

6 Early Farmers: The View from Archaeology and Science

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*Figure 1 – Conflict: Perhaps still an accurate analogy of archaeology and science?
(Image Copyright – Marc Renshaw)*

For three days from Monday 14th May to Wednesday 16th May, the Department of Archaeology and Conservation at Cardiff University was home to the ‘Early Farmers: The View from Archaeology and Science’ conference. As explained in the welcome speech by Dr. Penny Bickle, one of the organisers of the event, its intended purpose was to bring together researchers in scientific and interpretative archaeology in an attempt for both sides to recognise that their interests in the early agricultural populations, societies and environments of Neolithic Europe are in fact shared and should be enhanced by greater collaboration in research.

The following review will be the reflections of perhaps the youngest person who attended the conference (a second year bioarchaeology undergraduate student at the University of York). Whether you think the opinions below are

naive or refreshingly different, your comments and own opinions will be very gratefully received by *The Post Hole*.

Name	Institution	Title
Dr. John Robb	Cambridge	<i>The Future Neolithic: Science and the Humanities</i> (Keynote)
Prof. Jean-Pierre Bocquet-Appel	CNRS, Paris	<i>Multi-agent similarities of the trajectory of the LBK Neolithic</i>
Guido Brandt	Johannes-Gutenberg, Mainz	<i>Archaeogenetic evidence for the maternal gene flow in Neolithic cultures of Central Germany</i>
Prof. Lynn Meskell; Dr. Jessica Pearson	Stanford; Liverpool	<i>Isotopes, images and investment: fleshing out bodies at Çatalhöyük</i>
Dr. Mary Anne Tafuri	Cambridge	<i>Isotopic evidence of diet and social practices in the Neolithic Tavoliere (Apulia, Southern Italy)</i>
Dr. Alison Sheridan	NMS, Edinburgh	<i>The multi-strand Neolithisation of Britain and Ireland: the view from archaeology</i>
Prof. Richard Evershed	Bristol	<i>Milk, milk, everywhere, Nor any drop to drink</i>
Dr. Marie Balasse	Museum National d'Histoire Naturelle	<i>Stable isotopes enlighten herding practices in the Neolithic of Southern Romania (6th-5th mil BC)</i>
Dr. Corina Knipper	Johannes-Gutenberg, Mainz	<i>Mobility and animal husbandry in the LBK: examples from South and Southwest Germany</i>
Dr. Amy Bogaard	Oxford	<i>Framing farming: A multi-stranded approach to early agricultural practice in Europe</i>
Dr. Oliver Craig	York	<i>Molecular investigations into food values and cuisine across the transition to agriculture in the Western Baltic</i>
Dr. Jacqui Mulville	Cardiff	<i>Mind the gap? Integrating Animal Archaeologies</i>
Prof. Keith Dobney	Aberdeen	<i>The long and winding road: new insights into the origin and spread of stock-keeping</i>
Prof. Paul Halstead	Sheffield	Discussion of Day 1
Prof. Clark Spencer Larsen	Ohio State	<i>Health and lifestyle in early farmers: the same, yet different</i>
Dr. Rick Schulting; Dr. Linda Fibiger	Oxford; Edinburgh	<i>Violence in the Neolithic: a population perspective</i>
Prof. Christopher Knüsel; Dr. Sébastien Villotte	Exeter; Bradford	<i>Sexual division of labour during the LBK: an example from Stuttgart-Mühlhausen highlighting the use of skeletal activity-related morphologies</i>
Prof. Robert Hedges; Julie Hamilton	Oxford	<i>What we have learnt from collagen isotopes over the large geographical scale</i>
Prof. Alexander R. Bentley	Bristol	<i>Social identity in the early Linearbandkeramik: evidence from isotopes, skeletons and burial contexts</i>
Dr. John Chapman	Durham	<i>Doing science in the Mesolithic, Neolithic and Copper Age – an insider's perspective</i>
Prof. Alisdair Whittle; Dr. Penny Bickle	Cardiff	<i>Diversity in lifeways: conclusions from the LBK lifeways project</i>
Dr. Jessica Smyth	Bristol	<i>What's in a sherd? Contents and context in the Irish Neolithic</i>
Dr. Oliver Harris	Leicester	<i>Revealing our vibrant past: science, materiality and the Neolithic</i>
Prof. Gabriel Cooney	UCD	Discussion of Day 2

Table 1 – Complete list of speakers (keynote lecture on Monday 14th May, rest on Tuesday 15th and Wednesday 16th). (Image Copyright – David Alfto)

A packed schedule comprising of a wide range of speaking archaeologists and archaeological scientists ensured that the aim of bringing together the broad spectrum of fields studying the Neolithic was achieved. Above is full list of all the participants. Unfortunately there is only enough space to discuss seven of the presentations, which are highlighted in the list.

