

Chapter 1 : Trends for Semantic Web and Semantic Technologies - DATAVERSITY

This book builds a semantics for several kinds of future-referring expressions, including will sentences, be going to sentences, and futurates. While there exists previous work on future-referring expressions, this is the first treatment of such a variety of expressions in a formal semantic framework.

Martin Stokhof *The Future of Semantics?* Not only does it contain a wealth of empirical and formal insights concerning the analysis of tense and aspect, planning and causality, and other phenomena, it also contains some penetrating remarks concerning the scope and method of semantic theory. It is the latter aspect of the paper that I want to make a few comments on in what follows. Of course, the idea of science as a linearly progressing enterprise getting closer and closer to the truth about its subject matter has long been exposed for what it in fact is: We have come to acknowledge that science develops in various ways, with sudden and unforeseen turns in both conceptual apparatus as well as empirical orientation. Some of the hot topics of today were fringe phenomena of a past stage, the conceptual differences between succeeding theories are sometimes very fundamental, and some of the methods, both formal and experimental, by which scientists pursue their goals, change profoundly as well. One might be inclined to think that what we observed above simply shows that semantics is no exception. But even if we grant that it is subject to the same laws as other disciplines, the development of semantics and the state it is in today are not fully explained by that. As a discipline semantics is very fragmented, there are many different theoretical orientations, and very divergent notions of meaning that define the various frameworks. We have a wide variety of approaches: Thanks to Michiel van Lambalgen for his critical comments on an earlier version. Be that as it may, what really should worry us is that there is hardly any debate between the proponents of these different approaches. Although the literature does contain a fair amount of opinions of the proponents of one approach about the deficiencies of another, what seems to be lacking is a debate in which the differences are discussed against the background of a shared body of convictions as to what semantics is all about. But, unlike in semantics, here these differences are constantly debated, even in cases there is little chance of being able to decide the debate in the foreseeable future for example, due to lack of experimental means. Apparently there is enough commonality in the opinions about what the discipline as such is about, about what it wants to achieve and how it should achieve that, to provide common ground for both controversy and discussion. And that is where semantics is really different: The question that this raises is whether this is somehow a remediable deficiency, something that merely reflects the underdeveloped stage of semantics, which is after all a very young enterprise, or whether it is due to some more profound difference between semantics and other disciplines. Thus they suggest that a computational and cognitive framework might be the backbone of the paradigm that semantics needs. That a computational approach lends itself better to assessment of cognitive reality than a referential one is by itself an interesting, though not altogether uncontroversial claim. It might well be true, and if it is, that would be a significant insight. What I want to question, however, is the implicit assumption that adopting the model of cognitive science will settle the issue about the status of semantics. As a matter of fact this seems true of linguistics in general. In a sense the development of linguistics in the twentieth century was not just about creating suitable theoretical frameworks, it was also a quest for a suitable object of study. And no uniform such object seems to have emerged. And it is certainly worthwhile to try and develop models of meaning that are focused on semantic processing. But does the adoption of the cognitive model really resolve the problem of the status of semantics? I think there are two reasons to doubt that. Meaning, the subject matter of semantics, is a complex phenomenon. If we look at it from a non-theoretical perspective, we observe that meaning has referential aspects, that it is involved in entailment relations, that there are obvious intentional elements, that meaning is related to conversational goals, that some aspects of it relate to individual experience whereas others reflect collective knowledge, that meaning is involved in emotional expression and in information exchange, that it sustains social institutions and individual identities, and so on. In devising a theory we usually focus on one such aspect, which then is the invariant over expressions and situations, uses and users, that the theory deals with. However, the choices we make are not so much informed by an a priori insight into what are essential

