Abstract
There is a long tradition among architects for creating virtual utopias. Today it is Lebbeus Wood’s prismatic, organic, floating, mutating and abstract structures. The work process of Wood’s and the monochrome sketches of the graphic artist Palle Nielsen have been the inspiration and starting point for the case below.

This paper investigates where the classical drawing meets technology. The case unfolds very opposite aspects of the interaction and the integration of the analogue sketch process in the new 2D technologies. The case is based on monochrome architectural ink and pen drawings, combined with digital sketches as animation from Delphi, Egina and Athens. The work flow goes from ink and pen to digital sketch from 2D analogue to 2D digital.

When you record the sketch with the program “Camtasia” on a tablet notebook in Photoshop, the drawing becomes an animation. The user can play your sketch or stop and investigate any part of it. It is a learning process in understanding the interpretation of form and light.

Bachelard’s poetry is poetry of nearness which ties together the tactile and the metaphysical room taking its starting point in nearness, senses and dreams. Perhaps aspects of this poetry of nearness are to be found in the intuitive sketch. To Bachelard, poetry appears as a phenomenon of freedom, and poets, painters and artists are born as “phenomenonologists”.

This paper tells the story of the researcher’s and artists own reflective and interpretive strategies for authentic, first-person research. The paper will deal with explaining the relation between object, subject, concept and construction placed in context of Vallack, and Jopling’s aspects on “Sub-Phenomenology”. David Kolbs book “Experimental learning”, using the hermeneutic circle to unfold the intuitive sketch process and the loops between experimentation and reflection.

The loop of the design process can also be described in four levels:
1. Object is methodology level, analogue, actual and virtual.
2. Subject is ontological level, phenomenology interaction and learning.
3. Concept is epistemological level, content and storytelling.
4. Construction is the metric level, how to work with data, digital programming.

Keywords: Analogue, digital, monochrome, intuition and hermeneutic.
Daedalus above the black cliffs and white sea

“Now, at the name of the fabulous artificer, he seemed to hear the noise of dim waves and to see a winged form flying above the waves and slowly climbing the air. What did it mean? Was it a quaint device opening a page of some medieval book of prophecies and symbols, a hawk-like man flying sunward above the sea, a prophecy of the end he had been born to serve and had been following through the mist of childhood and boyhood, a symbol of the artist forging anew in his workshop out of the sluggish matter of earth a new soaring impalpable imperishable being?” (Joyce 1914)

In my dreams, gravity always is relative and random. If it is a lucid dream between awakening and sleeping, I use to be in control, defying the laws of gravity. Today, it is easy flying back over my heritage, the rocky and dense green island of my lost childhood. In my childhood dreams and nightmares, I could not control gravity. I was always falling infinitely, falling through fragmented landscapes of Dante's Divine Comedy, images of his journey to the underworld and hell, or falling in a void, or escaping the Great Flood. Now these days, I really appreciate flying, in dreams. But, flying came late to me.

I was a paradox living on a rock, when I could not swim. The sea represented all that was unknown, and I remember taking cover and hiding, wet and cold in an autumn storm under a sombre sky, behind the white lighthouse at the end of the harbour pier. While the white waves were stopping me from coming back to the city, I was both hiding and shirking from Sunday school at Bethesda. That morning, time stood still, and my memory of that day has grown dim into a grey, vague, claustrophobic echo; an ambiguous blurred remembrance; a blind spot, I suppose. But, I know it was the delivery of an aquaphobia, a great anxiety towards the transparent abyss. Nothing moved that day only white grey monstrous waves of the Great Flood, crashing and crashing towards the pier and lighthouse. Only a fool underestimates the sea, I was that fool. Swimming came late to me.

Every Sunday, we sang our hearts out in Bethesda. Bethesda was a house placed in a small street, as a great Ark ready for the Great Flood, a ship that carries the songs and words of God. The house was one room, one level, and one very high ceiling. And oh, have I sung out strange songs to that white ceiling with heavy black books in my hands, verse after verse after verse, praising the lord, with songs in an odd solemn old language. Progress has demolished that old Ark; I recall only the white ceiling and the black letters in the books on that strange, fragile, half transparent paper. What is left is a fragment in my memory of the evangelic wings, heavenly vaulted roof designed as homage to the Allseeing and Allknowing. It was a House of God, the architecture was a vessel for a higher cause, and a house filled with signs and images, a propaganda machine, based on architecture of metaphysics, awe, and vertigo.

