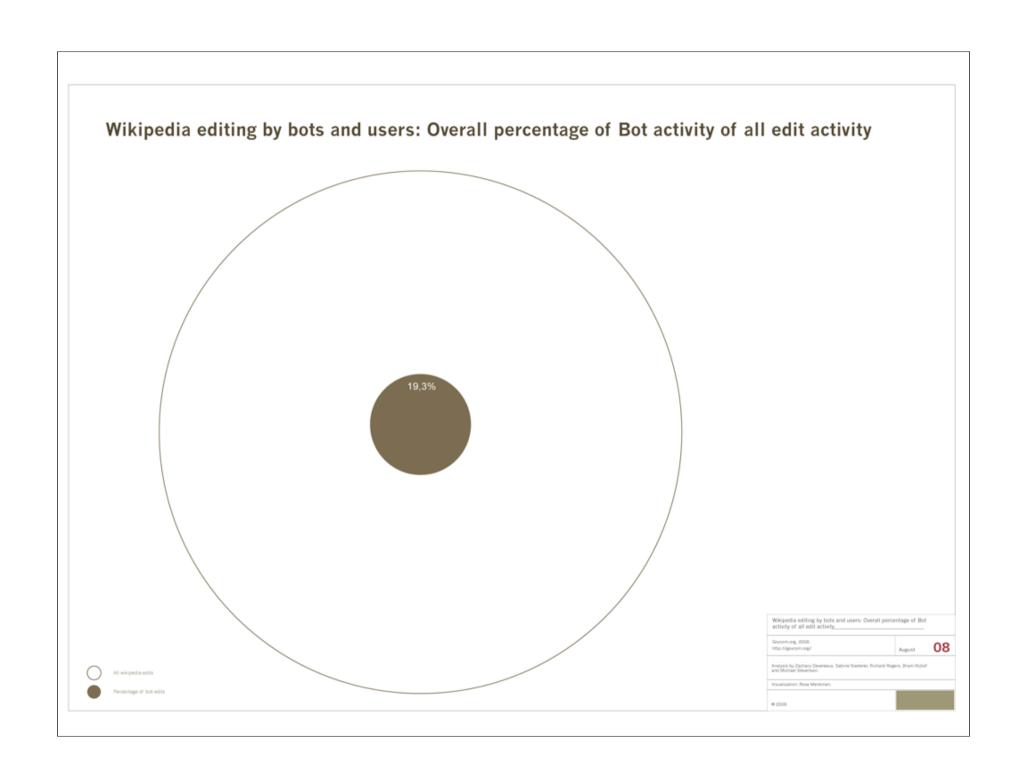
Ads by Google

Comments (0):

Leave a Comment:

# Who is editing?

- wikiwatcher: <a href="http://wikiwatcher.virgil.gr/">http://wikiwatcher.virgil.gr/</a>
- Colbert Report on the Wikiscanner: http://virgil.gr/



## Stats Pages

- Wikipedia stats: <a href="http://stats.wikimedia.org/EN/">http://stats.wikimedia.org/EN/</a>
- Wikipedians by number of edits: <a href="http://en.wikipedia.org/wiki/Wikipedia:List of Wikipedians by number of edits">http://en.wikipedia.org/wiki/Wikipedia:List of Wikipedians by number of edits</a>
- Bot activity stats: <a href="http://stats.wikimedia.org/EN/BotActivityMatrix.htm">http://stats.wikimedia.org/EN/BotActivityMatrix.htm</a>
- History of wikipedia (per year): <a href="http://en.wikipedia.org/wiki/History\_of\_Wikipedia">http://en.wikipedia.org/wiki/History\_of\_Wikipedia</a>
- Ancient Pages (not edited for a long time): <a href="http://en.wikipedia.org/wiki/Special:AncientPages">http://en.wikipedia.org/wiki/Special:AncientPages</a> (no longer updated)

What's Hot

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Methodology

**RSS Feeds** 

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#### Monitoring the Hive Mind through Wikipedia Edits

Wikipage tracks the pages in Wikipadia which are receiving the most edits over various periods of time. Popular people in the news, the latest fads, and the hottest video games, Internet memes, zietgeist, and trends bubble to the surface.

