

Architectural History Thesis

# The Individual and the Collective in the Primary School Buildings of Jan Verhoeven

## How Contrasting Concepts Interrelate

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14/04/2022

Keywords: *Jan Verhoeven, collective, individual, Jenaplan, Montessori*

According to Jan Verhoeven, the individual and the collective are the most important characteristics of his designs for primary school buildings. However, no literature focuses on this theme. Therefore this dissertation does concentrate on how Verhoeven portrays the individual and the collective in his school buildings. First, the theme is placed in context using literature. Three case studies of Verhoeven's primary school buildings follow. These schools have different educational methods to determine if it influences the portrayal of the theme. The designs of each of these schools stress the collective. They define the collective as non-hierarchic and approach it on different scales. The individual is easily identifiable within the collective and functions as a building stone for the collective. Therefore the individual is portrayed as strong and independent with their own identity. For the individual to develop in such a way, the schools are designed as a warm and safe place where children feel at home. Verhoeven accomplishes this by using the human scale, nature, simplicity, and fantasy. Lastly, the collective contributes to creating a warm and safe place such that the individual can develop well. Therefore in his school buildings, the collective helps the individual, and the individual is fundamental to the collective. The two opposites interrelate.



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Fig 1. (Left page) Leusder Krant, *Jan Verhoeven in primary school Leusden.*

## Introduction

“One thing that should always be expressed, what should always be visible, is the double-phenomenon of individual and community, the proportion between these two.”<sup>1</sup> Jan Verhoeven, who is shown in figure 1, says this about his primary school designs built around the seventies, reflecting his explicit education ideas. The quote inspired to research how the individual and collective are portrayed in his school buildings because these are essential characteristics according to the architect himself. Verhoeven believes the individual and collective form a whole.<sup>2</sup> To what extent this is visible in his school buildings will be researched using the following research question: *How is the theme of the individual and the collective portrayed in the school buildings of Jan Verhoeven?*

Within the topic of school buildings, the individual and the collective could be interpreted differently. They could be referred to in terms of humans. Whereas the individual addresses one person, the collective addresses a group of people on various scales: the neighbourhood as a community, the school as a community, the class as a community, etc. Moreover, the individual and the collective could be interpreted in terms of architecture. The individual refers to separate components, while the collective refers to the collection of components. This dissertation is about how Verhoeven’s primary school buildings treat both interpretations of the individual and the collective.

The individual and the collective theme in Verhoeven’s school buildings could be placed in context. Numerous literature is available on the theme in the seventies. Vletter points out the prevailing architectural themes at that time.<sup>3</sup> In addition to this publication, Van Heuvel identifies characteristics of structuralism.<sup>4</sup> Literature on educational thought during the seventies is available too. Rodermond writes about it at the time Verhoeven designed his school buildings.<sup>5</sup> Boersma and Verstegen reflect on educational thoughts during the seventies.<sup>6</sup> Furthermore, Koutamanis and Steijns describe tendencies in school buildings.<sup>7</sup> Broekhuizen complements this topic.<sup>8</sup> Although these sources touch upon the individual and the collective theme, none of them focuses on it. The same appears in the literature

<sup>1</sup>Susanna Komossa. “Lagere Scholen.” In *Architectuur Fragmenten*, ed. Onderwijs Commissie Bouwkunde (Delft: T.H.-Delft, 1982), 36. Translated from Dutch: “Een ding wat altijd tot uitdrukking moet komen, wat aanwezig moet zijn, is het dubbel-fenomeen van individuen gemeenschap, de verhouding tussen die twee”

<sup>2</sup>Mette Zahle. *Jan Verhoeven: Exponent van het Structuralisme* (Rotterdam: Stichting BONAS, 2012), 9.

<sup>3</sup>Martien Vletter. *De Kritiese Jaren Zeventig: Architectuur en Stedenbouw in Nederland 1968 -1982* (Rotterdam: NAi Publishers, 2004).

<sup>4</sup>Wim van Heuvel. *Structuralisme in de Nederlandse Architectuur* (Rotterdam: Uitgeverij 010, 1992).

<sup>5</sup>Janny Rodermond. “Onderwijs en Schoolgebouw.” *De Architect*, May, 1980.

<sup>6</sup>Tjeerd Boersma and Ton Verstegen. *Nederland naar School: Twee Eeuwen Bouwen voor een Veranderend Onderwijs* (Rotterdam: NAi Publishers, 1996).

<sup>7</sup>Koutamanis, Alexander, and Yolanda Steijns. *Onderwijsvisie & Schoolgebouw* (Amsterdam: SUN, 2004).

<sup>8</sup>Dolf Broekhuizen. “Build Educational Centres, Not Schools.” In *Contemporary Dutch School Architecture: A Tradition of Change*, ed. Ton Verstegen (Rotterdam: Nai Publishers, 2008).

describing the school buildings of Verhoeven. Zahle reports his school designs but writes minimally on the individual and the collective theme.<sup>9</sup> Rodermond does the same.<sup>10</sup> This dissertation does focus on the individual and the collective theme in Verhoeven’s school buildings, and connects it to how this theme was treated in the context they were built.

Case studies study the portrayal of the individual and the collective in his school buildings. As the educational thought of the school influences the portrayal of the individual and the collective, three different types of schools are chosen: a public school in Cuijk, a Jenaplan school in Heumen, and a Montessori school in Leusden. The latter is selected because Jan Verhoeven believes it best represents his philosophy on education.<sup>11</sup> The first two schools are built before the school in Leusden, so they show if there has been a transition in time. Using literature, images and archival information, these schools are analysed upon context, organisation (shape of plan, common area, corridors, classroom orientation, entrance), places to work, and architectural elements (building construction, lighting, materialisation, colours), to uncover how the individual and the collective is portrayed.

Before uncovering how the school buildings portray the individual and the collective, the first chapter investigates how the individual and the collective play a role in the context of the school buildings. As a beginning, the architectural context is discussed: how the individual and the collective are present in prevailing architectural themes in the seventies, structuralism, and Van Eyck’s influence on Verhoeven. Afterwards, the educational context is addressed: how the individual and the collective are present in prevailing educational themes, in tendencies in school buildings, and in Jenaplan and Montessori education. From chapter two onwards, the portrayal of individual and collective in school buildings is uncovered using case studies. Chapter two discusses the public school in Cuijk. It commences with how the school’s design defines the collective and the individual. An explanation follows on what an individual needs to develop well according to Verhoeven: a warm and safe place. The way it’s accomplished in Cuijk is the finishing part of the chapter. The following chapters discuss the same topics, only based on a different school. Chapter three discusses Jenapan school in Heumen, and chapter four discusses Montessori school in Leusden. Additionally, the chapters examine to what extent the schools’ educational methods influence the portrayal of the individual and the collective. The conclusion combines the chapters’ findings to answer the main research question.

<sup>9</sup>Zahle, *Jan Verhoeven*.

<sup>10</sup>Janny Rodermond. “Op de Kindermaat Gemaakt: Montessorischool van Verhoeven in Leusden.” *De Architect*, May, 1980.

<sup>11</sup>Komossa, “Lagere Scholen,” 37.

## Chapter 1: Context collective and individual

### *Architectural context*

The theme of the collective and individual in the school buildings of Verhoeven can be placed in context. Firstly, the architectural context is relevant. In seventies architecture, both the individual and the collective were present. The individual was found in the human scale. In the seventies, this was one of the design principles in architecture and urban planning in the Netherlands, partially as a reaction to the enormous building blocks from the post-war reconstruction.<sup>12</sup> The collective existed in the theme of meeting, which was being explored in architecture.<sup>13</sup> Both themes were also present in the structuralist movement, in which Verhoeven and van Eyck took part.<sup>14</sup>

Van Eyck has influenced Verhoeven heavenly, according to Verhoeven himself.<sup>15</sup> Van Eyck gave classes at Academie van Bouwkunst in Amsterdam which Verhoeven attended. Van Eyck addresses the theme of the individual and the collective too. For example, in van Eyck's orphanage, 'Burgerweeshuis', the human scale is present in the small units it's built out.<sup>16</sup> This is visible in the work of Verhoeven as well.<sup>17</sup> Additionally, van Eyck functioned as a messenger of the thoughts of Carola Giedion, who said oppositions could strengthen each other. Verhoeven's idea about the individual and the collective forming a whole, stems from Giedion's thoughts on the importance of contrast.<sup>18</sup>

Although Verhoeven recognised van Eyck as an influence, he dissented from structuralism: "*I have nothing to do with it!*"<sup>19</sup> He mainly opposes the first principle recognised by Van Heuvel: "growth and cohesion."<sup>20</sup> In which spaces are flexible in use, and the structure has the potential to grow.<sup>21</sup> Additionally, the building construction is shown honestly.<sup>22</sup> In contradiction with this extensibility, Verhoeven says: "*I want to start things and end them, they have to be finished.*"<sup>23</sup>

Zahle does count him as a structuralist.<sup>24</sup> Potentially because structuralism too emphasises the individual and the collective. The human is at the heart of structuralism.<sup>25</sup> Therefore the second principle of structuralism is "meeting".<sup>26</sup> It's expressed in places that stimulate relationships and making contact.<sup>27</sup> In addition, places are made where someone has the option to withdraw from the collective.<sup>28</sup>

<sup>12</sup>Vletter, *De Kritiese Jaren Zeventig*, 141.

<sup>13</sup>Vletter, *De Kritiese Jaren Zeventig*, 61.

<sup>14</sup>Zahle, *Jan Verhoeven*, 24.

<sup>15</sup>Jeanne Roos. "Praten met: Jan Verhoeven: Omdat Hij Bouwen een van A tot Z Menselijk Proces Vindt." *Het Parool*, May 13, 1976.

<sup>16</sup>Zahle, *Jan Verhoeven*, 22.

<sup>17</sup>Zahle, *Jan Verhoeven*, 22.

<sup>18</sup>Zahle, *Jan Verhoeven*, 9.

<sup>19</sup>Komossa, "Lagere Scholen," 37. Translated from Dutch: "Daar heb ik geen flikker mee te maken"

<sup>20</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 20.

<sup>21</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 22.

<sup>22</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 22.

<sup>23</sup>Komossa, "Lagere Scholen," 37. Translated from Dutch: "*Ik wil dingen beginnen en beëindigen, ze moeten af zijn*"

<sup>24</sup>Zahle, *Jan Verhoeven*, 24.

<sup>25</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 22.

