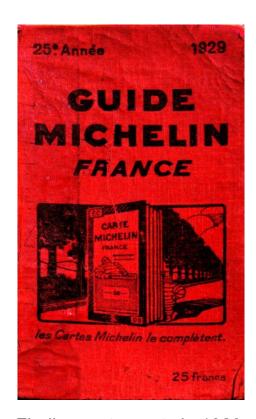
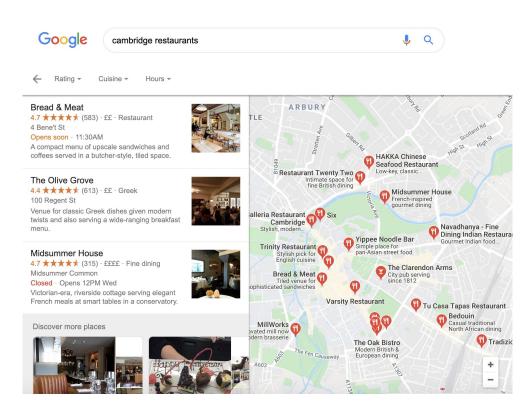
## "We have failed the internet."

Mike Eisen



Finding restaurants in 1929



Finding restaurants in 2019

#### E. S. HORGAN AND R. M. McKINNON

341

OUR OBSERVATIONS

#### Technique

The routine procedure in the Sudan is to send to the Laboratories the suspected brain divided in halves in 5 per cent formol-saline and to remove a thin slice of the hippocampus for section. This has given very satisfactory results on the whole, but as the removal of the brain from suspected animals is often carried out in out-stations by unskilled natives, the brain is sometimes rather torn and damaged in the process, although as a rule sufficient remains of the hippocampus to take a piece for section.

There is also a tendency to cut the brain off short at the upper level of the mid-brain and hence this region is often missing in the brains received. Further, the brain is often received undivided, still surrounded by its membranes, and in these circumstances the denser portions of the brain stem are often poorly fixed, but the formalin usually penetrates sufficiently into the ventricles to fix the hippocampus.

The following series only includes cases in which both mid-brain and hippocampus could be examined, and it extends over the period November 1935 to December 1936.

#### Method of examination of the mid-brain

Following the suggestion of Thomas & Jackson (1930) a complete transverse section was made whose upper limit was the posterior part of the superior corpus quadrigeminum, and which included a small anterior portion of the inferior corpus quadrigeminum. This portion included the oculo-motor nucleus and on the ventral surface the energing fibres of the oculo-motor nerve.

In the case of small brains it was generally possible to include the complete transverse section in a single block, but with the brains of larger animals as a rule it was necessary to make two blocks, of which one included the aqueduct.

a rule it was necessary to make two blocks, of which one included the aqueduct.

In the few cases where the medulla was examined, a transverse section
was made through the pyramids a little above the decussation.

#### Staining

After trials extending over years of the many recommended stains, it has been found that Lépine's (1935) is by far the most useful for diagnostic purposes. Admittedly in our hands it has proved a somewhat coarse stain for the finer differentiation of cellular structures, but Negri bodies are clearly stained and stand out from the cell with great distinctness. This stain has proved especially valuable in brains which, owing to imperfect fixation for the reasons previously described, have undergone a certain amount of post-mortem autolysis. In a number of sections Leishman's stain was also used, but in most cases we have found this less efficient than Lépine's.

Sharing research findings in 1937

and the fate of the components of the cloacal region, we reinvestigated the changes in shape of the cloaca, including its lumen, wall and surrounding mesenchyme in human embryos and fetuses between 4 and 10 weeks of development. Changes in size and shape were assessed qualitatively and quantitatively in 3D reconstructions to establish the growth pattern. We report that the cloaca consisted of a ventral 'growing' zone initially sandwiched between cranial and dorsal 'non-growing' zones that account for the changes in cloacal shape during the period studied.