Our house was an old Victorian house, richly ornamented, with complex details outside and inside. From the bottom and up; the cave or basement, with its naïve and cartoonish logos in children’s playroom and daddy’s workshop; next, the family ground floor, with its wall in the dining room painted with all the planets; above it all, grandfather’s attic atelier, with its constant flow of biblical images and text posters; and the stairway, with its vertical images of the four elements. The house was a vertical interpretation of Plato’s cave. The house becomes a living picture book for us children. Each level has its own atmosphere, story, and state of mind and the house was an empire of images and signs, space, and phenomenology. The architecture of dwelling is also metaphysically.
In that period, I spent hours in the attic looking into Gustave Dore’s illustrated Bible, especially the terrifying images of the Great Flood. The apocalyptic landscape was black and white under the black sky, white naked bodies of mothers lifting their babies struggling for survival on the last rock, in an infinite, immense, black sea. Twisted bodies, broken branches, curved and winding sea monsters, as precious, complicated, organic patterns in carving wooden Norse artwork.

Colours came late to me; hesitantly I was and very sceptical about it. I carefully added green, blue, and red to my vocabulary. Immediately, I got lost in great, dark, deep green old forests, in a stone labyrinth of red brick medieval ruins, on great red rocks, rising above the dark, blue, unpredictable, bottomless sea. The polychrome world overwhelmed me with kaleidoscopic visions, and for a while, I lost sense of direction, landscape, and form. To associate with colours is a true art form. I still have the prejudice that colour blurs the form and to see the real form and space you must look at the object in monochrome.

Palle Nielsen: Black light white darkness

Just as James Joyce develops his artistic vision on the basis of characters and stories in Greek mythology, so does the Danish artist Palle Nielsen, (1920 - 2000). His first graphical series Orpheus and Eurydice, (1959), follows the artist Orpheus on his quest to retrieve Eurydice from Hades and his journey through the apocalyptic city and dark, urban landscape.

Nielsen’s entire work is based on epic serial visions, with titles such as: “Orpheus and Eurydice 1. and 2., Isola”, “Pandæmonium”, “Nekropolis”, “Lethe”, “The enchanted City”, and “Hekuba”.

“[B]lack light and white darkness” is his way of describing his work and the relation between light and darkness within his images. Like a whisper before the storm, these images are frozen animations loaded with ambiguous omens. He is a master of monochrome wood engravings, linocut, and ink pen drawings. Polychrome came late to him, but in the Utopian series, “The Enchanted City”, it becomes a soft poetic, dreamy Elysian vision. He explains his artistic drive as follows:

“This is what I seek, this space that to me is the greatest miracle of the visual arts: the unity of the tangibility of language and the world of imagination, of dreams.” (Joyce 1914)

The dome of the Marble Church, (1740), designed by Nicolai Eigtved in Copenhagen, has been a building of great fascination to and inspiration for the work of. As a child Palle Nielsen has been circling around the plaza with the dome, and round, and round inside the building, and up, up
through the narrow curved stairs to the top of the dome and the beautiful panorama view of the city below. In the images of Palle Nielsen, the dome, as an architectural object, rarely has a lantern on its crest, which most classical churches have. To name a few such lantern crowned domes there is; St. Pauls Cathedral, in London, (1710), designed by Sir Christopher Wren, the great Baroque church of the Vatican St. Peters Basilica, (1626), which, most significantly, is designed by Michelangelo and numerous other artist.

Nielsen’s domes are round and smooth like the belly of a pregnant woman. His domes are rarely equipped with lanterns. Instead, they are mostly semi spherical or almost flat, like the Pantheon in Rome.

Sigurd Næsgaard, the psychoanalyst, referred to Palle Nielsens domed buildings as “Women portraits”. The domes are sacred buildings, perfect in shape. In his later work, the domes neither explode nor disintegrate; they become dense, soft, polychrome, poetic visions.

The Dome is a central motif for Palle Nielsen; the imploding, exploding, metamorphic, disintegrating flux of the infinite sphere, the sun, the moon, the womb, the godhead, the naval of the city, the archotypical centrifugal architectural dynamic form; a metaphysic form symbolising an infinite loop of beginnings and endings. The Dome is the most definitive architectural sign; a house of God, and like the basilica of St. Peter’s, in Rome, the Dome above reaches out to grab the city and the world. A Dome is a hierarchical symbol of a city reconciled with its own spirit.

A city only of domes will be like a beach of round stones, infinite non hierarchical with no centre and direction. One Dome in a city of cubes and squares is a nave, a centre that brings order and direction to the place.

The domes of Nielsen are ambiguous signs; “naked domes”. And when they disintegrate and explode, they mirror Nielsen’s fear. Though, when they rest in tranquillity, they resemble a pregnant woman and a pregnant city that carries the fragile hope of the future in its womb. For that reason, you may decode the dome as a symbol of power and a symbol of hope and reconciliation.

