# The Labyrinth of the City – Fractal Movement and Identity

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When moving through the labyrinth, we experience. Turning to the right or to the left, rhythmical change, failing to control our situation, lack of view, maybe a shadow of claustrophobia, questions, surprise, maybe laughter.... These experiences are normally not the focus of labyrinth research. The main question usually raised is: What is the meaning of this pattern? What was the original meaning of the labyrinth? A rapidly growing body of literature has developed around these questions, based on extensive works of collection [Saward 1981 ff, Thordrup 2002]. The literature spans from specialized research (Kern 1981), often with extremely different interpretations, through speculative literature with new spiritual undertones, to the approach of the artist [Seifried 2002]. In research, we find the historical-archaeological study of "stones" side by side with theoretical reflections about the aesthetics of the ornament [Raulet & Schmidt 2000]. Neither the symbolic meaning of the labyrinth nor its ancient roots will, however, be in the centre of the following reflections. The labyrinth is also part of the modern world, and it is in this context that the labyrinth raises questions of actual practice — of city, movement and identity, gender and fear.

#### The Labyrinth as Historical Poetical Figure

If we are talking about the city in a lax way, we will often call the urban world a "labyrinth." The metaphorical commonplaces hint towards movement patterns. Through the lanes and streets, we search our way as through the labyrinth. Where am I? Where to go next? Where did I come from? We may lose orientation - as in the desert, in the jungle, in the labyrinth. The view is barred, but movement is still possible. The metaphorical picture of the city as labyrinth, which we shall follow here, has been established in literature for at least 2000 years. It is more than an airy linguistic symbol. As a historical-poetical picture, it has its roots in early culture [Kern 1982, Eichberg 1989, 2000]. Where does the labyrinth come from? Normally, one refers to the classical Greek myth, and though this will turn out to be problematical, we can start by this story.

#### The Classical Legend

In Knossos on Crete, the Greek myth tells us that King Minos ordered the labyrinth built as a prison for Minotauros. This monster whom Minos' wife Pasiphaë had born from her love with a bull, should be hidden from the eyes of the world. Nobody could find the way into the labyrinth or out again. The labyrinth was invented by the brilliant smith and engineer Daidalos. Daidalos fell, however, in disgrace and was imprisoned in the labyrinth himself, but he was liberated by Pasiphaë and fled from Crete with the help of artificial wings. Each nine years, the terrible Minotauros received seven virgins and seven boys, sacrificed in the labyrinth. That is what the hero Theseus decided to finish. He got help from Minos' daughter Ariadne, who fell in love with him and gave him a magic thread that would mark the way back through the labyrinth. Theseus entered the labyrinth, fought against the bull monster – whether with a sword, with a club or by wrestling, is not clear – and killed the Minotauros. Then he fled from Crete, but left Ariadne behind on the island of Naxos, thus breaking his original promise.

From Naxos, Theseus sailed to Delos where an athletic festivity was held at his honour. Theseus had brought with him the labyrinthine dance *geranos*, crane dance, which was accompanied by harp music. He had learned it in Knossos from Ariadne, who owned a dance ground of white marble with a labyrinthine pavement, also constructed by Daidalos. In Delos, Theseus danced the crane dance together with his comrades around an altar of Apollon (or Aphrodite), and this was the first time that men and women danced together. The people of Delos continued to dance the crane dance, and it spread over many towns of Greece and Asia Minor. Homer mentions this *chorus* in his Iliad, as an illustration, evidently a labyrinthine ornament, on the shield of Achilles, which was forged by the god Hephaistos, and compared the dance pattern with the to-and-fro movement of a potter's wheel.

The classical myth, thus, tells about human movement. Both the myth and the bodily movement of the labyrinth, however, contain contradictory elements and may lead to contradictory interpretations. On one hand, the labyrinth means maze, prison and fight – on the other hand it is a choreography of dance and turning. This contradiction contains an unbalance of gender: The maze story tells about men – Minos, Minotaur, Daedalus and Theseus – the dance labyrinth is about Ariadne. The king, the monster, the engineer and the hero are confronted with the maiden.

