The Square: Bodies in Grid Formation

By Esmé Valk

In this brief text I’ll try to explain why we learn in grid formation. Bodies placed in rows behind one another seems to be the format in which we arrange children in classrooms but also sporting people in the gym. Why is this particular geometric shape so dominant and where did it come from?

The Romans

Of course we know the grid formation from Roman warfare techniques. A group of soldiers formed a human block, protecting their own and their comrades bodies with their shields. This way a legion could move towards the enemy as an impenetrable mass. This technique was called the testudo, or tortoise formation.

Once they reached a gated wall, several testudo’s stood on top of each other to form a human staircase for the others to cross the wall. The technology and tactics used by the roman army evolved, but it remained an efficient and disciplined fighting machine. Roman soldiers’ training included drills and formation marching as well as swimming and gymnastics to build strength and stamina.
In the feudal era the arrangement of bodies in a matrix seems to have almost completely disappeared. With the rise of nation states, industrial capitalism, democracy, individualism, science and university systems, a renewed interest in arranging bodies in rows arises.

The Prussian Army

Under the reign of Fredrick William a standing army was established in 1644. Three monarchs and a century later, in 1786, the army had grown to almost 200,000 men. It had become an integral part of Prussian society. The social classes were all expected to serve the state and its army — the noble men were the leaders of the army, the middle class supplied it and the peasants formed the mass of soldiers.

It was the world’s best trained army at that time. In the 18th century Leopold I, Prince of Anhalt-Dessau introduced new methods of drilling techniques to keep troops lined up properly as they advanced towards enemy lines. The goose-step – as it is known in common language – is a special marching step. The military refers to it as the stechschritt, meaning ‘piercing step’.

To perform the step, a soldier has to swing his straight leg from a vertical to an almost horizontal position. Simultaneously the soldiers bring their legs down, making loud contact with the ground. The pattern is repeated by one leg and then the other. Because this is a difficult step to master in unison, the spectacle of goose-stepping soldiers is a sign of extreme discipline and the dominion of will over the human body. The stechschritt spread throughout the world’s militaries as they modernised their training and organisational approaches, following the Prussian example.

The Prussian education system came forward from the development of a strong, disciplined army. Compulsory tax-funded primary education was introduced in Prussia during the 1700’s. Volksschule was the name of the eight-year course of primary education. The curriculum was aimed at inculcating skills necessary for the early industrialised world, like reading, writing and arithmetic. At the same time the new system also placed a strong emphasis on discipline, obedience and ethics. Many of the features we see in modern-day public schooling made their debut in Prussia: as well as making schooling compulsory, the Prussian state introduced a national curriculum, standardised student tests, and subject-specific teacher training programs. The classroom was a
new technology. The rows of regularly spaced desks allowed teachers and senior students, called monitors, to efficiently impose order on large groups of students. Some classrooms from the 1800’s could accommodate over one thousand pupils.

An important goal of the new system was to prepare children for later military or bureaucratic service, and instill in them an unshakable loyalty to the state. The new education system actualised the ideas of the German philosopher Johann Gottlieb Fichte, who described the guiding principle as follows:

“If you want to influence [the student] at all, you must do more than merely talk to him; you must fashion him, and fashion him in such a way that he simply cannot will otherwise than what you wish him to will.”

The education system was similarly crucial for Napoleon, it furnished him with officers for his armies and bureaucrats to apply his laws, as well as training the populace to be obedient and loyal to their ruler. The new system saw the emergence of a large non-revolutionary middle class. Patriotism was strongly encouraged in the schools, and this emphasis grew as the empire matured. At a meeting with the Council of State in 1807 Napoleon declared:

“Above all we must secure unity: we must be able to cast a whole generation in the same mould.”

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Foucault’s panopticon

In *Discipline and Punish* Michel Foucault argues that the disciplining techniques that were being reinvented in the 17th and 18th century created ‘docile bodies’. These bodies were manufactured to function in the new industries; factories, classrooms and the military. “What was so new in these projects of docility that interested the eighteenth century so much?” Foucault wonders. The body was treated in a completely new way, a group wasn’t handled as a mass but worked individually. Bodies were separated from one another in easily manageable grids in which each unusual movement or behaviour could immediately be recognised and disciplined. Power was exercised over individual gestures rather than over complete bodies. By partitioning time, space and movement a meticulous control of the operations of the body could be maintained.

In order to construct docile bodies the ruling institutions used observation as a technique to keep the bodies in check. Without using physical force the unruly masses were disciplined through careful observation. Foucault uses the metaphor of Jeremy Bentham’s invention, the panopticon, to describe what happens to society in the nineteenth century.

“We know the principle on which it was based: at the periphery, an annular building; at the centre, a tower; this tower is pierced with wide windows that open onto the inner side of the ring; the peripheric building is divided into cells, each of which extends the whole width of the building; they have two windows, one on the inside, corresponding to the windows of the tower; the other, on the outside, allows the light to cross the cell from one end to the other. All that is needed, then, is to place a supervisor in a central tower and to shut up in each cell a madman, a patient, a condemned man,
a worker or a schoolboy.”

The distinctive feature of the panopticon is ‘the unequal gaze’; the perpetual possibility of its inmates being secretly observed. No actual observers need be present once the inmates are policing their own behaviour as though they are constantly being watched. The internalization of the observer is the ultimate psychological effect of this situation. Bentham viewed the design of the prison as a model for organising society.

