

How are images used for visual argumentation?
The logic of images in philosophy of language and semiotics

1 and not image = 2 or 

THE
image
THIRTEENTH INTERNATIONAL CONFERENCE



PICTURE A PANDEMIC
The Visual Construction of Meaning in Digital Networks

13-14 September 2021

Lisbon, Portugal
Polytechnic Institute of Lisbon, School of Education


Prof. Dr. Andreas Schelske
andreas.schelske@jade-hs.de

Prof. Dr. Andreas Schelske
Jade University of Applied Sciences
Wilhelmshaven / Germany

Conclusion on visual argumentation		
		
<p>Zeuxis and Parrhasios were competing to see who could paint the most lifelike image. Zeuxis painted grapes so lifelike that birds flew to the painting and wanted to eat the grapes. But Parrhasios presented Zeuxis with an image that seemed to be covered by a cloak of linen. When Zeuxis wanted to remove the cloak, he realized that he had fallen for an optical illusion or <i>trompe l'oeil</i>.</p>		
<small>Source: Anecdotes von Suetonius, Zeuxis und Parrhasios, 1975, Fälschung, Detail (unten) Platz: 13.2 x 10.1 cm</small>		<small>Prof. Dr. Andreas Schelske Jade University of Applied Sciences Wilhelmshaven / Germany</small>
		2


I start with my conclusion. Only humans use image communication. Often, a visual argument offers a multifaceted show. This phenomenon will be continuously named as an overwhelming argument in this text. This is because an overwhelming argument strives to use every iconic and indexical effect to seduce the viewer not to constantly think in symbols about what he sees, but rather to react spontaneously and emotionally. The anecdote of Zeuxis and Parrhasios, as presented by the Roman scholar Pliny Secundus in the first century AD, already referred to the special feature of the overwhelming argument. According to legend, Zeuxis and Parrhasios were competing to see who could paint the most lifelike image. Zeuxis painted grapes so lifelike that birds flew to the painting and wanted to eat the grapes. But Parrhasios presented Zeuxis with an image that seemed to be covered by a cloak of linen. When Zeuxis wanted to remove the cloak, he realized that he had fallen for an optical illusion or a *trompe l'oeil*. Zeuxis, unlike the birds, could undoubtedly formulate this fallacy in symbols. Also in this anecdote, images convince their viewers as an overwhelming argument, although language is necessary to raise the visual argumentation to the level of a formal logic as follows: Parrhasios painted an image that seems so lifelike that Zeuxis, as a reasonable person, fell for it. Zeuxis painted an image that seemed so true to nature that birds fell for it. From this follows the logical conclusion: If not only birds, but also a human being can be deceived by an image, then Parrhasios painted the more natural image and Zeuxis lost the contest. Nowadays, image science knows that images are never images of something, but a representation of a constructed reality. This communicative sense of a constructed reality is exactly the sensitive message that suppresses and conceals the overwhelming argument of image communication, because, after all, everybody can see how an image represents a reality, although it is only one among others possible by image logic. Every logic of images shows its reality, which functions in societies as visual argumentation as long as it is not verbally elucidated as overwhelming argument in a formal logic.

Logic and visual argumentation



Immanuel Kant, 1791

"Thoughts without content are empty,
intuitions without concepts are blind."
(Kant and Weischedel 1983, B 76, A52)




Source: Gottlieb Daubler - <http://www.philosophie.de/kant/bilder/bild.htm>

This is followed by an account of how semiotics supports a **logic of images** in coherence with the concept of logic from the ancient Greek as a **thinking art, procedure, consequentialism, or reasonable inference** (cf. Pfeifer and Braun 1993; Schopenhauer 2019, 98).

