

Perspectives on Visual Learning

Vision Fulfilled

The Victory of the Pictorial Turn

Edited by András Benedek and Kristóf Nyíri

HUNGARIAN ACADEMY OF SCIENCES / BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS



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Hungarian Academy of Sciences
Budapest University of Technology and Economics

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Vision Fulfilled: The Victory of the Pictorial Turn

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Philipp Stoellger

As Turns Go By: New Challenges after the Iconic Turn

1. May We Tell a Story of Victory?

May “vision be fulfilled” and the iconic turn victorious, the question remains: what now? Which challenges do follow upon the iconic turn?

The *image* has always been already victorious. But has image-science as well been such? In a historical perspective, image and visual communication have invariably been “victorious”. If one looks at politics or religion, iconicity or visuality has always been the leading and prominent mode of communication: images as presence-makers, as power-media, as icons of glory and gods.

The reasons for the dominance of “the image” are well known. Communication is predominantly visual. A hegemony like that can be called the image’s *Deutungsmacht*. Scientific imaging techniques do indeed make use of this power-medium. The dominance of imaging techniques in science means – participation in and repetition of the image’s hegemony. However, the scientific success of imaging techniques is highly ambiguous: In many scientific fields the victory of the image is just an *operative* one, without any reflection by image science. In medicine for example: just operative but nevertheless quite successful. This means, as well, that the victory of the *iconic turn* as a *turn to a scientific method and theory* of image-use and image-performance is *still to come*. Regarding the natural or life-sciences, I have some doubts whether it will *ever* come. The reason for this scepticism is: The media involved with medicine simply work better if there is no reflection on them but just technical use. This is a version of the usual media paradox: Media make visible while making themselves invisible.

1. The *image* is victorious, the turn to *imaging techniques* as well.
2. Research using such imaging participates in this victorious medium and its power.
3. However, the life- and natural sciences are immune against imaging-*science*, because imaging (technique) is working without and even better without imaging-science and -theory.
4. This means that the turn to scientific and methodical research in imaging practices is still an open challenge.

2. What May Come after the Turn?

After a quarter of a century, when the turn was proclaimed at the beginning of the 1990s, and as the times and the turn go by and become history of science, what are the remaining or new challenges?

1. Which *methods* do we have for the “work on images”? Usually, we refer to *historical* and *empirical* methods. To interpret an image would mean to tell its (hi)story, and to do empirical research on its production, techniques, effects, etc. However, is it only these two mainstream methods we are acquainted with? What about hermeneutics, phenomenology, semiotics, iconic criticism et al.? Here the challenge of doing *methodology* arises.
2. Within the applicational turn, there is some *lack of theory*. That is why we need more work on concepts and theory. The subsequent challenge is “doing *theory*”: what concepts, distinctions and questions do we use? What is the background theory for the image? Is it art or design, is it a sign, a medium, an image-act, a technique, a cultural practice, a phenomenon, or almost nothing like a shadow, a fake or a fact, or is it just communication? Each of these concepts is an indicator for a different background theory, in which the image is included, and each concept offers an explication of “what an image is”.
3. In cultural studies, I notice a *broadening of the horizon*: expanding to visual culture, or crossings like scripture and image.

Because images are always “embedded”, it is a challenge how to deal with *combinations and chiasms* like “image and word”, “and number”, “and πρόγμα”, “and music”, etc. We need new perspectives on the multimodality and interferences of iconicity with verbality, scripturality and embodiment, etc. This would mean to address the chiasms of deixis and lexis. I would call it *differential analysis* of the interferences between iconic and verbal modes of communication: how iconicity and non-iconic modes of communication are intersecting. That is, I suggest to look for intersections and interferences.

4. There are signs for next turns or shifts: embodiment, (de/trans/re-...)figuration, mimesis, mediality, materiality (new materialism). Could it be that a wider horizon “after the iconic turn” is a turn to *mediality*?

5. However, while word and image are fighting for the victory, the *number* is already victorious (algorithms, big data) – and the fourth, the tone (or sound) is forgotten. Word, image, number and tone – are the four figures, intersecting.