Basically, and seen from a bodily, materialistic point of view, the labyrinth is a pattern of movement, of dance, quest and procession. As such it has been linked by architectural theory to the archaic encounter between the nomad and the city.

#### **Movement in the City and Labyrinthine Procession**

One of the many contradictory interpretations of the labyrinth, which have been delivered by research, concerns the city, the town and the urban movement. "The labyrinthine" has its origin in a cultural clash, which took place around 1400 BC. At that time, agrarian or nomadic tribes of the Greek peninsula first met the stone town of Knossos as centre of the Minoan culture on Crete. The encounter produced feelings of horror and fascination among the newcomers. The town-less people not only encountered a new view, the "city in the eye," they met a new type of movement as well. New patterns of moving around were forced upon human beings by the urban structure. Or, seen the other way around, it was these new patterns of movement which made the stones of houses rise to the new, entangling urban configuration, an innovation of epoch-making significance, changing the history of humankind fundamentally [Pieper 1987].

The city was not always there – people made the town by walking. This relation between movement and architecture is confirmed by the historical connections between town structure and procession. Processions played an important role for the historical genesis of the city. Medieval life was characterized by processions and pilgrimage, and whole towns were structured as series of stations for pilgrimage. In India, special procession towns are known, completely based on the principle of ritual circulation.

The connection between town and procession is not only archaic. When the urban carnival in Denmark in the early 1980s temporarily occupied the centre of Copenhagen, the dancing groups and their processions formed labyrinthine patterns, swarming in different directions and hindering any overview. This contrasted to the manner in which the carnival, as a way of social control, had established itself in other places and countries, imitating the military parade or adapting to the show of commercial advertisement.

Sacral procession and carnival are, however, only the festive highlights in urban life. Also, in its everyday movement, urban life has labyrinthine features. The flâneur gads about, the tourist searches her or his way, people go shopping, young folk take a stroll, the urban vagabonds circulate and the joggers make their way.

When seen from the Nordic point of view, however, the connection between the city and the labyrinth is not as simple, as the hypothesis of the stone-built town vs. the nomads suggests. In Northern Europe, the labyrinth has occupied a place in a non-urban landscape since ancient times.

The North of Europe is one of the classic labyrinth cultures of the world. Labyrinths have been a part of popular culture for over 1000 years, since the Iron Age, throughout the Nordic countries. The so-called "Trojaborg" of the North are classical labyrinths consisting of a single pathway, formed in a snail-like or spiral pattern, mostly marked as stone circles on the ground. The exact form may vary, but consists normally of seven or eleven circuits. More than 500 labyrinths of this type have been identified in Northern Europe, often placed on the coast, in a belt from North Russia over Finland and the Scandinavian countries to Northern Germany and the British Isles [Kern 1982: 391-415 with maps pp.396-98]. Hitherto it has been impossible to date the Nordic stone settings, as they do not include either any artefacts, which could be submitted to stylistic examination, or organic or wooden remains that would be amenable to C14 analysis. At some places, graves from the Bronze Age are found nearby, but the Scandinavian rock carvings of the Bronze Age do not include labyrinths. Some of the labyrinths were built in recent times, up to the nineteenth and early twentieth centuries.

It is especially the labyrinth in the Saami (Lapp) regions of the Arctic North, which can help to illustrate the problematic relation between labyrinth and town. In the Saami area of Norwegian Finnmark, at least eight labyrinths are preserved, dated back to the period of 1200-1700. Further labyrinths are found in the far north of Finland and on the Kola Peninsula and the White Sea area of Russia [Olsen 1996, Thordrup 2002: 50-53]. Though details of their ritual use are unknown, the Saami labyrinths prove that the labyrinths there grew in a non-urbanized culture.

#### Troyborg, Trelleborg and "Maiden's Dance"

In Sweden, 300 labyrinthine stone settings have been found or historically documented, in Norway more than 20, in Finland about 140, and in Iceland 3 or 4. In Estonia, Karelia, and the northern parts of Russia, around 60 labyrinths have been recorded. In Northern Germany there may have been around 20 of them, but most of these have meanwhile disappeared. In Britain more than 40 labyrinths have been be identified in a particular form, dug into the turf without the use of stones. They are often called *Troy Town, City of Troy, Walls of Troy* or in Welsh, *Caer Droia*. In Denmark, all the archaic labyrinth settings have disappeared today, but wall paintings of the labyrinth in its classical pagan form are preserved in a number of medieval churches.

