

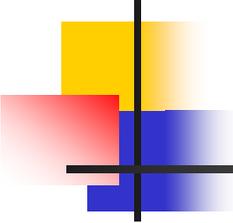
# Revyu: Linking reviews and ratings into the Web of Data

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Tom Heath, Enrico Motta

Present by Rui Huang

<http://revyu.com>



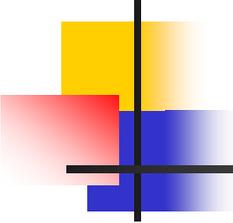
# Introduction

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Revyu

a reviewing and rating web site

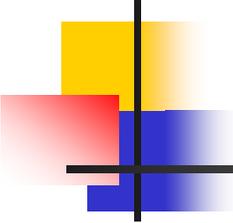
Why create Revyu?



# Introduction

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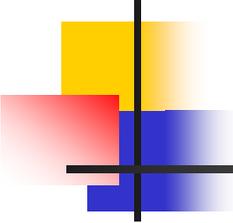
- Reviews and ratings created within Revyu are exposed in a reusable, machine-readable format, RDF
- Data access mechanisms provided by Revyu improve upon the APIs of sites such as Amazon



# Introduction

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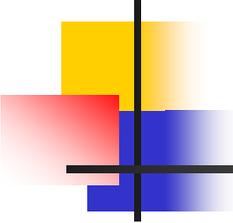
- Revyu takes a Linked Data approach to publishing reviews and ratings on the web
  - all entities are addressable over the Web
  - duplication of data across data providers is reduced
  - data integration can be performed once, and reused
- Revyu takes an open world perspective on the review process



# Outline

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- Document design decisions made during the implementation of Revyu
- Discuss the techniques used for linking Revyu data with external sources
- Outline how to infer the trustworthiness of reviewers as sources of information and recommendation



# Design decisions

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- tagging
- human-oriented vs. machine-oriented mashups
- programmatic access to Revyu data

# A usable semantic web system

**REYU.COM**  
ReView ANYTHING

[Browse Things](#) | [Search Things](#) | [Browse People](#)  
[Login/Register](#) | [New Review](#)

**What is Revyu.com?**  
Revyu.com is a web site where you can review and rate things. Unlike many other reviewing sites on the web, Revyu.com lets you review and rate absolutely anything you can name.

**Start a New Review**  
enter the name of the thing you would like to review

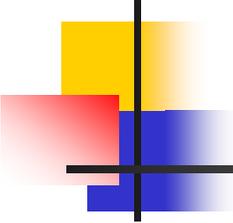
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[food-served-lunchtimes](#) [free-geodata](#) [fullers](#)  
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[samuel-smiths](#) [sandwich-shops](#) [semantic-web](#) [soup](#)  
[stony-stratford](#) [sushi](#) [take-kake-here](#) [takeaway](#) [wetherspoons](#)  
[wolverton](#)

**Top Reviewers** [\(All People\)](#)  
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[Aneta](#) [AxelPolleres](#) [bluesnow](#) [bouquet](#) [castagna](#) [Chaz6](#) [Crash](#)  
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[magicrebirth](#) [Mark](#) [Marta](#) [martinp](#) [mgaved](#) [mhausenblas](#)  
[Paddy](#) [Paul](#) [pip](#) [redwards](#) [revking](#) [ronny](#) [Rui](#) [Sanyukta](#) [smonroe](#)  
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Fig. 1. The Revyu.com home page.

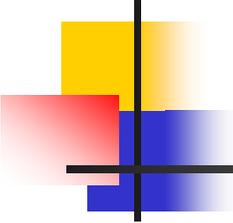


# Tagging

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Users associate keyword tags with the items they were reviewing

- Identify co-occurring tags
- Derive type information
  - two domains (books, films)

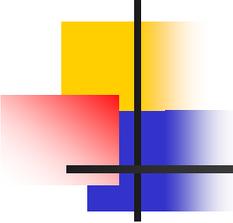


# Human-oriented vs. Machine-oriented mashups

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RDF: complemented by links to additional data in external data sets.

