

# CREATIVE OFFICE SPACES UNDER INVESTIGATION

About the crime of uninspiring creative spaces in architectural offices

an investigation by René Damstra

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An investigation by René Damstra

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**01** (front and back cover) Photograph of one of the shelving at the office of Adema Architects in Groningen. The shelves are filled with 'creative clutter' and inspirational objects such as books, images and models.

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## **ABSTRACT**

The aim of this research is to understand creativity related to three separate subjects, 'creativity in mind', 'creativity in space' and 'creativity in practice'. All of the three subjects are linked to the creative spaces of the architectural office. It is the question, "How did the interior of creative spaces within the architectural office form and how has it developed as a reflection of the architects creativity?" that will be answered. Creativity proves to be essential for arts, new inventions, innovations and human expression. Creativity often takes place in the studio, which is in essence a workspaces to bring creatives together to work hard, collaborate and learn from each other. The workspaces can both facilitate and stimulate the creativity of the people inside. The ability to produce something that is both original or innovative and possess utility or value for someone, proves to be an important part of the work of an architect. Creativity is, however, an integral part of the architect and architecture, which reflects on the workspaces of an architect. Personal preferences and the personal quest for creativity claim to a large extent the influence on the architect's workplace. Famous books about creativity, written by authors and philosophers are used as a source of information. Researches and studies of scientists are added to support and prove the literature. Creativity linked with the workspaces of architects and as a reflection of the mind of the architect, fills the gap between separate researches about creativity, architects and its workspace. The case studies of architectural firms, all located in the north of the Netherlands, add an additional layer of renewed information.

## INTRODUCTION

With the mysterious arrival of “creativity genes”, genes that are linked to creativity, by Homo sapiens the modern human had an important advantage over the Neanderthals. These creativity genes even made it possible to avoid extinction.<sup>1</sup> The rapid emergence of creativity 200.000 years ago, before the spreading of modern humans from Africa and the extinction of Neanderthals, still raises questions. What is clear, however, is the rapid development of the modern human that followed in the history. The remarkable creativity gave the Homo sapiens, among other things, the ability to innovate and express themselves through the first signs of art.<sup>2</sup> The emergence of creativity proves to be the key point of all the developments we, as modern humans, accomplished in the last 200.000 years. The modern human uses creativity to innovate and solve the problems it was facing.

Even today, the modern human is facing huge problems that affects the whole world. It is still creativity and innovation that drives the development of the human civilization. Creativity is crucial for art, new inventions and human expression. We, as humans, should celebrate creativity every day, as it is creativity that brought us here today. However, the humanity lost sight of their most important ability of creativity, because it got used to walking the familiar path.<sup>3</sup> In the meantime there are architects, that are considered to be creative minds, are sometimes sitting behind their blank desks in uninspiring office buildings. Although it is still creativity and problem-solving that drives architects like Bjarke Ingels mentions in his quote, the design of their creative spaces does not always seem to reflect their creativity.

“For an architect, [creativity] means attempting to create the physical framework that allows us to live the way we want to live—rather than being forced into lifestyles imposed upon us by our societal structures or physical environment.”<sup>4</sup>

Bjarke Ingels

Ingels describes that architects rather do not want to be forced into lifestyles imposed by societal structures, while architects actually seem to be forced into these patterns. Ordinary architectural offices, are silent witnesses of this event. ‘Creative Office Spaces Under Investigation’ aims to investigate whether it is true that architects commit the crimes of uninspiring creative spaces. It raises the question: “How did the interior of creative spaces within the architectural office form and how has it developed as a reflection of the architects creativity?”. The main research question is divided into three sub questions: “What is, and how works creativity?”, “How is the interior of creative spaces of architectural offices designed?” and “How did the interior of the creative spaces of architectural office evolved by time?”. ‘Creative Office Spaces Under Investigation’ questions the role of creativity within architectural workspaces. It is structured by the successive chapters “Creativity in Mind”, “Creativity in Space” and “Creativity in Practice”. In the first two chapters the research about the subjects is given by literature and research. In the third chapter, creativity is research in the current time through three case studies of architectural offices.

- 1 Ann De Nil, “Creativiteitsgenen Gaven Homo Sapiens Voordeel Op Neanderthaler,” DPG Media Privacy Gate, accessed February 18, 2022, <https://www.ad.nl/wetenschap/creativiteitsgenen-gaven-homo-sapiens-voordeel-op-neanderthaler-aa5e62e7/>.
- 2 Zwir, I., C. Del-Val, M. Hintsanen, K. M. Cloninger, R. Romero-Zaliz, A. Mesa, J. Arnedo, et al. 2021. “Evolution of Genetic Networks for Human Creativity.” *Molecular Psychiatrie*, April, 1–23. <https://doi.org/10.1038/s41380-021-01097-y>.
- 3 Ronne Theunis, “5 Tips Voor Meer Creativiteit Op De Werkvloer,” RTL Nieuws, May 23, 2018, <https://www.rtlnieuws.nl/sponsored-special/artikel/4202261/5-tips-voor-meer-creativiteit-op-de-werkvloer>.
- 4 Mimi Zeiger, “Inside the Mind of a Creative Architect,” *Architect*, August 31, 2016, [https://www.architectmagazine.com/practice/inside-the-mind-of-a-creative-architect\\_o](https://www.architectmagazine.com/practice/inside-the-mind-of-a-creative-architect_o)

## 01 CREATIVITY IN MIND

Creativity plays consciously or unconsciously an important role in daily lives, as it is crucial for arts, innovations and human expression. Thereby, creativity is one of the most complex human behaviors and regularly seen as something subjective. In addition, a person's amount of creativity is hard to test and measure. It is why creativity amazes researchers, writers, philosophers and many more. Although creativity can be viewed as subjective, 'Creativity in mind' aims to define the definition of creativity and to show the working and debunked myths of creativity.

## Creativity in human minds

Many people might think creativity is only sculpture, drawing, music or dance. The confusion of equalizing 'creative' with 'artistic' is often made by people. Architects and designers are expected to be creative thinkers by most of the people, while for example CEOs and lawyers are just as creative. There are ones who think creativity is a fixed trait and a result of being born with 'creative genes', which can be seen as one of the creative myths.<sup>5</sup> As the actor John Cleese once said: "Creativity is not a talent. It is a way of operating."<sup>6</sup> Creativity is reconnecting existing ideas in order to make something new, as Steve Jobs once said: "Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while". The overall definition used by scientists to research creativity is described as the ability to produce something that is both original or innovative and possess utility or value for someone.<sup>7</sup>

Art and experimental findings in research are often viewed as something that goes beyond reconnecting existing ideas in something new. Creatives as Albert Einstein are seen as mysteriously creative with some kind of undisclosed blessing. However, creativity is not in all aspects as mysterious as it seems. Some compare it to a mental muscle with ways to train it. Creativity is also about letting go, with the subconscious taking over. Musician and producer Brian Eno's creative philosophy called "Gardening, not architecture", is about planting something and seeing how it grows rather than trying to completely constraint and know every detail of it. Humans seems to do it all the time, as for example in music: "What if we did this you know, twice as fast?" and "What if we did this a country song?".<sup>8</sup>

About creativity in human brains there is this myth of left brained and right brained people, in which the logical thinking occurs in the left hemisphere and all creative thinking in the right hemisphere.<sup>9</sup> However, creativity is too complicated to take place in one certain spot of the brain. Just like creativity is 'connecting things', the brain does exactly the same. Various regions of the brain communicate with each other to arise creativity. Two crucial networks work together, including the default mode network. The default mode network leads in times of inner focus, as we are daydreaming. With this active network people turn up with creative and innovative ideas. After the default mode network, people start to steer their thinking and that is where the executive control network kicks in. With this adequate focus, people evaluate their ideas they just invented during the previous network in their brain. The first network provides new ideas through innovative connections and the second network helps to determine the value of the new ideas.