Prof. Dr. Andreas Schelske
Jade University of Applied Sciences
Wilhelmshaven / Germany


3

The following text discusses concepts used to talk about images. In this sense, the text is guided by the philosophical claim of Immanuel Kant: "Thoughts without content are empty, intuitions without concepts are blind." (Kant and Weischedel 1983, B 76, A52) The limitation of the following considerations therefore consist in the practice of the view and the consequences for the empiricism. In order to answer the questions raised, the following section first recapitulates why images do not withstand the criteria necessary for propositional logic and first-order logic in the formal logic of philosophy. This is followed by an account of how semiotics supports a logic of images in coherence with the concept of logic from the ancient Greek as a thinking art, procedure, consequentialism, or reasonable inference (cf. Pfeifer and Braun 1993; Schopenhauer 2019, 98). To describe the logic of images as thinking art, although it forgoes a logic of verbalizations and thus of language, seems unproblematic, since only Homo Sapiens can create images as signs and use them for interpersonal communication. Therefore, the final question of the following considerations is: How do images follow their logic, which allows them different forms of visual argumentation?


<p>Image based logic</p>	
<p>“We understand visual arguments to be arguments (in the traditional premise and conclusion sense) which are conveyed in images.” (Birdsell, David S., Groarke, Leo 2007, 103)</p> <p>This rhetorical trick can be easily exposed, because then likewise, a punch in the eye of an antagonist appears to such an extent evident or empirically significant as to finally convince him of one's own opinion, in an otherwise linguistic dissent.</p> <p>For example, Albrecht Dürer's painting Young Hare provides evidence that convinces, because it visually argues by means of a photorealistic representation in 1502, how a field hare can be designated as realistically (“verisimilitude”) as possible by similarity.</p>	
<p>Albrecht Dürer's painting Young Hare, 1502</p>  <p>Source: https://de.wikipedia.org/wiki/Feldhasen_(D%C3%BCrer)</p>	
<p>Prof. Dr. Andreas Schelske Jade University of Applied Sciences Wilhelmshaven / Germany</p>	<p>4</p>

Very simplified, but without far-reaching explanatory power, the pragmatic use of visual argumentation with Birdsell and Groarke can be described as follows: “We understand visual arguments to be arguments (in the traditional premise and conclusion sense) which are conveyed in images.” (Birdsell, David S., Groarke, Leo 2007, 103) Such tautological explanations follow the everyday observation that images are used in practice as visual arguments and are therefore supposed to be arguments. This rhetorical trick can be easily exposed, because then likewise, a punch in the eye of an antagonist appears to such an extent evident or empirically significant as to finally convince him of one's own opinion, in an otherwise linguistic dissent. **Such an overwhelming argument, as it is colloquially called in German, can be used to convince one's antagonist by means of evidence without further, real arguments.** Actions or images as signs do not have to be definable as arguments, although they seem to act like arguments in everyday life. In addition, as Roque points out, naming the visual channel is not sufficient to define visual argumentation as such (cf. Roque 2012, 276). The visual medium of image always conveys the message that something is visually present, without the possibility that argumentation in propositional speech acts could or should be equal to it. For example, Albrecht Dürer's painting Young Hare provides evidence that convinces, because it visually argues by means of a photorealistic representation in 1502, how a field hare can be designated as realistically as possible by similarity. Here, the visual presence of an image has an evident effect, because viewers understand without words and, if necessary, react, although they do not yet find words for what they see or even recognize arguments.

Arguments without vocabulary




Images do present a premise or a visually communicative assumption in a particular, more expansive definition of the term, but they do not contain a conclusion. Accordingly, the term “visual argumentation” can in no way mean an argumentation that is equivalent to the use of symbols in a language with a vocabulary.



Source: René Magritte, 1929 https://upload.wikimedia.org/wikipedia/commons/0/0d/Magritte_Pipe.jpg
 Pixabay, https://commons.wikimedia.org/wiki/File:No_smoking_symbol.svg

For images, there are no argumentative counter-images that put the facts of a first image in contradiction to those of a second image. Logical terms and usually also the dialog itself do not occur or rarely occur within visual communication.



Prof. Dr. Andreas Schelske
Jade University of Applied Sciences
Wilhelmshaven / Germany

5

First, the following question must be answered: How are arguments formulated in the vocabulary of a language? Philosophical argumentation theory defines an argument as a verbalized sequence of statements that requires one or more assumptions and a conclusion in a language. Assumptions are complete sentences that describe in words the premises from which the conclusion or inference is drawn (cf. Hardy and Schamberger 2018, 23). The formal logic of a verbal language is based on a foundation that uses logical expressions. Such logical expressions include, for example, the “words like ‘if – then’, ‘exactly then – if’, ‘and’, ‘or’, ‘all’ and ‘some’” (Hardy and Schamberger 2018, 22).