<sup>26</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 20.

<sup>27</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 22.

<sup>28</sup>Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 22.

"Geometric configurations" is the third principle of structuralism in which the individual and the collective appear.<sup>29</sup> A small, reproducible constructive unit is repeated and shifted, creating a structure that often follows basic shapes in a plan.<sup>30</sup> By shifting, places are designed for more privacy and protection.<sup>31</sup> The equivalent units don't allow a hierarchical structure.<sup>32</sup> The individual is present in the units that make the structure. The collective is present in the large structure, which collects separate units. Therefore the architectural context is relevant as the theme of the individual and the collective is addressed in seventies architecture, van Eyck's ideas, and the structuralist movement.

### *Educational context*

In the educational context of Verhoeven's school buildings, the theme of the individual and the collective is traceable too. This can be deduced from a speech by Frans Dillen at a congress about school buildings in spring 1980. He names three conditions the spatial qualities of a school building should meet, such that the school building portrays an educational vision that places the child in the centre instead of the material to be learned. These conditions are "experience value", "use value", and "being part of society".<sup>33</sup> The school buildings of Verhoeven were named to meet these conditions.<sup>34</sup>

Collectiveness comes forward in the condition of "being part of society". In the seventies, the sense of community has a revival in educational values.<sup>35</sup> Children had to learn they were part of a community, and the school would be one of the first communities they took part in.<sup>36</sup> Additionally, the community has a didactic value as the development of children is achieved mainly by the community.<sup>37</sup> Therefore educational thought in the seventies stressed the idea of collectiveness.

At the same time, the congress shows how the individual is important too in educational values as it places the child in the centre. Working both individually and in different group formations is part of a new education ethos, which started in the sixties, partially due to the report "De Nieuwe School Voor Het Lager Onderwijs" from 1953 by the association of Dutch municipalities.<sup>38</sup> Therefore in the seventies, the individual child gets space to work on his own and at the same time learn with others in its' community.

<sup>29</sup> Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 20.

<sup>30</sup> Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 24.

<sup>31</sup> Van Heuvel, *Structuralisme in de Nederlandse Architectuur*, 24.

<sup>32</sup> Zahle, *Jan Verhoeven*, 24.

<sup>33</sup> Rodermond, "Onderwijs en Schoolgebouw," 68-69.

<sup>34</sup> Rodermond, "Op de Kindermaat Gemaakt," 79.

<sup>35</sup> Boersma and Verstegen, "*Nederland naar School*," 27.

<sup>36</sup> Boersma and Verstegen, "*Nederland naar School*," 27.

<sup>37</sup> Boersma and Verstegen, "*Nederland naar School*," 27.

<sup>38</sup> Boersma and Verstegen, "*Nederland naar School*," 27.

### *Individual and collective in the design of school buildings*

The theme of the individual and the collective in educational thought, as discussed above, affected the design of the school buildings in the Netherlands as well in the seventies. The theme took shape firstly in a transition from a “corridor school” to a “hall school”.<sup>39</sup> A “corridor school” is composed of one long corridor enclosed by classrooms on both sides, as shown in figure 2, and a “hall school” has a central communal hall surrounded by classrooms, as shown in figure 3.<sup>40</sup> The central hall was multifunctional: it functions as a meeting place and transitional space.<sup>41</sup> Therefore this shift is partially due to economic reasons, as the user space is seemingly maximised, and a higher investment contribution was given to these types of schools.<sup>42</sup> But more importantly, communal activities could take place, such as theatre or documentation.<sup>43</sup> Thereby the community has space to come together: the collective is emphasised at the heart of the building.

Secondly, the theme took shape in the placement of a workspace outside the classroom. This workspace could be used for individual work or working together in different group formations.<sup>44</sup> The ability to work individually and in groups was partially facilitated by moveable furniture. To flexibly use furniture, lightning from different sides was necessary.<sup>45</sup> In 1972 the inspection interpreted the buildings’ regulations as more flexible so schools could use other lighting solutions.<sup>46</sup> Sometimes, flexibility was even more important than educational comfort: as skylights could blind teachers.<sup>47</sup> Therefore the design of school buildings found solutions to create space for the individual and the collective in the seventies.

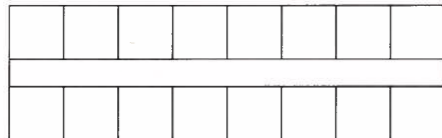


Fig. 2. Onderwijsvisie & Schoolgebouw, Corridor school, 21.

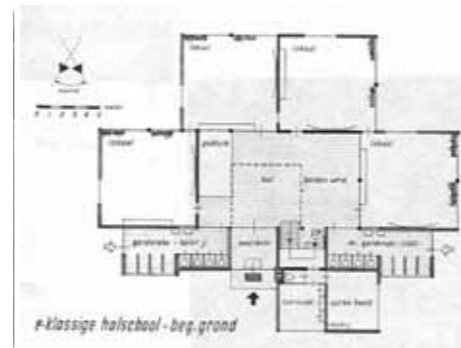


Fig. 3. Rijksdienst voor het Cultureel Erfgoed, Hall school, 29.

<sup>39</sup>Koutamanis and Steijns, *Onderwijsvisie & Schoolgebouw*, 27.

<sup>40</sup>Koutamanis and Steijns, *Onderwijsvisie & Schoolgebouw*, 27.

<sup>41</sup>Susanna Komossa, Lidwine Spoormans, and Sien van Dam. *De Transformatie van het Schoolgebouw* (Bussum: Thoth, 2011), 15.

<sup>42</sup>Komossa, Spoormans, and Van Dam, *De Transformatie van het Schoolgebouw*, 15.

<sup>43</sup>Koutamanis and Steijns, *Onderwijsvisie & Schoolgebouw*, 27.

<sup>44</sup>Broekhuizen, “Build Educational Centres, Not Schools,” 20.

<sup>45</sup>Boersma and Verstegen, “*Nederland naar School*,” 10.

<sup>46</sup>Boersma and Verstegen, “*Nederland naar School*,” 192.

<sup>47</sup>Boersma and Verstegen, “*Nederland naar School*,” 195.

### *Individual and collective in Montessori and Jenaplan education*

Apart from these solutions that apply to traditional educational methods, specific solutions related to special educational methods appeared too. An interesting educational method in this context is Montessori. At the beginning of the eighties, the essence of Montessori education is explained as individual development.<sup>48</sup> The school should provide as much freedom as necessary for the child to follow its learning path and not disturb the child when working. Therefore, individual working places are required. But not only individual working spaces, as Montessori education asks for places to work in groups too. A more recent source confirms these characteristics.<sup>49</sup> It adds three more characteristics. Namely, groups are heterogenous to stimulate children to help each other.<sup>50</sup> Additionally, they relate the development of the child to motivity. Therefore a sporting hall, school gardens and rooms to play are often included in the school building.<sup>51</sup> Lastly, a role is given to the school materials that should stimulate the children to operate independently.<sup>52</sup> Therefore the individual is at the heart of Montessori education, and the collective is present in working together in different group formations.

Another educational method that gained popularity in this period, Jenaplan education, demanded an even more integrated community.<sup>53</sup> Similar to Montessori education, Jenaplan provides space for the child’s development at their own pace.<sup>54</sup> The child is placed in the centre of the education and is shaped by its relationships with other people.<sup>55</sup> Thereby the child should become an independent adult surrounded by other adults.<sup>56</sup> Four core Jenaplan activities concern both the individual and the collective: conversation, play, work, and celebration.<sup>57</sup> The school needs spaces for different types of group formations. One of them is a space for the ‘core group’<sup>58</sup>, which is heterogeneous, so children contact each other to ask for help. Additionally, a common room where children of the same level from different core groups are being taught. Next to that is a place to work individually. And at last, a communal space where the whole school community can come together.<sup>59</sup> In Jenaplan education, the collective is stressed as it’s valuable for the upbringing of an individual and independent child. The following chapters discuss to what extent Verhoeven’s school buildings integrate the ideas of special education methods regarding the individual and the collective.

<sup>48</sup>Rodermond, “Op de Kindermaat Gemaakt,” 77.

<sup>49</sup>Boersma and Verstegen, “*Nederland naar School*,” 23.

<sup>50</sup>Boersma and Verstegen, “*Nederland naar School*,” 23.

<sup>51</sup>Boersma and Verstegen, “*Nederland naar School*,” 23.

<sup>52</sup>Boersma and Verstegen, “*Nederland naar School*,” 23.

<sup>53</sup>Rodermond, “Op de Kindermaat Gemaakt,” 74.

<sup>54</sup>Rodermond, “Op de Kindermaat Gemaakt,” 74.

<sup>55</sup>Boersma and Verstegen, “*Nederland naar School*,” 22.

<sup>56</sup>Boersma and Verstegen, “*Nederland naar School*,” 22.

<sup>57</sup>Rodermond, “Op de Kindermaat Gemaakt,” 74.

<sup>58</sup>Translated from Dutch: “stamgroep”

<sup>59</sup>Boersma and Verstegen, “*Nederland naar School*,” 22.

## Chapter 2: Collective and individual in public school Cuijk

### *Collective defined in Cuijk*

The previous chapter explained how the meeting theme belonged to architecture in the seventies, including the structuralism movement. This theme applies to public school 'De Harlekijn' too, which model is shown in figure 4. This school stresses the collective through its' meeting places which vary in size. It's located in Cuijk and was designed in 1974.<sup>60</sup> The school was situated in the "wedge-shaped area between the houses", as shown in figure 5.<sup>61</sup> The collective as the neighbourhood community was integrated within the new school: the existing path running from one side of the houses to the other side continued within the school.<sup>62</sup> The school corresponds to the typology of a hall school as classrooms surround a long common hall which can be deduced from the plan in figure 8. The existence of a common hall allows the whole school community to meet. Skylights accentuate the common hall.<sup>63</sup> The classrooms lay immediately to the common area, and glass panels separate them.<sup>64</sup> The common area thus functions as a corridor too, which allows for even more interaction to occur. Figure 6 shows wooden sliding doors in the common hall. These accommodate changing the size of the common hall so smaller groups can meet.<sup>65</sup> When they are closed, they create three rooms: a common hall for the little children who use it as a playing room, a common hall for the large children, and a room for arts and crafts in between.<sup>66</sup> In the elevation of figure 9, skylights are visible. The roof is tilted in an octagonal shape in each classroom, as shown in figure 7. Each classroom always has sun due to these skylights.<sup>67</sup> Therefore they make it possible to move furniture and to form different groups.