#### Materials and methods

This study was undertaken in accordance with the Dutch regulations for the proper use of human tissue for medical research purposes. Anonymised specimens from the historical collections of human embryos of the Departments of Anatomy and Embryology, Leiden University Medical Centre (LUMC), Leiden, Academic Medical Centre (AMC), Amsterdam, and Radboud University, Nijmgen, The Netherlands, that were donated for scientific research were included. In addition, digital images of human embryos of the Carnegie collection (Washington, DC, USA) were downloaded from the Digitally Reproduced Embryonic Morphology (DREM) project (Thist-Virtuslahumanembryos) subsect, edu).

#### Image acquisition, 3D reconstruction and visualisation

Well-preserved human embryos and fetuses between 4 and 10 weeks of development were studied (Table 1). The criteria of O'Rahilly as modified in 2010 were used to determine the Carnegie Stage of development and post-ferilisation age of the embryos (O'Rahilly & Müller, 2010; Table 2). We subdivided C514 into C514-early, -intermediate and -late because of rapid developmental changes during this stage. The collection from which we selected the embryos studied (Table 2) amounts to -150 embryos (collections in LUMC and AMC). Selection criteria were histological quality of the sections [embryos undergo autolysis (maceration) quite quickly) and developmental stage. The main limitation to use more embryos was the time required for their 3D reconstruction: scanning and aligning sections remain very time-consuming activities. Instead, we used quantitative (Figs 2, § and 2) chronological developmental so ur most important indicators for adequate description. Accordingly, developmental transition for adequate description. Accordingly, developmental transition for adequate description. Accordingly, developmental transition for adequate description is the transition of the correlation coefficients that we report are characteristically > 0.8. If a discontinuity or a discrepancy with literature is found, we do check sections of the non-reconstructed group of embryos to confirm our findings.

Table 1. Sources of human embryos and fetuses

Stage	Embryo number	Section plane	Source	
CS10	56330	Transverse	DREM	
CS11	56344	Transverse	DREM	
CS12	58943	Transverse	DREM	
CS13	5836	Transverse	DREM	

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Keyword	s			
3D morph	nometry	anorect	tum	
bladder	urogeni	tal sinus		
urorectal	septum			
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#### Sharing research findings in 2019

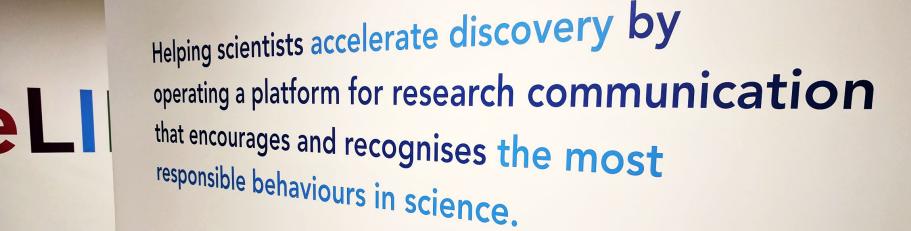


The Internet has transformed nearly every aspect of life









# eLife Innovation's mission is to drive open innovation for open science.

## Open innovation: Open-by-design

- Intentional, ordered, strategic, process-based, inclusive, open for revision
- When everything is open by design, people have a clear idea of how to be in an inclusive, collaborative community with others, how to get help, and how to recognise one another and their contributions