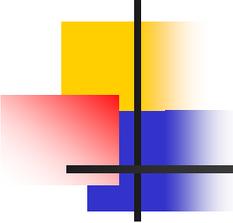
HTML: reproduce external data



## Programmatic access to Revyu data

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- Third parties can access Revyu data by performing HTTP GET requests
- Data held within the site can be queried programmatically via the Revyu SPARQL endpoint.



# Production of Linked Data

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- Linkable Data in Revyu
- Linking to other data sets
  - retroactive linking
  - proactive linking
    - 'skeleton' record

## Ye Olde Swan, Woughton On The Green, Milton Keynes

### Links

See Also: [http://miltonkeynes.openguides.org/?Ye\\_Olde\\_Swan%2C\\_Woughton\\_On\\_The\\_G...](http://miltonkeynes.openguides.org/?Ye_Olde_Swan%2C_Woughton_On_The_G...)

### Tags

[bar](#) [beer](#) [food](#) [milton-keynes](#) [pub](#) [restaurant](#) [woughton](#)

### Map



### Reviews (2)

★★★★☆ [by tom on 20 Nov 2006](#)

The Swan (as it's commonly known) is one of the nicer pubs within the Milton Keynes boundary, being situated in the old village (more a large hamlet really) of Woughton on the Green. It's got log fires, a crooked roof, and low ceilings, which all give it a cosy feeling on a winter evening. Come summer time there are plenty of tables outside in a pleasant garden. Given the other options nearby it's a good choice, but has plenty of shortcomings. The pub is heavily geared towards food, which is generally quite good, and this is responsible for a stupidly restrictive policy about where you can sit during busy periods. In practice you may find more than half the pub reserved for diners, making it hard to get a table if you just want a drink. There are a few decent ales on tap, including Deuchars IPA and Old Speckled Hen, which generally seem well kept. Anywhere else I'd give this pub a rating of 3, but in MK the lack of decent choice makes this a 4.

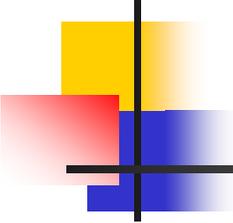
[RDF Metadata About Ye Olde Swan, Woughton On The Green, Milton Keynes](#)



[Write a Review of Ye Olde Swan, Woughton On The Green, Milton Keynes](#)

[Add to del.icio.us](#)

Location map of reviewed item using external geodata



# Consumption of Linked Data

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## The Prestige

### Links

Homepage: <http://theprestige.movies.go.com/>

See Also: <http://imdb.com/title/tt0482571/>

### Tags

[christian-bale](#) [christopher-nolan](#) [drama](#) [entertainment](#) [film](#) [hugh-jackman](#) [illusion](#) [magic](#) [michael-caine](#) [movie](#) [murder](#) [period](#) [scarlett-johansson](#) [science-fiction](#) [whodunnit](#)

### Reviews (1)

★★★★★ by [martinp](#) on 23 Jan 2007

This is a drama about intense rivalry between stage magicians in the late 19th Century. The evocation of the period, although first rate, is not the main attraction, however. The Prestige has an incredibly clever plot including the most ingenious murder I've ever come across. It also has a deeply moving and sad love story hidden in it, which gradually emerges over the course of the film.

The film requires a strong suspension of disbelief on some key points: there is a science-fiction premise which is introduced using the real historical character of Nikola Tesla (I'd rather they had used a fictional scientist). There are a couple more implausibilities required to hold it together (something odd that goes on that none of the characters pick up on and a dead-end that by a huge coincidence turns out not to be a dead-end: I can't be more specific without spoiling the plot).

However, rather than feeling cheated by these aspects of the film, I'm hugely impressed. The writers have taken an implausible (okay, impossible) premise but created an intricate, involving and visual story that would be impossible without that premise. Scenes join up with each other in many subtle ways, echoing the same writers' earlier film Memento. Even when you've seen the twist coming, the final scene which lays it all out are has a lot of impact and I suspect the final shot will haunt my dreams.