The basic octagonal shape in the plan represents a non-hierarchical collective. In an interview by Sloothaak, they sit around a hexagonal shape, about which Verhoeven says, "*At such a table you sit around as equivalent people*"<sup>68</sup>. However, some level of hierarchy still exists in this school because the younger children are separated from the older children in the building. The classrooms of the younger children lay on one side of the common area, the classroom of the older children on the other side. This split is too visible in the outside area.

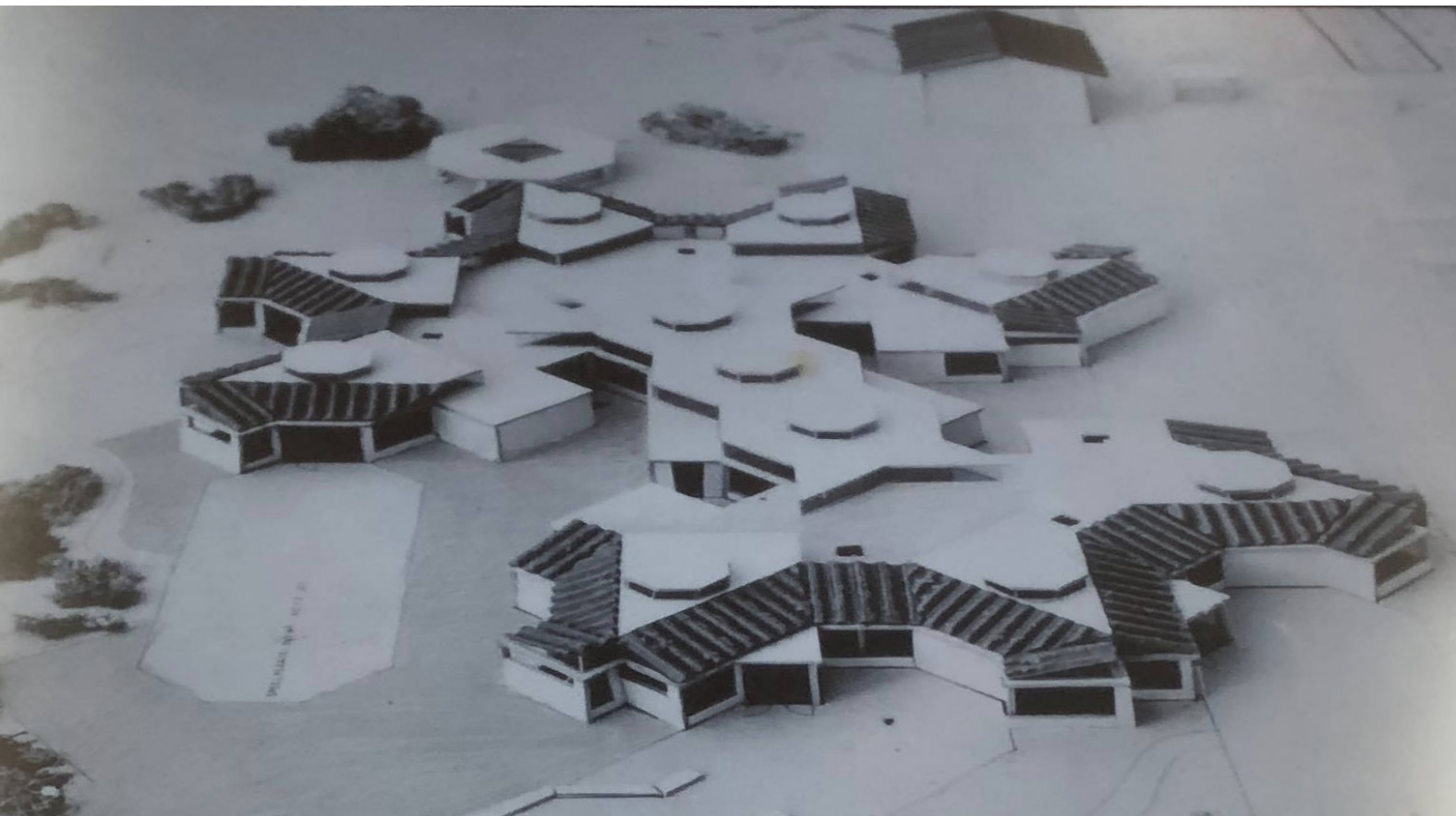


Fig.4. Verhoeven, *Model school Cuijk*.



Fig.5. Verhoeven, *Surrounding plan Cuijk*.

<sup>60</sup>Zahle, *Jan Verhoeven*, 108.

<sup>61</sup>Jan Verhoeven. "Toelichting op het project Cuijk." Het Nieuwe Instituut, Rotterdam, archive Verhoeven, inventory number VERHd81, n.d.

<sup>62</sup>Verhoeven, "Toelichting op het project Cuijk."

<sup>63</sup>"Grundschule in den Niederlanden." *Deutsche Bauzeitung*, February, 1979, 32.

<sup>64</sup>Deutsche Bauzeitung, "Grundschule in den Niederlanden," 32.

<sup>65</sup>Verhoeven, "Toelichting op het project Cuijk."

<sup>66</sup>Verhoeven, "Toelichting op het project Cuijk."

<sup>67</sup>Verhoeven, "Toelichting op het project Cuijk."

<sup>68</sup>Jan Sloothaak. "Bouwen op Montessori's Fundamenten." *Trouw*, November 18, 1987. Translated from Dutch: "*Je zit als gelijkwaardige mensen aan zo 'n tafel.*"



Fig.6. Het Nieuwe Instituut, *Wooden sliding doors Cuijk*.



Fig.7. Het Nieuwe Instituut, *Classroom Cuijk*.

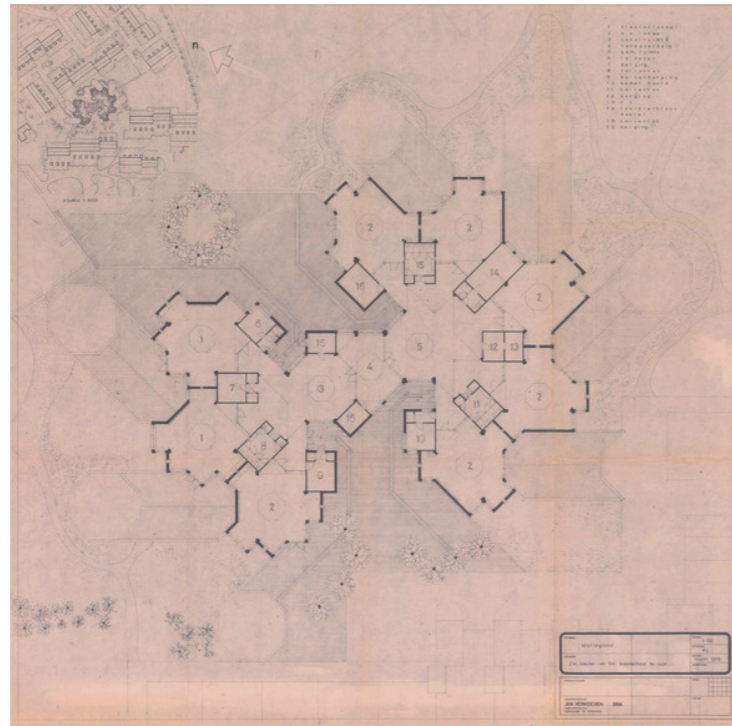


Fig.8. Verhoeven, *Plan Cuijk*.

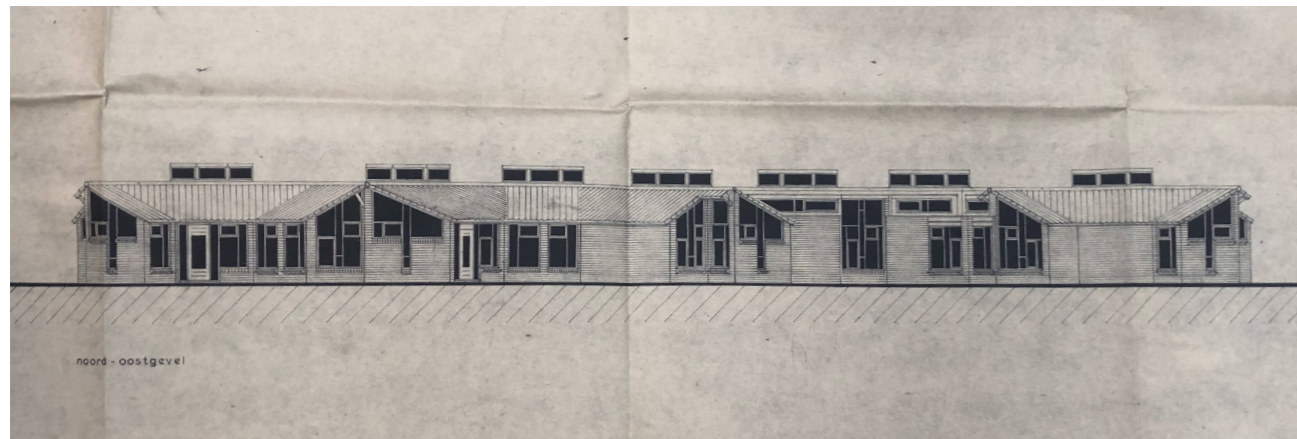


Fig.9. Verhoeven, *North East Elevation Cuijk*.

*Synergy: the individual as a fundament for the collective*

Within the collective, the individual is stressed. All classrooms have their own exit and outside area.<sup>69</sup> The windows of the classrooms are mostly oriented on their own outside area.

The basic shape of the plan is based upon a geometric octagonal. The same shape is present in each classroom, although the niches added to the classrooms make it harder to deduct the shape.<sup>70</sup> Smaller units creating a larger structure, comes back in structuralism too. Verhoeven describes it as rhythmic “the variation of the big and the small, the light and the dark.”<sup>71</sup> By stressing the individual within the collective, Verhoeven portrays his ideas on the individual and collective in Cuijk: the individual as a fundament for the community.<sup>72</sup>

*Individual defined in Cuijk*

Stressing the individual within the collective defines the individual too. Jan Verhoeven schools’ should enhance the individual child to become independent and develop their own identity. According to Verhoeven, “*Upbringing shouldn’t be focussed on adaptation but on actively building the community, because children might very well want to improve society.*”<sup>73</sup> Therefore, Verhoeven stresses the importance of the individual child to develop itself as an independent.<sup>74</sup> Developing their own identity is another returning principle in his work.<sup>75</sup> Even though Verhoeven wants to create a non-hierarchical collective, he explicitly wants “*equivalence*”<sup>76</sup>, not “*equality*.”<sup>77</sup> This creates space for a child’s own identity.