Prof. Alisdair Whittle and Dr. Penny Bickle – Diversity in lifeways: conclusions from the LBK lifeways project

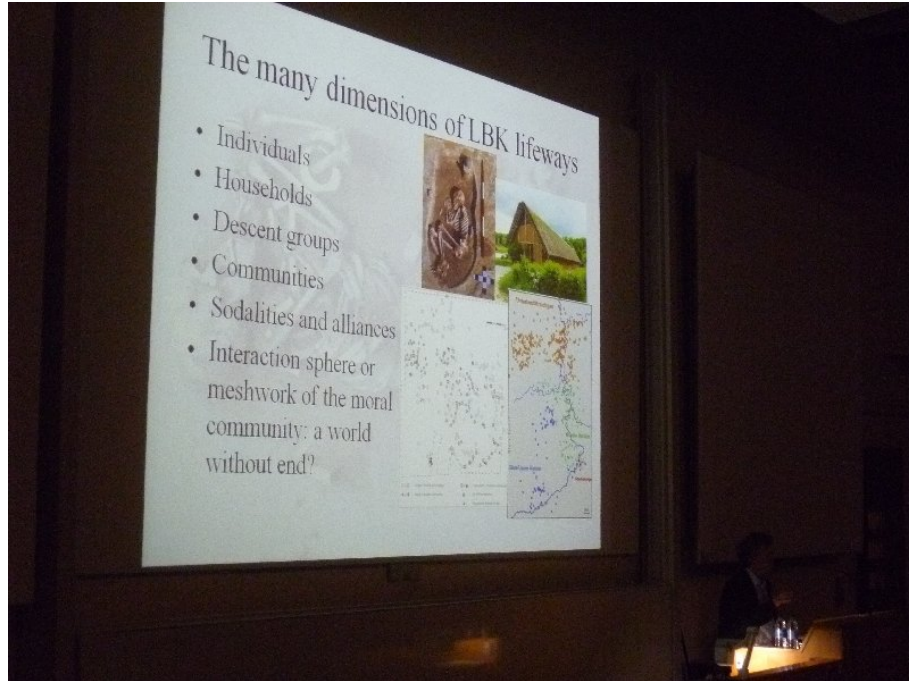


Figure 2 – Prof. Alisdair Whittle presenting his and Dr. Penny Bickle’s paper on differing scales of LBK lifeways (Image Copyright: D. Altoft; kind permission of A. Whittle)

Perhaps the most optimistic presentation was the one given by the hosts of the conference Prof. Alisdair Whittle and Dr. Penny Bickle. Outlining their recent work on the Cardiff-Oxford-Durham research project, ‘The first farmers of Central Europe: diversity in LBK lifeways’, Bickle and Whittle demonstrated the apparent ease of a collaborative project between archaeology and science to reveal aspects of diet and mobility in LBK societies. Their consideration of the differences in these relationships with varying scales of analysis, from the individual through stable isotope and mortuary analysis of human remains to wider society through the comparison of different settlements and cemeteries in regional and wider settings was rather unsettling. How was this so easy?

The answer seems to be the close collaboration and mutual respect of different practical and theoretical approaches to interpreting the Neolithic, rather than using the period (as so often before) as a battleground for science and archaeology. The project has been a success because it has stepped beyond the carnage of the battlefield and looked meaningfully at the subject of archaeology discerning the scale at which the *past individual* viewed the world, in which he or she lived and died (Whittle & Bickle, 2012).

