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The meme as technical object

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Thank you very much for the kind invitation and also for the warm welcome. I am very pleased to be with you today. I would prefer being with you all in person, but we can have that wait for another day. The title of the talk today is “The meme as technical object”. This is new work. It’s a piece of research that I have been working on for a few months with a colleague and I would like to talk a little bit about meme research specifically. I want to talk about a new way to think about meme research that is indeed inspired by our digital research methods, more broadly. But another even broader point of departure is the study of technicity and why technicity matters when doing research, particularly about digital objects such as memes. What I’m going to talk about today is the study of technicity. This is a different kind of application, and it is towards the study of digital objects.

I’m going to introduce meme as technical object as well. One conceptualizes memes in a variety of ways. And I’ll talk about the evolution of the conceptualisation of the notion of the meme from, let’s say, memetics as a field of study to media studies and then I’ll introduce the idea of meme as a technical object that is formed in a variety of ways by different software environments. And I’ll talk about software environment individually. So, I’ll talk about the meme in a database the meme, in a meme generator, the meme on a social media platform, the meme as a part of a digital campaign, the meme as a subject or object of analysis in vision software and what a meme is thought of in popular marketing data dashboard. Firstly, what we see is that these memes are distinctive in each of these software environments. Secondly, each of these memes are thought about as being shaped materially by these soft environments and also have different suggested research agendas. So, I’m going to talk about the suggested research depending on the type of meme technicity in question. So, those are the moves of the argument today.

So what I think it’s interesting about the meme research is its gradual denaturalization. So, the meme started off as this notion by biologists of being kind of a cultural equivalent of something biological. So, this is a sort of a classic case of naturalization of a cultural object of study. This idea of a cultural gene. Now, in all of the work you see the infusion of the

biological notions and so the definition of infectious or thought contagion. In each of these we have the intermingling of the biological but also of a specific type of biological and that is the viral and in particular the application of the viral as it moves from host to host. And the hosts in this sort of memetic point of view, is a particular kind of medium and that is mainly the mind. And you could argue that memetics, as a field of study, became stranded because of thinking about the mind as the medium and thinking about the form of study of the replication of cultural ideals in minds. The memetics as a field of study has declined quite significantly. But where the meme has found its home is in the second type of research of the meme and you could argue that media studies, communicative studies and cultural studies have resurrected the meme as object of study and also renamed it.

Oftentimes what we're referring to when we think about memes today is not the cultural gene that Dawkins was talking about like 'someone whistling a tune down the street and someone hearing that tune start whistling as well', we're not talking about particular kinds of fashion or pottery but rather we're talking about the internet. These are the definitions you see here which have in some sense started the de-naturalization of the meme. You see, a 'piece of cultural, typically a joke', 'apparently insignificant embodiments of silliness and whimsicality, and then you also hear this word 'common tongue' of the internet, and you see here the meme has become very much cultural and specific to a medium (the internet) and to medium culture, that is the vernacular. It's nearly complete de-naturalization of the meme. But one other thing needed to take place for it to be fully de-naturalized. And that is the work of Limor Shifman. She makes the distinction between the viral and meme. She talks about memes in quite a different way. If you go back to the work of early internet theorists, they would always speak in terms of the study of virality and the things that go viral and of course we still use those ideas but what Shifman did is divide the viral and the meme. The viral is something that circulates, it's unchanged. Whereas the meme is something that one adds to. Here you see the study of the vernacular what is oftentimes referred to in more mature internet meme research, the idea that you add to a meme. So, it's additive content. This is the first part. The second one is the difference between the viral as the single piece of content. And the meme on the other hand as a collection. And this is crucial, also to the argument I want to make today. Now the meme is a collection of content that one adds to.