A very simple argumentation is therefore based on an assumption which allows a conclusion by means of logical expressions such as “if – then”, “and”, “or” as well as “not”. For example, a simple argumentation is: If it rains (first assumption) and individuals have no roof over their heads (second assumption), then they get wet (conclusion). Even such a simple example suggests that images cannot be explained or made sense of as visual argumentation with a philosophy of formal logic. Images do present a premise or a visually communicative assumption in a particular, more expansive definition of the term, but they do not contain a conclusion. Accordingly, the term “visual argumentation” can in no way mean an argumentation that is equivalent to the use of symbols in a language with a vocabulary.

What is meant by logic of images?

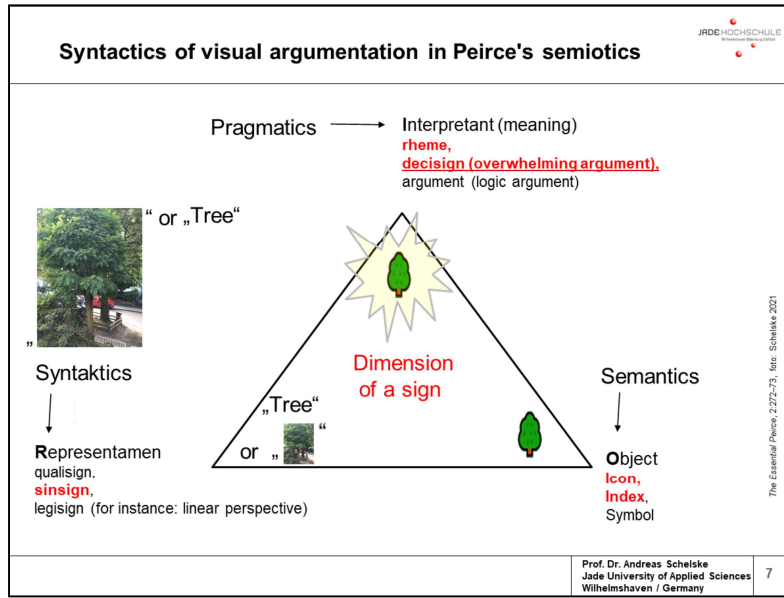


This historical development of the terms probably led to the interpretation of the term >logic< as the doctrine of thought, procedure, and finally consequentialism of reasoned conclusion.

In a more metaphorical interpretation, the notion of a visual argumentation seems clearer, if it implies that the logic of images describes a consequentiality which suggests that recipients might be convinced or seduced by an evidence of the images.

Edg.: Andreas Schelske


The formal propositional and predicate logic of philosophy offers no theoretical basis for establishing a visual argumentation. But then what does it mean when authors write scientifically about visual logic or visual argumentation? Are we talking here about an unfortunate metaphor chosen to assert, by means of a rhetorical artifice, the scientifically high rank of a logical argument for a visual argumentation as well? And this, although the original discipline of philosophical propositional and predicate logic rejects such expressions of a visual argumentation? For example, Schopenhauer already pointed out that logic and dialectic were used as synonyms in ancient Greece (cf. Schopenhauer 2019, 98). Logic was used to name the laws of thought and procedure. This historical development of the terms probably led to the interpretation of the term >logic< as the doctrine of thought, procedure, and finally consequentialism of reasoned conclusion. From such an interpretation, it seems less problematic to interpret the notion of image logic metaphorically and to understand it as the consistency of image-based communication. In a more metaphorical interpretation, the notion of a visual argumentation seems clearer, if it implies that the logic of images describes a consequentiality which suggests that recipients might be convinced or seduced by an evidence of the images.



