People's happiness, a 75-year-old Harvard study on adult development revealed, is intrinsically linked to how connected we are. The more and better quality connections we have, the happier and healthier our lives, argued psychiatrist Robert Waldinger, the director of the study, in a TED talk titled: What makes a good life? Lessons from the longest study on happiness.

No man is an island, as the quote by John Donne goes.

Not surprisingly, the nature of connectivity and its benefits play a major role in a domain of growing importance to the way we live and do business and that is the domain of data.

Both John Donne's line and the conclusions from the Harvard study are absolutely valid when thinking about data and the challenges our interconnected world poses.

Thinking about data within the conceptual framework of "happy connected people" is an almost effortless way to understand how important it is to choose the right solution for managing, modelling and ultimately mastering your data. Share on X

Here's why.

Enterprise Data, the Universe and Everything

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Leaders and decision-makers in today's growingly interconnected world know that adopting an ecosystem view of the way we do business is of prime importance. The wider the net of their connections is, the broader the grasp of their business surroundings and the richer the span of their understanding.

Knowing that, enterprise leaders continuously strive to plug into as many networks in order to get access to more customers, new sources of data, better and smarter business processes.

The problem is that many are not aware how to apply effectively this same thriving for connections on a data level. They struggle to translate ecosystems thinking into data management solutions, while they shouldn't.

The Beauty (and Usefulness) of RDF

In the context of connections, one type of database that thrives on relationships is the RDF

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graph database, also called RDF triplestore. It owns its usefulness (and shininess) to one of the building blocks of the Semantic Web: the Resource Description Framework.

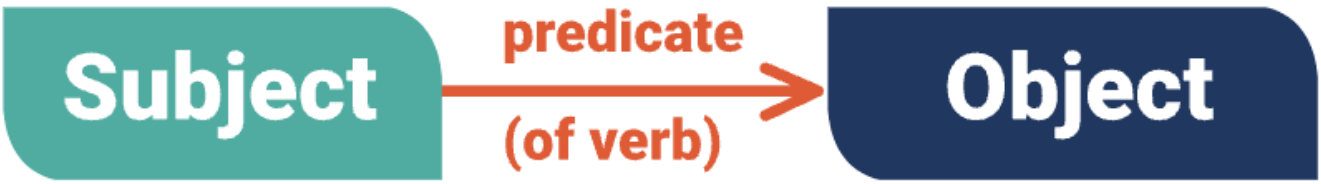
The value of RDF is very much like the value of Hypertext Markup Language (HTML): they both serve as a common language for representation. HTML is a common language for representing documents on the Web and RDF – a common format for data to be represented and shared.

RDF 1.1 Concept and Abstract Syntax

With the help of RDF, you can express just about anything. The format consists of three parts, which is why it is called a triple and also referred to as a "statement" or an "RDF statement":

- Subject
- Predicate
- Object

This *subject->predicate->object* format makes it easy to take any subject or concept and connect it to any other object thus showing the type of relationship that exists between the subject and the object.



Thanks to the endless number of connections objects can have, data modelled with RDF allows for creating more and more semantic links and, as a result, enables finding unknown or non-obvious relationships between facts.

You can dive deeper and drink directly from the source in RDF Primer.

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Addressing the Many Issues with a Single Form of Atomic Intelligence

Now let's zoom out and have a bird's eye view on the problem with enterprise data and its possible solutions.

The mess with most enterprise data management systems comes from the fact that data pieces are stored isolated from one another, living their own lives as islands without bridges, unconnected and very far from existing as an ecosystem.

But what if there was another way?

What if the vision of an ecosystems view could turn from understanding into action by a system that links all the pieces of a business puzzle together?

It can. With an RDF database.

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For here is what RDF – as an atomic form of intelligence (a triple) and a database built of RDF statements – can bring to the table:

- Integration of disparate data;
- Data interoperability;
- Resource-effective data management.

Richard Cyganiak, a Semantic Web researcher and evangelist, has conveniently unpacked the benefits of using RDF in his answer to the question: How to integrate the semantic web in a real application:

> Here are a few general stories for why you'd want to use RDF in some system:
>
> 1. You want to decentralize data in a way that no single party "owns" all the data (think FOAF vs. the big social networking silos).
> 2. You want to integrate data from different sources without custom programming.
> 3. You want to offer your data for re-use by other parties.
> 4. You want to do something fancy with large amounts of data (browse, query, match, input, extract, …), so you develop (or re-use) a generic tool that allows you to do this on top of the RDF data model (which has the advantage of not being tied to a proprietary data storage/representation technology, like a certain database dialect).

Epilogue: Difficult the Beautiful Things

Truth be told, with all the praise for RDF, deciding on an RDF-based solution for your data isn't easy. Not because the technology isn't mature or accessible enough. The reason RDF-based solutions are still considered a "niche market" is that their implementation takes a lot of thinking about why and how you want your data solution to serve your enterprise. It also takes walking the extra mile of redefining company processes related to data as well as training developers to work with such systems.

The good news is, every resource spent pays off.

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RDF statements, combined with links of various types and other technologies (e.g., text mining, sentiment analysis, etc.) can help enterprises understand more about their data. RDF technology not only makes it easy to query diverse and evolving data coming from different sources but also reduces the cost of data integration and data management. Share on X

To get back to the concept of ecosystems, handled properly, an RDF-based solution serves well the enterprises' need for integration, for a holistic approach and connectivity (with both external and internal systems). It is a choice worth considering when in need of wider nets of connections, broader grasp of surroundings, richer span of understanding. Because this need can be met with integrated databases, complex contextual systems and data-powered

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