and what more accidental features of the meaning complex, but rather by external factors such as possible applications, prior philosophical assumptions, particular formal interests, and the like. The drawback is, of course, that we can not really say that there is something definite that semantics is about. And as for the decision to focus on cognitive, neuropsychological aspects, well, that then represents as good a choice as any other, but not one that is necessarily better. The second reason to doubt that the cognitive paradigm will prove to be the unifying force that semantics seems to be lacking, concerns its intrinsic limitations, both with regard to its subject matter as well as to its methods, that in their turn inform a particular view on language, meaning and competence. One of the main characteristics of that view is that competence is an individual property, something that can be ascribed to language users on an individual basis. The fact that they are always members of a linguistic community has no essential role to play in determining what competence is and how we can study it. Of course, one way of looking at this assumption is to regard it as a genuine empirical hypothesis concerning the nature of competence. Do note that this view does not necessarily deny that the community plays a role in how competence comes about learning and how it is executed performance. However, one could also argue that individualism is an artifact, that its assumption is merely an implication of the paradigm as such. Hence if we want to maintain that it is language, its meanings and its use, that we are studying in this way, then competence has to be constructed as individual as well. And from that, particular views on what language and meaning are follow naturally. My main claim here would be that it is better to conceive of the debate not as one that is about what semantics is, but rather about what we want semantics to do. Rather the issue is about decisions. Actually, the very history of the discipline bears witness to this. It serves their purpose, which is to contrast realism with cognitivism, adequately, since in Lewis the Fregean ancestry to which the entire analytical tradition is an heir, resounds quite clearly. Semantics basically is about nothing real, in the sense of empirical, its object is an abstract one through and through. Nevertheless, the basic idea is operative in a great deal of other work that has been done, and continues to be done, in the Lewis-Montague tradition of semantics. Unlike Lewis, Davidson does want semantics to be about something real. According to him the goal of a semantic theory is to provide a characterisation of semantic competence, i. However, Davidson does want to pursue this empirical goal in such a way that claims about psychological reality of the concepts and procedures that his theory of meaning employs are avoided: We may, if we please, also maintain that there is a mechanism in the interpreter that corresponds to the theory. Obviously, the empirical data provided by the execution of competence do restrict the theory, but the theory is not intended as a description of the competence itself, in the sense of the actual underlying neuro- psychological mechanisms. Now the important thing to note is that this is a legitimate choice. In the first case we are really concerned with how human actually process language, in the second case we most probably are not, since machines will have to do the same task in a different way. The point is that given that there are no independent characterisations of what language, meaning, and competence are, the difference is not a factual one, but a pragmatic difference. To put it differently, meaning is a heterogeneous phenomenon, and we lack notions and principles that are sufficiently theory-independent for us to be able to characterise the ontology of semantics in a uniform way. In that respect the various approaches one finds in semantics lack a common standard, in that they may simply not be about the same subject matter. Their approach in fact embodies two claims, which for them seem intimately related: But computationally adequate theories can be devised in many different ways, and what we learn from cognitive science about human inference may not be relevant for some of them. For example, if we are building a computational semantic theory that needs to be implemented as for of a natural language man-machine interface it is not obvious that results from cognitive science will be relevant. That provides another illustration that the mere observation that language is processed in a certain way in the brain does not force a conception of semantics on us that has its goals, means and methods defined by whatever it is that cognitive science reveals about these processes. Rather we first have to decide what we think semantics is about, only then can we draw consequences. Of course, one of the choices we can make is to develop a semantic theory that is in line with the results of cognitive research. In itself that is a perfectly honourable choice, and one that leads to interesting descriptions. Let us look at one in slightly more detail. The question whether semantic description involves mental representations received some attention in the early nineties