Denmark possesses, however, a large number of *Trøjborg* or *Trelleborg* farm and field names. From these names, one can hypothetically derive the earlier existence of stone labyrinth settings (Knudsen 1948). The name *Trøjborg*, with its variant *Trøjeborg*, which corresponds to the Swedish *Trojaborg* or *Trojborg*, can be found in at least 33 places. Its earliest documentation is from 1347 as *Trøyborg* near Tønder. In Sweden the word was first recorded as *Troyobodhe* in 1307, which is *Tröjeborg* today. *Trelleborg* with its variants *Trælleborg*, *Trelborg*, *Trelborg*, *Drelburg* and *Thrælaborg* is the name of at least 32 further places in Denmark and the former Danish parts of southern Sweden. It is first documented in 1251 as *Thræloeborg*, which is today the town *Trälleborg* near Malmø. The most famous *Trelleborg* is the Viking fortress near Slagelse. With its geometrical, circle-cross formed ground plan, it was built, probably on the base of an older settlement, in 980, and has been known as *Trelleborg* since 1487 [Nørlund 1948]. In Norway the name *Thrælaborg* dates back to 1161, in which year the *Heimskringla*, Snorri's "Book of Kings," records a place of this name close to a nunnery near Oslo. A Russian *Thrælaborg* was documented in 1268 as *Dhrelleborch* in Novgorod. But the earliest record of this type of name is from France where the *Traliburc* castle was recorded in 1016 at Charente. Norman warriors dwelt there from 844 to 865 and later the name of the place was transformed to *Taillebourg* [Knudsen 1948, 196-197].

Linguistically the names of the type *Trelleborg* are the oldest, dating back to about 1000 CE or even to the tenth and ninth centuries. *Trelle*- can be related to English *trail* – track, path, to drag – and in German *treideln* or *treilen* – *schleppen*, *ziehen*, to tow. *Trelle*- is also related to the English *to throw* and *to drill*, with Danish *at dreje* and German *drehen*, to turn, to rotate, to twist, as well as *drillen* and *Drall*, to spin or twist. All together, these words are leading back to an Indo-Germanic root *ter\**. *Trelle*- thus describes a certain trailing movement – either of drawing the labyrinth (on the ground) or of moving within the labyrinthine pathway. In any case, it characterizes a bodily movement.

The same is true for the name *Trøjborg* or *Trojaborg*, appearing in Northern Europe three hundred years later. If it is related to the Etruscan *truia*, surviving in the Roman verb *antruare* or *amptruare*, its original meaning is to jump, to spring, to dance. The common denominator of *Trelle- (borg)* and *Troi- (borg)* is, thus, the complex of Old European verbs *drajan* (Old German), *thraian* (Gothic), *thrawen* and *throwen* (Old and Middle English), *troian* (Celtic), *truia-* (Etruscan) and *-truare* (Latin) [Thordrup 2002: 7]. They all describe bodily movements of turning or rotating.

Beside these traditional names, *Trelleborg* and *Troyborg*, the labyrinth is also called "Maiden's Dance" – in Finland *Jungfrudans* – and this name also seems to be of some antiquity. By the element of dance, the "Maiden's dance" is related to *Dandtze steen*, "dance stone," as a labyrinth was named in 1683 in Skeby parish (Denmark). Similar dance-names are known from some labyrinths in Germany – *Steintanz*, *Jekkendans*, *Adamstanz* – and in Prague, where the *Tantz-Boden der Ertz-Zauberin Libussa* was named in the 18<sup>th</sup> century, the labyrinth as dancing ground of the arch-sorceress Libussa. By its female connotation, the "Maiden's dance" labyrinth is connected with the "*Dises*" hall," which Snorri mentioned in his "Book of Kings" in connection with

the death of the mythical king Adils, referring to a *skald* poem from the ninth century. Adils rode into the *disarsalr* in order to sacrifice to the *dises*, female spirits or goddesses of the pre-Viking religion. But Adils' horse stumbled and he broke his head on a stone of the labyrinth [Snorri 1922: 58-59]. The British labyrinth name *Julian Bower* and the Finnish *Nunnatarha*, "Nuns' Wall," have a similar gender bias, and the same is true for labyrinth names connected with the fairy Libussa, Queen Christina and Fru Trolleborg. From Sweden, the labyrinth name *Jungfru Mariadans* is known. All of these, in both gender and movement, reminds one of the *geranos* dancing place of Ariadne.