This panopticon model was a very cost effective way to incarcerate people; only one man was needed to control hundreds. Architecture such as the panopticon and techniques such as the organisation of bodies in grids played an important role in the design of an efficiently arranged society:

“Disciplinary control does not consist simply in teaching or imposing a series of particular gestures; it imposes the best relation between a gesture and the overall position of the body, which is its condition of efficiency and speed. In the correct use of the body, which makes possible a correct use of time, nothing must remain idle or useless: everything must be called upon to form the support of the act required. A well-disciplined body forms the operational context of the slightest gesture.”

Prescribed body positions at the école d’enseignement mutuel, 1818.

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The history of gymnastics

This ideology also influenced physical exercise. It is interesting to note that throughout history there has always been a strong link between ideology and gymnastics. The father of modern gymnastics, Friedrich Ludwig Jahn was born and raised in Prussia. He had experienced the defeat of Prussia by Napoleon. The fourth monarch who was running the country at the time wasn’t interested in the army and the once military super power had shriveled to half its splendour. Jahn saw the defeat as a humiliation and he wanted to find a way to restore the spirits of his countrymen. He considered gymnastics as a means to regain physical and moral powers. He set up the first open-air Turnplatz in Berlin in 1811. Jahn was a nationalist. On the benches under the trees in his Turnplatz he spoke with the gymnasts about the emancipation of their fatherland. He defined movement as a patriotic exercise that insured national as well as individual ‘liberation’.

*Turnplatz Hasenheide*, an outdoor gym in Berlin designed by Friedrich Ludwig Jahn, 1811 (left) and *The Adolf Spiess Halle*, the first indoor gym, 1852 (right).

About 40 years later, in 1852, Adolf Spiess built the first indoor training center. Aside from the gymnastic activities, he added marching and conditioning exercises set to music for the purpose of developing body posture and graceful movements. Throughout the modern history of gymnastics opinions have fluctuated on whether to practice it outdoors or indoors. The move indoors started in the Sixteenth century when the noble men withdrew from popular game culture. They constructed specialised halls and therewith isolated their physical culture from that of the commoners. They also transformed the open-air space in a new way. The geometrically cut bushes of the new French gardens formed a backdrop for courtly dance displays. Some of these outdoor spaces come very close to being an indoor hall. The halls and hall-like gardens spaces served as venues for bodily movement in conformity with new patterns of order and taste.

As Henning Eichberg puts it in the essay “Race-Track and Labyrinth: the Space of Physical culture in Berlin”: “In fact, the hall culture created a new form of social discipline, of social geometry. Its point of departure was the newly organized state, the prince’s court and the military. But the bourgeois townsmen also joined, along with their shooting-houses for the rifle corporations and fencing-rooms for the sword-fencing guilds. The new barriers and stone walls marked the social barriers growing in an aristocratic society of absolutism. By creating a
new external space, this social geometry brought forth a new relationship to the body. New forms of exercises were practiced in these halls: courteous dance instead of popular folk dance, geometrical equestrianism of the “high school” instead of racing contests, elegant fencing with light rapiers instead of the heavy sword and its blows, court tennis and pique drill. A new body appeared: Where the old aristocracy had put force and contest onto the stage, now elegance and theatrical circulation were in style. The violent drama of aristocratic competition was transformed into a representation of bodily positions and courteous civilization. The trained poises and choreographies of the body corresponded to the architectonic frame, the geometry and the straight lines of the halls. The transformation of space thus signaled the rise of a new society and a new configuration of social classes.5

As mentioned previously, the hall designated for the practice of physical exercise is later adopted by people of all layers of society. So is it then the case that the architecture of the halls and the classrooms is part of the reason why we learn in grid formation? It can’t be denied that it is the most efficient way for the distribution of bodies inside a rectangular building, as the architect Le Corbusier testifies:

“The most appropriate shape for a gymnastics field is the rectangle.”, “In pools and swim-halls, where space must be saved, the rectangular pool form is most suitable.”, “Gym hall: experience has shown that the rectangular form is the most appropriate for practicing bodily exercises.”, “Playgrounds should be rectangular because this affords the best utilization of space.”

Although the architecture was conducive to grid formations, it certainly wasn’t the only factor contributing to the popularity of this arrangement. The grid formation was expressed in mass gymnastics with awe-inspiring results. It has been used by all sorts of regimes – from the extreme right to the extreme left – to unite its people and to embody national ideology in the thousands. Onto the bodies one could project an ideal, strong, youthful and disciplined society. This body of the exemplary citizen faces its leader in a disciplined choreography, prepared to execute any desired task.

The congregation and separation of bodies has been influenced not only by architecture but most of all by the accepted methods of discipline that find their roots in the Seventeenth century and the birth of the nation state.

The Sokol Slet at the Strahov stadium in Prague, 1932.

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About the writer:

Esmé Valk is a visual artist. She is one of the members of the artist initiative ADA Rotterdam. Her work process includes extended periods of research. She is interested in how social undercurrents are made visible in physical form; in other words in how a society aestheticizes itself through its bodily expression. In the past few years she has been researching social choreography, which she takes to mean the patterns that come about through social interaction.

Further online reading:

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