

Conceptualising a Web of Linked Actors

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THE WEB AS A SOCIO-TECHNICAL PHENOMENON?

The Web is a socio-technical phenomenon – produced by both human and non-human actors. Existing research tends to emphasize *either* the social or the technical rather than offering an integrative analytical framework.

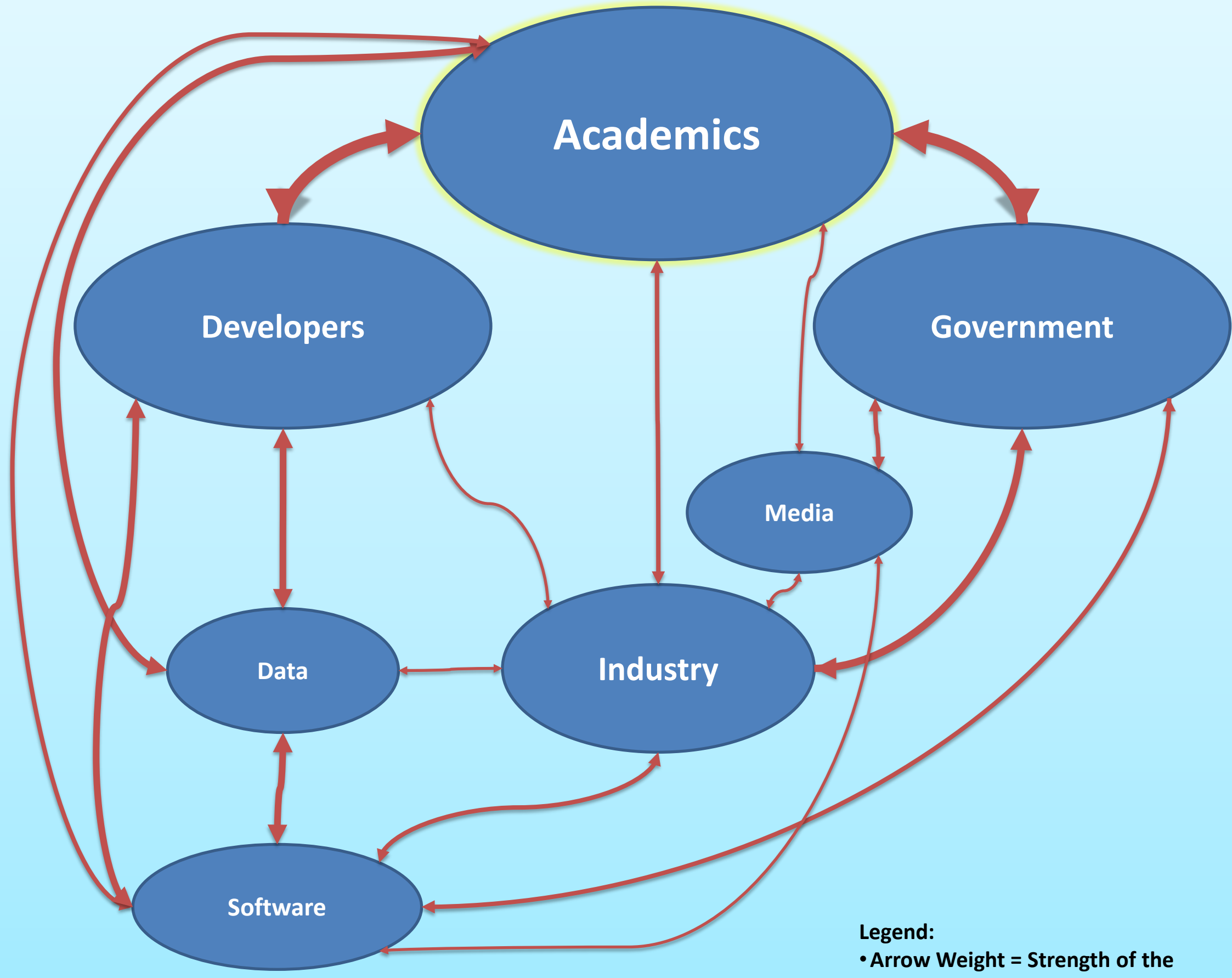
We examine the affordances of Actor Network Theory (ANT) in offering a better understanding of the Web as a socio-technical phenomenon. We use the case study of the evolution of the Linked Open Data Community (and specifically the UK Public Sector Information Community) which promises to shape the next iteration of the Web – the Semantic Web to explore how ANT might be used to connect the social and technical aspects of the Web.

WHAT IS ACTOR NETWORK THEORY?

ANT explores how socio-technical networks produce everyday outcomes, providing a analytical framework to enable human and non-human actors to be studied within the same domain.

By offering an alternative to social or technical determinism, ANT focuses on how socio-technical networks are formed through the interactions of the actors. ANT exposes a balanced view of a socio-technical environment, where all actors, including technologies, are considered equally.