<sup>69</sup> Verhoeven, “Toelichting op het project Cuijk.”

<sup>70</sup> Zahle, *Jan Verhoeven*, 108.

<sup>71</sup> Bert Bosker. “Techniek is Middel, Nooit Doel van de Architectuur.” *Architectuur/ Bouwen*, February, 1987, 56. Translated from Dutch: “*Ritmiek: de afwisseling van het grote en het kleine, het lichte en het donkere*”

<sup>72</sup> Zahle, *Jan Verhoeven*, 46.

<sup>73</sup> Sloothaak, “Bouwen op Montessori’s Fundamenten.” Translated from Dutch: “*Opvoeding moet niet gericht zijn op aanpassing maar op actief bouwen aan de gemeenschap, want kinderen kunnen de maatschappij best wel een willen verbeteren*”

<sup>74</sup> Roos, “Praten met: Jan Verhoeven.”

<sup>75</sup> Bosker “Techniek is Middel, Nooit Doel van de Architectuur,” 56.

<sup>76</sup> Komossa, Spoormans, and Van Dam, *De Transformatie van het Schoolgebouw*, 49. Translated from Dutch: “*gelijkwaardigheid*”

<sup>77</sup> Komossa, Spoormans, and Van Dam, *De Transformatie van het Schoolgebouw*, 49. Translated from Dutch: “*gelijkheid*”





Fig.10. Het Nieuwe Instituut, Entrance Cuijk from outside.



Fig.11. Het Nieuwe Instituut, Entrance Cuijk from inside.



Fig.12. Het Nieuwe Instituut, Common hall Cuijk

*School as a warm and safe place for the development of the individual*

He does add one condition for this child to develop into an independent individual with its own identity: the necessity of school being a warm and safe place:

*I think it's extremely important that you feel pleasant in a place. I have made quite a number of schools and the children are tough in saying: I feel at ease or I don't feel at ease. Well, I always noticed they feel at home there incredibly.<sup>78</sup>*

Concentrating on the atmosphere suits educational thinking in the seventies, as could be read in the previous chapter. "Experience value" was named an ingredient to create a school that places the child in the centre. Creating an experience of a warm and safe place is accomplished in five ways.

*Warm and safe place by the human scale*

The first way Cuijk accomplishes a warm and safe place is through the human scale, which is a theme in seventies architecture too. Both the common hall and the classrooms have niches, which create a feeling of safety for the children, as the individual can withdraw from the collective.<sup>79</sup> Differences in height, including sloped roofs, contribute to the creation of differentiated areas.<sup>80</sup> Wall indentations also create niches, as shown in figure 7. Children can use these niches to work more individually within the classrooms, which suits educational thinking in the seventies about stimulating individual working. However, there are no individual working spaces outside the classroom. From the photos, it can't be deduced that niches in the common area are used to work individually, as figure 12 shows.

Additionally, the main entrance is not monumental but small and hidden around a corner, as figures 10 and 11 show. It conveys that you don't enter a sacred place where the truth is being told.<sup>81</sup> The entrance isn't a threshold, so children enter the school easily.

<sup>78</sup>Jo Hurkmans. "Een Architect is Gewoon een Man, die Ergens Goed in Is." *Bouw*, November 13, 1982, 86. Translated from Dutch: "Ik vind het een ontzettend belangrijke zaak dat je je ergens plezierig voelt. Ik heb nogal wat scholen gemaakt en kinderen zijn keihard in het zeggen van: ik voel me lekker of ik voel me niet zo lekker. Nou heb ik altijd gemerkt dat ze er zich ongelooflijk thuis voelen"

<sup>79</sup>Deutsche Bauzeitung, "Grundschule in den Niederlanden," 32.

<sup>80</sup>Zahle, *Jan Verhoeven*, 109.

<sup>81</sup>Zahle, *Jan Verhoeven*, 51.

### *Warm and safe place by nature*

The second way is through contact with nature, which Stam confirms.<sup>82</sup> The school is placed on the ground floor, so contact with nature is easy.<sup>83</sup> The plan follows an organic structure.<sup>84</sup> The skylights allow both the sun and shadow to come into the classroom, and the raindrops on the windows will be heard.<sup>85</sup>

In these sober colours of the materials, nature is also found back. According to Verhoeven, “*Colours have to relate to the surrounding, connected to the earth. Advertising colours, I don’t like that*”<sup>86</sup> In Cuijk, you don’t find advertising colours. The outside is made from red bricks, wooden window frames, orange roofing tiles, and a bitumen roof.<sup>87</sup> On the inside, concrete blocks and a pine wooden construction are visible.<sup>88</sup> The natural material wood stands out as the heavy wooden beams and columns that make up the building construction are visible throughout the building.

### *Warm and safe place by simplicity*

The third one is by means of simplicity, of which the churches of Cistercians inspired him:

*The primal feeling of ‘feeling at home’, that is very important to me. . . . We are keen on making things by simple means, not by simple shapes. We have been strongly influenced by the way the Cistercians built; it was very rich, but very simple at the same time.*<sup>89</sup>

This simplicity comes back in using materials that reference traditional Dutch architecture.<sup>90</sup> Secondly, it comes back in the visible building construction, making the building readable. The Cistercian churches could have been a source of inspiration for the lighting from above and the curving roof. Verhoeven does tell he takes over their shape, not their hierarchical ideas.<sup>91</sup> Otherwise, it would clash with his portrayal of a non-hierarchical collective, which is easier to deduct from the schools of the following chapters.

<sup>82</sup>Marja Stam. “Pedagogische Uitgangspunten Vormgegeven.” (unpublished manuscript). Faculteit der pedagogische, andragogische en onderwijskundige wetenschappen, University of Amsterdam, 1990, 27.

<sup>83</sup>Zahle, *Jan Verhoeven*, 46.

<sup>84</sup>Stam “Pedagogische Uitgangspunten Vormgegeven,” 27.

<sup>85</sup>Sloothaak, “Bouwen op Montessori’s Fundamenten.”

<sup>86</sup>Bosker “Techniek is Middel, Nooit Doel van de Architectuur,” 57. Translated from Dutch: “*Kleuren moeten te maken hebben met de omgeving, verbonden zijn met de aarde. Reclamekleurtjes, daar houd ik niet van*”

<sup>87</sup>Verhoeven, “*Toelichting op het project Cuijk*.”

<sup>88</sup>Verhoeven, “*Toelichting op het project Cuijk*.”

<sup>89</sup>Komossa, “Lagere Scholen,” 37. Translated from Dutch: “*Het oergevoel van zich thuisvoelen, dat vind ik heel belangrijk. . . . We zijn er erg op gesteld om met eenvoudige middelen, niet met eenvoudige vormen, dingen te maken. We zijn sterk onder invloed geweest van de manier waarop de Cisterciënzers bouwden; dat was heel rijk, maar ook heel eenvoudig*”

<sup>90</sup>Zahle, *Jan Verhoeven*, 51.

<sup>91</sup>Komossa, “Lagere Scholen,” 37.

### *Warm and safe place by fantasy*

Another principle by which Verhoeven tries to achieve a warm and safe place, is activating children’s fantasy: “*Fantasy has to be activated, the most valuable we have.*”<sup>92</sup> About the building of a school, he says: “*You have to do it in such a way that the world of thought is enriched. In a sterile environment creative thoughts don’t have space to exist. If one discipline is a social art, it has to be the discipline of architecture.*”<sup>93</sup> The atmosphere in Cuijk is the opposite of sterile: it combines textured materials such as concrete blocks and wood, skylights twinkle, the plan follows an unconventional shape, and the building construction is intriguing. Therefore it inspires and gives room for children’s fantasies.

### *Synergy: warm and safe place by the collective*

Lastly, the collective contributes to creating a warm and safe place for the development of the individual. It does so by stressing the collective, as explained before. According to Rodermond it’s the central theme of the work of Verhoeven: creating space for the development of the child at its’ own pace with its’ individual talents, within the comfort of the collective.<sup>94</sup>

This idea seems to come from the Jenaplan education method, where the child learns from the collective. But in general educational thinking of the seventies, this is a theme too. Other themes regarding the individual and the collective in Cuijk overlap too with both general educational thinking seventies and other educational methods such as Jenaplan or Montessori: the importance of community in learning, working both individually and in different group formations, and approaching the child as an independent. Therefore, it could be that Montessori and Jenaplan’s education influenced general thinking in the seventies heavenly on these themes. At least Cuijk resembles Montessori and Jenaplan education ideas, whether these originate from general educational thought in the seventies or not. The following chapters research if Verhoeven portrayed the individual and the collective theme the same way in non-public schools.

<sup>92</sup>Roos, “Praten met: Jan Verhoeven.” Translated from Dutch: “*Je fantasie moet in werking worden gesteld, het kostbaarste wat we hebben*”

<sup>93</sup>Sloothaak, “Bouwen op Montessori’s Fundamenten.” Translated from Dutch: “*Je moet dat zo doen dat de gedachtewereld verrijkt wordt. In een steriele omgeving kunnen creatieve gedachten hun weg niet vinden. Als er 1 vak sociale kunst is, dan is het wel architectuur*”

<sup>94</sup>Rodermond, “Op de Kindermaat Gemaakt,” 72.

### Chapter 3: Collective and individual in Jenaplanschool Heumen

#### *Collective defined in Heumen*

In Jenaplan school 'de Vuurvogel' the collective is stressed even more than Cuijk. It's located in Heumen and was designed in 1978.<sup>95</sup> Figure 13 shows the model of the school. Another school is attached to the Jenaplan school in the model, but it was never built. The school functions as a community in Jenaplan education. Therefore the toddlers aren't separated from the other grades, which can be deduced from the plan in figure 14.<sup>96</sup> Consequently, the collective is more non-hierarchical than in Cuijk, the plan is based on an octagonal again.<sup>97</sup> Eight classrooms, octagonal too, are situated around a common hall, corresponding to the typology of a hall school.<sup>98</sup> Between the common hall and the classrooms exists a transitional space with working places and a library.<sup>99</sup> On the south, west and north side are attached rooms, which function as a playing area, a teachers' room, and a storage room.<sup>100</sup> Skylights allow the shifting of furniture to suit different group formations.