5 Tom Kelley and David Kelley, "The Heart of Innovation." Introduction. In *Creative Confidence: Unleashing the Creative Potential within Us All* (London: William Collins, 2015).

6 Austin Kleon, "You Don't Have to Be a Genius," in *Show Your Work! 10 Ways to Share Your Creativity and Get Discovered* (New York: Workman, 2014).

7 Dita Cavdarbasha and Jake Kurczek, "Connecting the Dots: Your Brain and Creativity," *Frontiers for Young Minds*, May 12, 2017, <https://kids.frontiersin.org/articles/10.3389/frym.2017.00019#:~:text=White%20matter%E2%80%94white%20matter%20makes,together%20more%20ideas%2C%20more%20quickly>.

8 *The Mind Explained, Season 2, Episode 4: Creativity, The Mind Explained, Season 2, Episode 4: Creativity* (Netflix, 2019), <https://www.netflix.com/browse?bjv=81098586>.

9 Dita Cavdarbasha and Jake Kurczek, "Connecting the Dots: Your Brain and Creativity," *Frontiers for Young Minds*, May 12, 2017, <https://kids.frontiersin.org/articles/10.3389/frym.2017.00019#:~:text=White%20matter%E2%80%94white%20matter%20makes,together%20more%20ideas%2C%20more%20quickly>.

By creatives, that seem to be more creative than the average person, these two networks communicate more.<sup>10</sup> The part of the brain that makes this connections possible is called the ‘white matter’. If the white matter is well-connected the brain will bring more ideas together.<sup>11</sup> In addition, there are many more parts of the brain that play a small role in the realizing creativity.

It is probably no surprise that when you let your mind roam ideas can arise. It does not matter what makes your mind roam, doing something else can contribute to emerge ideas. There is even a study that proves getting tipsy can result in abrupt creative ideas. Sleep can facilitate the emerge of ideas as well, where you wake up with ideas.<sup>12</sup> Dreams are according to scientist important for creativity and learning, because of the limitless imagination in dreams. In dreams people can break patterns and test ideas without any logic, reasons or consequences.<sup>13</sup> Research showed that the activity of the brain, during the twilight zone between sleep and awake, results in bursts of creativity. Participants of the research during the twilight zone solved the problem with a 83% change versus 30% when the participants were awake. The name of the research underlines the conclusion: “Sleep onset is a creative sweet spot”.<sup>14</sup> It is exactly the sweet spot Salvador Dali and Thomas Edison used in a sleep technique to foster creativity. In their sleep on a chair they have an object as a spoon or ball, which falls before the next sleep stage starts in. The moments of unconsciousness, where reality and fantasy collide, were experienced by Dali and Edison before they started their works.<sup>15</sup> Another research of the brains of freestyle rappers also showed the unconscious, the loss of sense, that fostered their creativity. The daydreaming default network was activated, while parts of their executive network were nearly shut down. The executive networks were not shut down all the way, because the words of rappers are not random.<sup>16</sup>

Daydreaming can act as a seed for creativity, but after that the seed must be nurtured. People need to work for creativity after daydreaming, to make the seed turn into something. Creativity takes in this process of creativity, when the executive networks operate, focus and dedication. Without this process, peoples are like a child with a limitless imagination. It is exactly the reason why often artists try to get into their childlike mind with childish curiosity. Creativity might suggest and romanticize the limitless possibilities of ideas. However, infinite possibilities will disadvantage creatives as it results in expected and boring ideas. An example given in *The Mind Explained* illustrates the ideas people come up with when facing limitless possibilities: When asking to name all things that are green, people will come up with grass or trees.

10 *The Mind Explained, Season 2, Episode 4: Creativity, The Mind Explained, Season 2, Episode 4: Creativity* (Netflix, 2019), <https://www.netflix.com/browse?jbv=81098586>.

11 Dita Cavdarbasha and Jake Kurczek, “Connecting the Dots: Your Brain and Creativity,” *Frontiers for Young Minds*, May 12, 2017, <https://kids.frontiersin.org/articles/10.3389/frym.2017.00019#:~:text=White%20matter%E2%80%94white%20matter%20makes,together%20more%20ideas%2C%20more%20quickly>.

12 *The Mind Explained, Season 2, Episode 4: Creativity, The Mind Explained, Season 2, Episode 4: Creativity* (Netflix, 2019), <https://www.netflix.com/browse?jbv=81098586>.

13 *The Mind Explained, Season 1, Episode 2: Dreams, The Mind Explained, Season 2, Episode 4: Creativity* (Netflix, 2019), <https://www.netflix.com/browse?jbv=81098586>.

14 Célia Lacaux et al., “Sleep Onset Is a Creative Sweet Spot,” *Science Advances* 7, no. 50 (October 2021), <https://doi.org/10.1126/sciadv.abj5866>.

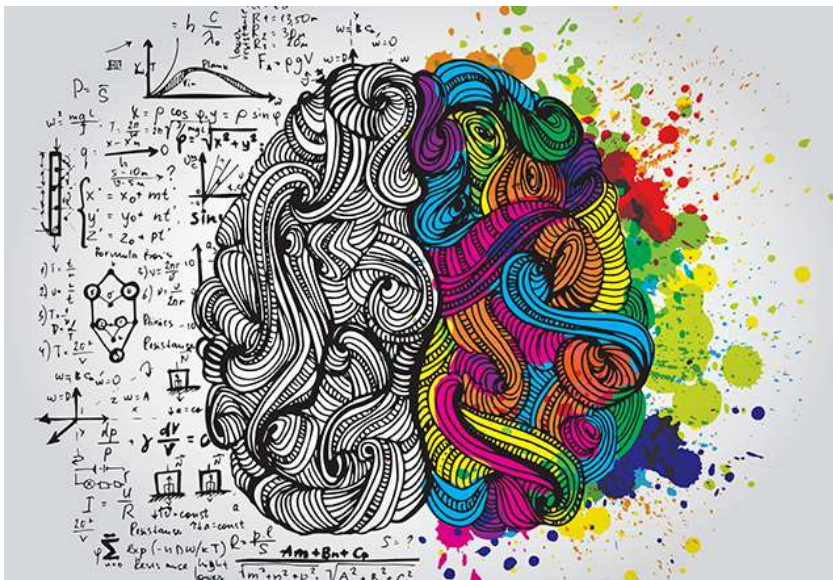
15 Yasemin Saplakoglu, “Sleep Technique Used by Salvador Dalí Really Works,” *LiveScience* (Purch, December 8, 2021), <https://www.livescience.com/little-known-sleep-stage-may-be-creative-sweet-spot>.

16 *The Mind Explained, Season 2, Episode 4: Creativity, The Mind Explained, Season 2, Episode 4: Creativity* (Netflix, 2019), <https://www.netflix.com/browse?jbv=81098586>.