Svetlana Boym wrote in her book, “The Future of Nostalgia”, which is a case study on ruins in Berlin: “The ruin is an obvious example of the age value, but the value of the ruin itself changes trough history. In the baroque and rococo age, the ruins of antiquity were often used didactically, conveying the beholder. The contrast ancient greatness and present degradation. Romantic ruins radiate melancholy, mirroring the shattered soul of the poet and longing for harmonic wholeness. As for the modern ruins, they are reminders of the war and the cities’ recent violent past, pointing at coexistence of different dimensions and historical times in the city. The ruins are not merely something that reminds us of the past; it is also a reminder of the future, when our present becomes history.” (Boym 2001)

“Once, because there was time for it, I immersed myself in dreaming and fantasy in Rome, spinning a tale on the seemingly abandoned time of childhood.” (Nielsen 1984)

Nostalgia is something we all have in common. It goes beyond individual psychology and is the longing for our childhood, a longing and yearning for a different time and place closer to our experience of dreaming. Nielsen was attempting to create this collective, parallel space.

This is a rebellion against modern mainstream’s blind rush of our mediated culture, and it comes from Nielsen’s work as a message and a prayer to us all that we must learn from history, and that we need to reconcile our fears and images of possible enemies that haunt us.
METHODOLOGY AND FINDINGS:
Self reflective case study on Tower of Winds

This is a four part case study based on a sub - phenomenological approach; first comes the background of the artist, then the phenomenological and methodological approach to Palle Nielsen, then the actual case study of the design process on the site around The Tower of Winds, and finally, the drawing as a film and as sound and vision.

The loop of the design process in this case study can also be described in four levels, just like in the abstract:
1. Subject is the ontological level, phenomenology, interaction, and learning. The artist and the researcher as born; “phenomenologists”. Sense and sensibility. The artistic drive. Dream and reality.
2. Object is the methodology level, analogue, actual, and virtual. The artist and his case, place, time, light, shadow, canvas, pen, and paper.
3. Concept is the epistemological level, content, and storytelling. Aesthetical space analysis, architecture, and art. Architectural historical perspective.
4. Construction is the metric level, how to work with data, digital programming. The drawing as a film, as sound and vision.

The loop continues driven by action and reflection, as David Colb (Colb 1975) describe in his “Experimental learning”, using the hermeneutic circle to unfold the loops between experimentation and reflection:

- concrete experience,
- observation of and reflection on that experience,
- formation of abstract concepts based upon the reflection,
- testing the new concepts,
- (repeat). The loop continues.

David A. Jopling argues in his paper on “Sub-Phenomenology”: “Granting an increased role to phenomenological investigation in cognitive psychology is not tantamount to weakening or denying the role played by causal explanation: it is to reinstate the descriptiv element as an essential component in any complete causal explanation. Phenomenological description is not a substitute for causal explanation, but a constraint upon theory-formation” (Jopling 1996). Jopling insist, as Vallack, on a new hermeneutic and phenomenological approach to the intuitive design process to help understand and explain the complex and wordless processes in the design process.

“Sub-Phenomenology” relates to the nearness and joy of interpretation and creation. The French philosopher Gaston Bachelard states in “The Poetic of space” that poetry is based on nearness and dwelling, which ties together the tactile and the metaphysical room, taking its starting point in nearness, senses, and dreams. Perhaps aspects of this poetry of nearness are to be found in the intuitive sketch. To Bachelard, poetry appears as a phenomenon of freedom. J. H. Van den Berg writes: “The poets, painters and artists are born as phenomenologists” (Berg 1955)
And through their art they reveal the close and “happy” rooms of reminiscences, in which the house becomes a mirror reflecting the consciousness and the inner soul. This paper tells the story of the researcher’s and artist’s own reflective and interpretive strategies for authentic, first-person research. Bachelard explains:

“By the swiftness of its action, imagination separates us from the past as well as from reality; it faces the future. To the function of reality, wise in experience of the past, as it is defined by traditional psychology, should be added a function of unreality, which is equally positive,…Any weakness in the function of unreality, will hamper the productive psyche. If we cannot imagine, we cannot foresee.” (Bachelard 1994)

**Being there with Aerides and the eight winds**

The Tower of the Winds, or Aerides (Winds) also called *horologion* (timepiece), is an octagonal Pentelic, marble clock tower, placed close to Eastern Propylon of the Roman Agora, in Athens (build between 19-11 BC). It is the most well-preserved structure of ancient Greece. The structure features a combination of eight sundials, a water clock, and a wind vane. It was supposedly built by Andronicus of Cyrrhus around 50 BC, but according to other sources it might have been constructed in the 2nd century BC and before the Roman Agora that was constructed around 19 -11 BC. The roman General Lucius Sulla besieges and sacks Ancient Athens in 86 BC. And in 31 BC, Emperor Augustus initiates a systematic reconstruction program for Ancient Athens, with the intention and ambition to recover her ancient luster.