UK Public Sector Information Community Actor-Network



Legend:

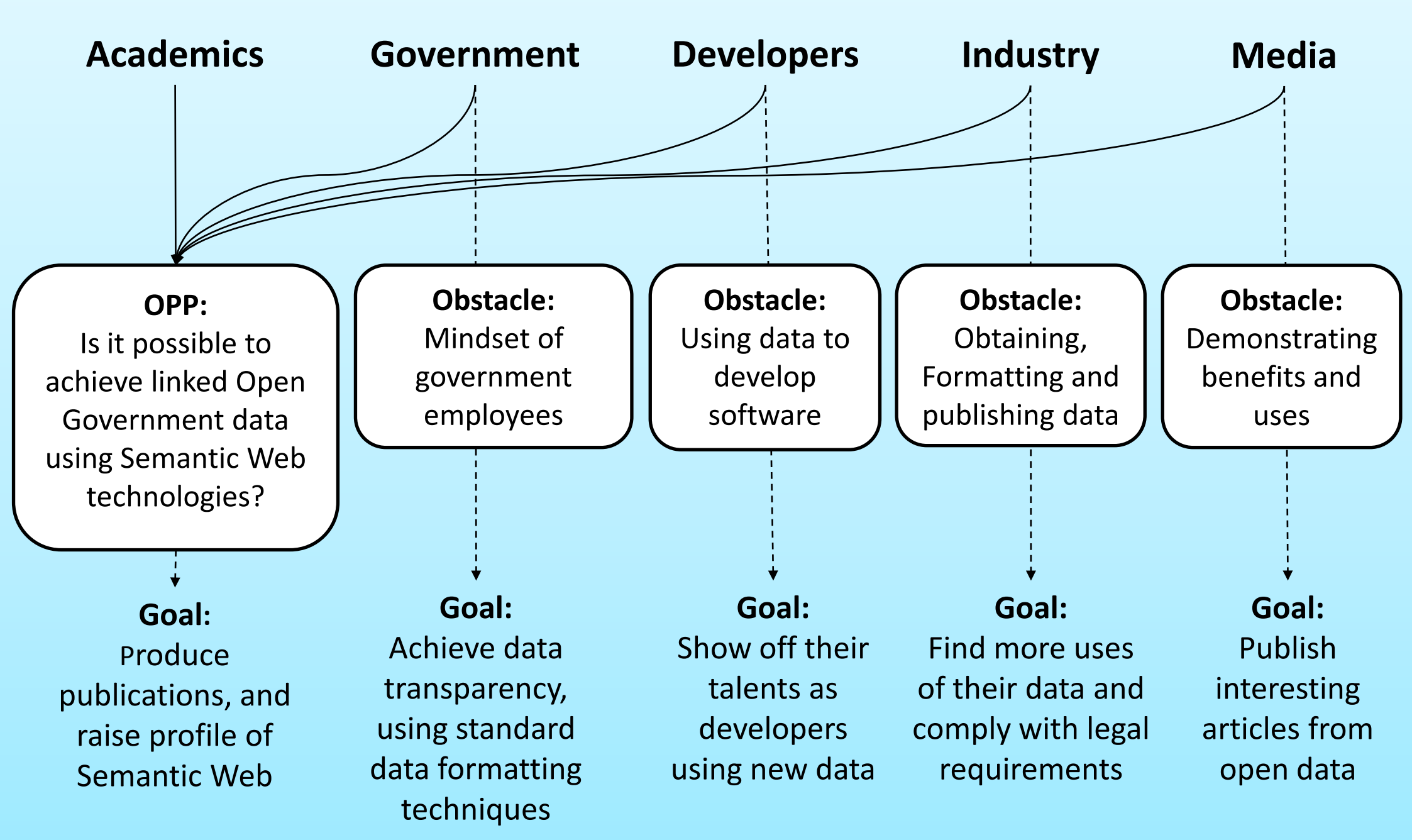
- Arrow Weight = Strength of the actor-network relationship
- Size of Actor = Influence in network

THE PROCESS OF TRANSLATION

The *process of translation* put forward in ANT offers a solution to understanding networks function and are stabilised and how relationships are produced. It has 4 stages:

- **Problematisation** – a focal actor identifies other actors and their interest needed to be part of the network, the focal actor becomes the *obligatory passage point (OPP)*, making themselves indispensable.
- **Interessement** - obtaining the interests of the actors and negotiating their involvement with the use of *Interessement devices*.
- **Enrolment** – gaining the alignment of actors by the “*group of multilateral negotiations*” - supported by Interessement devices
- **Mobilisation** – the alignment of the actors begins to produce action, and the network stabilises.

Barriers to Achieving A Mobilised Network



EXPLORING TRANSLATION

Utilising the *process of translation*, the Problematisation UK PSI Community can be unpacked:

- Academics have made themselves an **Obligatory Passage Point (OPP)**, setting a common goal that needs to be achieved
- Other actor’s barriers to enrolment and goals must be identified by the Academics
- To overcome the **barriers** identified, Interessement devices (interpositions which strengthen the network) can be used
- Enrolment of the actors enables a temporary **stabilised** network – namely the PSI community

WHAT ACTOR NETWORK THEORY EXPOSES

Using ANT to examine the UK PSI Community shows that:

- Academics have a central role within the network compared with other actors; they champion the majority of discussions and key meetings, pro-actively developing the network.
- There is a notable lack of discussion between the government and developers. The strength of the relationship between the academics-government and academics-developers makes the academics indispensable, but at the same time, limits the government-developer relationship.
- There is no involvement of the end-user. The aim of Open Government data is to provide public access to unpublished data, however, end-users are not considered or engaged as important actors, and are seen just as the end users of the software or data produced. This potentially threatens the stability the network; Linked Open Data may be an exciting research venture for both academics and the government in the UK, but without explicit consideration of the users it may not be sustainable

MOVING BEYOND ACTOR NETWORK THEORY

Actor Network Theory highlights the importance of socio-technical networks but specifically precludes prediction and cross case comparison. We need to move beyond this because:

- The recent *Share-PSI Workshop: Removing the roadblocks to a pan European market for Public Sector Information re-use* highlighted differences between newly formed PSI communities within Europe – notably that academics are not central to this network
- The potential exclusion of academics and researchers within the network has may halt or slow innovation
- European Public Sector Information communities may be different to the UK community even though they share the same common goal if government or industry actors take a central place in the network
- Economic recession and political change may throw up new barriers potentially affecting alliances and enrolment within networks

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