when discourse representation theory developed. The information involved needs to be incorporated in the theory at some point, they claim, and mental representations, they suggest, are the obvious candidate. Take the case of a referential versus a representational description. What the description does is provide us with a model of what semantic competence with regard to the phenomena at hand, of course is, or rather, what characterised the execution of competence. Whereas if we encode the required information in some level of mental representation that itself is what the theory is about, we claim that that specific element of the theory is what models competence. However, that should not obscure that they do embody quite different views about what semantics is. One might say that where one approach models the execution of competence, the other intends to describe competence itself. On the first view semantics is not about competence, although what it is about is related to it, in that its execution provides the necessary empirical constraints. On the second view it is the content and structure of individual competence as such that defines the empirical adequacy criteria for the description. And that means that the theory is subject to completely different constraints. The point I want to make is methodological. It is not a fact of the matter whether semantics is concerned with individual semantic competence, it is a decision. Once a decision is made, representationalism follows. But what about semantics? In view of the considerations above my feeling is that such a claim would be too hasty. And it is not only the fact that the relation between semantics and cognitive science can be construed in often subtly different ways, that should make us weary of strong claims here. But again, there may be different ways of meeting the demand. Note that on this way of looking at it, the mere fact that meanings and interpretations are represented in actual execution of competence is irrelevant. And it appears this is not just a matter of various approaches not having been worked out in appropriate detail and to sufficient depth. Rather, the tasks we want to see performed seem to dictate the nature of the theories we should bring to bear on them. And that, too, underscores the point made earlier that meaning as such may not be as homogeneous a phenomenon as we may have thought it to be, and that doing semantics is also a matter of making choices. So my feeling is that we are still a long way from being able to decide what is right and what is wrong here. In fact, we will probably will not know what the future of semantics before we get there. And that still may take a while. And in doing that they certainly contribute to their being some future for semantics, whatever it may be. Belief and the basis of meaning. The Proper Treatment of Events. Meaning, interpretation and semantics. Barker-Plummer, Dave, et al.

Chapter 2 : Semantic feature - Wikipedia

This is a survey article about the semantics of free relatives. Issues discussed include the basic denotation of free relatives (detailed comparison between the definite, universal, and indefinite).

Applications[edit] The intent is to enhance the usability and usefulness of the Web and its interconnected resources by creating Semantic Web Services , such as: Many converters to RDF exist from different applications. Relational databases are an important source. The semantic web server attaches to the existing system without affecting its operation. This could be machine-understandable information about the human-understandable content of the document such as the creator, title, description, etc. Note that anything that can be identified with a Uniform Resource Identifier URI can be described, so the semantic web can reason about animals, people, places, ideas, etc. Automated agents to perform tasks for users of the semantic web using this data. Web-based services often with agents of their own to supply information specifically to agents, for example, a Trust service that an agent could ask if some online store has a history of poor service or spamming. Such services could be useful to public search engines, or could be used for knowledge management within an organization. Facilitating the integration of information from mixed sources Dissolving ambiguities in corporate terminology Improving information retrieval thereby reducing information overload and increasing the refinement and precision of the data retrieved [21] [22] [23] [24] Identifying relevant information with respect to a given domain [25] Providing decision making support In a corporation, there is a closed group of users and the management is able to enforce company guidelines like the adoption of specific ontologies and use of semantic annotation. Compared to the public Semantic Web there are lesser requirements on scalability and the information circulating within a company can be more trusted in general; privacy is less of an issue outside of handling of customer data. Practical feasibility[edit] Critics question the basic feasibility of a complete or even partial fulfillment of the Semantic Web, pointing out both difficulties in setting it up and a lack of general-purpose usefulness that prevents the required effort from being invested. In a paper, Marshall and Shipman point out the cognitive overhead inherent in formalizing knowledge, compared to the authoring of traditional web hypertext: Effective use of such a formal representation requires the author to become a skilled knowledge engineer in addition to any other skills required by the domain. Indeed, this is a form of programming based on the declaration of semantic data and requires an understanding of how reasoning algorithms will interpret the authored structures. A further issue that they point out are domain- or organisation-specific ways to express knowledge, which must be solved through community agreement rather than only technical means. Furthermore, the Semantic Web relies on inference chains that are more brittle; a missing element of the chain results in a failure to perform the desired action, while the human can supply missing pieces in a more Google-like approach. This phenomenon was well-known with metatags that fooled the Altavista ranking algorithm into elevating the ranking of certain Web pages: For instance, text-analyzing techniques can now be easily bypassed by using other words, metaphors for instance, or by using images in place of words. An advanced implementation of the semantic web would make it much easier for governments to control the viewing and creation of online information, as this information would be much easier for an automated content-blocking machine to understand. In addition, the issue has also been raised that, with the use of FOAF files and geolocation meta-data , there would be very little anonymity associated with the authorship of articles on things such as a personal blog. Some of these concerns were addressed in the "Policy Aware Web" project [30] and is an active research and development topic. Doubling output formats[edit] Another criticism of the semantic web is that it would be much more time-consuming to create and publish content because there would need to be two formats for one piece of data: However, many web applications in development are addressing this issue by creating a machine-readable format upon the publishing of data or the request of a machine for such data. The development of microformats has been one reaction to this kind of criticism. Results of their work include the RDF S based Corese search engine , and the application of semantic web technology in the realm of E-learning.