The tower, with its Doric interior and its Corinthian exterior, featured a 24 hour mechanized clepsydra and indicators for the eight winds, from which the tower received its name. It displayed the seasons of the year and the astrological dates and periods. It was a 12-metre-tall structure with a diameter of about 8 meters, and it was crowned, in antiquity, with a weathervane-like Triton that indicated the direction of the wind. Triton was the fish-tailed sea god, the son and herald of Poseidon, king of the seas. He stilled the waves with a blow of the conch-shell trumpet. Below is the Frieze depicting the eight wind-deities — Boreas (N), Kaikias (NE), Eurus (E), Apeliotes (SE), Notus (S), Livas (SW), Zephyrus (W), and Skiron (NW). It was considered important to know the winds, so as to estimate the arrival of products coming by sea. The considerable height of the tower made it visible from most of the agora, making it effectively an early example of a clock tower.

The Tower has two propylons or entrance porches; one on north eastern side and one on north western side. Attached to the south side is a cylindrical annex. It was a sort of metrological station with a system of sundials on the exterior. The water clock Clepsydra inside was driven by water from the Acropolis. The octagonal tower stands on a three step platform with three extensions. The octagonal shape is an extraordinary, compact, geometrical form based on a clear symmetrical axe, from north to south. The German architectural researcher Hermann J. Kienast states that the combination of the octagonal ground plan, and numbers 8 and 3, is a bold, unique, harmonic composition, which is the first in ancient Greek architecture (Kienast 2007).

The tower has survived 2000 years of war and changes, in early Christian times; the building was used as the bell-tower of a Byzantine Church. Under Ottoman rule it became a tekke and used by whirling dervishes also known as a dergah, a tekke is a lodge for dervishes. At that time it was buried up to half its height, and traces of this can be observed in the interior. In the tower the
dervishes performs the ritual whirling dance or Sema that is the name of the ritual dance performed by the dervishes turning round and round to music to get closer to the prophet. The Order of the Whirling Dervishes is one branch of the vast Sufi tradition of Islam. The Tower was finally fully excavated in the 19th century by the Archaeological Society of Athens.

THE ART OF SITTING THE SHADE
White shadow black lights and the song of the cicada

The tower stands on the north side of the Acropolis rock. It is the only ancient structure that has survived for over 2000 years. Many younger structures have crumbled, included are the entirety of buildings around the Roman Agora. Only the Fetiyeh Moschee, which was build much later than the Turkish conquest of Greek, in 1496, stands. The rest is ruins. Because of the excavation, the tower stands almost in a countersink that is a lower terrain than the rest of town. Though, due to its dynamic octagonal shape and its height, it acts as the hub for the entire city area, beneath Acropolis.

What partly explains the dynamic power of the tower, are the eight winds that swirl clockwise, which generates the experience and illusion of the tower slowly turns clockwise. And when you walk around the building, it feels like it is the hub of the city, and that the city is controlled by its secret power. No matter from whence you approach the tower, from the south hillside and above, from the north in the narrow streets, from the west in the bottom of the excavation, between all the broken columns over the agora square, or moving between the trees on the east side that partly hides the tower, the tower is the centre.

Just as the dome, the tower creates order, system, composition, content, and direction in the urban landscape. The Dome and the tower have a long range of similarities; they centre and create focus, and they are both signs of great significance.

The relief sculptures of the eight winds move with the sun, and the shade on the octagonal tower moves with the eight winds and the eight sundials. The tower is a weather station and a clock tower. Form and function create a dynamic synthesis to serve the city; mercantile, but and at the same time poetic. The spirit and the constant movement of the Whirling Dervishes are still embedded, as almost invisible shadows of the dancers, on the wall in the building.

Being there for an entire day makes it possible to follow how shadow moves across the octagonal tower and to experience how a dark shadow on a white, marble wall can become illuminated as the result of the inherent, reflective, prismatic quality of marble. If you stare long enough at the shadow, it disappears, and the wall just becomes a pattern of different colour tones and shadings of shadow and light. The shadow whitens, and from the two door openings a deep, black light inverts and creates a white, whispering darkness.