3. Example: Embryo on a Pin

Medical imaging techniques are not just depictions or representations of facts. They *can* be so, but they are more: A CT or neuro-imaging may become a quasi-religious icon, shaping and forming our “image of life”. The invisible, the origin of life becomes visible – as if by a revelation of the secret of life. And the images themselves become alive – *living* images: like the first gestures of the unborn baby. May one say, some images become an image of life’s holiness – and thereby holy images, icons in a quasi-religious meaning?

One example is the famous 16-cell human embryo on a pin, produced by Dr. Yorgos Nikas, commercialized by Science Photo Library (sciencephoto.com). Nikas’ commentary of the image provides the following “information”:

Caption: Human embryo. Coloured scanning electron micrograph (SEM) of a human embryo at the 16-cell stage on the tip

of a pin. The ball of cells (yellow) of the embryo is known as a morula, a cluster of almost identical, rounded cells, each containing a central nucleus. This 16-cell embryo is about three days old. It is at the early stage of transformation from a single cell to a human composed of millions of cells. The cells multiply by repeated cleavage divisions (mitosis) and will form a hollow ball of cells (the blastocyst). Development of the blastocyst occurs before the embryo implants into the wall of the uterus (womb). Magnification: x130 at 6x7cm size. Magnification: x450 at 8x10 inch size.¹

What is going on in this image? What is shown and how?

1. It is a SEM-image (scanning electron microscope) of an “embryo on a pin”,
2. made in high vacuum as vacuum-stable object,
3. coated with an ultra-thin gold or graphite layer.
4. The human (?) embryo was frozen (where from? Legal and ethical questions...) and was coated, prepared for the imaging procedure, i.e. the embryo was killed for making the image (was the embryo alive before?).
5. For the composition of the image, the killed embryo and the pin were probably assembled secondarily, i.e. the image is a fictive assembly.
6. The colours and the light are free invention, producing an “aura” of the embryo, as if the light came out of it, or as if the “secret of life” were presented (like a revelation?).
7. The dead embryo (simply: the frozen and coated cells or the killed human life) is presented and transfigured: a mysterious transfiguration of something dead as alive.
8. The pin is showing something somehow: the contrast of the size (big needle, small embryo); presenting the embryo and transfiguring the (not anymore) living human embryo into a “secret of life”.

¹ Online: www.sciencephoto.com/media/313647/view/16-cell-human-embryo-on-a-pin-sem.

9. The pin is a sharp deixis: The image shows the pin, the pin shows the embryo, pointing at it.
10. The pin is the re-entry of the image within the image, a metonymy of the image in the image, or an exemplification of deixis.
11. The killed and transfigured embryo is shown (presented, pointed at) by the pin; the pin embodies the deixis and the image shows the showing of the embryo.
12. The image looks like a depiction or representation, but it is rather an inventive production and auratic presentation.
13. The public circulation of the image (including copyright and economical aspects) with a high reception made it into a “science-icon”.
14. The thesis for medical images like “the embryo on a pin” is: They are highly artificial images, whose artificiality serves the pretension of the most faithful depiction or imprint. We treat these images as if *that, what they show, was the shown itself*. Are they what they show? We believe that these are depictions – thereby we are treating these images *not as images, as not-images, but as imprints and visualized data*.

4. Methodological Proposal: Seven Steps of Work on the Image

Scientific as well as didactic image-use is “dangerous”, because it is a use of a quite powerful medium. May it be for teaching and learning, may it be for making visible what would remain invisible otherwise: Image-use is a challenge with methodological consequences. Whenever we make use of an image, seven steps of reflection and explication are necessary and can be methodically distinguished.

All of them are consequences of the concept of “image”: An image is not saying but rather showing: (often) something as something, showing the showing itself (reflexive), showing itself ([non-intentionally) and always hiding all the rest. The image is of course always in use, pragmatically embedded. If I speak of forces, powers

and effects of an image, it is a mode of speech, which may be justified by phenomenology or media theory: The image as medium is a phenomenon with power and effects.

First, the common use of an image is: to show what is said. In teaching or in medicine and in religion, the image shall show (make visible), what was said. Accordingly the image remains dependent on the text. However, this perspective is half-blind because the image is more than an instrument for illustration. Look at online newspapers: The image more and more dominates the news and the text becomes a comment on the picture. In medical diagnosis as well as in lectures it seems to be similar: the lecture becomes a commentary on the ppt-images, or therapeutical conversation becomes a comment on the images.