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The surveys are conducted through online questionnaires to which a selected group of experts and the highly engaged internet public have been invited to respond. The surveys present potential-future scenarios to which respondents react with their expectations based on current knowledge and attitudes. You can view detailed results from the , , and surveys here: The tension pairs and their alternative outcomes were constructed to reflect previous statements about the likely evolution of the internet. They were reviewed and edited by the Pew Internet Advisory Board. Results are being released in four venues over the course of The results that are reported here are responses to a tension pair that relates to the future impact of the internet on institutions and organizations. Results to five other tension pairs “ relating to the internet and the evolution of intelligence; reading and the rendering of knowledge; identity and authentication; gadgets and applications; and the core values of the internet “ were released earlier in at the meeting of the American Association for the Advancement of Science. They can be read at: Additional results from the tension pair involving the impact of the internet on institutions were discussed at the Capital Cabal in Washington, DC, on March 31, and can be read at: Still other results will be released at the World Future Society conference <http://> First, several thousand were identified in an extensive canvassing of scholarly, government, and business documents from the period to see who had ventured predictions about the future impact of the internet. Several hundred of them participated in the first three surveys conducted by Pew Internet and Elon University, and they were recontacted for this survey. Second, expert participants were hand-picked due to their positions as stakeholders in the development of the internet. Here are some of the respondents: Following is a representative list of some of the institutions at which respondents work or have affiliations: They are not necessarily opinion leaders for their industries or well-known futurists, but it is striking how much their views were distributed in ways that paralleled those who are celebrated in the technology field. While a wide range of opinion from experts, organizations, and interested institutions was sought, this survey should not be taken as a representative canvassing of internet experts. That process does not yield a random, representative sample. The quantitative results are based on a non-random online sample of internet experts and other internet users, recruited by email invitation, Twitter, or Facebook. Since the data are based on a non-random sample, a margin of error cannot be computed, and results are not projectable to any population other than the respondents in this sample. The first column covers the answers of longtime experts who have regularly participated in these surveys. The second column covers the answers of all the respondents, including the who were recruited by other experts or by their association with the Pew Internet Project. Interestingly, there is not great variance between the smaller and bigger pools of respondents.

Chapter 4 : Semantic Web - Wikipedia

Builds a semantics for several kinds of future-referring expressions, including will sentences, be going to sentences, and futurates. This title addresses a number of issues of interest to formal.

