



“Metamorphosis” – When did we become Butterfly’s?

Humans are terrestrial animals. They do not possess wings, nor any other way to fly, they do not dot have six legs and they most certainly not produce offspring in the hundreds at once. But yet, in my mind, there is a certain similarity between them and Butterfly’s. They both experience the phenomenon of metamorphosis. Throughout history, literature and art, the topic of metamorphosis has sparked philosophical advances and an interest in the mesmerizing power of nature. Ovid explores the topic in many layers ranging from the transformation of humans into the environment through the violence inflicted upon them (1), whereas Kafka takes a more psychological route and uses the physical change as a means to inflict psychological change in the character (2). The wide range that the term has been applied to makes it confusing to pinpoint from where to extract the nectar of information. I will explore the topic of Metamorphosis firstly by familiarizing the audience with the process of metamorphosis of a butterfly and then discussing the existence of a psychological change in humans throughout history as well as humans in general that mimics the properties of insect metamorphosis. This is explored through the claim that humans undergo *metamorphic cycles*. So, on what kind of basis does the question of “When did we become Butterfly’s?” demand an answer?

Relevant Definitions:

Metamorphosis (3):
a complete change of character, appearance, or condition

[U] BIOLOGY specialized
the process by which the young form of insects and some animals, such as frogs, develops into the adult form

Symbolic thought (4):

Symbolic thought refers to the use of symbols (e.g., words and images) and mental representations of objects or events to represent the world

Syncretism (5):

The combination of many different forms into one whole form

Since metamorphosis in literature and art is a continuation of the scientific exploration and most certainly an interpretation of what this transfiguration entails. Therefore, it is important to develop an understanding of the initial phenomenon that helped spark the ideas of transformation, *Verwandlung*, constant manifestation etc.¹

egg

The process begins. The female adult butterfly lays around 100 to 300 *eggs* onto a leaf. The *eggs* are very close together. They are around 1-3 mm in size. A very specific leaf. Each butterfly species only eats one type of plant. This is called the **host plant**. This leaf will act as the first source of food. The *eggs* are round. The *eggs* can also be oval or cylindrical. The shape is species specific and can vary. The *eggs* are deposited during the months of spring to fall. The time it takes to hatch varies. It can take days to weeks. Or just until the weather and temperature is right.



Butterfly egg (a)

caterpillar

Once the weather and time is right a small butterfly larva (also known as a caterpillar) emerges from the egg. According to the butterflyschool (7) it is referred to as a “**first instar caterpillar**”. The caterpillar isn’t much larger than the egg itself but will grow very large. The only purpose of the caterpillar is to consume as much food as possible. The food that is eaten will be later used by the adult butterfly. As soon as the caterpillar is hatched it starts to feed on the leaf that the egg was placed on. Some caterpillars can grow up to 100x their original size and can reach a length of 2 inches long. During the time of feeding, they will grow so much, and their skin does not expand like in humans for example, it is necessary for them to shed their outer shell (exoskeleton) multiple times in a process called molting. After every molting the caterpillar is referred to as a different instar caterpillar. This system was put in place to distinguish between the individual appearances after every molting. Usually, after the fifth molting the caterpillar will have grown so big that it is ready to start the next step in the process of becoming a butterfly.

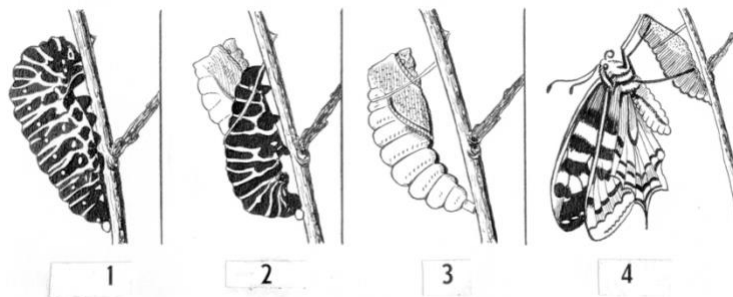
¹ References used to amalgamate the information describing the process of metamorphosis of a butterfly: (6-9)

pupa

When the caterpillar is ready to pupate, it spins a silk girdle and attaches itself to a plant (7). The shape at which it attaches itself depends on the species of butterfly. The caterpillar will then molt one last time and form the pupa (i.e., chrysalis for butterflies). The process that is occurring inside can last for weeks or up to two years for some species. What happens inside the pupa is a gruesome transformation that involves advanced scientific terminology. But what emerges is a beautiful, luscious butterfly that is ready to repeat the process once more.

butterfly

The butterfly's main purpose is to mate and lay eggs. Whilst the caterpillar was made to eat and become bigger, the butterfly isn't able to develop or grow. Whilst some butterflies get energy from nectar there are many species that don't feed at all. This is due to their lifespan being only around two weeks. Certain species of butterfly can live for multiple months due to hibernation. Another big difference from caterpillar to butterfly is that the butterfly is able to fly and for one find nectar and to search for the correct host plant for its offspring.