If asked all green things in Paris at the turn of the century, people will come up with more creative things as absinthe or Picassos paint.<sup>17</sup>

Another integral part of creativity is aimless curiosity, whereby more knowledge and experiences result in more material to work with. It is proved by open-minded people, who often are more on the high edges of the fictional creative spectrum. Research showed that people with creative breakthroughs swapped more between various (side)projects than others. The projects stimulate each other and helpful skills can be learned to apply in another project. The most inspiration comes, however, from other people. Studies have shown that dating people from other cultures increase creativity, because of the more flexible thinking. Leaving comfort zones definitely can help in creating experiences to later on work with. People who lived elsewhere in foreign countries, prove to be more creative according to creativity tests. Other studies have shown that when people are stimulated to debate and criticize more creative ideas arise, rather than admire each other.<sup>18</sup>



## 02

Illustration of one of the myths about creativity: left and right brained people. In the myth logical thinking occurs in the left hemisphere and all creative thinking happens in the right hemisphere (Learman, 2019).

## Creativity in architect minds

'Creativity in architects mind' is not a suggestion that creativity works differently in the mind of architects, but it is focused on the creativity of architects and functions as bridge between 'creativity in human minds' and 'creativity in architects minds'. Architects use creativity in order to end up with a creative outcome as a solution to a problem. The creative outcome is a result of 'the creative process'. In the creative process an architect experiences according author George F. Kneller different phases, which give an insight into the various stages that are happening during the process.<sup>19</sup> Kneller based the creative process on the well-known phases of the universal creative process of scientist Graham Wallas, but added the phase of 'first insight'.<sup>20</sup>

17 Ibid.

18 Ibid.

19 Bryan Lawson, "Creative thinking" in *How Designers Think: Demystifying the Design Process* (Oxford: Architectural, 2005).

20 Dita Cavdarbasha and Jake Kurczek, "Connecting the Dots: Your Brain and Creativity," *Frontiers for Young Minds*, May 12, 2017, <https://kids.frontiersin.org/articles/10.3389/frym.2017.00019#:~:text=White%20matter%E2%80%9494white%20matter%20makes,together%20more%20ideas%2C%20more%20quickly.>

The creative process of an architect consists of five different phases. The five phases are called: first insight, preparation, incubation, illumination and verification. In the first phase the problem will be formulated, after which a conscious attempt at solution takes place in the second phase. The third phase is the incubation phase, which characterizes as 'no conscious effort'. The illumination phase is the 'eureka'-phase, which is the sudden emergence of an idea. The phases will be shut down with the verification phase, in which conscious development will take place.<sup>21</sup>

The formulation of the problem is something that arises in accordance with the clients, or is formulated by the architect after his analysis of the clients' needs. The first phase mostly takes place at the architectural offices. Also, new problems will be found during the process – it is an iterative process, that can take place both in the creative spaces of an architect's office or outside. The phase relates back to Eno's philosophy of "Gardening, not architecture", whereby in this phase is something planted to see how it grows. In this first phase there can be daydreaming and subconscious thoughts, whereby the default mode network is activated. As soon as the problems are formulated, the phase of conscious attempt to solve the problem takes place. This 'preparation'-phase will be connected with the creation of concepts and sketches, in which the executive control networks of the brain kicks in. In the phase the seed, that is planted before, must be nurtured. The phase is obviously something that takes place in the architects' office. Thereafter, the incubation phase is a phase of no conscious effort. The incubation phase is a phase of working on other projects: "Thus the practicing designer and the design student alike need several things to work on in order not to waste time while one 'incubates'." After unconsciously thoughts about the project, the illumination phase takes place. The phase of 'sudden emergence of idea' can take place everywhere and anytime. The phase isn't particularly linked to the architects' office, but could happen in the office. The final phase, the verification phase, is the conscious development of the ideas. After the 'eureka' moment the ideas will be developed in the office. The different phases are connected and can overlap, which increases the chance that the creative process happens at the architectural offices. The design process is an iterative process, which means it is a continuous process back and forth.<sup>22</sup>

Architecture balances between art and science. This balance is something that reflects in the work of the architect. The thinking process of art and science differs, whereby lateral thinking applies to art and linear thinking applies to architecture. Lateral thinking uses similarities and connects ideas on a spectrum to come up with something full of fantasy. Linear thinking, on the other hand, is a linear process that leads from idea to a certain result.<sup>23</sup>

Creativity remains something mysterious to researchers. Not all aspects of creativity and of the brain are yet researched. Creativity is the ability to produce something that is both original or innovative and possess utility or value for someone. Architects achieve this through a creative process consisting of successive phases.

21 Bryan Lawson, "Creative thinking" in *How Designers Think: Demystifying the Design Process* (Oxford: Architectural, 2005).

22 Ibid.

23 Ken Boroson, "What Is Architecture – Art or Science?," *Timeless, Enduring Architecture*, February 29, 2016, <https://www.kbarch.com/articles/what-is-architecture-art-or-science#:~:text=Both!,essential%20to%20creating%20great%20architecture.>

## **02 CREATIVITY IN SPACE**

Creativity by architects takes mainly place in the physical spaces of architectural offices. 'History of creative spaces' intends to elaborate on the history and origin of creative spaces led by architects. The chapter describes the development of architectural offices and points out why the offices look the way they do. 'Conditions of creative space' aims to include the conditions or requirements to facilitate and increase creativity within physical spaces. The different types of creative spaces are categorized in 'Typologies of creative spaces'.

## History of creative spaces

In ancient Greek and Medieval times manual skills were sometimes seen as inferior to intellectual work. Performers of manual labor were designated to workshops that were tucked away, had a high risk of disease infections and other bad conditions. Prestige did not come until the created objects left the workshops. Later on, the workspaces or 'ateliers' of the first craftsmen like goldsmiths, sculptors and musicians represented the creativity. The ateliers of these artists helped to shape the first architecture studios. However, until the Middle Ages the actual first architects were chief-carpenters who had their 'workshops' on site. In the Renaissance the first advanced architects appeared, painters often ended up in architecture. The painters studio turned out to be a good working place for designing, with the high ceilings and lots of daylight.<sup>24</sup> The Renaissance was also the first time the term 'studio' pops up. The term studio referred in that time to the workshop of an artist of fine or decorative arts.<sup>25</sup> The Renaissance architects added in time a new feature to their studios: libraries, which ended up being an essential tool. The profession of an architect clearly became of socially importance, which resulted in the improvements of their working spaces. The previously discussed process mostly took place in Italy, while in the rest of Europe this process took more time. In the North the architects still were for a long time linked to engineering.<sup>26</sup>

Towards the end of the eighteenth century offices were private offices added to residence. The private offices were designed as home libraries, but were open and inviting to clients. Changes within the offices were made later, after the arrival of modern capitalism. However, the real gamechanger turned out to be the Industrial Revolution. The result was a new structural building especially for the intellectual working class: the office building. The office building progressed the architect's office into the commercial mainstream and to the rank of an enterprise. New changes came by the nineteenth century, with the inventions of the telegraph and the typewriter. In the same century the cooperate architecture became of interest with a hierarchical organization, presence of light and ceiling height. In the decade of the 1920s, steel file cabinets and stainless steel furniture were introduced in offices. The more comprehensive changes in the architectural office furniture happened after 1940, when a lot of architects started to design and produce their own furniture. Thereafter, the profession of interior architect started to arise, which naturally reflected on the office of architects. Later, during the seventies the high tech furniture found their way to the interior of offices. In the 1980s the computer changed the office and the work methods dramatically. With the arrival of technology, there were even shifts and disappearances of professions.<sup>27</sup>

In the more contemporary offices, the offices were dealing with integration and flexibility. Also, inspiring work spaces are important in nowadays offices.<sup>1</sup> Offices are seeking an image, which needs to be more unique. Every architect has its own quest, which has led to offices such as the workshop of Charles and Ray Eames, the messy and crowded open plan office of Frank Gehry and the white colored and clean office of Richard Meier.