Therefore the collective in Heumen can operate on different scales. There is room for the "individual child, the small group, the base group and the entire community", according to Verhoeven.<sup>101</sup> The fundamental activities of Jenaplan education, discussion, play, work and celebration, are thereby represented.<sup>102</sup>

Apart from the space reserved for meeting, the collective is stressed too by the "spacial climax" in the common hall.<sup>103</sup> It's more impressive than Cuijk. A dome is created by a wooden roof construction with skylights on different heights, as shown in figure 15.<sup>104</sup> The common hall is accentuated too by height difference and surface area compared to the classrooms, as the section in figure 16 shows. Additionally, it has a different floor. Namely brown felt, while the classrooms have green linoleum as a floor.<sup>105</sup> Stressing the collective so extensively suits Jenaplan education.<sup>106</sup>

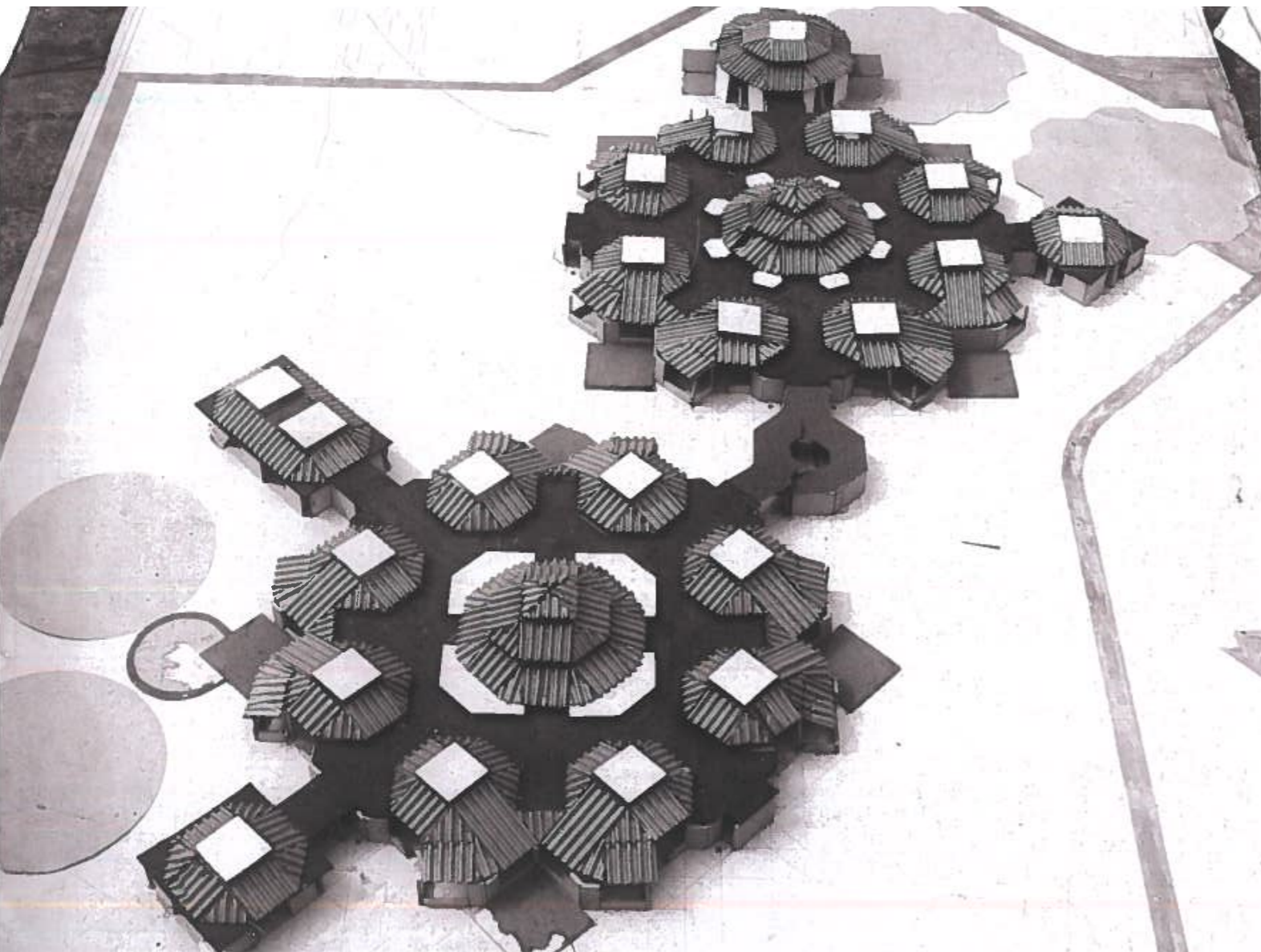


Fig.13. Het Nieuwe Instituut, *Model school Heumen*.

<sup>95</sup>Zahle, *Jan Verhoeven*, 128.

<sup>96</sup>Jan Verhoeven. "Toelichting op het project Heumen." Het Nieuwe Instituut, Rotterdam, archive Verhoeven, inventory number VERHd90, n.d.

<sup>97</sup>Zahle, *Jan Verhoeven*, 128.

<sup>98</sup>Zahle, *Jan Verhoeven*, 51.

<sup>99</sup>Zahle, *Jan Verhoeven*, 51.

<sup>100</sup>Zahle, *Jan Verhoeven*, 51.

<sup>101</sup>Verhoeven, "Toelichting op het project Heumen."

<sup>102</sup>Verhoeven, "Toelichting op het project Heumen."

<sup>103</sup>Zahle, *Jan Verhoeven*, 50.

<sup>104</sup>Zahle, *Jan Verhoeven*, 50.

<sup>105</sup>Verhoeven, "Toelichting op het project Heumen."

<sup>106</sup>Zahle, *Jan Verhoeven*, 50.

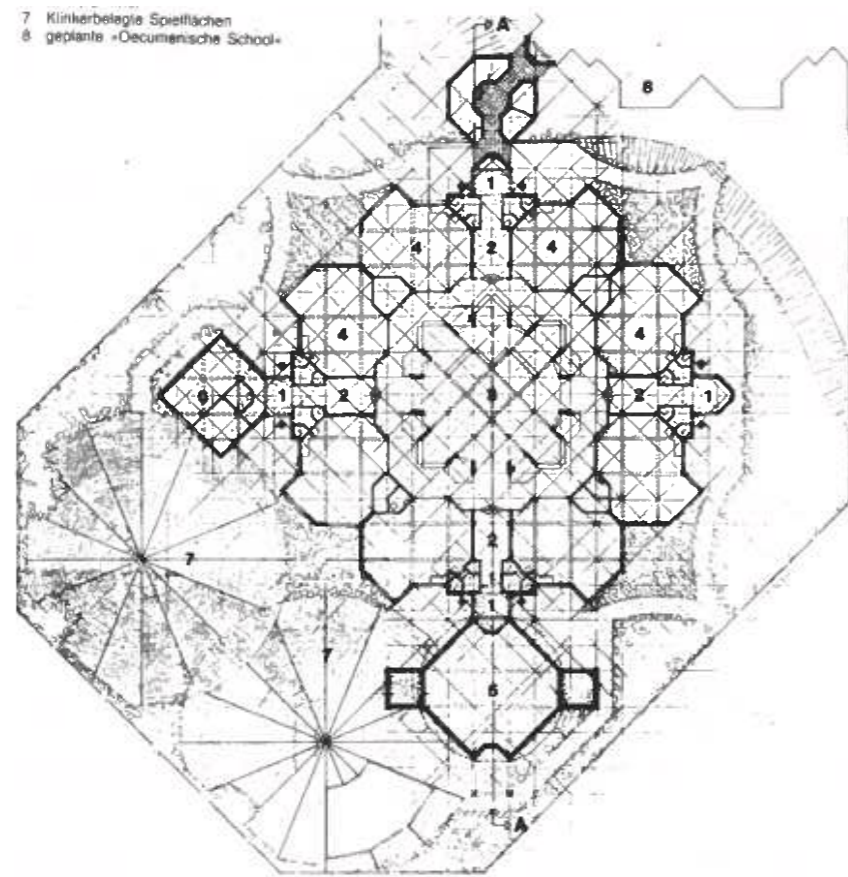


Fig.14. Jan Verhoeven, *Plan Heumen*, 129.



Fig.15. Jan Verhoeven, *Common hall Heumen*, 49.

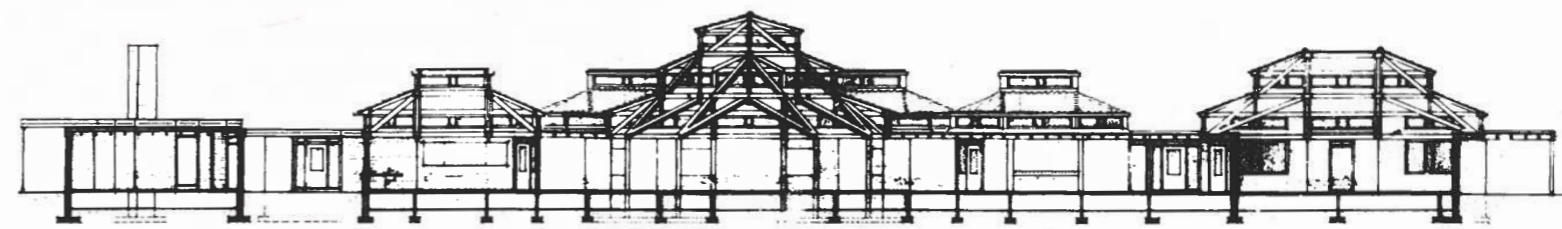


Fig.16. Jan Verhoeven, *Section Heumen*, 51.