And one then will think of the collection as something quite significant and I think this is understudied in the research, the idea of, let's call it 'collection making'. So, the meme itself is something that's a collection. However, when we move to its study, one needs to also make a collection. So, this is where I want to now begin to talk a little bit about technicity. And I think it's a digital methods approach to data collection so to speak. However, it's broader than that. And as I mentioned before, the study of technicity is something that is behind digital methods more generally. So, I'd like to argue that the meme should be considered as a technical object as well. And since they're collections we need to take collection-making seriously. This is also for those who collect them but also those who study them. So, there are a couple of points of departure in the argument and one is from software studies. I think it's an important idea from those studies that one should not forget materiality. So, I think that software studies move significant contributions, that is to think of the materiality of the code. Software studies came in and said well listen what you're forgetting

is the materiality and the code itself. And so, the meme thus is something that is “technologically composed”, code constituted by its software. So, the digital objects under study are in some ways code-constituted by their software environment. The other one that I want to bring up comes from the idea of network content analysis which itself means code-content analysis. What’s so interesting about Klaus’s work is the insistence of never thinking content analysis is only but the content. And then, it sounds like it talks about the content but what it argues, is that when thinking about the content we think about container. And so here is the symmetrical study so to speak of content and the medium. But I think that’s also content analysis and now this new notion of Networked content analysis. So, the two let’s call them theoretical disciplinary points of departure of the argument of the meme as technical object comes from software as well as content studies. Not to forget that we are studying collections so internet memes as collections, co-constituted materially by the software environment technicity.

The study of memes thus cannot be separated from its containers and that now the containers are then internet type containers. So now I want to subsume meme collections under different kinds of internet related containers. These are the containers under study in the software environments. I want to talk about six of them. This is the talk, so to speak. I will speak with you whether you think there are others. Nevertheless, I think these are the major ones. So, the first container or software environment for the study of internet memes is historical database, “Know your Meme”. It’s been around since 2008 at least and it is probably the most well-known American project and also in some ways locates, historicizes memes in America’s digital culture where of course memes are now global and globalized and globalizing but it locates sort of the first collection, if you will. Of course, memes go back to the early news net, but nevertheless this is its first site of collection so to speak.

Secondly, I want to talk about generators and what they do for a collection and they do something very different than the database. And then I want to talk about platforms, and I want to take TikTok as an example. I chose Tik-Tok because of its infrastructure, I thought it was very interesting. Then I want to talk about digital campaigning. This is very different, again. Campaigns use memes. The collections are honed or curated through analytics. So, what becomes a meme is derived by their analytics they use, what is performing well. Then I want to talk about another software, and in particular grouping and vision software and how they treat memes. So, if you were to take a collection of memes for meme research, then you get different collections. And the same is true for the marketing research data dashboard (Crowdtangle). There is a new-ish feature called meme search. And so, when you use let’s say Crowdtangle to make a collection of memes according to meme search then you’re going to get a different collection. Now all these collections because of the way they’re collected, and in some ways suggest different meme research. I don’t want to push this point too far but I could say that

if you were to show me your collection-making technique, I could probably guess what type of research agenda you have for your meme research. But I would say if you go through the literature and you look at different kinds of collection-making then you see patterns and types of meme research. And I would like to argue that this collection-making does have an impact on the type of research or suggest-research.

I want to go through these one by one and talk about these collections and what they mean for meme research. I want to talk first about “Know Your Meme”. What’s so interesting about it is that it made this sort of early distinction between what is a meme and what is not, and it fits perfectly with shift modes. So, they anticipate shifts by making distinctions themselves between the viral, on the one hand. This is identifying viral as part of viral marketing, let’s call commercial side, commercialism.

And a special internet phenomena. You’ve all seen it. These are all the Youtube videos, like the person doing 25 different dances. These are the early amateur classics. So early meme research was oftentimes video based. What’s important here is that these are the significant medium specific phenomena, something very peculiar, native to the internet. And then to make a collection of them required new literacy to identify and collect. Now, these collections in some ways suggest a particular type of research. It’s about a playful vernacular, what is peculiar participatory digital culture, it’s about the weird or the odd. And also, the weird that’s specific to the internet, the whimsical. And this is what one would tend to study.