24 Anatxu Zabalbeascoa, "Introduction" in *The Architect's Office* (New York: Whitney Library of Design, 1996).

25 Juriaan Meel, "Type 6: Studios," in *Workplaces Today* (Amsterdam: Centre for Facilities Management, 2015).

26 Anatxu Zabalbeascoa, "Introduction" in *The Architect's Office* (New York: Whitney Library of Design, 1996).

27 Ibid.

For a business today to be even successful, the companies need to distinct and to stand out.<sup>28</sup> Creativity is a more integral part of the firms and offices today, often showing the playfulness of creativity. For designers and architects, however, creativity is more seen as a serious skill. The appearance of the studio seems to define if it is a studio or not, but the essence of the studio lays, as author Juriaan van Meel describes, in bringing creative people together in a workplace where they can work hard, collaborate and learn from each other.



### 03

A cropped photograph of the engraving of a Renaissance studio by Philips Galle, after Jan van der Straet, c.1593 – c.1598. It illustrates the busy and creative dynamics of the studio (Glover, 2021).

## Conditions of creative spaces

Creative spaces of architectural offices are meant to facilitate creativity, because drab and ordinary spaces do not work, as Tom and David Kelly once said: “If you want a team of smart, creative people to do extraordinary things, don’t put them in a drab, ordinary space.”<sup>29</sup> For creativity to be part of the work, it must be built into the physical spaces, where there are conditions to foster creativity in workspaces.

When thinking about creative spaces, there is a distinction between the neat, well-organized minimal studio and the messy studio. The messy studio is most often visualized as the creative space of creatives. According to research, the mess or ‘creative clutter’ stimulates creativity. The researchers concluded: “Disorderly environments seem to inspire breaking free of tradition, which can produce fresh insights (...) Orderly environments, in contrast, encourage convention and playing it safe.” On the other hand, the research shows that neat workspaces encourage thoughtfulness, generosity and improves well-being.<sup>30</sup> At the same time, other research points out that a messy workspace undermines persistence and self-regulation. People behind messy desks are less efficient, less persistent and more frustrated. The mess creates a feeling of depletion, the feeling of a loss of personal control. However, the depletion of disorder could stimulate people to think divergent, which increases creativity.<sup>31</sup> Since creative clutter fosters creativity, horizontal surfaces can be added to accommodate creativity because they attract creative clutter and mess.<sup>32</sup>

28 Winnie Hart, “The Importance of Standing out in Business,” Inc.com (Inc., September 6, 2016), <https://www.inc.com/entrepreneurs-organization/the-importance-of-standing-out-in-business.html>.

29 Tom Kelley and David Kelley, “The Heart of Innovation.” Introduction. In *Creative Confidence: Unleashing the Creative Potential within Us All* (London: William Collins, 2015).

30 Juriaan Meel, “Type 6: Studios,” in *Workplaces Today* (Amsterdam: Centre for Facilities Management, 2015).

31 Boyoun (Grace) Chae and Rui (Juliet) Zhu, “Why a Messy Workspace Undermines Your Persistence,” Harvard Business Review, January 22, 2015, <https://hbr.org/2015/01/why-a-messy-workspace-undermines-your-persistence>.

32 Scott Doorley and Scott Witthoft, “Foreword\_by David Kelley” in *Make Space: How to Set the Stage for Creative Collaboration* (Hoboken (N.J.): J. Wiley, 2012).

Or to minimize horizontal surfaces to, as author Gustave Flaubert, “Be regular and orderly in your life, so that you may be violent and original in your work.”<sup>33</sup>

The creative clutter can be an inspiration for people, because they get inspired by what surrounds them. It is suggested to keep supplies and tools visible for inspiration, because people tend to use only the items that are nearby in the creative process. By reason of “out of sight, out of mind” there needs to be spacious workspaces, in which tools and materials are almost effortlessly visible and accessible. About materials, the floors and walls that consist of raw materials communicate creative possibilities rather than the well-known office carpets. It is also about imperfection, which refers to the possibilities of experimentation. Whether it is a minimal or messy studio, the spaces have to equalize ranks within architectural offices. In spaces with leveling status people share more ideas. It is suggested to sit together in circles or around square tables. Symmetry in the setting ensures that all individuals are equal in status.<sup>34</sup> While creative spaces are key for the creative process, other supportive spaces are just as important. Artist Maira Kalman once said: “Avoiding work is the way to focus my mind.” Every creative mind should get lost and mess around during the creative process.<sup>35</sup> Therefore, “on” and “off” spaces are suggested to give creative minds room to think. Creatives need a shift in the scene to work out an idea. Something creatives also need, are spaces that encourage our bodies to move, people can't just sit still. While the modern human made a rapid development after the emergence of creativity genes, as mentioned in the introduction, people are still primates or smart apes born to move. Providing more chairs than people is one way to encourage people to both move and interact.<sup>36</sup>

Creative spaces, like desks or project rooms are examples of the main place for individual or group creative tasks. Author Austin Kleon refers to these places as the stages of creatives: “Creative work is a kind of theater. The stage is your studio, your desk, or your workstation.” These stages are provided with for example a designated place to create, display and store yet unfinished work. In these creative space are at least four ‘attributes’; a place to access exclusive resources and tools, store continuous and unfinished work, showcase input and to share ideas, emotions and connections. However, it is important to leave room for evolving, improvement and grow. Among the exclusive resources and tools, as one of the attributes, belong books too. Author Austin Kleon wrote about this “Collect books, even if you don’t plan on reading them right away” and refers to filmmaker John Waters: “Nothing is more important than an unread library.”<sup>37</sup> Reading books is generating ideas and imaginations, whereby reading books can stimulate encourage and advance creative thinking. As written in the first chapter, reading adds knowledge to a person which enlarges the knowledge of existing things to combine it in order to create innovative ideas. Author Richard Steele described it as “Reading is to the mind what exercise is to the body”.<sup>38</sup>

33 Austin Kleon, “Don’t Wait Until You Know Who You Are to Get Started” in *Steal like an Artist: 10 Things Nobody Told You about Being Creative* (New York: Workman Publishing Company, 2021).

34 Scott Doorley and Scott Witthoft, “Foreword\_by David Kelley” in *Make Space: How to Set the Stage for Creative Collaboration* (Hoboken (N.J.): J. Wiley, 2012).

35 Austin Kleon, “Don’t Wait Until You Know Who You Are to Get Started” in *Steal like an Artist: 10 Things Nobody Told You about Being Creative* (New York: Workman Publishing Company, 2021).

36 Scott Doorley and Scott Witthoft, “Foreword\_by David Kelley” in *Make Space: How to Set the Stage for Creative Collaboration* (Hoboken (N.J.): J. Wiley, 2012).

37 Austin Kleon, “Don’t Wait Until You Know Who You Are to Get Started” in *Steal like an Artist: 10 Things Nobody Told You about Being Creative* (New York: Workman Publishing Company, 2021).