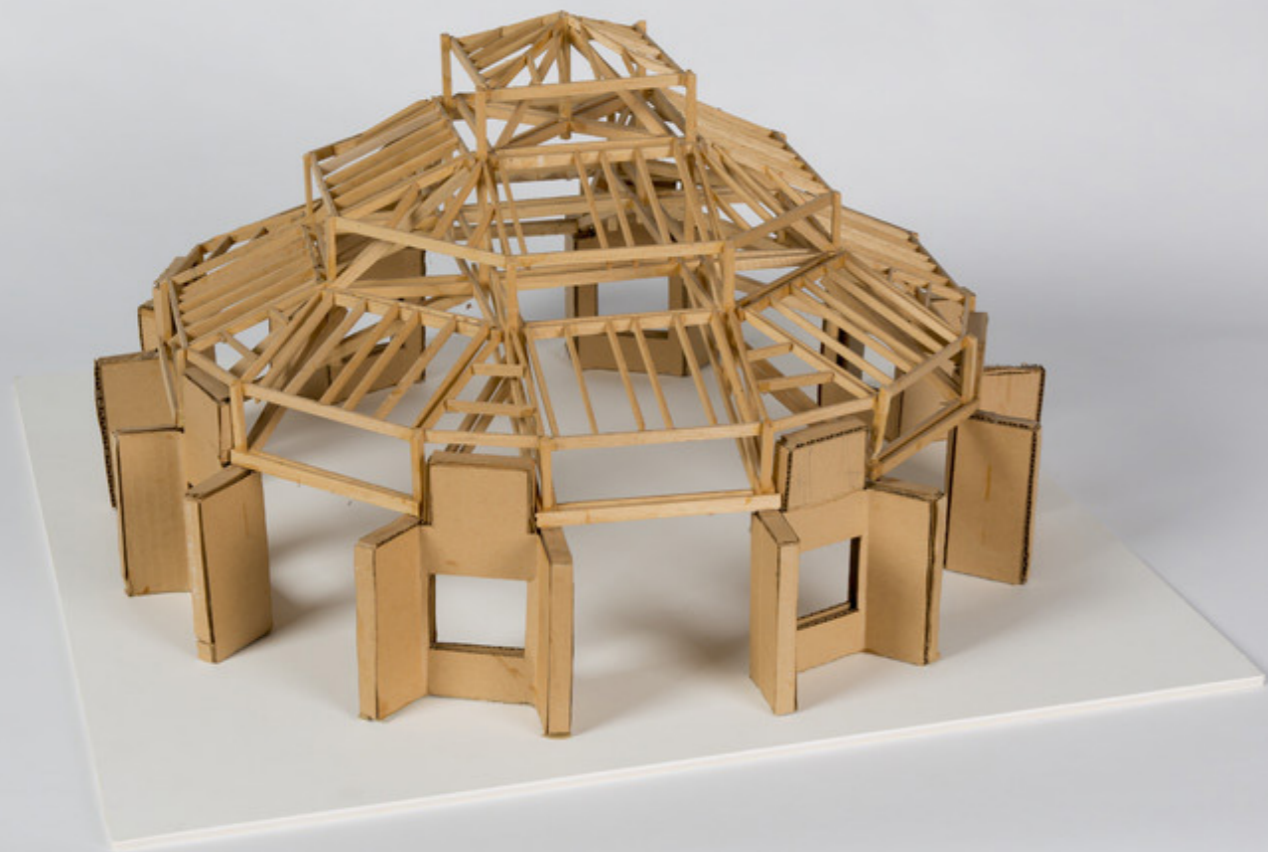


Fig.17. Verhoeven, *Model common hall Heumen*.

*Synergy: the individual as a fundament for the collective*

The collective is composed of the individual, which is visible in numerous ways in Heumen. First, in roof construction. The model of figure 17 shows the dome beams in the central hall leaning on brick walls at the edge of the central hall.<sup>107</sup> These brick walls create niches for individual work. Therefore the collective dome literally leans upon the individual spaces. It's a translation in building structure of Verhoeven's statement about the individual and collective as humans: "*I believe a strong individual is indispensable. Only then you can think about forming a community*".<sup>108</sup>

Secondly, the octagonal classrooms form the octagonal building as a whole. The individuality of the classrooms is still readable. In the school model in figure 13, the separate classrooms are easily identifiable, surrounding the central hall. Broekhuizen describes them as a 'series of pavilions' that form a community.<sup>109</sup> Therefore the individual and the collective go hand in hand.

*Individual defined in Heumen*

Verhoeven says about the school in Heumen, "*In this environment, the child is regarded as an individual personality. We want to allow each child to have enough room to be itself so that it may develop according to its own character, disposition and at its own speed*".<sup>110</sup> The identity of an individual is therefore important in Heumen too.

The independent character of the individual is stressed more in Heumen than in Cuijk. Inside and outside the classroom, there are individual working spaces, the niches behind the brick walls in the common hall.

*Warm and safe place by human scale, nature, simplicity and fantasy*

The human scale creates a warm and safe place. The entrances aren't monumental.<sup>111</sup> Additionally, the human scale provides the individual to withdraw from the collective. Niches in classrooms and differentiated window sizes create a place for the individual.<sup>112</sup> The niches in the central hall have the same function. Additionally, they make a transitional zone between the common hall and the classroom, with a smaller size than the central hall. The individual can thereby choose to walk through the central hall, enable meeting, or withdraw and use the smaller transitional space as a corridor if the child doesn't want to meet. This possibility of withdrawal creates safety.

<sup>107</sup>Zahle, *Jan Verhoeven*, 50.

<sup>108</sup>Bosker, "Techniek is Middel, Nooit Doel van de Architectuur," 56. Translated from Dutch: "*Ik vind een sterk individu noodzakelijk. Pas daarna kun je gaan denken aan het vormen van een gemeenschap*"

<sup>109</sup>Broekhuizen, "Build Educational Centres, Not Schools," 37.

<sup>110</sup>Verhoeven, "Toelichting op het project Heumen."

<sup>111</sup>Zahle, *Jan Verhoeven*, 51.

<sup>112</sup>Zahle, *Jan Verhoeven*, 50.



Fig.18. Jan Verhoeven, *Individual working place in central hall Heumen*, 50.

Nature and simplicity are present in Heumen as well to create a warm and safe place. The school is placed on the ground, the plan follows an organic structure, and nature comes into the building through skylights. The same traditional materials are used in sober colours: red brick for the outside, ceramic red roof tiles, dark brown stained pine window frames, red-stained pine framing and roof support on the inside, unpainted concrete blocks as inner walls, woodwool slabs as inner roofing. The visible wooden building construction makes the building understandable.

In Heumen, children's fantasy is triggered too by textured materials, skylight, and the plan's shape. The building construction is even more intriguing than in Cuijk, as it stands out more and reaches higher.

*Synergy: warm and safe place by the collective*

Thus far, creating a warm and safe place is developed further in Heumen. As the collective is stressed more in Heumen, it also attributes more to a warm and safe place than Cuijk. It's portrayed in the individual working spaces in the central hall shown in figure 18. They create space for the individual, but through the opening in the wall, the child can still observe the collective. Here, the collective and the individual come together.

In comparison with Cuijk, Heumen stresses the collective even more, has more places to work individually and provides more options for withdrawal. Therefore the core idea of Jenaplan education is portrayed stronger: becoming an independent individual surrounded by the collective.

## Chapter 4: Collective and individual in Montessori school Leusden

### Collective defined in Leusden

*“Design a building in which the child feels so much at home, such that it automatically starts to open up for its’ own creativity. Give the child spaces, in which the child naturally wants to act, play music, dance, paint, build.”<sup>113</sup>*

Verhoeven designed a school with the child’s creative development at heart to fulfil this given task.<sup>114</sup> Subsequently, he placed a theatre in the middle of the school where the collective comes together. This meeting place is one of the ways the collective is stressed in this school.

The school is located in Leusden and was designed in 1979, its model is shown in figure 19.<sup>115</sup> The type of the school corresponds to a hall school too. Eight rooms surround a central hall in a crystal-shaped plan, as shown in figure 20.<sup>116</sup> The plan represents a non-hierarchical collective, especially because the small and large children aren’t separated. The circle doesn’t finish, which creates space for the entrances. The plan reminds of the plan of an apsis, referring to the roman/gothic church.<sup>117</sup> Balconies surround the central hall, which are reached by three wide stairs visible in figure 21 and the section of figure 23.<sup>118</sup> The stairs and balconies function as a stand.<sup>119</sup> On the balconies, children can work on their own. Skylights in the central hall and the classrooms enable the furniture to move. Therefore, the collective can operate on different scales, which suits Montessori education.<sup>120</sup>

The spacial climax in the central hall stresses the collective. The prominent wooden roof construction comes together in the centre, as shown in figure 22. It stands out even more because of the surrounding skylights in the central hall, which could be seen as an “aureole” for children, according to Verhoeven.<sup>121</sup> Additionally, the central hall is visible from most parts of the school, such as the balconies and the classrooms. Figure 24 shows you can look into the central hall from the classroom because of the glass windows between them. Simultaneously, the whole school could be observed from the central hall due to its basic structure as a panopticon.<sup>122</sup> Therefore, the collective is always present and fulfils a central function in the school.

<sup>113</sup>Jan Verhoeven. “Toelichting op het project Leusden.” Het Nieuwe Instituut, Rotterdam, archive Verhoeven, inventory number VERHd111, n.d. Translated from Dutch: “*Maak een gebouw waarin het kind zich zo thuis voelt, dat het zich vanzelfsprekend gaat openstellen voor zijn eigen creativiteit. Geef het kind zulke ruimtes, dat het vanzelf de behoefte krijgt toneel te gaan spelen, muziek te maken, te dansen, te schilderen, te bouwen*”

<sup>114</sup>Rodermond, “Op de Kindermaat Gemaakt,” 77.

<sup>115</sup>Zahle, *Jan Verhoeven*, 130.

<sup>116</sup>Zahle, *Jan Verhoeven*, 130.

<sup>117</sup>Komossa, “Lagere Scholen,” 27.

<sup>118</sup>Zahle, *Jan Verhoeven*, 130.

<sup>119</sup>Verhoeven, “Toelichting op het project Leusden.”

<sup>120</sup>Rodermond, “Op de Kindermaat Gemaakt,” 77.

<sup>121</sup>Leusder Krant, “Met Architectuur Kun Je Inspiratie Geven aan Mensen en er uit Halen wat er in Zit.”

<sup>122</sup>Komossa, “Lagere Scholen,” 27.



Fig.19. Verhoeven, *Model school Leusden*.