A postulated logic of images on the syntactic level must be able to show how form and color are structured in visual media in order to elicit a willingness to follow on the part of image recipients. This is because the proponents of visual argumentation in particular always focus on the visual medium, as Dove notes, in order to emphasize the persuasive power of the visually perceptible (cf. Dove 2012, 223). This also shows that visual argumentation is persuasive in a different way than a formal logical argumentation, because the latter concept does not address the medium in particular, but the grammatical structure of the designations and meanings of an arrangement of signs. A language logic differs from a logic of images in that the latter, unlike the language logic, tries to convince with its perceptible materiality. This pictorial form of visual argumentation is dependent on its medium, because as an overwhelming argument it has to let its materiality and its syntactic structure have an effect on the viewer. Thus, it intentionally tries to prevent a subsequent, formally logical argumentation - just as a fist in the eye of the viewer would do in order to be right. But in order to gain communicative validity as an overwhelming argument, the syntactic structure of color and form must follow a cultural rule (cf. Schelske 1997, 146).

The most significant, visual argumentation of a regularity on the syntactic level in contemporary world society demonstrates the central perspective on a daily basis (cf. Schelske 1997, 34). On the one hand, the lens of a photographic camera stabilizes the expectation that the syntactics of central perspective will be adhered to according to rules. And in this way, on the other hand, the central perspective of a camera lens arranges the syntactic forms in a photograph so convincingly that recipients worldwide believe that the objects look more or less as they are iconically visible in the medium of a photograph (cf. Romanyshyn 1989; Rehkämper 1993). In this respect, the culturally connectable "relational aspect" (Watzlawick, Bavelas, and Jackson 1969, 53) of visual communication lies in the rule-like syntactics of the image in order to integrate itself into the image canon of an era.

Semantics of visual argumentation



As an overwhelming argument, the iconic object reference appears, for example, when recipients perceive a bear (decision) as so cute (rheme), that they claim that such a cute-looking bear could never kill people.

The image logic of visual argumentation works in the icon with the expectation that the image seduces, entices, or manipulates a recipient into an action, although in formal logic a very different conclusion would be necessary.

For formal propositional logic would express: If brown bears are large predators and all large predators can kill humans, then it can be concluded that brown bears can kill humans.




Foto: Rasmus Sinding, <https://www.pexels.com/de-de/fofobrunbar-35435/>

Prof. Dr. Andreas Schelske Jade University of Applied Sciences Wilhelmshaven / Germany	8
--	---

For the dimension of semantics, therefore, the question of visual argumentation must be as follows: How can the image's own semantics offer an image logic that, as visual argumentation, elicits a certain readiness to follow in the recipients? The question of semantics thus refers to how images designate an object and how their designations affect viewers. Peirce distinguishes the semantic object references into icon, index, and symbol (cf. Peirce, Hartshorne, and Weiss 1960, 2.274). The icon denotes something by its overwhelming resemblance to its object. This happens whenever, for example, we recognize a bear in the image of a bear, that is, the image iconically designates a bear. As an overwhelming argument, the iconic object reference appears, for example, when recipients perceive a bear as so cute, that they claim that such a cute-looking bear could never kill people. The image logic of visual argumentation works in the icon with the expectation that the image seduces, entices, or manipulates a recipient into an action, although in formal logic a very different conclusion would be necessary. For formal propositional logic would express: If brown bears are large predators and all large predators can kill humans, then it can be concluded that brown bears can kill humans.

Semantics of visual argumentation

For example, Coca Cola advertising often shows happy people, although it is by no means to be expected that the consumption of a Coke makes everyone happy.

The overwhelming argument of an icon results from the communicative power to create things, bodies, and lifeworlds in signifying images, although sometimes they can never be experienced - as shown - and are not even meant to be experienced.



Source: <http://www.frazerator.com/coca-cola-pastor/> Creative Commons Attribution 4.0

The visual argumentation of the icon subverts any formal logic to both impress and inform the viewer in the aesthetics of color, form, and materiality. Advertising, for example, thrives on the fact that images arouse expectations that cannot necessarily be experienced in terms of real things by the viewer. For example, Coca Cola advertising often shows happy people, although it is by no means to be expected that the consumption of a Coke makes everyone happy. The overwhelming argument of an icon results from the communicative power to create things, bodies, and lifeworlds in signifying images, although sometimes they can never be experienced - as shown - and are not even meant to be experienced. Always, the assertion of an iconic image is that what is shown could be like what is depicted simply because it can be shown as an image of something in positive presence. Scientifically, it can be claimed that angels are non-existent, but they can be seen in Christian images. Words sometimes remain powerless against convincing arguments. If the dream island, the dream car, the dream relationship or the dream life has been formulated as longing by means of images, then formal arguments often lose their relevance because they are perhaps simply no fun and have a disillusioning effect.