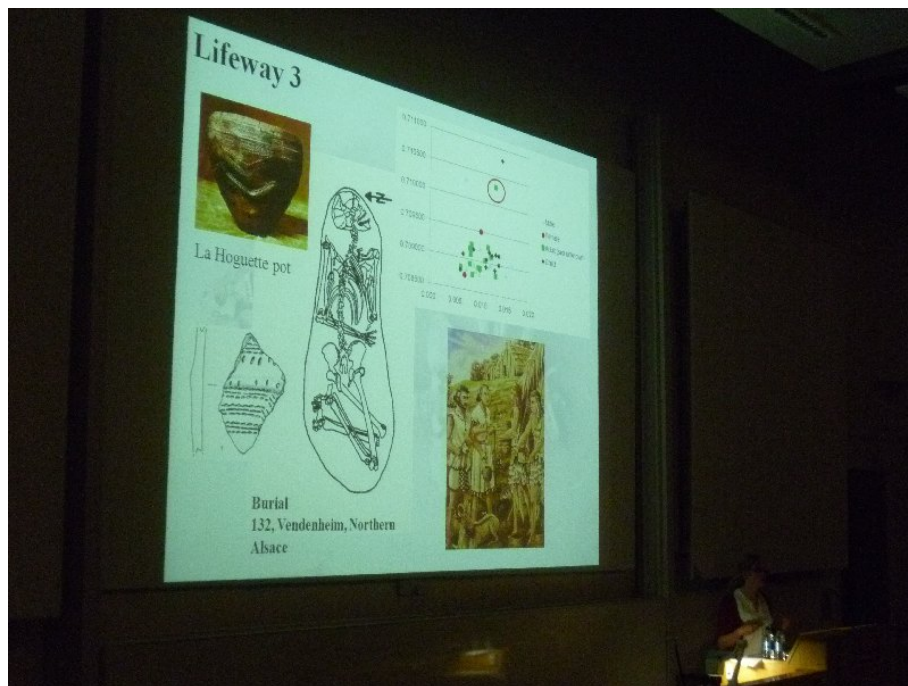


Figure 3 – Dr. Penny Bickle (Cardiff) presenting her and Prof. Alisdair Whittle’s paper on differing scales of LBK lifeways (Image Copyright: D. Altoft; kind permission of P. Bickle)

Prof. Christopher Knüsel and Dr. Sébastien Villotte – Sexual division of labour during the LBK: an example from Stuttgart-Mühlhausen highlighting the use of skeletal activity-related morphologies

Prof. Christopher Knüsel (Exeter) and Dr. Sébastien Villotte’s (Bradford) paper showed similar promise in directly addressing a rarely studied aspect of Neolithic life; in this case, the sexual division of labour in early farming communities. They convincingly demonstrated that by analysing the lesions of upper limb tendons, a very clear picture of differential motor actions between males and females from Stuttgart-Mühlhausen can be elucidated, and more importantly, the use of a very specialised line of enquiry can in some cases be of equal benefit to broader discussions of life in the Neolithic as studies incorporating many fields of study, so long as the broader implications of research are properly considered.

Knüsel and Villotte’s research offers exciting prospects for understanding the stratification of labour within populations, and should be used more widely in the studies of other communities and alternative divisions, such as inferred age and mortuary prestige of individuals to open up further questions about lifestyle across different sectors of society (Knüsel & Villotte, 2012).