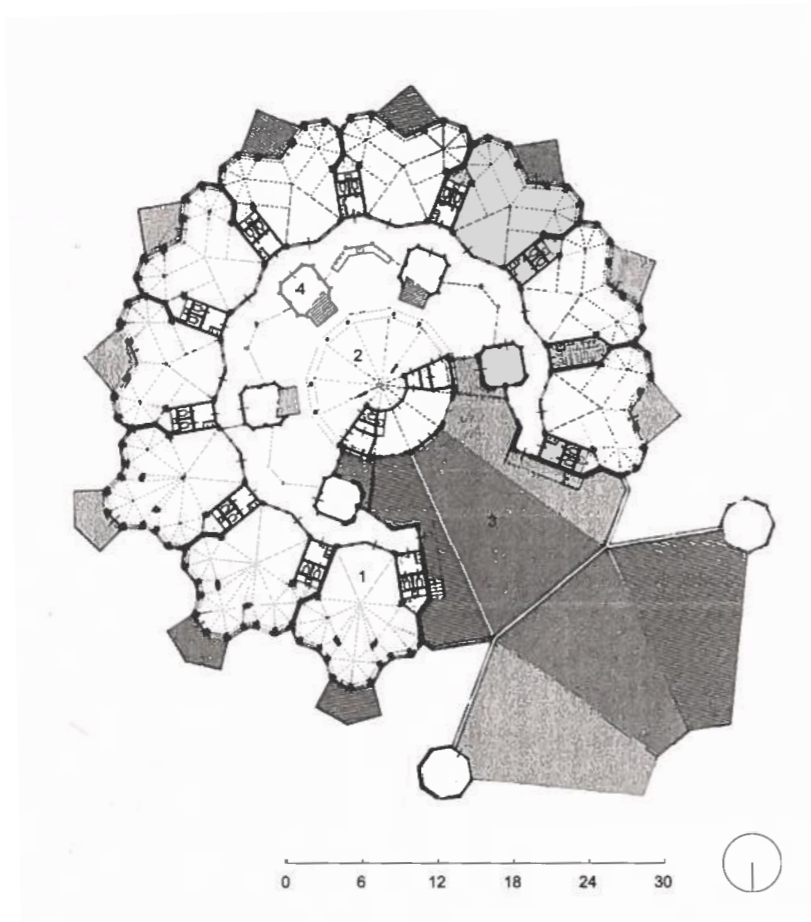


Fig.20. Swakman, Daan, and Shakeeb Zahir, *Plan Leumen*, 19.



Fig.21. Het Nieuwe Instituut, *Stairs and balconies common hall Leusden*.





Fig.22. Het Nieuwe Instituut, *Common hall Leusden.*

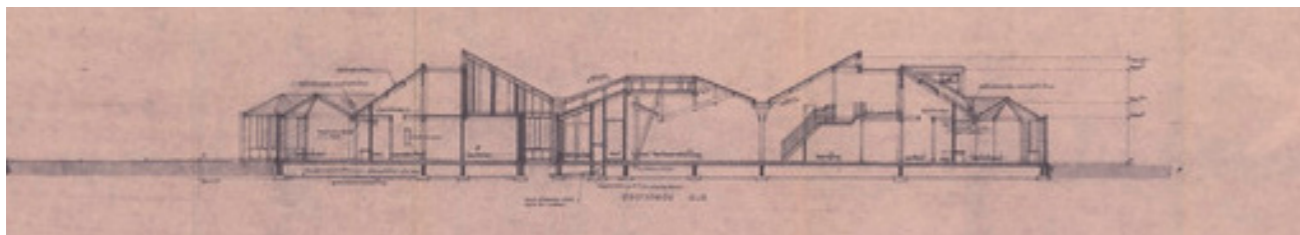


Fig.23. Verhoeven, *Section Leusden.*



Fig.24. Het Nieuwe Instituut, *View from classroom to common hall Leusden.*



Fig.25. Het Nieuwe Instituut, Classroom Leusden.

*Synergy: the individual as a fundament for the collective*

Within the collective, the individual is fundamental in Leusden, which Verhoeven portrayed: “We attempted to use shape to visualise what a Montessori school could be. The smallest groups enlarge into groups, and these, in turn, enlarge into a community.”<sup>123</sup> It’s visible in the plan as the smallest circles, the ‘chapels’ in the classroom, connect and create a larger circle, the classroom. Connecting these classroom circles create the largest circle, which has the central hall as its centre and is being completed by the outside area.<sup>124</sup> The building construction of the roof accentuates the accumulation of small to large: the building construction of the largest circle is repeated in the smallest circle, the chapels.<sup>125</sup> At the centre of each circle, the building construction comes together.<sup>126</sup> Figure 26 shows the most prominent knot in the central hall, which is repeated in the smaller knot in the middle of the classroom, as shown in figure 27. In figure 25, the most petite knot is visible, which is in the chapels of the classroom. The circle is stretched even further by the water and green area in the surrounding, as shown in figure 28.<sup>127</sup> Verhoeven believes Leusden represents his philosophy on the little forming the whole best.<sup>128</sup> He says: “The architecture and function became an expression of life.”<sup>129</sup>



Fig.26. Het Nieuwe Instituut, Knot roof construction common hall Leusden.

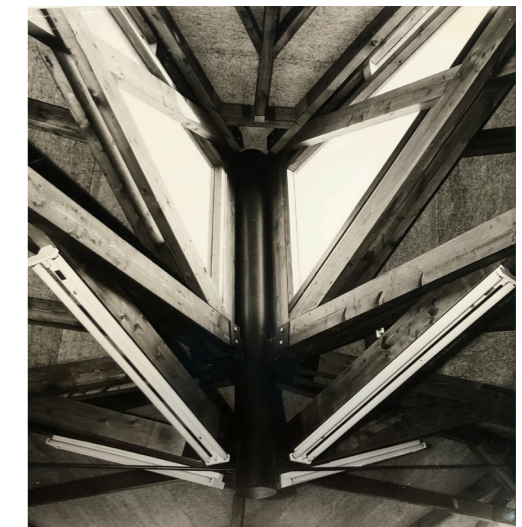


Fig.27. Het Nieuwe Instituut, Knot roof construction classroom.

<sup>123</sup>Verhoeven, “Toelichting op het project Leusden.” Translated from Dutch: “Getracht is door middel van de vorm uit te beelden wat een Montessorischool zou kunnen zijn. De kleinste groepjes die zich vergroten tot groepen en deze vergroten zich weer tot een gemeenschap”

<sup>124</sup>Verhoeven, “Toelichting op het project Leusden.”

<sup>125</sup>Komossa, “Lagere Scholen,” 17.

<sup>126</sup>Rodermond, “Op de Kindermaat Gemaakt,” 78.

<sup>127</sup>Komossa, Spoomans, and Van Dam, *De Transformatie van het Schoolgebouw*, 49.

<sup>128</sup>Komossa, “Lagere Scholen,” 37.

<sup>129</sup>Verhoeven, “Toelichting op het project Leusden.” Translated from Dutch: “De architectuur en funkte is een uitdrukking geworden van het totale leven”



Fig.28. Het Nieuwe Instituut, *Exterior Leusden.*



Fig.29. Het Nieuwe Instituut, *Individual working spaces on balconies Leusden.*



Fig.30. Het Nieuwe Instituut, *Child's drawing classroom Leusden*

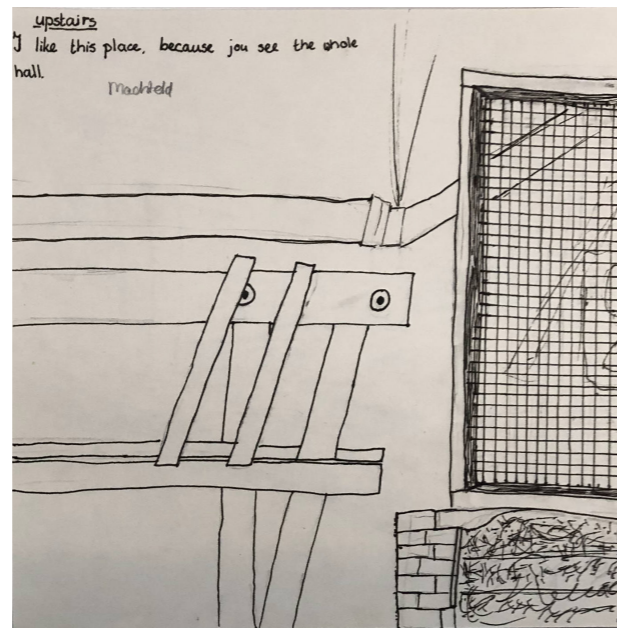


Fig.31. Het Nieuwe Instituut, *Child's drawing view from balconies Leusden*

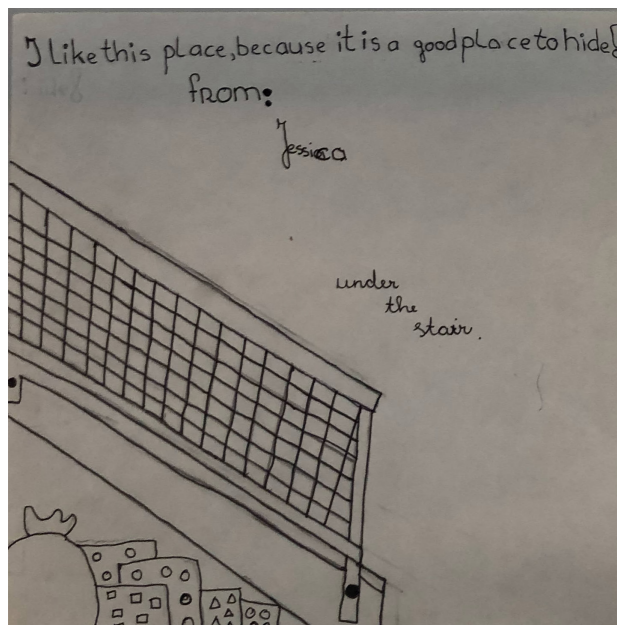


Fig.32. Het Nieuwe Instituut, *Child's drawing hiding place stairs I Leusden*

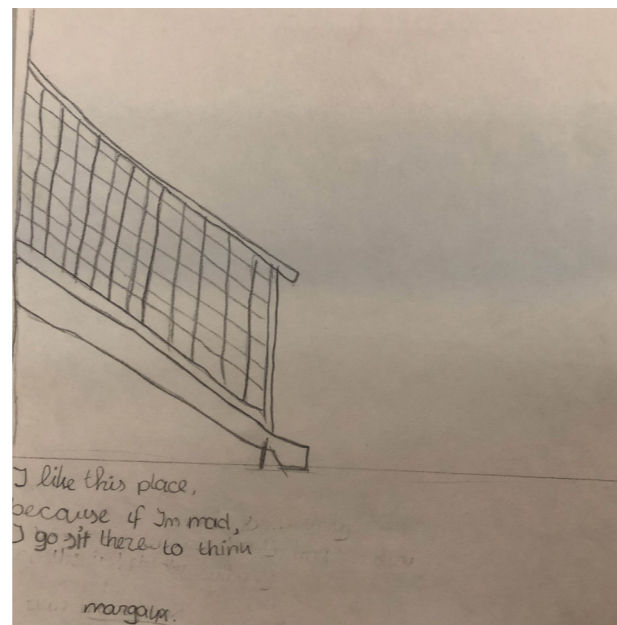


Fig.33 Het Nieuwe Instituut, *Child's drawing hiding place stairs II Leusden*

### *Individual defined in Leusden*

In the previous quote, both 'architecture' and 'function' portray an independent individual with their own identity. Whereas 'architecture' in this quote refers to the individual as a building block for the collective, 'function' refers to the ability to work in different group formations. There is a whole story, the balconies, dedicated to working on your own, as shown in figure 29. It stimulates children to become independent and develop their own identities. The school as a warm and safe place, does so too.