Semantics of visual argumentation


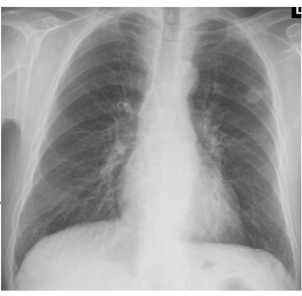
Visual argumentation is never symbolic, because it develops its persuasive power from the aesthetics of the material or the means of signification and the iconic object reference.

Source: Mike Lamm - <http://www.dfg-at-mainz.de/material/download-online/afzode-museum/afzodeonline.pdf>

Prof. Dr. Andreas Schelske
Jade University of Applied Sciences
Wilhelmshaven / Germany

10

Symbols in images oppose the concept of visual argumentation, because symbolic object references can be understood exclusively by means of verbal language and make visual insights impossible. For this reason, brands in corporate business are always built as arbitrary symbols and not as iconic images. As soon as symbols in images are used as a means of argumentation, formal propositional logic and predicate logic provide the context of all interpretation. Visual argumentation is never symbolic, because it develops its persuasive power from the aesthetics of the material or the means of signification and the iconic object reference.


<p>Pragmatics of visual argumentation</p>		
<p>The first X-ray images in 1895 finally showed an undeniable fact and a specific reality of human skeletons and organs.</p> <p>All examples of imaging techniques are based on the evidence that physical measurands depend on the causal relationship of cause and effect.</p> <p>From such imaging measurements follows causality, which in the natural sciences is considered a basis of theory building and often evidence of a reality. The precision that Birdsell and Groarke ascribe to the meanings of words is clearly shown by images with respect to the visualization of measurands, although their meanings remain manifold or interpretatively open.</p>		<p><small>Source: Lunge 123, Birdsell, eine Thorax mit Bronchialkarzinom https://de.wikipedia.org/wiki/Bild:Birdsell.jpg peripneumonia, Bronchialkarzinom, J. O. Pp</small></p>
<p>Prof. Dr. Andreas Schelske Jade University of Applied Sciences Wilhelmshaven / Germany</p>		<p>11</p>

As single signs, images present themselves neither as true nor as false. They are prelogical in the sense of formal logic, although their logic of images asserts the identity of something by means of the icon - apparently like a proper name. If recipients understand the logical consistency of a visual argumentation, they may be affected, amused, moved or emotionally touched, although a reaction is not subject to any logical consistency. For prelogical, emotional interpretations Peirce defines the so-called “rhema” (Peirce, Hartshorne, and Weiss 1960, 2.250) as the interpretant reference of a sign. Almost all images provoke a rhematic interpretant reference because their effect and meaning are initially emotional to comprehend.


The visual argumentation of image communication would be misrepresented if only emotional and aesthetic meanings could be interpreted, but no rational meanings. The first X-ray images in 1895 finally showed an undeniable fact and a specific reality of human skeletons and organs. Such imaging procedures, as they are also used today in ultrasound, X-ray and nuclear diagnostics, magnetic resonance and computer tomography as well as endoscopy, visualize physical measurands. All of the above examples of imaging techniques are based on the evidence that physical measurands depend on the causal relationship of cause and effect. From such imaging measurements follows causality, which in the natural sciences is considered a basis of theory building and often evidence of a reality. The precision that Birdsell and Groarke (cf. Birdsell, David S., Groarke, Leo 1989, 2) ascribe to the meanings of words is clearly shown by images with respect to the visualization of measurands, although their meanings remain manifold or interpretatively open.

Pragmatics of visual argumentation

Images based on the causality of measured quantities have a much higher persuasive power than artistic images when scientific facts are to be proven in our culture (!).



In the European Middle Ages, for example, elephants were often drawn with no models, according to linguistic descriptions.