If the image is used for “illustration” or “proof”, it shows *more* than merely what is said. One may use the “embryo on a pin” as an illustration to show how small it is or how it looks like, but there is *more* at stake: a demonstration of the power of stem-cell-research, or as an impressive “science-photography” with some fascination.

The second challenge therefore is: not only to show what is said, but to *say what is shown* and how the image is going beyond what is said. That’s the crucial “problem” in image use: The image shows always *more* than what has been said. If the image was introduced for illustration, the “image game” has its own dynamics. To become aware of this “more”, and explicate *what more is at stake*, is a second and difficult challenge.

In the illustrational or demonstrative use of the “embryo on a pin”, showing simply how an embryo looks like and how small it is, one cannot or should not overlook that there is more shown: simply the colours for example and the play of light, the composition of a rough needle together with the “living” embryo. The presentation is more than a mere representation of an embryo.

The third challenge is that showing an image is not only showing something said but showing a *showing* and the *how* of showing. By using the image, one gives space and time for an event of showing. This is where the iconic difference becomes relevant: The image

may show something (said), but *how* it does so is different, *iconically different*.

Thereby, the seeing is different as well: recognizing something or seeing the “showing”. The Imdahl-difference of recognitional seeing and seeing-seeing is a marker of this difference.² For image-use the challenge is to reflect and explicate the difference. Or at first: to be aware of and to keep this difference. Otherwise the image would be reduced to its “content”, may it be the propositional or iconic content.

The *image* of the embryo on a pin is an image, of course. What is shown is one thing, *how* it is shown another. “Don’t think but look” – as Wittgenstein pointed out and claimed. This claim is not a claim for a “naive staring at”. I suppose it means pointing at a difference – in perception: Do not only recognize what you already know and re-cognize, but rather look at it to see something unknown, overlooked, strange, etc. This is a rule for perception: not mere repetition of the known but openness to the new or different.

Fourthly, the consequent challenge is *saying* the showing, i.e. reflecting and saying the *how* of showing, the iconic performance and “pregnance” (conciseness). This fourth challenge is precise articulation of the *how* of showing and its performance.

The *how* is crucial and decisive for the embryo on the pin: the play of light, the colours, the composition etc. And the “*how*” becomes again relevant in the use of the image: as an icon of “human dignity” or as a demonstration of medical power.

Fifth, the image in itself is always self-referential and self-reflexive. In the showing of something somehow, the iconic performance of an image consists in “showing *itself*” ([non-]intentionally). The image may show something somehow, but for doing so, at first and at last, it *shows itself*. The exposition of something somehow is as well an exposition of “an image” and what an image is and is capable of. *Showing the showing is a mode of self-reflection of each*

² Max Imdahl, “Cézanne – Braque – Picasso: Zum Verhältnis zwischen Bildautonomie und Gegenstandssehen”, in Max Imdahl, *Gesammelte Schriften*, vol. 3: *Reflexion – Theorie – Methode*, Frankfurt/M.: Suhrkamp, 1996, pp. 300–380.

image – and needs to be explicated. This “self-showing” or “self-exposing” is the aspect of phenomenality and appearance, in contrast to the intentional monstration of something.³

Therefore, the fifth challenge consists in: saying the “showing itself”, the reflection on and explication of phenomenality. This is what Imdahl called “Ikonik”: the reflection on what is genuinely “iconic”, specific to the image in difference to all other media.

In the case of “the embryo”, the showing itself is repeated and reflected in the image itself: The showing is repeated in the shown needle showing the embryo. The iconic presentation – the pin *presents* the embryo – is a *re-entry* of the image within the image: The image shows something, this showing is “made explicit” in the image by the needle. Like a mirror in the mirror it is an entry into a reflexive labyrinth.

Here it becomes manifest and explicit what an image does: appearance, monstration and presentation – in and with the representation. That this re-entry is presented as a *needle*, is not arbitrary: Remember the question for how many angels find place on a needle? And the needle seems to be an aggressive intervention, but the needle is not clean and sharp but rather rough. How rough is the medical intervention – in comparison to the embryo?

Sixth: The five challenges up to now have been “work on the image” while the image is working on us. It is an interplay of *manifest* factors in this image-game. Even the showing something, somehow and “itself” are manifest factors of the image performance. Keeping these differences and explicating them is hard enough. But it even gets harder.