Being there and drawing all day, looking at the prismatic structure of the tower distorts your vision, so that it seems as if you are looking through a kaleidoscope, only in slow motion. At night it stands as a yellow-white, naked monolith behind the black, closed, iron fences. The floodlight, on the tower, makes it looks like a shadowless, opera coulisse, though in the evening twilight, in between sunset and floodlight, the eight winds sinks silently into the shadow of the tower. After a long day
of hard work under the merciless sun, above the tower whispers the soft, newborn stars; this moment is a moment of true Poetry. This is the art of sitting in the shadow.

Findings: The flow of becoming and the tablet trouble

The question in the abstract was: “can we create a new synthesis between the analogue and the digital sketch?” So how is the findings and conclusion on the three loops of the case study?

1. **First loop** with black pen on white paper, in A4 format, was quick, small, and conceptual, and simple travel sketches and close-ups. The quick travel sketch has a nerve like reportage; it is conceptual notations, and the flow of the sketch is short and intense. It is all a matter of time, of hit and run. It is also a play on memory; can I draw what I saw 5 minutes ago, for how long does the image stay fresh I my memory, how photographic is my memory, and for how long can I remember a scene, a face a street? And is this kind of drawing not another form of memory and vision compared to the direct confrontation with the object on the place, drawn as seen directly without delay. This is what the first loop was concerned with; the two kinds of drawings, the direct and the memory based sketch. It is like the close-up, where you do not see the entire picture, you only see a section, not the panorama.
2. **Second loop** with black pen on white paper, in A2 format, was slow, complex, precise, detailed, big, and panoramic. One drawing took an entire day. The landscape becomes immense, and following the shadow during the day, on the chosen location, becomes a real challenge. It was one thing to decipher the many complex, spatial layers and perspective points, but at what point during the day cast the revealing shadow that clarified form and gave a bit of spirit to the place. To figure this out, I had to stop halfway into the sketch and return the next day, at the right time, in order to capture the exact, right shadow. Thereby, each drawing developed in its own tempo and life, and the best way to work was to have several drawings in process, and then to work on them in their own pace and flow.

3. **Third loop** Drawing with Camtasia on a A4 screen on a tablet computer, is like drawing by looking through dark sunglasses. The sunlight is so sharp that it weekends the light in the tablet screen, and you are only able to see what you draw, if you use a broad line, which renders the drawing more rough and simple; it becomes a naïve expressive travel sketch.
Conclusions: The first and second loop were diametrically opposite forms of expression; the quick, documentary conceptual against the vast, panoramic, complex image. The third loop reveals the problem of simulation; when you use the tablet computer to simulate an analogue sketch, you have an actual screen (paper) and pen, so from the outside it looks as if you are merely doing a normal drawing. But, nothing could be more wrong. It compares to using an iron nail scratching on window glass, and even though you “draw”, there is no soft tactile experience of the pen and paper. It resembles stumbling around blind, with eyes wide open; you simulate and pretend, and your brain tells you that it is a drawing you produce, but your body and soul tell you that nothing happens; it is just empty movement in the air. The tactile sense of the artwork in
progress has gone.
The experience of drawing with a pen or pencil, on paper and canvas, is such a pure and tactile experience. The pen is the direct extension of your eye, and the pen hits the paper before the brain has analyzed the move. It is pure intuition; it is the flow of becoming a meditation, where body and mind is one, and where no technology interferences or blurs the pure experience.

To work and sketch on a tablet computer with Camtasia demands a totally different approach; first you must accept that what you are doing is a simulation, you must accept the possibilities that the new technology provides, and you must accept the layers of delay, which technology produces. What you are creating is a second order artwork, a simulation. Your media is the pen and Photoshop, but there is an important third part, Camtasia, the program that records what you are doing. Thus, time suddenly becomes an important factor in the design process. You can record the sounds of the place where you are; your speech, the song of the cicada, you can add music, or just let the sound of the pen on the screen be on the soundtrack.

So the question in the abstract was: “can we create a new synthesis between the analogue and the digital sketch?” This is actually an impossible question, because the answer is both no and yes.

No synthesis: Technology delays, with its complex interface, the intuitive workflow, and the loss of the fundamentally tactile experience from the classical, analogue, intuitive sketch process is evident and cannot be replaced. The spiritual link between eye, intuition, pen, and paper is a sublime experience. (Subject, object, concept)

Synthesis: What technology looses in nearness, from a phenomenological point of view, it gains in the sense of the communicative and pedagogical values. It makes it possible for both the artist the researcher, and the audience (students), to enter into the design process at any point; “Play your sketch” or watch the film that unfolds the (simulated) intuitive search for the spirits of place. (Construction, concept, object and subject)

Ole Pihl

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