The next one is in some way the polar opposite. Arguably, memes these days are thought of as no longer videos but rather as their most successful template, as an image background. So now we have a meme which is a template. There are many of them. You notice there’s the generator, a template you could do yourself, but then there’s also popular ones. And they’re huge. So, these are vast repositories. So the meme here is no longer special, it’s rather mainstream and participatory. But it’s a bit different as collection in terms of suggested research.

Now when we think about memes on platforms. There are a few platforms, I don’t know if you necessarily associate Fb with memes, but during digital research methods I put in a quotation from a FB employee that said “95 percent of the content that’s coming through are memes”. And it seems like if you look at the most engaged with content across social media platforms (engagement analysis) you’d likely find that in many spaces, substantive or cultural or subcultural, the meme as an object is dominant. However, what’s interesting more specifically about Tik Tok and this is why I chose it, is that you have a new imitation infrastructure. Why? It’s because of, at least two, maybe three, features. One is the sound. If there’s a sound on a particular Tik Tok video, you can click on it and see any video with that sound so it chains or links the memetic sound, if you will. The additive content, if you will. That’s why I call it imitation infrastructure. The second one is that you can stitch videos, I mean the technical affordance is the stitching. Once again whether it’s linked or chained, or stitched, you’re bringing the memetic content, the additive memetic content you’re bringing it together as a collection, as an imitative collection. This is why I call it imitative infrastructure. Research has found new forms of social interaction and cultural commentary by ‘imitation publics’, which I think is also a good term. So that’s again the notion of imitation public that would move your work to participatory culture again, whereas imitation infrastructure moves your work to the technicity of collection making.

You see this image there, the bottom right of the screen, of this building in St. Petersburg, the infamous internet research agency and the influence operation that they carried out. The internet research agency in St. Petersburg ran an influence operation that helped meme

Trump into the US presidency in 2016 and there have been 3 or 4 reconstructions of this operation. Most of these have found that this is a collection making, one I have here is a forensic reconstruction of an influence operation. What they found is that they operated like a digital marketing agency, which was very analytics driven. So, what they found is that there was a cross-platform enterprise, and they had employees who would work regular hours, like a 9-5 job. They would test memes and would test their texts and images in order to stir virality and engagement from an analytics points of view, and have other people push them around, spread them. So, they would also measure how well they were doing. So, when you see the work of those who have studied this, they normally talk in terms of tactics, so these are influenced operation tactics and there's a whole vocabulary for this computational propaganda, and it's not isolated to this operation. So, you get into the study of unintentional or unknowing memetic participation. This is a very different kind of participatory culture. Then you get something called memetic warfare which is a sort of subgenre of info warfare. So, this is oftentimes how these meme collections are studied. Now I'd like to move to the study of analytical software and in particular, what they do to meme research. I'd like to talk about PicArrange and Google Vision. The reason being is because of how they define memes but, in some ways, slightly different underlying technologies and approach. Vision is more sophisticated. But nevertheless, what we have here are visually similar images. So images that group together because of their similarity. So then you see in a an image collection, a larger image collection, the memes and then the extent to which these memes when you see them as grouped together, whether they are significant in these collection. Are they the dominant images/imagery?

And you also see which ones and also the ones that haven't done well. So, in fact you can use this software in some ways as a part of analytics driven campaign although I don't think the influence operations actually use this type of software. This in some ways a form of analysis where you then see memes as performing well or not well (visual cluster inspection). You also get the study of what you can call 'poor images', all the images these days there are pixelated or down-sampled that circulate on the internet. So then you get the meme as images that have been reworked, that have the same picture but different text.. so you get also poor images as part of your cluster. So you can see the intertextuality of intervisuality of memes. This is again a different kind of collection, in a sense that the software is grouping and then also labelling as memes. And then it suggests, because of the grouping, it suggests studying groups, as well as core and dominant ones.