38 John Adair, *The Art of Creative Thinking* (London: Kogan Page, 2007).

As already mentioned in the previous chapter, gathering and collaboration are crucial for creativity. Creativity is constantly a collaboration of connected minds. Motivation for collaboration can be to supplement weakness or to add another pair of eyes.<sup>39</sup> Collaboration can be stimulated by open office plans. Open floors plans have no boundaries or soft boundaries such as transparent or flexible walls. Stripes on the floors or different flooring materials can also act as soft edges. There are, however, also critics about the open office plans. Some, like author Randy Deutsch write about the open office plans as “noisy, distracting and lead to lower productivity”.<sup>40</sup> Rooms or corners to escape and to ensure privacy can avoid the disadvantage of open floor plans. If collaborative interaction is desired, although individual work dominates, there is a way to create a place to work alone, together. The furnishing of a coffee-shop, a long and narrow table, proves to function for individual work with quick collaborative interaction. Open spaces are also characterized by its flexibility, fluid spaces that enable and encourage changes. The flexibility communicates and offers space for creative possibilities. Something that should not be that fluid as the layout and furniture, is the framework of creativity. Musician Jack White once said: “Telling yourself you have all the time in the world, all the money in the world, all the colors in the palette, anything you want—that just kills creativity.”<sup>41</sup> That is why it is recommended to limit creativity and to “simplify to amplify”.

The same could count for creative spaces, simplify the setting in order to amplify the creativity. In contrast to the messy studios, there are also a lot of neat and minimalistic creative spaces out there. The style and the setting are neutral, the spaces are open, the colors are subtle and often raw materials are used. The same raw materials, as stated before, to communicate creative possibilities and experimentation. Author Juriaan van Meel describes the reason behind minimalistic spaces as the desire of the designer to have a blank backdrop for their work. The neat spaces doesn't mean there is no ‘mess’, often there are materials on both desks and on the walls.<sup>42</sup> After all, prototyping or modelling is a physical exploring and results in the making of a mess. The limited scheme of the used materials, gives a predictable pattern and relaxes the mind.<sup>43</sup>

Colors can influence people's moods and can also influence creativity. In a research it is shown that a warm color decreases motivation, but increases detail-oriented tasks. Creative tasks and imagination are strengthened by a cool color.<sup>44</sup> Saturated colors prove to function for active spaces, besides raw materials, lively music, bright light and open windows. Relaxed spaces, on the other hand, thrive with the use warm or dark colors, plush seating, several points of light and quiet music. Large white colored and writable surfaces in an active environment can stimulate creativity. The white color gives the possibility to pull out all the stops, not half way.<sup>45</sup>

39 Austin Kleon, “You Don't Have to Be a Genius,” in *Show Your Work!: 10 Ways to Share Your Creativity and Get Discovered* (New York: Workman, 2014).

40 Randy Deutsch and Bruce Bondy, *Think like an Architect How to Develop Critical, Creative and Collaborative Problem-Solving Skills* (London: RIBA Publishing, 2020).

41 Austin Kleon, “Don't Wait Until You Know Who You Are to Get Started” in *Steal like an Artist: 10 Things Nobody Told You about Being Creative* (New York: Workman Publishing Company, 2021).

42 Juriaan Meel, “Type 6: Studios,” in *Workplaces Today* (Amsterdam: Centre for Facilities Management, 2015).

43 Scott Doorley and Scott Witthoft, “Foreword\_by David Kelley” in *Make Space: How to Set the Stage for Creative Collaboration* (Hoboken (N.J.): J. Wiley, 2012).

44 Ravi Mehta and Rui Juliet Zhu, “Blue or Red? Exploring the Effect of Color on Cognitive Task Performances,” *ScienceAdvances*, March 2009, <https://www.science.org/doi/10.1126/science.1169144>.

45 Scott Doorley and Scott Witthoft, “Foreword\_by David Kelley” in *Make Space: How to Set the Stage for Creative Collaboration* (Hoboken (N.J.): J. Wiley, 2012).

In a research there is concluded that the color green facilitates creative performance.<sup>46</sup> The color green is by all means connected to the natural environmental on earth, which also has a positive influence on creativity. Neurologist Hans Berger found the first brain waves, electrical pulses between neurons, which depend on the mental activity. Alpha Waves is one of the five groups of brainwaves, that are related to be somewhere between the subconscious and conscious mind. Increased creativity is linked to high amplitudes of Alpha waves. Nature landscapes, compared to urban landscape, exposed to people scored in a research consistently higher in Alpha amplitudes. Natural environment boost alpha waves and thus creativity is stimulated.<sup>47</sup>

### **Typologies of creative spaces**

There are differences in the appearance of the creative spaces within architectural offices. There are three types arranged in typologies, although each creative space differs and there are no clear distinctions. The quote of artist Paula Mills shows the spontaneously origin artists and their studio: "My studio looks the way it does because I know no other way of doing it". The writer Sally Coulthard concludes: It confirms the relation between most creatives and their studios, in which both their vision and work is that personal that there is almost no difference between their work and workspace.<sup>48</sup> Musician David Byrne points at the relation of spaces and the fluidity of creativity: "It seems that creativity is adaptive, like anything else. When a space becomes available, work emerges to fill it."<sup>49</sup>

First of all, as shown in the previous chapter, there is the messy office filled with creative clutter. The messy spaces are imbued with creativity, as David Byrne's quote indicates. The messy office, or atelier, is most related to the workshop of an artist. The offices are often a reflection of the creative minds of the artist or architect. In case of the artist, the messy studio is often an individual workspace. Studios are also seen as open, dense and messy workspaces. Nowadays studios are described as part office, part atelier and part workshop.<sup>50</sup> Workshops are mainly spaces with space for experimentation and creative work.<sup>51</sup> "In the old days before creative writing programs, a workshop was a place, often a basement, where you sawed or hammered, drilled or planed something." The writer Brian Kiteley says he tries to make his workshops true to the original sense of the word: "a light, airy room full of tools and raw materials where most of the work is hands-on."<sup>52</sup>

The opposite of the creative cluttered spaces are the neat and minimal creative spaces, as described in 'conditions of creative spaces'. Although the spaces are subtle and neutral, there can be for example drawings and tools on horizontal or vertical surfaces. The colors are discrete and there is a better chance of coming across raw materials like bare concrete floors. Author Juriaan

46 Stephanie Lichtenfeld et al., "Fertile Green: Green Facilitates Creative Performance - Sage Journals," SAGE journals, March 16, 2012, <https://journals.sagepub.com/doi/10.1177/0146167212436611>.

47 Oliver Heath, "Boosting Your Brainwaves - How Can Boost Creativity and Help Us Avoid Depression," Oliver Heath (Oliver Heath, June 8, 2017), <https://www.oliverheath.com/insights-and-news/news-item-boosting-your-brainwaves/>.

48 Sally Coulthard, "Part One: Studio Inspirations, Bright," in *Studio: Creative Spaces for Creative People* (London: Jacqui Small, 2017).

49 Juriaan Meel, "Type 6: Studios," in *Workplaces Today* (Amsterdam: Centre for Facilities Management, 2015).

50 Ibid.

51 Anatxu Zabalbeascoa, "Introduction" in *The Architect's Office* (New York: Whitney Library of Design, 1996).

52 Sally Coulthard, "Part One: Studio Inspirations, Bright," in *Studio: Creative Spaces for Creative People* (London: Jacqui Small, 2017).



van Meel describes it as: "Designers may opt for a raw and austere look because they want to have a blank backdrop for their work."<sup>53</sup> The neat and minimal creative spaces, seem to be compromise on the interplay of architecture as art and science. Author Anatxu Zabalbeascoa describes the workspaces as an expression of the different aspects of work, with the materials and tools reflecting the "ambiguous position of the architect between artist and craftsman".<sup>54</sup>

The messy and well-organized workspaces can be combined in the typology of gathering or collaborative workspace. The collaborative workspaces are focused on collaboration and aim to increase the interaction as a stimulant for creativity. The design and layout of the collaborative workspaces are often in domestic atmosphere. Both playful and handy chairs are combined to enable different types of collaboration. Innovative layouts and settings, such as campfire seating, can be found in this type of creative spaces.