It is one of the best sets of advanced SEO content we have, so we updated and are publishing them again for the community. Be sure to read all three: The Internet has grown from just over an estimated 17, websites in to well over a billion by This tremendous growth has put an enormous amount of pressure on Google and the other major search engines to be able to interpret what people are looking for and better understand the value and depth of the websites available. This pressure pushed Google to introduce semantic search into its algorithm. Beginning with the Knowledge Graph in and the Hummingbird Update in , Google stopped looking at strings of letters in a sequence and trying to match them to the strings of content on a website. The search engine was working to understand context and intent and then match the idea that the user was looking for with the best website, rather than just matching the words. While Google has been working on improving its algorithm, there has also been simultaneous growth in the content marketing industry and the number of people who use the Internet when researching products and services. People now require sophisticated and user-friendly sites that quickly meet their needs. If you fail in this task, they will just click off and go to the next one on the SERP. For sites to meet the needs of these users and the modern Google algorithm, we believe that logical organization taxonomy and content silos are the key. This structural system allows you to organize and classify your available content in a way that helps both search engines and users navigate your content and understand the depth of your knowledge on the topic at hand. The LSI system will first record the keywords contained within a document It will then record the keywords used throughout the silo It will then compare the keywords used in the document with those used throughout the silo The documents that contain large amounts of common keywords are considered semantically similar, those that do not are considered semantically different. There is some debate as to whether or not the major search engines directly use LSI in their algorithms; however based on studies and my personal experience, I believe they do. Regardless, silo structuring and LSI work from the audience perspective. When you add the value of silos and content organization to your website and products for improved UX, you have created a meaningful and purpose-driven website that aligns content to the audience. This is what Google has been telling us is the key to success from the beginning. Constructing an efficient silo therefore requires a careful look at your user experience, your content coverage, the linking structure between content and pages in the silo, the keywords used in the silo, and your taxonomy. This is just part 1 of a 3-part series that will break down for you the principles of content silos and how you can use this strategy to boost your click-through rate, conversions, and ranking. How Google is pushing semantics forward LSI, the Knowledge Graph and Hummingbird laid the foundation, but Google continues to push the issue of semantics forward, calling on webmasters to conform to improve or maintain their rankings. In they introduced RankBrain , their first leap into the world of artificial intelligence. The engineers for the search engine aimed to create a system that not only would be able to understand how different concepts were related because of manual inputs, but would actually be able to learn how different concepts relate. RankBrain was specifically designed to help Google return useful results for the roughly million completely unique queries it receives each day. Shortly after RankBrain, Google stopped participating in the announcement and naming of algorithm updates and encouraged the community to focus on quality and relevance with the implication that RankBrain would be able to recognize and reward that focus. This push towards semantics has changed the way SEO is done. Now, rather than trying to match the keywords and vocabulary that your targeted audience is using, you want to match to the topics that they are asking about. Suddenly, related vocabulary terms are not only relevant but often important as a way to demonstrate your depth. Establishing silos on your site takes a little effort, but it will prepare you for the changes Google continues to make to the algorithm. Each section of this series will help you understand the topic on a deeper level and will make it easier to understand how to build your silos yourself. Here is what we will cover in each section the this blog series. Look for future posts. Here we will explore the value of using

technical SEO as a part of your overall authority and why it can help influence your rank. We will see how you can use your terms to align your content and then manage your created system. You will look at how to do a taxonomy markup and how create a system that works specifically for your needs. Login to the BrightEdge platform to get started today, or request a demo to learn more.

Chapter 5 : DSpace@MIT: The semantics of the future

The Future is NOW: Dynamic Semantic Publishing. More and more organizations are looking for solutions that fuse the manual editorial content creation and curation with smart automated processes for aggregating, repurposing and reusing content.