Metamorphosis of a Butterfly (b)

So, when did we become butterflies?

Rather than attempting to use analogies of both worlds, the butterfly and the human, the insect is an outcome of metamorphosis which we can “superimpose” on the context of change in psychological thinking, contextual analysis and environmental awareness of humans. At this point we use the idea of **metamorphic cycles** to clarify uncertainties in when humans went from being a caterpillar into a butterfly.

A **metamorphic cycle** is described as the period between a certain change in mental psychology of primates) and the realization of that change occurring.

In order to argue for the validity of metamorphic cycles it is important to refer to it in the real world. The first (and most certainly the longest) incident of a cycle ending is that of the concept of “**symbolic thought**”. Georg Herbert Mead & Sociologist Herbert Blumer configured the idea of symbolic interaction between oneself and the society that that individual associates with. Mead writes: “A person's sense of self emerges from the interaction with others (social interaction/society) and that societies emerge from interactions among people's selves” in *George Herbert Mead and human conduct* (10). The relevancy of symbolic interactionism as well as the use of symbols to communicate instead of signs of gestures (11), commonly exhibited with animals, allow for an interpretation that leads to approximation of when art was first consciously created.

In prehistoric times the modern definition of art and symbols used would be quite similar, because according to Mark V. Redmond, interpreting Joel Charon, a symbolic interactions expert, in his report of symbolic interactionism, “Symbols allow us to remember and reminisce, to evaluate and plan, to coordinate, to communicate abstract thoughts, to think about the future, and to consider alternatives and outcomes” (12-13).

This brings me to evidence of symbols, or in other words art, in history. Joaquin Rodriguez-vital, with his article on Rock engravings made by Neanderthals in Gibraltar, estimated that the clearly man made, with intention, skill and knowledge carved engravings in Gorham’s Cave, is a clear “demonstration of the Neanderthals’ capacity for abstract thought and expression” (14).



Carvings found in Gorham’s Cave provides evidence for symbolic thought. (c)

Another incident, where engraved ochres were found at Blombos Cave in South Africa that date back to the middle stone age (around 75 thousand years ago) are analyzed, described and evaluated by Christopher S. Hensilwood, suggest that “symbolic intent and tradition were present in this region” (15).

With the knowledge that Mead gathered in his studies, this marks the end of the metamorphic cycle, and in an analogy, as well to answer the question of this paper, refers to as the time in which humans had reached the so-called butterfly stage. To begin this cycle, they had to have evolved from animals to incidents ranging over uncertain frame of time which resulted in the psychic realization of the self, the other, the whole and use of symbols. Art acts a symbol of subjective matter that can benefit anyone that interprets it. This benefit acts as a catalyst to the evolution (i.e., transformation) of complex human life. Complex life is referred to as the idea that there is more to existence than knowledge of survival and reproduction and the awareness of a beginning and end of life itself.

Metamorphic cycles have been established and depict that they allow humans to change from something inferior into the next best thing. Another question that then arises, if this “metamorphosis” exists, what is there to say that it cannot re-occur. Furthermore, is metamorphosis a constantly re-occurring phenomenon that happens in every human. And so, when, and how.

In *The Hidden Order of Art: A Study in the Psychology of Artistic Imagination* by Anton Ehrenzweig, an Austrian art theorist, he discusses the child’s vision of the world. He writes: “While the infant experiments boldly with form and color in representing all sorts of object, the older child begins to analyze these by matching them against art of the adult” (16 p.6) which evokes an apparent change in the production and relationship that a child has to their art after a certain time. The term “syncretistic” or the syncretistic vision is often used to describe the distinctive quality of the child’s vision. Their ability to undifferentiated, or rather their inability to do so, allows them to expand their horizon indefinitely. Infants are not susceptible to anxiousness in work produced, nor are they capable of self-reflection. Ehrenzweig mentions