"The best creative spaces are highly resolved (thoughtful), but not highly refined (precious)", summarizes the essence of the chapter 'creativity in space'.<sup>55</sup> The appearance of studios changed in time, although the function of the studio stayed the same: bringing creative people together in a workplace where they can work hard, collaborate and learn from each other. Collaboration is one of the conditions to foster and increase creativity, whether it is in a messy or well-organized workspace. Colors, natural environment, flexible layouts, creative clutter, books, and a framework are all conditions to accommodate and increase creativity. With the history, conditions and typologies everything about 'creativity in space' became clear.



#### 04

Photo of the open office space of architect Frank Gehry. It is both a messy workspace and a place to collaborate (Polidori, n.d.).

53 Juriaan Meel, "Type 6: Studios," in *Workplaces Today* (Amsterdam: Centre for Facilities Management, 2015).

54 Anatxu Zabalbeascoa, "Introduction" in *The Architect's Office* (New York: Whitney Library of Design, 1996).

55 Scott Doorley and Scott Witthoft, "Foreword\_by David Kelley" in *Make Space: How to Set the Stage for Creative Collaboration* (Hoboken (N.J.): J. Wiley, 2012).

## **03 CREATIVITY IN PRACTICE**

The previous chapters show the definition of creativity, the process of creativity, the development of creativity in offices and how creativity can be facilitated within architectural offices. 'Creativity in practice' aims to answer the same questions, but from the view of experienced architects that lead an architectural office. The architects thrive in their work and are the appropriate ones that are able to identify creativity within their architectural offices.

**05** The interior at Adema Architects, seats to socialize while overlooking one of the harbors of Groningen.



## **Adema Architects, Dokkum and Groningen**

Adema Architects is a medium sized architectural firm, which consists of a team of around 40 to 50 employees. Adema Architects operates since 1972 from the most northern city of the Netherlands: Dokkum. Along with the offices in Groningen and Kampen the architectural firm expands its work field to spread their specialisms of renovation and new constructions in historical context.<sup>56</sup>

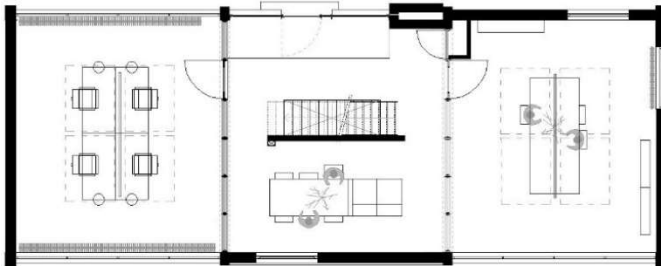
Creativity is for Adema Architects an important element, according to Silvester Adema who is the head of the office, but prefers to be referred to as a colleague within the team. Creativity is the base, while other aspects such as finance and building technology are of great importance as well. For Adema it is, however, not all about creativity. Creativity means also hard work and being able to pass the creative product to the next colleague. Leave room for input of others is for Adema a crucial part of the creative process, which results in a more comprehensive process. Creativity is nowadays for Adema Architects a present search. The past years Adema Architects is more focused on the search of their 'image', about who they want to be. Creativity is a part of this search, which resulted in several changes in the past few years and will also result in changes in the near future. Creativity is becoming more and more part of the workspaces in the offices of Adema Architects. The office building of Groningen turns out to be an accelerator for this change. All findings experienced in this building are going to be implemented in the office building of Dokkum as well. In the near future there will be a collective kitchen and a large worktable in the office of Dokkum.

At the start of Adema Architects the office was dominated by mess and disorder. Later on, since 2008 the office is more tidy and organized. The organized and neat spaces are still present, although there is nowadays more freedom in creative clutter. All working spaces of Adema Architects are created together as a team, which eventually results in a 'carefull' design, although it is not carefully designed. There are different architects and other colleagues working on the designs of various working spaces, while Adema does not interfere their ideas. The office is a reflection of the creativity of the team. A fixed layout is at Adema Architects not applicable anymore, all colleagues also have their own laptops. In the past, the fixed layout used to be the norm. With moving to another building some colleagues even moved onto the same floor as the previous office building. The office buildings became more social gathering spaces, as Adema calls it: 'clubhouses'. Although, the building in Dokkum is currently still more like an office, this will change in the near future. What has already changed are the colleagues who give direction to the team, it is no longer just the architects.

The location and context of the offices also play a role in how creativity is experienced by Adema. Adema Architects originates from the city of Dokkum, in which the father of Adema started the architectural practice. According to Adema the environment of Dokkum sometimes feels overloaded, because of all memories and emotional load. Before arriving in Dokkum, Adema comes across all these projects that are done before by Adema Architects. In Groningen, on the other hand, Adema does not drive into this overloaded environment. For Adema the office of Groningen activates a more freely thinking, which benefits the creativity. Certain meetings, such as managements meetings, are preferred by Adema at the office or at a restaurant in Groningen. It should be clear, creativity is to Adema not dependent on a physical office space. Creativity cannot be placed in a room and happens to Adema everywhere, from the couch to in the car.

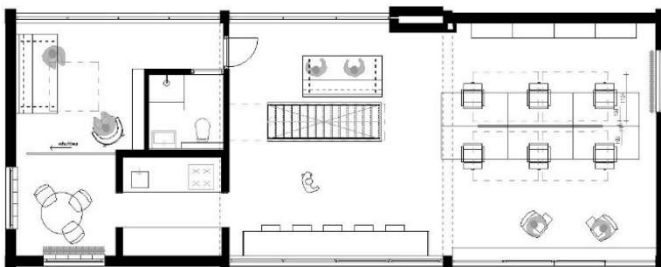
Creativity, however, according to Adema, can be fostered and influenced by the space. A safe base and conviviality are the conditions for Adema Architects to accommodate creativity. In addition, the spaces to come together are important for creativity.

The workspaces of the office in Dokkum were previously shaped in favor of the clients. The father of Adema said at the time that the spaces should not smell of food. Nowadays, with future plans of a communal kitchen as place of gathering, the spaces are likely to smell of food. Adema points at the changing times, which also influences the current choices. Adema believes it is important that everyone in the team is seen as equal and that colleagues are also points of contact for clients. The team of multiple architects and other creatives of Adema Architects work often individually on projects. Every architect has a different approach and a personal way of their creative process. Within Adema Architecten, there are for example the more chaotic architects and the more structured ones. It is in meetings with clients or colleagues, where Adema experiences the eureka moments. As for the workspaces, Adema expects Adema Architects and their working spaces will be continuously in motion. It is a continuous search of the whole team with changing courses, a journey without end.<sup>57</sup>



#### 06

The interior of Adema Architects in the city of Groningen, illustrated in ground floor (above) and first floor (below). The workspaces are furnished with collective tables, a kitchen, informal conference room, and several grouped chairs to have conversations.