It did, however, rise as a content marketing trend throughout this year. What is Semantic Search? First, Understanding the Different Shades Algorithms of Google Since the inception of our search friend known as Google, the internet know-it-all has attempted to move search results into a more natural-sounding realm. Part of that strategy falls under the idea of semantic search and machine learning algorithms like RankBrain. When we use Google to search for something, there are potentially millions of webpages that can provide a solution. Algorithms are the computer formulas that take our questions and turn them into the answers we are looking for. Past algorithms that Google has used include: In , Google updated search filters to stop sites with poor quality content from showing up in top search results. Penguin was launched in to catch sites that appeared to be spamming its search results in order to boost Google rankings. Launched in , Hummingbird was designed to sort through information and deliver the best results—the name came from the speed of the algorithm. After the launch of Hummingbird, users may have noticed that Google was offering more precise answers to search queries. The update was one of the biggest overhauls to its search engine and it allowed Google to provide faster answers to questions and rank them according to the index. Tolkien, The Hobbit In other words, what are you really trying to say? Check out how this works when you type a question in Google. It knows your history and uses it: It knows logic and deciphers meanings: Semantic search looks for the logic, or intent, behind what a searcher is looking for in their quest for information. Rather than searching for what someone literally types in as in, misspelled words , Google semantics uses a complex system of algorithms and prediction to make a guess as to what we actually mean, and then looks for the most relevant content. Ever feel like the search box is reading your mind? Examples of Semantic Search Whether we know it or not, semantics plays a part in every search we perform. In his post over at Crazy Egg, Neil Patel gives us some good examples of common semantic search, something we can all relate to in our everyday lives. Conversational queries We ask, Google answers. Auto-corrected misspellings As we showed in the example above, it corrects misspellings. After correcting for the misspelling, we have ideas for a Christmas cookie swap and the Best Christmas Cookie Recipes for Information shown as graphics Relevant images are provided as part of the answer. Now, if only my Christmas cookies turned out like those. Google Semantics will now very quickly identify, and then disqualify, keyword-stuffed content and spammy articles. And, as we showed above, grammar is checked too by the new Nazi in town Semantics. So, check grammar, link quality, and spelling for mistakes. Consider making sure you have both a copywriter AND a proofreader on your projects. Spend time to create attractive and engaging headlines that invite readers in and makes them want to stay. Deliver quality content on a consistent basis and increase your chances of return visitors Kissmetrics. Post more than once a day and up the potential for more unique views and inbound links. Keep information scannable and concise, not in long paragraphs bogged down by too much information. As we look to the future with Semantics and Google, the talk is all about the use of artificial intelligence. Those answers come from the quality content that is provided by authorities in the field. That would be you, content creator. You have to decide what you want to be known for, which keywords you want to rank, and how to become known as an expert in your own field. It helps to consider questions like: How does my audience interact? Who are they following? What questions are my readers asking, and am I providing the expert advice they need? Here at Express Writers, we know the future is headed in the direction of expert content more than ever, which is why I created authoritative content and trained a select group of expert team writers on creating it, this year. Check out Authority Content in the Content Shop. Go au natural in your online language. Focus on being conversational, not stiff. There is a pretty good chance no robot is going to be ingesting your content anytime soon, so use natural SEO writing as your main language. Readers will be drawn to the answers to their questions and interesting content that they can share, tweet, and repost. Overusing keywords only makes

content look unappealing and forced. Will Semantic Search Be Important in ? The first real guiding principle of search engine optimization is trust. Algorithms were built not to discourage us, but to weed out the bad guys and give us a chance. The semantic search is continuing to go through the fine-tuning process, and it will remain an important component of content development in Stay away from keyword stuffing. Be patient and consistent. Produce quality, not necessarily quantity.

Chapter 6 : Semantics for SEO, Conversions, and UX | BrightEdge Blog

3 The quest for futuristic solutions and models that bring positive changes in Data Management has always been to transform sourcing, distribution and managing the golden copy of data.

Chapter 7 : The Fate of the Semantic Web | Pew Research Center

On the Semantics of Historical Time the past and the future became 'relocated' in relation to each calendrierdelascience.com promises of modernity -freedom, progress, infinite.

Chapter 8 : The Semantics of the Future: 1st Edition (Hardback) - Routledge

The Semantics of Supply Chain. will define the future of supply chain. As to semantics, the name "supply chain" is only as boring or as exciting as the work you do. Marketing stokes.

Chapter 9 : Semantic Search in Looking at the Future of Content

The semantics of the future. [Bridget Copley] -- This book builds a semantics for several kinds of future-referring expressions, including will sentences, be going to sentences, and futurates. While there exists previous work on future-referring.