

*For what could be more beautiful than the heavens which contain all beautiful things,
- Copernicus.*

8. SUNFLOWERS BY VAN GOGH AND THE SOLAR SYSTEM.

After a few examples in the previous chapter, showing different kinds of signatures and their relationship to the so called main objects, we are ready for the “master example” of signatures. The example selected by the author of the book is a painting. It is not just any picture, it is a very famous one. Van Gogh, the master of color, painted sunflowers, two famous paintings. For our purposes, I selected the one with fifteen sunflowers, simply because the number of sunflowers is in my example also important, and more about that later. The other famous picture consists of 12 sunflowers.

Let us take a look at sunflowers on the picture. What do we see ? For me personally, the most important first look impression is, that every single sunflower is different. And the difference is far going; size, colors, age, angle orientation, shape, almost everything. Still every single object is a sunflower, and the composition of them all create the main object, called sunflowers, and this is the famous picture by Van Gogh.

There is more on the picture. In addition to sunflowers (the main object), there is a vase that the sunflowers are placed in, there is a kind of a background, and the background is painted in two colors. Of course last but not least, it is also possible to notice the signature of the great painter himself. Yes, that is exactly what we are after, again the signature. What about the signature then ?

Is it beautiful and colorful ?

No it is not, it is black. It is a very unique color on the painting.

Is it similar to the main object (the group of sunflowers) ?

No it is not, it is a string of characters, completely different from sunflowers.

Is the signature big, in comparison to the main object ?

No it is not, it is smaller than the smallest of all sunflowers.

Is the signature placed in the middle ?

No it is not, the signature is placed in the lower left corner, more or less on the border between the main object (the group of sunflowers) and the background.

Is the signature with the name of the author very hard to read ?

No, there is no problem with reading. Everybody can read out the name “VINCENT”.

As you can see here, above we have a few sentences about “what the signature is not ?”, as a kind of counterbalance, to what was said before in the area of “what the signature is about ?”. Some of the specific examples given in the previous chapter, were dealing with a single property of the signature. In the case of our master example, looks like everything what was said about the theoretical signature so far, is included in our beautiful example. So far we are talking about the picture. Now we will need some imagination for the next step. Are you ready ?

TRANSFORMATION, NOW.

Let us imagine that the Solar System is like the picture by V. Van Gogh. That is generally speaking four things as we described that above.

Let us name them again:

- the main object, composition of sunflowers that is,
- the vase that the sunflowers are placed in,
- the background,
- the signature.

We will include in the main object as in Van Gogh's picture 15 sunflowers. I say again fifteen sunflowers. No more no less, digits one and five, fifteen is the number (a few words of explanation will be added later).

Our transformation starts from the Sun. I say the Sun is the vase that supports all sunflowers, and contains some water I believe. It is a vital necessity for sunflowers, the same as the Sun for the planets. I guess we can say that the Sun is also vital necessity for us. Is it raining right now, or the Sun is shining by the way ? Here in Toronto, we have fantastic summer this year, the Sun is shining.

Step forward with our transformation, sunflowers are planets. This is especially easy to imagine since sunflowers indeed follow the Sun. They are the so called heliotropic flowers. There is 9 or 8 planets, (that depends if Pluto is included or not) and not fifteen. Correct, this is true, we made a mistake. Let us correct our mistake and add a few big moons so that the total will be equal 15. Big moons ? Why not, since some moons are bigger than planets, why should we ignore them ? Let us not ignore them. There will be then :

- 8 planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune),
- four Jovian moons : Io, Europa, Ganymede and Callisto (that adds up to 12),
- one moon from Saturn, Titan is its name (better, the total is now 13),
- one moon from Neptune called Triton (almost good now the total is 14),
- our moon called the Moon, and the total is now exactly equal 15.

If I was asked which one is the Earth, I personally would select the central sunflower with very precise details, and a mixture of different colors. As for the Moon, I would select the one in the lower left corner. It is like the Moon almost one color only. It is small, and like the Moon we see only one side of it, and it is located close to the signature of the painter, and this is important, and you will see later what I mean. In my opinion this is the last one that the artist created. That would explain the name " 14 sunflowers" of the original painting. Maybe the proper name should be "14+1 sunflowers". Please cover this sunflower with a finger, and you will see that the picture is still OK, maybe just a bit asymmetrical. As a representation of Mars I would select the sunflower in the upper left corner. If PLuto was included the total would be equal 16, but for PLuto there is a special place reserved, PLuto is excluded. In such a case the total is 15, and all listed above objects are bigger than PLuto. In our group we included 15 largest objects in the Solar System.

So we have the first two steps of the transformation completed, the Sun and planets turned into sunflowers and the vase. The next step of the transformation is the background. Let us say, that everything smaller than PLuto is not important and is included in the background. Quite a big step in our transformation. We put there everything : thousands of asteroids, small moons, thousands of comets, so called Kuiper belt objects (we hope there is thousands of them, in spite of the fact that so far around 200 were discovered (year 1999)), solar wind, interplanetary dust, interplanetary gases. In spite of the fact that we put there that much, it is not that much from the point of view of weight. Do you know that all asteroids (and we have thousands of them) taken together, are not as massive as the planet Mars ?

SUNFLOWERS BY VAN GOGH



“Fourteen Sunflowers in a Vase” by Van Gogh, where we can clearly see ... 15 flowers. Maybe I am mistaken, please count them all.