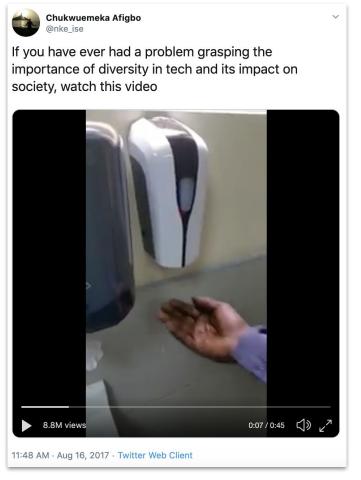


## Why open innovation?

#### If closed:

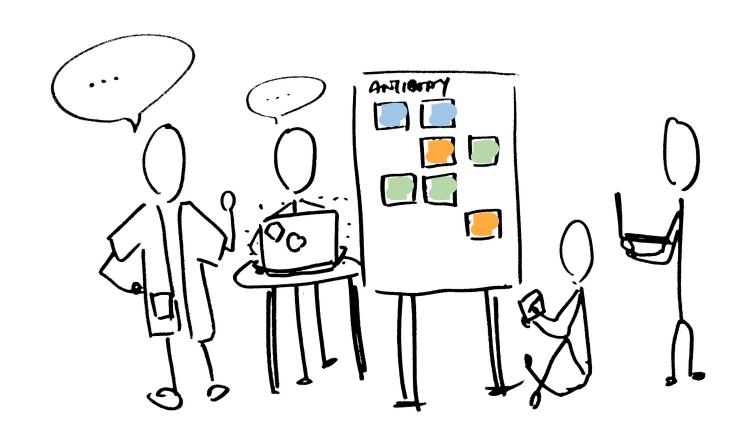
- Propagate existing biases
- Un-reusable research

Chan, Leslie. (2019, April). Platform Capitalism and the Governance of Knowledge Infrastructure. Zenodo. http://doi.org/10.5281/zenodo.2656601





eLife Innovation's vision is to create open, inclusive, user-centric research communication tools with the community.







## eLife Innovation Sprint: some projects and prototypes

2018





**SWIPESFORSCIENCE** 



2019



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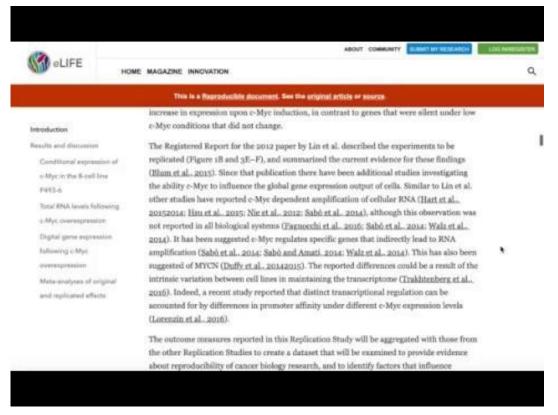
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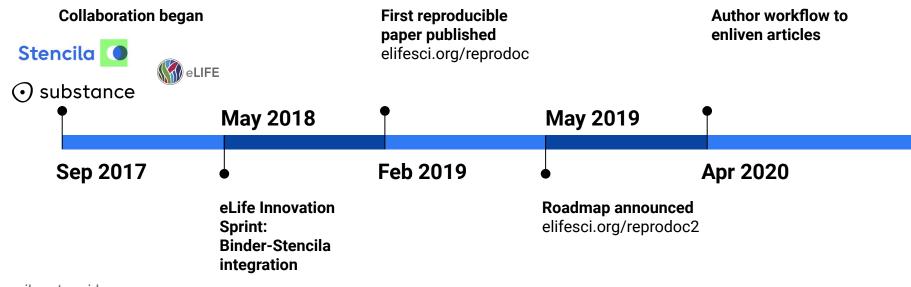


# Reproducible Document Stack (RDS): capturing code, data and compute environment in a live paper





## Reproducible Document Stack (RDS): A timeline



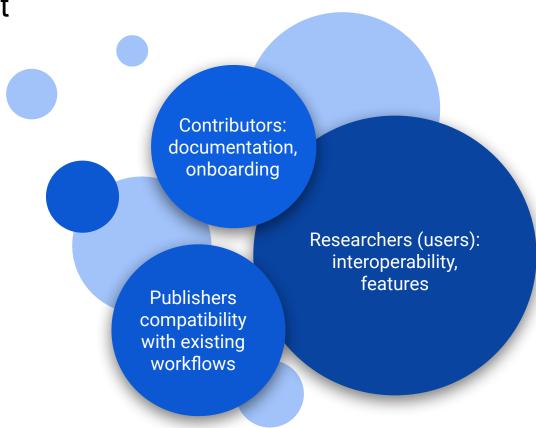
Stencila: stenci.la

Substance: substance.io

RDS updates: elifesci.org/RDSupdates



## What we learnt





enthusiasm tential many Knowing reporting scientists commeeting potential form new Continue better ting hard driving scientists improve COMMUNTY: Screate & al 2 group Open willing Julea & ways concepts he starting ways of work Expanding Lime like Swill W pleasure Science & done people's done Developers 4 seeing something forward capable Realising experiencing 🕖 different relationship contributed research

## Empowering people, supporting communities





## Thank you!

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