Day

Google<sup>™</sup> Custom Search

Search Wikirage

Month

#### Top 30 Most Edited pages for last Day

1. Rafael Nadal verify May 10

Hour

6 Hours

3 Days

- 2. The Championships, Wimbledon &
- 3. Portal (video game) &
- 4. 2009 Wimbledon Championships &
- 5. List of Grand Slam Men's Sin...
- 6. FIFA 10 🚱
- 7. List of Wimbledon Gentlemen' ...
- 8. 2009 Wimbledon Championships Me...
- 9. Longest tennis match records 2
- 10. 2009 CONCACAF Gold Cup
- 11. Hannah Montana (season 3)
- 12. Pete Sampras verify 2
- 13. 2009 Major League Baseball All-St...
- 14. ATP World Tour records verify 2
- 15. Charm School with Ricki Lake verify 2

#### **Download MindTouch Core**

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- 16. Albert Pulols 2
- 17. 2009 flu pandemic 🗳
- 18. Peter T. King &
- 19. Miss Universe 2009 2
- 20. Tennis statistics verify 2
- 21. Martin Bashir 🚱
- 22. Evacuate the Dancefloor

Week

- 23. Survive This &
- 24. Serena Williams verify Dec 31
- 25. List of career achievements by Ro...
- 26. List of ATP number 1 ranked playe...
- 27. I Am... Tour 🗗
- 28. List of Wimbledon champions 2
- 29. Kelly Kelly &
- 30. Organization of American States Apr 30

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Ads by Google

#### What is Wikirage?

Wikirage tracks the pages in Wikipedia which are receiving the most edits over various periods of time.

Popular people in the news, the latest fads, and the hottest video games. Internet memes, zietgeist, and trends bubble to the surface.

Created by Craig Wood. Follow me on Twitter.

Other wikirages | 日本語 | Español | Deutsch | Français |

#### **Popular Links**

#### Tennis Recruiting Pages

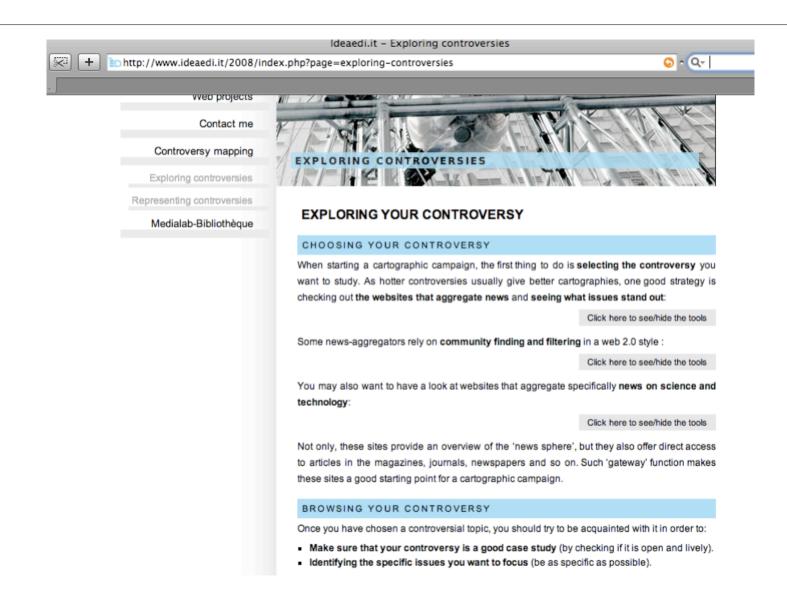
Explore Every Team's Credentials Hours of Research In Your Hands! www.juniortennisconsulting.com

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www.wikirage.com

# How to recognize controversy on Wikipedia?

- most edited
- composition of the crowd
- topical coverage (Lackaff & Havalais, 2008)
- number of editors & coordination (Kittur & Kraut, 2008)
- link analysis



http://www.ideaedi.it/2008/index.php?page=exploring-controversies

## Keeping things off Wikipedia

"For seven months, The New York Times managed to keep out of the news the fact that one of its reporters, David Rohde, had been kidnapped by the Taliban. But that was pretty straightforward compared with keeping it off Wikipedia."

http://www.nytimes.com/2009/06/29/technology/internet/29wiki.html? \_r=2