It looks like the transformation is completed, isn't it ? What about Pluto ? Exactly, good question, we said that we want to include planets and moons, and we decided not to include PLuto. Why ?

No, the picture of Van Gogh is not the reason, as you may probably think. It is just pure coincidence, that the picture contains 15 sunflowers, and we want 15 objects to be included in the main group (in the next chapter I will explain why 15 is the best number). Well, maybe not all true, my sister painted a copy of sunflowers for me for my birthday, and this helped me to select this example. Please do not assume that I think that the famous painting was painted especially for my book. Let us say that the author of the book found the picture with 15 sunflowers perfectly good as an example. Why PLuto is out ? We said that we wanted to include planets and moons, isn't PLuto a planet ? I am afraid it is not, even worse PLuto is neither a planet nor a moon.

What ?

Yes, that is correct. PLuto is not a planet, because it does not go around the Sun. Am I out of my mind, everybody knows that PLuto is a planet and goes around the Sun ! That is an example of historic tradition and nothing else. Another good example here would be with Indians who are not always from India . PLuto rotates around the common center of gravity, that is shared with its moon Charon. Charon is not small when compared to PLuto, and also is enough far from PLuto, and as a result the common center of gravity is outside of Pluto's body. As a result, PLuto rotates around an empty point in space, somewhere along the way between Pluto and Charon (please note that I consider Charon more like an attribute of Pluto, and not a separate object (!). Otherwise I would be forced to include Charon in the "background", since it is 22nd object in the Solar System from the point of view of its size).

This is the only "planet like object" in the Solar System like this. In the case of Earth+Moon system the common center of gravity is inside the Earth, so do not worry please the Earth rotates around the Sun, Copernicus was right.

I say that PLuto is not a planet, what is it then ? Is it a comet, an asteroid ? Neither a comet nor an asteroid. The closest match from this point of view, probably would be something like "double moon ". Please note that it is not a "double planet" as some astronomers started to call it (I do not know where they took this name from). However the best answer is, that PLuto is ... PLuto, because it is such a unique object, not similar to anything else in the Solar System, with maybe the exception of the other extreme rarity ... Earth+Moon.

PLUTO IS THE SIGNATURE, AFTER THE FOURTH STAGE OF OUR TRANSFORMATION. IT CAN BE CLEARLY SEEN, THAT PLUTO IN THE SOLAR SYSTEM IS PLACED LIKE THE SIGNATURE ON THE FAMOUS PAINTING.

The transformation is completed. Now, after all four stages of the transformation, we have our Solar System transformed into sunflowers. Of course, the main point of the transformation is to expose the signature in the maximum possible way. A very careful observer probably noticed, that the signature of the artist is placed on the vase, and not in the very corner of the picture as in most cases of signatures. The signature is placed on the vase, and its meaning in the transformation will be explained later, in order to show how good is the selected example with sunflowers.

I can imagine that some readers can be surprised here, with the example for the signature that I selected. So far (late 20th century) the Solar System was rather presented as a kind of a big machine. In fact, is it not a like a machine where everything goes around in such a perfect heavenly order ? We have here gravitation that is the dominant force, forcing all planets and moons to go around the Sun following the laws of gravity. Everything makes perfect sense, and an example of some kind of a machine probably would fit better one can argue. Say a giant clock or something similar. It is true. In 19th century everything was portrayed as a kind of a machine, it was a great age of mechanical engineering. The same was followed early in the 20th century, once electricity appeared, there were more machines. Then came electronics, finally computers. They are now smaller and smarter, but still more and more machines. I am an engineer myself, so why not a kind of machine as an example ?

I selected a painting on purpose. I want to show something with my example. The Solar System is like a machine only to certain extent. In the case of a machine everything is predictable and explainable. In the case of the Solar System there are things that our science will never be able to explain, no matter how fast and big computers of the future will be. Let me give you an example. It looks that there are four rocky planets (Mercury, Venus, Earth, Mars), then there is a gap (asteroids) and we have another group of four big planets (Jupiter, Saturn, Uranus, Neptune). Our science was more or less able to explain why it is like that. Amazingly the pattern with four objects is repeated in the case of satellites of Jupiter (the so called small Solar System). We have here four (Io, Europa, Ganymede, Callisto) similar in size objects believed to be born in orbit around Jupiter, like planets around the Sun . So far so good. It even looks that the pattern is repeated again in the case of Uranus. We have again four proportionally smaller moons believed to be born together with Uranus (Ariel, Umbriel, Titania, Oberon). Of course scientists created computer models that tell them, that this is the way it is allowed to be. In a sense the answer is; gravitation did this on its own. Everything is perfectly natural.

Unfortunately the pattern with four satellites completely breaks down in the case of Saturn. There is only one big moon, plus we have many small moons. Why this way ? Nobody knows, and nobody is going to know. The situation is even worse in the case of Neptune. There is no proportionally big satellites there, except for Triton, which was probably not born together with Neptune, because it rotates in the opposite direction. It is probably a captured satellite, that is what the science tells us. Excuse me, but captured from where ? No answer. Question like this is similar to another question “Why Van Gogh decided to place this sunflower here and this one over there ?” Why ? Because he found it to be beautiful this way !

I said enough. All I want to signal here is that the Solar System is probably a combination of both an “engineering perfection”, and a great example of “heavenly art”.