#### 07

The office of Adema Architects on the edge of the dynamic city center and near the harbor of Groningen. It is built in 1955 and designed by architect Arent Grit. The building is listed as municipal monument.

56 "BUREAU." Adema Architecten, accessed March 26, 2022. <https://www.adema-architecten.nl/bureau/>.

57 Damstra, René, and Silvester Adema. Interview creativity in architectural offices. Personal, March 22, 2022.

**08**

'Creative clutter' and books organized in shelves to draw inspiration from in one of the workspaces of the office in Groningen.

**09**

The informal conference and gathering room in the office of Groningen.

**10**

The interior of Adema Architects in Dokkum, with bookshelves along the entire wall filled with books for inspiration and knowledge.

11 The interior of architectural firm PUUR, the workspace, photographed from the listening room.



## Architectural firm PUUR, Damwâld

Architectural firm PUUR is the architectural practice of architect Arjen van der Schaaf, located in the village of Damwâld. Van der Schaaf works, after years of gained experience at another office, mainly by oneself but gets help from an architectural drafter and befriended external independent entrepreneurs. The office of PUUR is part of Van der Schaaf's living house.<sup>58</sup>

Creativity is to Van der Schaaf to create something one of a kind, despite the fact that the client asks for the usual same layout such as the three bedrooms and a bathroom on the first floor. It is about getting creative within the given constraints, as the finance and the framework of the desire for the same layout. Within this constraints Van der Schaaf can get creative and tries to "turn a hamburger into a beef steak" – to make something out of nothing. Creativity is to Van der Schaaf not designated to a specific workspace. It is everywhere, but it is crucial to open up and get surprised by it. It is also about looking beyond, asking critical questions and to do it differently. Creativity is not the purpose of architecture, but rather as a resource to get to that purpose. Van der Schaaf says "creativity as purpose is for artists without clients".

In the midst of the creative process there is chaos on the desks of architectural firm PUUR. However, this created mess will be cleaned at the end of the day or week by Van der Schaaf. Although mess is created during the creative process, it is important that it stays a well-organized and neat environment. The desks in the spaces are on purpose chosen in a white color, to connect to the white colored papers in order to relax the mind. The desk functions as a canvas for the sketches and drawings. Additionally, it is essential for Van der Schaaf that the space activates well-being, is pleasant to stay and gets filled with daylight. Soft materials, toned down colors and domestic details such as plants dominates the workspace of PUUR. The domestic ambience proves to be excellent for clients, but differs for commercial clients. Although, commercial clients often seem pleasantly surprised and satisfied. The workspace of PUUR is preferably described as a 'studio' by Van der Schaaf. The mix of office and atelier suits the most, since an traditional office doesn't really works for Van der Schaaf. When Van der Schaaf has plans and ideas, the goal is to "not cast it in concrete", which also applies to the layout of the workspace.

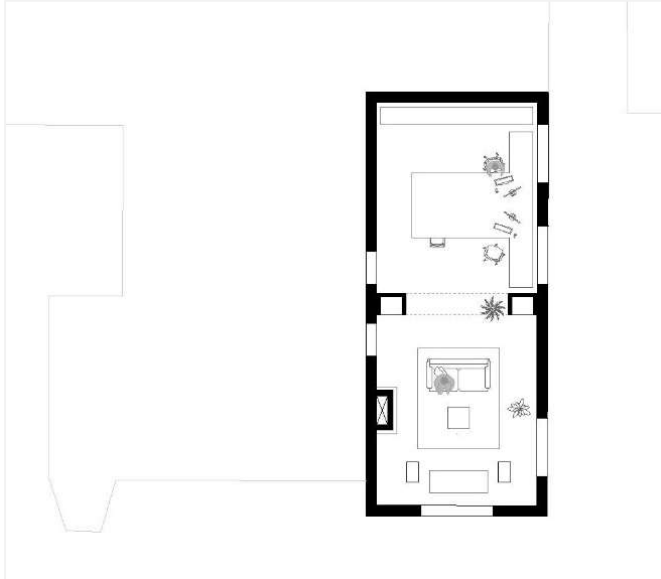
During the creative process Van der Schaaf want no one to watch, because of the intuitive lines he draws on paper. In this intensive process with sketching and absorbing inspiration by examples, Van der Schaaf is in search of the 'eureka moment'. Van der Schaaf points out that there is not one solution, but multiple solutions that in this interplay are being judged. It is a continues process of development. Van der Schaaf sometimes alternates his work with other activities, such as mowing the lawn, walking the dog, household chores and listening to some music while closing his eyes. The front area of the workspace is furnished as a music listening space. The workspace of PUUR combines therefore work with hobby and recreation. Combining both the living house and workspace provided a more relaxed environment. There are now possibilities to work on entertaining tasks in the evening and the less fun tasks in the mornings. Sometimes, Van der Schaaf walks past the sketches on the desk in the evening and then something new stands out. Far before the coronavirus pandemic, Van der Schaaf already took advantage of the benefits of 'working from home'.<sup>59</sup>

58 "Architecten Bureau Puur," Architecten Bureau Puur, accessed March 26, 2022, <https://bureau-puur.nl/>.

59 Damstra, René, and Arjen van der Schaaf. Interview creativity in architectural offices. Personal, March 21, 2022.



The interior of architectural firm PUUR consists of one space, which is accessed by a hallway after entering the front door of the living house. The workspace is visually divided into two separate spaces: the working area and the listening room. Inspirational materials, such as books and material samples, are stored in open shelving.

**12**

The interior of architectural firm PUUR in Damwâld, illustrated in an indicative floorplan. The workspace is divided into two open spaces, the workspace and the listening room.

**13**

The listening room, an hobby and appropriate for the 'off' moments in the so-called "on-off"-moments.

**14**

The exterior of both the living house and the workspace, a characteristic Dutch house built in 1895. The workspace is located on the right side of the house.

15 The - yet unfinished - interior at Zantman Architects with view on a natural recreation area in Leeuwarden.



## **Zantman Architects, Leeuwarden**

Just outside the city of Leeuwarden, in a natural recreation area, the office building of Zantman Architects is located. A new bio-based building arose on an existing foundation of a farmers cubicle shed with a reused steel construction. Zantman Architects is founded by Bart Zantman and is a small architectural office with at most 6 to 7 employees.

The interior and exterior of the building are currently being finalized, while the accurate details of the office are already visible. The flooring of the workspace consists of a concrete floor, to be truthful to the former concrete floor of the farmers cubicle shed. The wood cladding on both the interior and exterior are a result of environmentally friendly choices. In contrast to the previous architectural practices, dominate raw materials the workspaces at Zantman Architects. The interior choices have led to a clean and minimal workspace. Creativity is for Zantman implemented in the office in the way where the workspace "is conceived and designed to make it happen spontaneously". Leaving space for development is something architects should do when designing according to Zantman. It also makes the layout of the office not a fixed one, therefore the conference room and office space are already exchanged. The whole building is flexible as well, with the eye to possible future uses or expansions.

In the creative process, everyone is allowed and stimulated to make models, sketches and spread creative clutter if necessary. Books are also important for the office and stimulated to grab and browse. At the end of the week, there is this expectation of having a clean desk. The creative clutter is temporary, because the workspace environment needs to be quiet and look calm. The team of Zantman Architects are also stimulated to enjoy the natural recreation area that is surrounding the building. Outdoor lunches and walks are part of working at Zantman Architects. Nature is prominent at the office and reflects the green image of the architectural firm. Sustainability and ecology are crucial for Zantman Architects, whereby the location communicates the environmentally friendly preferences.