Source: Roland Hinzke: https://de.wikipedia.org/wiki/Elefantenmittelalters_Elefant_und_Basilisk, w. Anger (p. 18) San. Basilisk de Bologna. Soma "Elephant and Basilisk" in the manuscript of the "Cronica" of San. Basilisk, Spain 12th century.


Prof. Dr. Andreas Schelske
Jade University of Applied Sciences
Wilhelmshaven / Germany

12

The aesthetic or emotional interpretations disregard imaging techniques because their visual argumentation is to be based on measured variables and their causality. The reality of a bone fracture in an X-ray image remains proven regardless of whether the X-ray image shows its measurands in shades of gray, blue, or red. If, for example, a magnetic resonance image appears more red, green or blue in the image, this does not change the scientific knowledge of a reality. The rationality of the visual argumentation concerning physical measured quantities always consists in recognizing these as proof of reality concerning the image and, by means of the verbal language, clarifying which measurement was visualized. The visualized measurands in imaging procedures therefore need the linguistic terms of formal logic to prove in a scientific context that e.g. X-ray images show a medical reality, which the commonplace look at a broken leg cannot prove.


Images of artistic painting are based on the forms that an artist represents by virtue of his creativity. The painter develops his creativity independently of measured quantities, although in perspective drawing he might try to draw as accurately as a photorealistic camera. The decidability of whether an image is based on measured quantities or on human creativity also affects the persuasiveness of visual argumentation. Images based on the causality of measured quantities have a much higher persuasive power than artistic images when scientific facts are to be proven in our culture (!). In the European Middle Ages, for example, elephants were often drawn with no models, according to linguistic descriptions. Nowadays, these medieval elephant images seem whimsical because they deviate greatly from the representation of reality, such as an elephant iconically shown to us by metrics of light imaging. Any willingness of recipients to follow stands or falls fundamentally with how cultural conventions are adhered to in an image logic. For example, digital photography still seduces many recipients today into accepting it as proof of reality, although many know how easy it is to manipulate.

Second conclusion on visual argumentation



The logic of images in the artistic type and in the type of measured quantities is based on the persuasive power of an overwhelming argument, which is to convince before all argumentation of a formal logic. If an image is based on the causality of measurands, then its overwhelming argument is to be recognized in this, since there is no counter-image to oppose it. If an image is based on the creativity of the communicator, then it achieves a willingness to follow because the image aesthetics subjectively please the viewer.

For example, a drawing can prove the fact of a gruesome murder, but at the same time, it disgusts viewers and in this respect is not aesthetically convincing.



Quelle: Polizei Niedersachsen 1985 Proximo in der Wikipedia auf Deutsch - Polizei Niedersachsen, Gemeinfrei, <https://commons.wikimedia.org/w/index.php?curid=2169702>

Prof. Dr. Andreas Schelske
Jade University of Applied Sciences
Wilhelmshaven / Germany

13

The logic of images in the artistic type and in the type of measured quantities is based on the persuasive power of an overwhelming argument, which is to convince before all argumentation of a formal logic. If an image is based on the causality of measurands, then its overwhelming argument is to be recognized in this, since there is no counter-image to oppose it. If an image is based on the creativity of the communicator, then it achieves a willingness to follow because the image aesthetics subjectively please the viewer. For example, drawing can prove the fact of a gruesome murder, but at the same time, it disgusts viewers and in this respect is not aesthetically convincing. Today's computer-assisted image processing again marks the special persuasive power of digital photography, because its metrics can be highly aestheticized by a communicator's creativity to please recipients. Digital photography thus combines visual argumentation by means of both metrics and cultural conventions, so that a photograph “exemplifies” both, aesthetically as a logic of images (Goodman 1973, 199f.; Schelske 1997, 36). Despite the connection of two types of images, digital photography does not receive a higher validity in its logic. For digital photography, the interpretant reference “dicent” also marks the highest possible persuasive power that images can achieve as an overwhelming argument of a logic of images. All images fundamentally fail at the requirements as demanded by an argumentation in formal logic. Images seduce when their logic of images appears powerful and they thus undermine any formal logic.