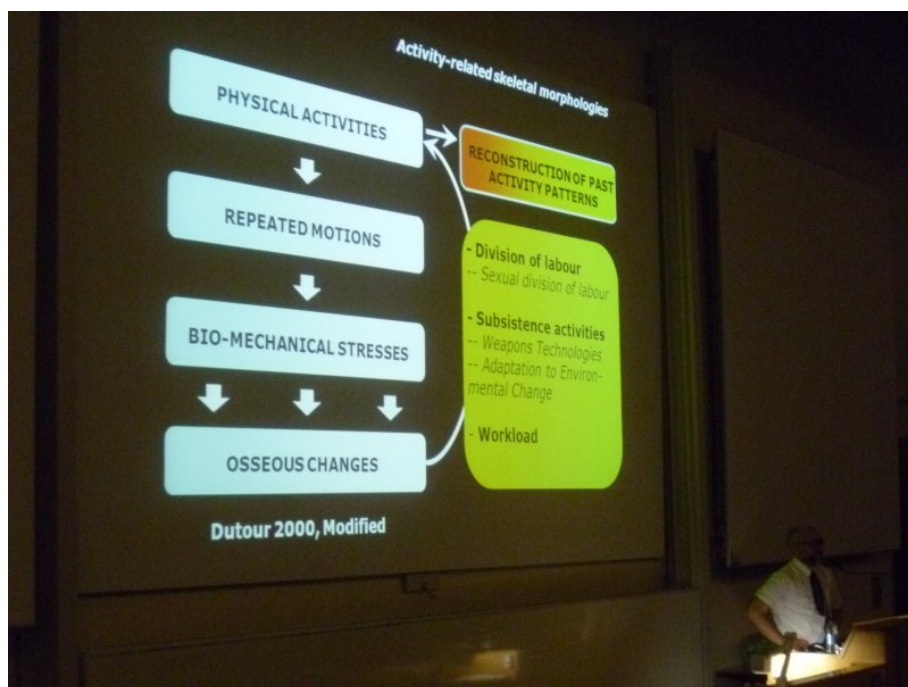


Figure 4 – Prof. Christopher Knüsel presenting his and Dr. Sébastien Villotte’s paper on direct osteological evidence for gender division of labour in the LBK (Image Copyright: D. Altoft; kind permission of S. Knüsel)

Dr. Oliver Craig – Molecular investigations into food values and cuisine across the transition to agriculture in the Western Baltic

As one may expect, the Early Farmers conference was mostly focused on diet and subsistence in the Neolithic. Dr. Oliver Craig’s (York) paper on organic residue analysis of Ertebølle pottery from northern Germany offered a unique opportunity to focus more specifically on cuisine. The social, cultural and sensual processes behind what people eat and how they eat is something that is sadly overlooked in archaeology. Although, as acknowledged by some of the audience, organic residue analysis of pottery cannot inform understanding of broad diet and subsistence of individuals as discerned from direct stable isotope analysis of bones or of whole populations, due to the obvious reasons that pots are not involved in all preparation and consumption of food by all people, it can equally be argued that other analyses of diet and subsistence do not normally include cultural and personal agencies influencing people’s interaction with food, or that not all food was treated as food (for example, oils from fish used as illuminants in vessels).

The nuanced changes in the uses of pots across the Mesolithic-Neolithic divide determined by organic residue analysis can offer unique suggestions of the influences on and results of changing economies and transition to agriculture within cultures (Craig, 2012).

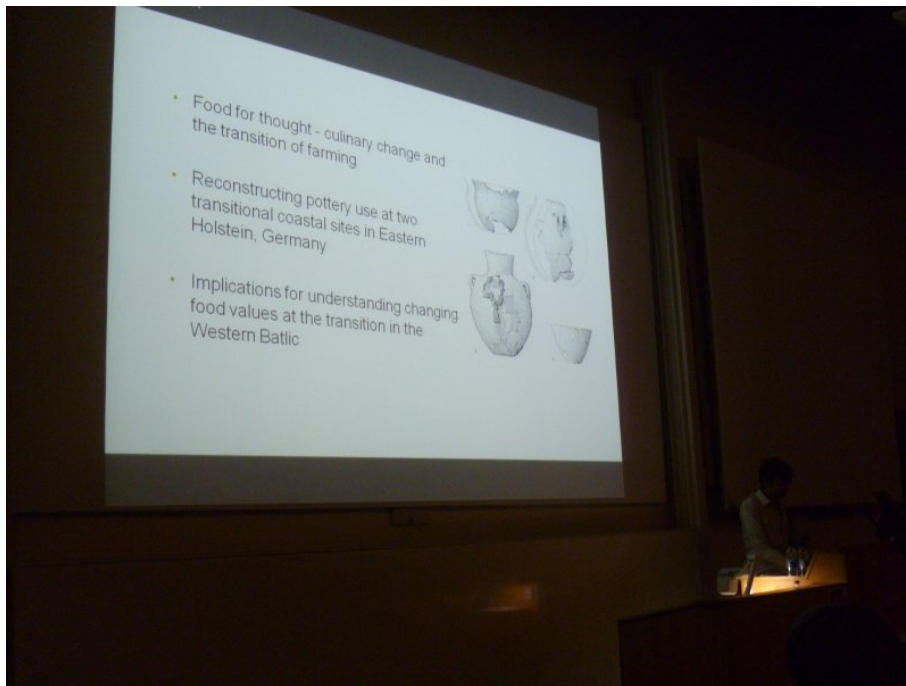


Figure 5 – Dr. Oliver Craig (York) presenting his paper on organic residue analysis of Ertebølle pottery during the Mesolithic-Neolithic transition (Image Copyright: D. Altoft; kind permission of O. Craig)