The workspaces have to facilitate collaboration in order to foster creativity according to Zantman. Creativity can be encouraged by others, and therefore it is important to have a space where everyone can sit, discuss and sketch. Zantman also mentions a television screen to project drawings, which in the case of Zantman Architects is neatly concealed in the wall. Besides that, an individual place for concentration is just as important. There is at Zantman Architects sometimes a distinction between discussion and concentration spaces. The spaces of the offices are sometimes used for these different functions, although the spaces are not designated for this use. Zantman often goes walking outside on the porch when on the phone, while the others can concentrate on their works. Creativity can be, according to Zantman, fostered by these three 'spaces': a collective space for collaboration, an individual concentration space and the outdoor space for inspiration and changing environments. However, creativity depends to Zantman not on a particular place, although he prefers a quiet environment. Sometimes, Zantman looks for hustle and bustle in new environments to work and sketch.

Creativity is to Zantman inventing something you don't know yet, what makes it for Zantman also connected to knowledge. Art is skill, whereas architecture is both skill and knowledge. Zantman states that knowledge comes from the whole team, in which every team member has its own specialism. It is to Zantman important to surround yourself in a circle of people with knowledge.

Creativity is to Zantman not the goal of architecture, but an integral part of architecture. Creativity is both consciously and unconsciously sought at Zantman Architects. Sometimes unconsciously and sometimes consciously in a collective gathering to active creativity. One assignment requires to Zantman more creativity than the other. Moreover, creativity is not always about design. The creative process starts to Zantman behind a quiet place such as the desk, but gradually expands to different locations, spaces and people. Nature and the conference space are one of them. The eureka moment is not sought but stimulated by Zantman, to make it happen spontaneously somewhere. The shift of environment proves crucial in the creative process of Zantman. Not all environments have to stimulate creativity, because creativity is not always necessary for architecture. All views of creativity by Zantman lead to the description of the workspace as a 'studio', because of the raw materials and the crafting atmosphere. Zantman also points at references as the working shed and barnyard, because of the dynamic with all work and activities. It is the dynamic, activities and creativity that contrasts on the blank canvas of the workspace at Zantman Architects.<sup>60</sup>

**16**

Models, plants and books to browse, all organized in shelving. The raw materials, concrete floor and interior wooden cladding, are a way to create a clean and minimal workspace.

**17**

The wood cladding and large windows connect the workspace of Zantman Architects with the natural recreation area.

All three experienced architects state that creativity is not bounded to a designated space, although they all agree the space can influence creativity. As proven in the previous chapter, architecture is balanced between art and science. It already shows that, although creativity is inseparable connected to architecture, creativity is not viewed as the key to architecture for architects. Some of the architects made comments about this, as for example: “creativity as purpose is for artists without clients”. It explains the reduced, unlike artist studios, excess of creativity of for example the creative clutter. However, all creative clutter is allowed and can be found temporarily on the desks during the creative process. The workspaces contain many inspiring objects and books, but unlike the artist's studios, they are neatly arranged on shelving.

It turns out that all architects are putting their experiences of previous offices into practice. The office at Adema Architecten in Groningen proved to be an experiment of change for the office of Dokkum. Van der Schaaf of PUUR discovered that a traditional office was not for him after all and started his own firm, which is connected to his living house. Zantman took his preference for neat and quiet workspaces and his fascination for environmentally friendly design into the construction of his new office. The workspaces are a personal reflection of the architect and his team, who are in search of their own ‘image’. Their experiences led to the knowledge of what works and what does not, resulting in a workspace that “is conceived and designed to make it happen spontaneously”. The workspace of the architects, are depending on personal preferences, categorized in typologies. All the typologies are related to the way in which the architects view creativity. Inside or outside the offices, every architect has his own kind of 'off' moments and shifts in settings. The architects indicate that these moments are crucial for the creative process.

Creativity is often consciously sought and activated, whereby collaboration is important for the architects. Creativity is, however, also unconsciously applied. The presence of time and resources appears to be crucial for the creative process. Architects, however, do not need a lot of resources for their creative process. Where an artist is often bound to his space, because of the presence of his resources, the architect can experience his creative process almost everywhere. The imagination and possibly a beer mat and a pen are enough for an architect. Also unlike the artist, who often works individually, the architects indicate that collaboration is an essential part of creativity. For the architects it is important to facilitate and stimulate gathering and collaboration in order to increase the creativity. Experimenting with creativity is a continuous personal quest for the architects, as stated earlier: a journey without end.

## CONCLUSION

Creativity proves to be essential for different aspects in daily life. The ability to produce something that is both original or innovative and possess utility or value for someone, seems to be crucial in the development of humans and society. Creativity are all kinds of connections that are made in the brain in order to perform the creative process, although there are still a lot of unstudied aspects of creativity in the human brain. The creative process consists for architects of successive phases. The phases prove to be connected to the activity of the brain during the creative process. The creative process often takes place or starts at the workspace of the architect, which is likely to be referred to as a studio. The history of the architect and the studio has undergone a major development, but the essence of the studio stayed the same. The studio is a place to bring creatives together to work hard, collaborate and learn from each other. Collaboration is one of the conditions to foster creativity in the workspaces. Other conditions as messy or well-organized, colors, natural environment, flexible layouts, creative clutter, books and a framework prove to be all of influence on creativity in workspaces. For the architects gathering and collaboration prove to be crucial for the creative process. The history and conditions of creative spaces led to three different typologies of creative spaces, the messy workspace, the clean and minimal workspace and the workspace focused on gathering. Each of the focus of the typologies proved to be an ingredient for creativity in workspaces. The case studies show that the appearance of the workspaces are a result of personal preferences and years of earlier experiences. Personal preference determine the role of creativity within the workspaces. Previous experience at other architectural firms has led to the knowledge of what works and what does not. Creativity in the workspaces is a never ending quest and change of the architect. The amount of creativity in the workspaces depends on the architect, but has also proved to be connected to the fact of that architecture balances between art and science. Creativity is reduced, in comparison to messy artist ateliers, but still finds its way to the architectural office. Creative clutter and inspiring objects are organized in open shelves. Mess on desks is created during the creative process, although it will be cleaned up afterwards. The architects also prove that they can be creative everywhere and do not need a lot of resources in the creative process. The workspaces facilitate and increase creativity, but the architects are not bound to their offices.

'Creative Office Spaces Under Investigation' proved that the architects do not have committed the crime of uninspiring creative spaces. The creativity of the architect differs, it works more integral than the one of artists. Creativity in architectural workspaces can be found everywhere, in color, materials, location, creative clutter, mess on desks, layout of spaces, resources, furniture and inspiring objects. To answer the main question, creative spaces proved to be in essence all the same: places to gather, collaborate and of hard work. The creative spaces are a continuous reflection of the search for creativity, the search for an image of the office and of the present time. The reflection of creativity in creative interior spaces of architectural offices seem as fluid as creativity itself. The workspaces are a reflection of the architects' ongoing shift on the spectrum of creativity.

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## Illustrations

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- 04** Polidori, Robert. *Interior Photograph of the Office of Frank Gehry*. *System Magazine*. Accessed April 14, 2022. <https://system-magazine.com/issue4/frank-gehry/>.



# **CREATIVE OFFICE SPACES UNDER INVESTIGATION**

About the crime of uninspiring creative spaces in architectural offices  
an investigation by René Damstra

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