Images are not only manifest and manifestations, but have their latency: What is *not* shown: the production: the killing and preparation of “human life”. What is “out of sight” or out of question: Is it really a human embryo? The assembly (or montage, installation): the iconic combination of needle and embryo. The translucent but

³ See Daniel Dayan, “Sharing and Showing: Television as Monstration”, *The End of Television? Its Impact on the World (So Far) – The Annals of the American Academy of Political and Social Science*, vol. 625 (2009), pp. 19–31.

hidden background; the laboratory situation, the photographer, etc., the commercial context of distribution and consumption, the political context about stem-cell-research, the ethical and legal contexts: killing for making an image – despite the human dignity of the embryo (or not – what is just the question).

The seventh challenge is what I tried to do here: to reflect on images as showing, something, somehow, the showing itself with reflexive re-entries – and to articulate by decisive differences the saying, the speech or explication of the whole complex. One may call it the *expanded method for image-science*. Without consideration of these seven steps, the work on the image remains somewhat blind.

The seven challenges are all together only the *first part* in the work *on* the image – explicating the work *of* the image. This is a *responsive* explication, in response to the image and its powers, and in methodical responsibility. But – that is not the whole challenge. The image-pragmatics has a double meaning: work *on or with* the image and work *of* the image itself. Usually we work *with* images; in image science, we work *on* them by research about their use, effects, performance and potentials. But thereby the image is working with and on us. Do not forget the retroactivity of the image.

The *second part* of image-science should reflect on what and how *we* are working on and with the image, what we are *doing* with them in working on them, i.e. also what and how we speak and think. The iconic difference reappears in the modes of speech and thought and theory. This means as well that we are not just saying something somehow in a clean distance. We do not only describe neutrally, but we are doing something somehow: for example, we are *showing* in our saying something somehow. In religion one would call that the dimension of witnessing in our speech – in risky self-exposition. That is at stake as well in science – because in any saying a showing and doing is present.

So – what may *I* have done with the “embryo on a pin” in this exemplification? And what may I say in response to the image? The strength and weakness of the image lie in its openness for interpretation and quite different use. While the image is relatively concise – the message, the performance, the reception and use remain quite di-

verse. That is a weakness if one expects unambiguity (in propositions and reference), but it is a strength in regard to its power and potentiality. The consequence is: The image needs further articulation, or with Charles Taylor: We must make *explicit* what *we* may see.⁴

What may be the latent claim or supposition of the image? What is its latent suggestion? So little and so alive? So little and so human? So holy and humane? Ecce embryo? Or vice versa: Look what we can do! And there was light and life – by medical intervention! It is our power, it is in our hands, not random or God’s choice.

From a phenomenological perspective, I prefer to say: We must *respond* to the image, in our own responsibility. We are used by now to the image of an embryo – but it can be surprising or even breath-taking: ecce embryo, ecce homo, ecce imago ...

5. Time for Pensiveness

I challenged the idea of a victory and fulfillment of the iconic turn: not only because in several sciences the iconic turn is yet to come, but also because the new empowerment of “the image” is ambiguous. The power of the image is tremendous, but thoughtful reflection and iconic criticism are quite slow and delayed. In comparison to visuality, words and concepts like understanding and theory have always been delayed. This is why word and concept as delayed media tend to criticize and “master” the image. Philosophy’s and theology’s histories are stories of the self-empowerment of the word and concept against the image – like David against Goliath.

That is why the “victory of the iconic turn” resembles “Goliath strikes back”. Always and from the very beginning more powerful, images strike back against the weak forms of word and concept. However, this striking back is in a way a necessary destruction of the self-empowerment of word and concept.

By the way, the story would become more complex and appropriate if “the number” was taken into consideration. The iconic-

⁴ Charles Taylor, *Sources of the Self: The Making of Modern Identity*, Cambridge, MA: Harvard University Press, 1989, p. 34

New Challenges after the Iconic Turn

turn may be overruled by the most powerful medium of digital communication: the number. May it be that behind the struggle of word and image the number becomes at last the actually dominant medium? We are confronted with “big data”, but rarely with “big images”. We live in the realm of algorithms. May the image be as strong as the numbers – or even stronger?