### *Warm and safe place by human scale, nature, simplicity and fantasy*

Verhoeven was asked to make children feel at home, which he accomplished according to Leusder Krant, 1979: "It's a sympathetic building, in which children 'live' together in tiny houses"<sup>130</sup>. Children's drawings portrayed their reactions. One of them illustrates the classroom as a living room, including flowers on the table, as shown in figure 30.

The human scale is the first aspect that makes it feel like a place at home. The entrances aren't monumental, as shown in figure 34. Moreover, niches and individual working spaces allow the child to withdraw from the collective. Therefore, not being visible creates a safe feeling for the children, as opposed to stressing the collective by being visible. Children's drawings valued the ability to either see or not be seen. The drawing of figure 31, values the ability to have an overview from the balconies. The drawings of figure 32 and figure 33 value the hiding place beneath the stairs: here, presents are hidden, and the child can think when he or she is mad. The corridor doesn't provide the opportunity to withdraw from the collective as it did in Heumen. A circular flat roof only accentuates it.<sup>131</sup> Still, the human scale offers the opportunity to remove from the collective in Leusden.



Fig.34. Het Nieuwe Instituut, *Entrance Leusden.*

<sup>130</sup>"Met Architectuur Kun Je Inspiratie Geven aan Mensen en er uit Halen wat er in Zit." *Leusder Krant*, September 27, 1979. Translated from Dutch: "Het is een sympathiek gebouw, waarin de kinderen als in kleine huisjes bij elkaar wonen"

<sup>131</sup>Komossa, "Lagere Scholen," 17.

Nature and simplicity come back in the same use of simple, natural materials as in the previous schools. The colour palette is terrestrial.<sup>132</sup> The school is placed on the ground floor, and the classrooms have a view of green fields.<sup>133</sup> Skylights allow the sun to come in. Verhoeven would have wanted to use the same concrete stone as the inside floor for the outside pavement to create an even stronger relationship with the outside.<sup>134</sup> As a critique of his interior, the colours are sober, and the lighting is dark; it doesn't meet schools' existing lighting standards.<sup>135</sup> However, teachers of all schools are positive about the schools.<sup>136</sup> And children feel at home, according to Verhoeven.<sup>137</sup> To what extent the simple, sober materials create a homey atmosphere is hard to tell, but they do generate the reference toward nature Verhoeven wanted to have.

Fantasy is present in this building, not only because a theatre is at its heart. Leusden has an intriguing roof construction, which he chose for the visual effect.<sup>138</sup> In the corners, the bricks stick out, as is visible in the classroom of figure 25. Verhoeven says: "*Because you see them, you start thinking about them ... It wouldn't surprise me, if suddenly a bird would sit on it. Or a small dwarf!*"<sup>139</sup> According to Verhoeven, when the school was built, children automatically opened up to all sorts of activities because the space was so inspiring.<sup>140</sup> To what extent this was due to his design or the children's nature to fantasise can only be researched by comparing his schools with other schools. It does suit his hypothesis on the importance of fantasy: "*If men want to vibrate, he needs inspiration for his mind.*"<sup>141</sup>

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<sup>132</sup>Komossa, "Lagere Scholen," 17.

<sup>133</sup>Verhoeven, "Toelichting op het project Leusden."

<sup>134</sup>Leusder Krant, "Met Architectuur Kun Je Inspiratie Geven aan Mensen en er uit Halen wat er in Zit."

<sup>135</sup>Rodermond, "Op de Kindermaat Gemaakt," 79.

<sup>136</sup>Rodermond, "Op de Kindermaat Gemaakt," 79.

<sup>137</sup>Roos, "Praten met: Jan Verhoeven."

<sup>138</sup>Leusder Krant, "Met Architectuur Kun Je Inspiratie Geven aan Mensen en er uit Halen wat er in Zit."

<sup>139</sup>Leusder Krant, "Met Architectuur Kun Je Inspiratie Geven aan Mensen en er uit Halen wat er in Zit." Translated from Dutch: "*Doordat je ze ziet, ga je erover nadenken...Zou me niks verwonderen, as daar plotseling een vogeltje op zat. Of een klein mannetje!*"

<sup>140</sup>Verhoeven, "Toelichting op het project Leusden."

<sup>141</sup>Leusder Krant, "Met Architectuur Kun Je Inspiratie Geven aan Mensen en er uit Halen wat er in Zit." Translated from Dutch: "*Wil de mens gaan vibreren, dan heeft hij voor zijn geest inspiratie nodig*"

### *Synergy: warm and safe place by the collective*

As the school building stresses the collective, it takes part in creating a warm and safe place for the individual. Similar to Heumen, Leusden has a place where the individual and the collective come together: the individual working spaces on the balconies. Here, the individual has a safe space where he or she can't be seen but can observe the collective.

The school portrays Montessori education extensively. Children's creativity and motivity are encouraged by a theatre. Besides, the collective is stressed and has many places to come together. Furthermore, the individual has a fundamental role within the collective and has places to work on their own, which creates independent children with their own identities.

## Conclusion

“A child has three teachers: firstly, other children. Secondly, the teacher. Thirdly, the ‘space’.”<sup>142</sup> This Swedish saying applies to the discussed schools of Jan Verhoeven. The other children, the collective, fulfil an essential role in the development of the individual, which is visible in his design of ‘space’. Verhoeven designed this ‘space’ carefully as a warm and safe place. If the quote had referred to the individual contributing to the collective as they interrelate, it would have been a direct translation of Verhoeven’s school buildings.

These school buildings stress the collective. Firstly, the collective is placed in the middle because a common hall is at the centre of the schools, which follows the typology of a hall school. Secondly, different group formations can meet. Various meeting places are created, and skylights allow furniture to move. The meeting theme is also present in architecture in the seventies, including the structuralist movement. In Heumen and Leusden, the central hall, thereby the collective, is stressed even more, partially due to the intriguing roof construction. In all schools, the collective is approached as non-hierarchic due to the shape of the plan. Especially in Heumen and Leusden, because the small and large children aren’t separated from each other.

The schools portray the individual as a fundament for the collective. The smaller units of the classrooms create a larger structure of the school, which follows a structuralist principle. Additionally, in Heumen, the collective roof literally leans on the individual niches. However, the accumulation of small to large is best represented in Leusden by its’ roof construction and apsis shaped plan.

As the individual is stressed and given space within the collective, it enhances the individual child to become independent and develop its’ own identity. Individual working spaces contribute to this, which appear mostly in Heumen and Leusden.

According to Verhoeven, the development of the individual benefits from a warm and safe environment. Human scale attributes to it firstly, which is a theme in architecture in the seventies too. It’s achieved by non-monumental entrances and niches where the individual could withdraw from the collective. In Heumen, the niches in the common hall create a corridor where the child could choose to participate in or withdraw from the collective. This option creates an extra layer of safety by the human scale. Leusden creates an extra layer of protection because the niches are characterised by not being seen, while the collective is always observable. Secondly, nature attributes to a warm and safe environment. Schools are on the ground floor, the plan follows an organic shape, through skylights, the weather is observable. Additionally, natural materials and sober colours are used. These are part of the third factor contributing to a warm and safe environment, namely simplicity. Cistercian churches gave inspiration regarding this theme. Lastly, the design of the schools triggers the fantasy of children. Textured materials, twinkling skylights, the plan following an unconventional shape, and an intriguing building construction all contribute to it. The latter is even more impressive in Heumen and Leusden.

<sup>142</sup>Otto Seydel. “Die Gute Schule der Zukunft.” In *Schulen in Deutschland Neubeau und Revitalisierung*, ed. Wüstenrot Stiftung (Stuttgard: Karl Krämer Verlag, 2004), 122.

Lastly, these schools use the collective to create a warm and safe place for the development of the individual since the designs emphasise the collective. Therefore, the individual needs the collective, and the collective needs its’ fundamental individual in these school buildings. The oppositions strengthen each other, as posed by Carola Giedion before. Their interrelation in these school buildings portrays Verhoeven’s idea of the individual and the collective forming a whole.

This idea corresponds to Montessori and Jenaplan educational methods a lot. It was portrayed in the schools of these educational methods, but it was so too in public school Cuijk. There are two reasons for this. First, the ideas of Montessori and Jenaplan education overlap with themes in general educational thinking in the seventies. Next to that, Verhoeven’s ideas suited Jenaplan and Montessori education. However, the ideas of Jenaplan and Montessori were portrayed most strongly in the corresponding schools. These emphasised the collective even stronger and had more individual working spaces. Additionally, in Jenaplan school Heumen, the corridor allows the child to choose to enter a relationship or not, joining or withdrawing from the collective. Montessori school Leusden most strongly emphasised the fundamental role of the individual within the collective by accumulating from small to large in its’ architecture.

All schools are characterised by fantasy. Fantasy characterises children too, so it’s hard to say to what extent Verhoeven’s’ design triggers their fantasy. Therefore this theme could be explored more in future research about Verhoeven’s’ designs. Imagination is a beautiful theme in the light of education, as it’s about thinking, creating, dreaming and opening up the mind. Verhoeven has been imaginative in using the theme in his school buildings because it doesn’t come forward in general educational thinking of that time. Analogously has he been imaginative in portraying the two opposites in his warm and safe school buildings where children feel at home: Verhoeven has shown the value of interrelating the individual and the collective.

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## Figures

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