The last one is CrowdTangle, which has been opened up for research use by Facebook or Meta. Not that long ago, maybe 6 months ago, CrowdTangle added memes search. So, if you go into CrowdTangle, you can query it and what you get is a list of either pages or post depending on what you're doing, ranked by most engaged with content. And you can do that for Facebook, Instagram, Reddit. But then there's meme search. What meme search is, is just text over an image. And when you do memes search you oftentimes get a tweet, that has an image in it. But you normally wouldn't associate it with the idea of meme. So, this has a much broader understanding of what a meme is. And you can search it in two ways, two very different kinds of meme search. The default is researching the text of the meme. So they do this through OCR and they put the text that they scan in in the alt

parameter of the image, so the text that's over the image becomes meta data. And you can invert meme research and look for those images that have the same text. So, this is again literally intertextuality. Or you can search the text around the meme, around the post of the meme. So here you could study textual trends, you can study also what I called global circulating. So, what I have attempted to do is to introduce you to the history of meme conceptualization as one being from the naturalization to the denaturalization but then I argued that we can also see memes as technical object if we think them through as collections rendered by software environments. Then I went through a number of these, trying to get a sense of how collections are different and of course since we cannot separate the meme form its container, software environment, I suggest that we should pay special attention to collection making. And I also gave a sense of how each of the collections have different research suggestions or affordances, traditions, or research work associated with them. So, for Know your Meme or database, these are special internet phenomenon, whereas with generators these are massified, Tik Tok the meme collection is kind of linked or chaines ot stritched together. Again, this is a particular kind of infrastructural interaction in some ways produces your collection, so this is the platform/driven and then the influence campaign is again slightly different in the sense that it's very much marketing, but it's influenced operation approach using analytics. When you're using vision software, you're getting as visually similar, and you can see the extent to which they dominate a visual landscape whether they're peripheral or not. In CrowdTangle there's this meme search and again it's quite different. You could make an argument that the visual software and the marketing dashboard are on the same type of category. I distinguished them here because you get more than an image macro so to speak when you're using meme search, and you're also not using videos. And the way you search-make is quite funny, you can search which memes use the same text, that could be your collection. Or your collection could be memes whose posts share a key word. So yeah, the larger point has been that the technicities here under study have implications for meme research.

Nota biografica

Richard Rogers is University Professor and holds the Chair in New Media & Digital Culture at the University of Amsterdam. He is also Director of the Govcom.org Foundation (Amsterdam) and the Digital Methods Initiative. Previously, Rogers worked as Senior Advisor to Infodrome, the Dutch Governmental Information Society initiative. He also has worked as a Researcher and Tutor in Computer Related Design at the Royal College of Art (London), Research Fellow in Design and Media at the Jan van Eyck Academy (Maastricht), and Researcher in Technology Assessment at the Science Center Berlin (WZB) and in Strategic Computing in the Public Sector at Harvard University (JFK School). He earned his PhD and MSc in Science Studies at the University of Amsterdam, and his B.A. in Government and German at Cornell University. Over the past decade, Rogers and the Govcom.org Foundation have received research grants from the Dutch Government, Soros Foundation, Open Society Institute, Ford Foundation, Open Society Foundations, Mondriaan Foundation, MacArthur Foundation and the Gates Foundation. Recently, he was Annenberg Fellow at the Annenberg School for Communication at the University of Pennsylvania and Visiting Scholar in Comparative Media Studies, Massachusetts Institute

of Technology (MIT). Rogers is author of *Technological Landscapes* (Royal College of Art, London, 1999), editor of *Preferred Placement: Knowledge Politics on the Web* (Jan van Eyck Press, 2000), and author of *Information Politics on the Web* (MIT Press, 2004/2005), "the 2005 Best Information Science Book of the Year Award presented by the American Society for Information Science and Technology (ASIST)." He is also author of *The End of the Virtual* (Amsterdam University Press, 2009). His book *Digital Methods* (with MIT Press, 2013) was awarded the best book of the year by the International Communication Association (ICA) in 2014. Rogers co-authored *Issue Mapping for an Ageing Europe* (Amsterdam University Press, 2015) with Natalia Sanchez and Aleksandra Kil. His most recent book, *Doing Digital Methods*, is with Sage (2019). He is currently working on the book project, *Critical Analytics for Social Media*.