

A new understanding of connectivity and 'bio-heritage'

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Credit: Paolo Palladino

EU-funded researchers delved into how the nature of 'things' is shaped by their connectivity, particularly with regard to biological materials. The research resulted in the development of 'bio-heritage' as a novel and distinctive analytical concept.

"The project's core goal was to advance our understanding of the various ways in which connectivity transforms the nature of the things connected," says Professor Paolo Palladino, principal investigator on the SWLCONNECTIVITY project. A further goal was to "do this in a way that would speak to growing interest in the transformation of [biological materials](#) into drivers of economic growth."

Work resulted in a series of articles on sheep, wool and the landscapes of

the English Lake District, the Catalan Pyrenees and the Maritime Alps. "The articles explore how different modes of connecting the material existence of human and non-human animals shape the social, economic and political values by which we organise our lives," explains Prof. Palladino.

Introducing the concept of bio-heritage

SWLCONNECTIVITY led to the development of bio-heritage as a distinctive analytical concept. This concept seems necessary for a more comprehensive understanding of "the implications of the contemporary, proliferating ties between, on the one hand, the recollection of landscapes and the lives of their human and non-human inhabitants, and, on the other hand, new forms of valuing the food we eat and the clothes we wear," notes Prof. Palladino.

The project highlighted how everyday items of clothing such as the traditional woollen suit are the product of very complex and globally extended networks. The same goes for the meat and cheeses that today enjoy Protected Denomination of Origin status. Exploring the details of these networks and how they have come into being affords us a better understanding of our lives, including the non-human animals that we depend on for our livelihood.

By way of a summary, Prof. Palladino states: "Bio-heritage is a source of great [economic value](#). Yet, its biological and commemorative components are so dependent on one another that there can be no added economic value to products without memories of the way things once were, but memory without the living organisms and landscapes from which the products are derived is worthless. We need to understand much better how this looping relationship works."

A new approach to connectivity

SWLCONNECTIVITY challenged the understanding of connectivity as a quality of networks related to the number and distribution of links between component nodes.

Focusing on a number of breeds of sheep, the project's findings suggest that the sheep's current genetic characteristics are the product of the histories of commerce in which these sheep's ancestors participated. As a result, the exploitation of new commercial opportunities requires the undoing of these histories and their genetic effects, but the economic sustainability of the new opportunities stems from the retention of these very same effects. In other words, the identities of nodes and networks are not independent.

These findings support the premise that the relationship between nodes and networks is more complicated than that previously proposed. As such, we need to reconsider our most basic assumptions about connectivity, and to think differently about how best to manage the complexities of emerging global systems.

An all-round shift in mindset

The project's findings have contributed to contemporary historians', philosophers' and sociologists' increasing attention to relationships between human and non-human animals. Under another Horizon 2020 initiative, one project collaborator is now examining how the past of plant and animal breeding can help to clarify communication strategies in the field of synthetic biology and how these strategies multiply the economic value of the objects emerging from this novel field.

"The articulation of the concept of bio-heritage has served usefully to

initiate a wider set of interdisciplinary inquiries into the transformative effects of connective networks," Prof. Palladino concludes. One example is the integration of the project's concerns into the work of the Animal Research Nexus, a multi-institutional network dedicated to the exploration of the changing nature of relations and obligations between human and non-human animals.

Maintaining (SWL)connectivity

Finally, and in keeping with the interest in connections between seemingly unconnected things, the project's development was supported by informal contacts with theatre and film production companies. Prof. Palladino noted in particular the assistance provided by Théâtre du Centaure, but he also wished to thank Rurbans, the Consorzio L'Escaroun and the directors of Herdy, as well as the Norfolk Horn Breeders' Group. It is hoped that SWLCONNECTIVITY will prove useful to these organisations as they think about and promote new modes of co-existence between human and non-human animals.

More information: SWLCONNECTIVITY:
www.rug.nl/research/icog/research/swlconnectivity/

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