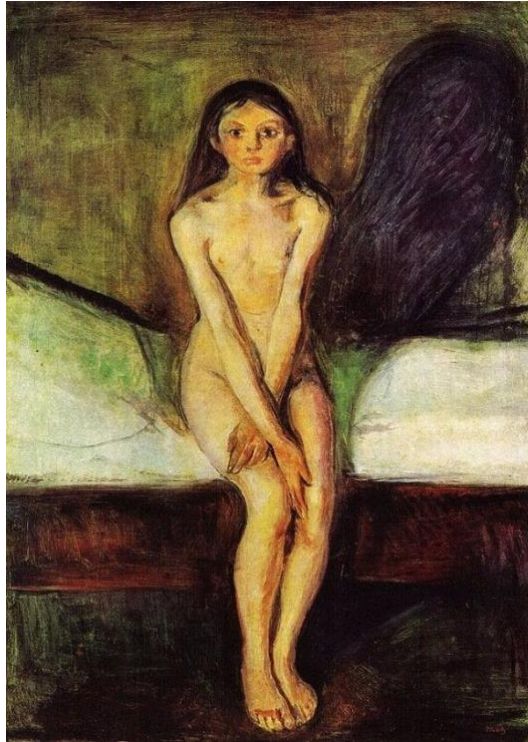
that a child's early work is "better in its aesthetic achievement" (16 p.6) because of his disregard for detail and the "global, unanalytic view" he possesses. Jean Piaget, Swiss psychologist, has brought widespread focus on the word "syncretistic vision" as he explains it to be a distinct part of a child's creative freedom and exploration in the early stages of life that start to fade after the eight year of life (17). It is apparent that the child has morphed its vision from being syncretistic to analytical in a matter of moments.

This is not to say that with time humans lose the ability to envision syncretic thoughts. Rather opposite, but with an analytical perspective. This dilemma, being torn between two ways in which to depict reality, can be problematic. For an audience, that is in the midst of a metamorphic cycle, the transformation from syncretistic vision to the analytical in this case, both interpretations of reality are questionable. It finds the vision of the child, lackluster and deficient, whilst not being able to grasp the full spectrum of the analytical interpretation.

Through attunement to the existence of both kinds of representations are we able to recognize the genius that Picassos distorted portraits embodied. Through experience, institutions, literature etc. we have been accustomed to the idea to not analyze the fine abstract details of Picassos portraits but to experience it as a whole. This proves that the capability to recognize is far more advanced in syncretistic ways of thinking.

At this point it has become apparent that the metamorphic change that occurs has a very subjective outcome, as well as incorporates a somewhat negative process. Whilst analytical evaluation of reality, that is manipulating the mind of a growing human, is quite necessary, as life is in simple terms, a collection of small issues that need to be resolved before the inevitable demise. Whereas syncretistic perception purely experiences life as a whole due to the primitive level of awareness. Once the metamorphic cycle has started, in order to minimize the harmful effect of the so-called analytic self-criticism, according to Eisner, should the growing child be exposed to artists (16 p.10) that include spontaneity and randomness as for example Picasso. Other include Klee, Miro, Matisse etc. Through the exposure to these artists the child is able to retain a vast amount of comparative self-criticism and can therefore more easily navigate and understand the realm of expressionism.

To finalize the argument surrounding the metamorphic cycles the change that occurs during puberty is placed in the area in-between start and end. An artistic example of how puberty can affect the metamorphic cycle can be seen by *Puberty* by Edvard Munch. The painting is a visual representation of one's confrontation of the topic of puberty/ the physical and mental change. It is said that this painting "the spark that led to the increase in the expression of his personal feelings in his artwork" (18).



Puberty, 1894 by Edvard Munch (d)

In the beginning sentences of this paper, I asked what the basis of the question “When did we become butterflies?” was. From all the information considered I can confidently present that the realization of a metamorphic cycle occurring to be the answer to the question. The cycle itself is the basis on which the question is presented. And the beginning of the most important metamorphic cycle can be traced back to the creation of art. The most relevant conclusion is generalized by the knowledge that as infants we experience reality through syncretic vision, and as we become older that vision morphs into an analytical world view. Now are these arguments enough to say that humans go through a metamorphosis? I think at a certain point we have to realize that us humans are very different from animals, especially insects. But that doesn't mean that nature didn't give humans the tools to transform into something even greater.

Notes:

Below is an account of certain intentional creative adjustments that were made and an explanation on the desired effect. Visual elements are also expanded upon:

- cluster of sentences (in explanation of an egg) rather than a fluid argument or consistent paragraph to visualize the eggs.
- Instead of explaining the chemical process of the pupa I replaced it in some areas with “dream-like” vocabulary. This was done to show the mystical properties of that stage of metamorphosis.

- Through the use of the starting question, certain neologisms, argumentative language I tried to link the beginning with the end, creating a circle reminiscent of the process of Metamorphosis.
- Especially for the scenarios where I describe artists that reflect spontaneity, I didn't want to include the images to encourage the viewer to remember examples seen previously. This remembrance would then be more syncretistic than analytical. The image can be distinguished in your memory, but most fine details have merged into one.
- The beginning and end images are supposed to represent the two ways of envisioning, that were examined in the paper. The beginning is very rounded, with colors merging with the words. The end is very clear, as well as details. The end is also shown in reverse to show a completion of a cycle.