Dr. Jacqui Mulville – Mind the gap? Integrating Animal Archaeologies

Whilst the value of using specific lines of inquiry to address specific, often overlooked questions about the past is undoubtedly beneficial to archaeology, combining these should be viewed similarly, particularly if it helps address complex interactions between different aspects and influences of lifestyle and society. This is excellently illustrated in Dr. Jacqui Mulville's presentation (see photograph below).

Like Prof. Whittle's observation that different scales of analysis can produce different focuses in results, Dr. Mulville (Cardiff) identified that overlapping methodologies did the same thing. This, it could be argued, is a positive phenomenon that can be utilised to provide more comprehensive perspectives of the past. It was enlightening to see Mulville's demonstration of the extent zooarchaeological and stable isotope evidence can sometimes sharply contrast. Looking at the Atlantic island sites that were studied in her and Prof. Richard Evershed's Diversity and Sustainability in Marine Resources project, she demonstrated that provided there is sufficient relevantly overlapping data in this case, zooarchaeological, stable isotope and organic residue they should be combined to provide broader perspectives on agricultural practices (Mulville, 2012).

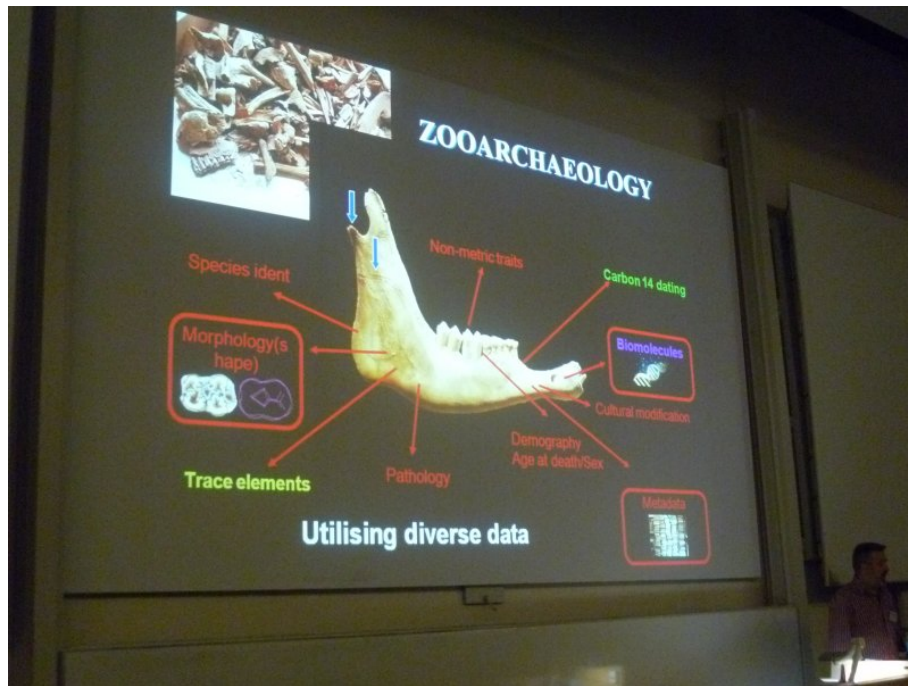


Figure 7 – Prof. Keith Dobney presenting his paper on the westward and eastward spread of domesticated pigs across Eurasia (Image Copyright: D. Altoft; kind permission of K. Dobney)

Dr. Alison Sheridan – The multi-strand Neolithisation of Britain and Ireland: the view from archaeology

It was clear that the views of one speaker members of the audience either appreciated or (a little unfairly) scorned. Dr. Alison Sheridan (NMS, Edinburgh) very admirably used her presentation to call on archaeology and science to work more collaboratively in order to approach the past more holistically. While this message should be encouraged by the academic community, the apparent negative reception the presentation received from some people was not associated with this call to arms all of the speakers made clear their interest in multidisciplinary research but because (arguably) Dr. Sheridan did not clearly demonstrate how the many strands of her research were connected.