I expected the film to be about nice costumes or impressive magical trickery, but it is actually about deep emotions felt by the main characters as they deal with the situations life has dealt them, and it rather than serving up those emotions on a plate, it requires you to think and piece together what you've seen. That's got to be a good thing, in fact the best of what film a be.

### The Prestige



directed by [Christopher Nolan](#)

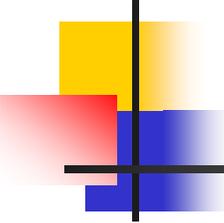
[RDF Metadata About The Prestige](#)



[Write a Review of The Prestige](#)

[Add to del.icio.us](#)

Profile page of 'The Prestige' with DBpedia file data



# Reusing existing personal profiles

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- User provide URI
- User doesn't provide URI
  - query with SPARQL a store of FOAF data crawled from across the Web and stored in the Talis Platform
  - use the Sindice Semantic Web index

## Reviews by *kjwa* (8)

### [ARC RDF Classes for PHP](#)

★★★★★ on 26 Feb 2008

A very usable and fairly comprehensive suite of classes for parsing RDF and/or storing it in MySQL and querying with SPARQL.

I use it all the time.

### [Smultron](#)

★★★★☆ on 26 Feb 2008

An open-source text-editor for macosx. I don't like it as much as Textmate or Vim (the interface has too many icons for my tastes), but it's quite good, and free and open source, and has been getting more powerful.

### [Colloquy](#)

★★★★☆ on 26 Feb 2008

A nice IRC app for Mac OSX, does logging, etc.

### [cyber duck](#)

★★★★☆ on 26 Feb 2008

A decent OS FTP client for Mac OSX. Crashes sometimes, but generally does the job.

### [planet rdf](#)

★★★★☆ on 26 Feb 2008

Great aggregation of semantic web related blogs

Do you know *kjwa*? [Login](#) or [Register](#) to add *kjwa* to your Network

[Web Feed of \*kjwa\*'s Latest Reviews](#)



About *kjwa* (Keith Alexander)



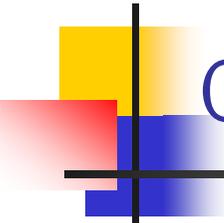
[kjwa's Home Page](#)

[RDF Metadata About \*kjwa\*](#)



[Add to del.icio.us](#)

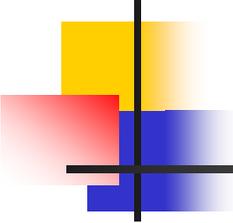
User profile page, showing reuse of external FOAF data



# Collecting and exposing social network data

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Use foaf:knows property

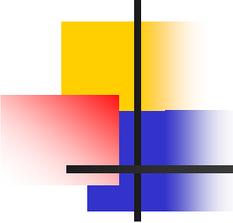


# Inferring trust relationships

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Hoonoh algorithms: three metrics

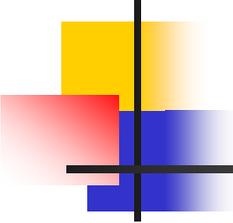
- person - topic
  - 'experience'
  - 'expertise'
- person - person
  - 'affinity'



## Future work

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- Aggregate a number of review and rating data from external sources
- Investigate algorithms for reasoning about the trustworthiness at large amount of data



# Conclusion

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- Functionality is not unique
- provide a publicly available service in daily use that is oriented towards human users, as well as embodies the current best practices in developing for the semantic web.

# Questions!

## Related work:

- C. Bizer, R. Cyganiak, T. Heath, How to publish Linked Data on the Web. <http://sites.wiwiiss.fu-berlin.de/suhl/bizer/pub/LinkedDataTutorial/>
- Heath, T., and Motta, E. Revyu.com: A Reviewing and Rating Site for the Web of Data, 6th International Semantic Web Conference and 2nd Asian Semantic Web Conference (ISWC+ASWC2007), Busan, Korea
- T. Heath, E. Motta, M. Petre, Person to person trust factors in word of mouth recommendation, in: Proceedings of the CHI2006 Workshop on Reinventing Trust, Collaboration, and Compliance in Social Systems (Reinvent06), 2006