Citations

1. Johnston, I. (2014, April 7). The Influence of Ovid's Metamorphoses. Retrieved February 22, 2021, from Archive.org website:
<https://web.archive.org/web/20140407101129/http://uts.cc.utexas.edu/cgi-bin/cgiwrap/silver/frame.cgi?ovid,influ>
2. Ottiker, A. (2017). *Die Verwandlung von Franz Kafka: Lektüreschlüssel mit Inhaltsangabe, Interpretation, Prüfungsaufgaben mit Lösungen, Lernglossar. (Reclam Lektüreschlüssel XL)*. Ditzingen, Germany: Reclam, Philipp.
3. metamorphosis. (n.d.). Retrieved February 22, 2021, from Cambridge.org website:
<https://dictionary.cambridge.org/dictionary/english/metamorphosis>
4. Hockenbury, D. H., & Hockenbury, S. E. (2002). Lifespan development. In *Psychology* (3rd ed., pp. 367–408). New York: Worth Publishers.
5. Youngblood, G. (2020). *Expanded cinema : Fiftieth anniversary edition*. Fordham University Press.
6. Butterfly Life Cycle. (2020, September 14). Retrieved February 22, 2021, from Ansp.org website: <https://ansp.org/exhibits/online-exhibits/butterflies/lifecycle/>
7. Butterfly school: Metamorphosis. (2016). Retrieved February 22, 2021, from Butterflieschool.org website: <http://www.butterflieschool.org/new/meta.html>
8. Butterfly Life Cycle. (n.d.). Retrieved February 22, 2021, from Thebutterflysite.com website: <http://thebutterflysite.com/life-cycle.shtml>
9. LIFE CYCLE OF THE BUTTERFLY. (2020, April). Retrieved February 22, 2021, from Wildnephinnationalpark.ie website: <https://www.wildnephinnationalpark.ie/wp-content/uploads/2020/04/Butterflies.pdf>
10. Blumer, H. (2003). *George Herbert mead and human conduct* (T. J. Morrione, Ed.). Walnut Creek, CA: AltaMira Press.

11. Hewitt, J. P. (1988). *The self and society: A symbolic interactionist social psychology* (4th ed.). Old Tappan, NJ: Allyn & Bacon.
12. Redmond, M. V. (2015). *Symbolic Interactionism*. Retrieved from https://lib.dr.iastate.edu/engl_reports/4
13. Charon, J. M. (2006). *Symbolic Interactionism: An Introduction, An Interpretation* (9th ed.). Upper Saddle River, NJ: Pearson.
14. Rodríguez-Vidal, J., d'Errico, F., Giles Pacheco, F., Blasco, R., Rosell, J., Jennings, R. P., ... Finlayson, C. (2014). A rock engraving made by Neanderthals in Gibraltar. *Proceedings of the National Academy of Sciences of the United States of America*, *111*(37), 13301–13306.
15. Henshilwood, C. S., d'Errico, F., & Watts, I. (2009). Engraved ochres from the Middle Stone Age levels at Blombos Cave, South Africa. *Journal of Human Evolution*, *57*(1), 27–47.
16. Ehrenzweig, A. (1992). *The hidden order of art: A study in the psychology of artistic imagination*. Berkeley, CA: University of California Press.
17. *Piaget's theory of cognitive development*. (2003). Valdosta, GA: Educational Psychology Interactive.
18. Puberty, 1894 by Edvard munch. (n.d.). Retrieved February 22, 2021, from Edvardmunch.org website: <https://www.edvardmunch.org/puberty.jsp>

Image Citations

- a) Butterfly Life Cycle. (2020, September 14). Retrieved February 22, 2021, from Ansp.org website: <https://ansp.org/exhibits/online-exhibits/butterflies/lifecycle/>
- b) File:Butterfly metamorphosis (line art) (PSF M-580001 (cropped)).png. (n.d.). Retrieved February 23, 2021, from Wikimedia.org website: [https://commons.wikimedia.org/wiki/File:Butterfly_metamorphosis_\(line_art\)_\(PSF_M-580001_\(cropped\)\).png](https://commons.wikimedia.org/wiki/File:Butterfly_metamorphosis_(line_art)_(PSF_M-580001_(cropped)).png)
- c) Rodríguez-Vidal, J., d’Errico, F., Giles Pacheco, F., Blasco, R., Rosell, J., Jennings, R. P., ... Finlayson, C. (2014). A rock engraving made by Neanderthals in Gibraltar. *Proceedings of the National Academy of Sciences of the United States of America*, *111*(37), 13301–13306.
- d) Puberty, 1894 by Edvard munch. (n.d.). Retrieved February 22, 2021, from Edvardmunch.org website: <https://www.edvardmunch.org/puberty.jsp>

metamorphosis

\sizedet':cmet3m, ,sizedet:cm'et3m, \