This is not to say that her study of the adoption, spread and consequences of jade axe material culture on societies is not of worth or potential to archaeology; rather, the work of Project JADE should be better demonstrated as being cohesive towards addressing the many aspects of the material culture, its geographic spread and cultural impact in Europe. One example of this was the use of the jade axe deposited beside the Sweet Tract in Somerset, a static entity, in the rhetoric of other non-static entities of jade axe adoption in mainland Europe. Archaeological data is finite and so such uses of static entities in the interpretation of non-static changes, as above, should be accepted, so long as they are rigorously justified through alternative information, or explicitly noted consideration of the analytical implications neither of which were fully achieved by Sheridan in her presentation (Sheridan, 2012).

One positive consequence of this was the discussion amongst the audience of whether the main obstacle to studying the past is a general lack of data in archaeology or the reticence of some researchers to accept that lack of data and make the most of it. This question will be returned to at the end of the review.

Prof. Lynn Meskell and Dr. Jessica Pearson – Isotopes, images and investment: fleshing out bodies at Çatalhöyük

Prof. Lynn Meskell (Stanford) and Dr. Jessica Pearson's (Liverpool) research on combining two very different forms of evidence to build credible alternative interpretations of deeply psychological and socio-cultural views of bodily image in the past is perhaps one of the most exciting current achievements in archaeology. Rarely does research simultaneously incorporate multiple methodologies in this case stable isotope analysis of human remains and typological study of mortuary figurines and succeed in delivering a succinct, comprehensive narrative of the less discernible levels of social and psychological reasoning of individuals behind the material culture they choose, or are chosen by others, to be associated with.



Figure 8 – Prof. Lynn Meskell presenting her and Dr. Jessica Pearson's paper on the alternative interpretations of figurines from Çatalhöyük, based on isotope analysis of humans (Image Copyright: D. Alft; kind permission of L. Meskell)

In what was a fascinating presentation that challenged the traditional singular approaches of archaeology and science towards the study of mortuary treatment and human biographies, Meskell and Pearson demonstrated that their combination of techniques with a broader consideration of the built environment of Çatalhöyük, particularly of the numerous wall murals around the site, suggests that the figurines always associated with the Mother Venus and fertility, due to stereotypical associations with their bodily form, may have actually served as

symbols of prosperity through the plentiful availability of food. They observe that the figurines are more indicative of obesity and flesh, and that this theme occurs throughout the city in the storage areas used to contain excess food, the abundance of hunted animals represented in wall murals, the post-mortuary treatment of flesh of the deceased, and the stable isotope data of skeletal remains.

The apparent similarity between the analyses of these very different indicators makes Meskell and Pearson's suggestion of flesh and obesity serving as a symbol of an individual or a group's prosperity all the more compelling. Furthermore, this presentation was beneficial in highlighting that different kinds of data can indeed be combined to offer tentative suggestions of lifestyle in the Neolithic. Perhaps this was made possible by the considerable amount of archaeology that is preserved at Çatalhöyük, and in other cases, such an overlap of different lines of inquiry would not be possible; but it is certainly advisable that this is tested in all manner of other archaeological contexts, as it may prove highly valuable to looking at the past. (Meskell & Pearson, 2012).

As demonstrated through these seven presentations, the analogy of science and archaeology first suggested in this review should be reconsidered. The conference was a huge success for encouraging a vast array of researchers to share and discuss their studies of Neolithic Europe. It is encouraging to see many of the projects presented making use of linking multiple specialisms and that archaeologists and scientists however they identify themselves are starting to recognise that working together is essential if more holistic perspectives of the past are to be formed.

So the conference was a success, different methodologies are starting to be combined, but archaeology still has a long way to go! The remaining, and perhaps highest hurdle between archaeology and science is the way data that these methodologies produce is interpreted. The sooner we all stop forever whining that "we need more data" and arguing over interpretative paradigms for the sake of arguing, but instead recognise that we are all people with an interest in the past, the sooner we will be able to make the most of the data we have and work effectively together to acquire more.

Thanks should go to Dr. Penny Bickle and Prof. Alisdair Whittle for organising a superb conference, and to the speakers in the photographs for agreeing to them being included in this review. Thank you also to Marc Renshaw for producing the illustration at the start of this review.

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