#### **Labyrinthine Play and Game**

Labyrinths of the same form as in the North were also constructed in the Mediterranean area since Neolithic times, in Indian cultures, including Afghanistan, Sri Lanka and Indonesia, as well as in some American Indian cultures in the Southwest of the United States, among Hopi and Pima. This distribution and especially the lack of labyrinth traditions in the ancient cultures of the Near East, in China and Japan, in Black African cultures and in most of the American Indian societies, show that the labyrinth is a cultural, not natural, form. The labyrinth is not a universal biological pattern, but a creation in specific cultural contexts.

In all labyrinth cultures, the labyrinthine pattern was connected with movement games. Historical and ethnographical sources deliver a rich documentation of horse riding in the labyrinth, ball games, foot races, as well as limping games and jumping. Labyrinth myths tell also about wrestling and other types of fighting. Mainly however, the labyrinth was a choreography of dance, whether for the single dancer or danced in chains. Labyrinthine chain dances have been practiced up to the twentieth century in the form of the snail dance in Basque country, the night dances *fest noz* in Brittany and the chain dances of the Faroe Islands. When young people used the labyrinthine stone sets or turf paths for flirtation games, as in Sweden and Britain, an erotic adventure was involved. Children used the labyrinth for games of drawing, but probably the labyrinthine choreography was also the root of limping games in the springtime, like "Limping Snail" and "Heaven and Hell" [Vries 1957]. In the labyrinth, one hears the laughter of children, and this element of laughter and carnival was further cultivated in the figure of the fool who played an important role for instance in the labyrinth rituals at Stolp, in Pomerania, during the eighteenth century [Eichberg 1989].

Seen in a broader comparative view, and especially from the perspective of the non-urbanized North, the labyrinth cannot be interpreted simply as a reflex of the stone-built town. The Nordic labyrinth was a movement pattern, indeed, but not derived from urban architecture, and not at all from the imaginary prison. A connection can rather be drawn in the opposite direction: from the labyrinth via the fortress to the town.

## **Trelleborg Fortresses**

The labyrinth name *Trelleborg* denotes in Denmark a certain type of circular fortress from the Viking time – e.g.: Trelleborg near Slagelse, Fyrkat near Hobro, Aggersborg at the Limfjord and Nonnebakken in Odense [Knudsen 1948]. The castles of the *Trelleborg* type were constructed inside an exactly circular rampart, with four gates and a cross way inside, and the quarters filled with longhouses in a strictly geometric manner. They probably had their origin as sacral places where people met for ritual festivities prior to ca. 1000 CE. Though providing room for some hundreds of people, they never became real towns of permanent dwellings, because the Christianisation of Denmark around the year 1000 withdraw their fundament, and they were burnt down.

Modern archaeologists have tried to construct military interpretations for the *Trelleborg* fortresses as barracks and strongholds of royal power in Denmark [Nørlund 1948, Olsen & Schmidt 1977, Roesdahl 1977 and 1994, Andersen 1990]. This view also dominates the official and tourist presentations. However, this interpretation lacks direct evidence. On closer examination, the military function remains highly speculative, and relevant objections can be raised [Cohen 1965, Christensen 1988, Nancke-Krogh 1992: 120-123]. Whilst military logic and infrastructure was continually developed, parallel with the establishment of royal power in Denmark around year 1000, the *Trelleborg* castles disappeared. That is why they cannot be explained as primarily military fortresses. The archaeological findings also tend to contradict the military hypothesis; at Fyrkat, few weapons, but many female clothes, luxury items and no Christian symbols were found. Moreover, whilst written sources tell something about the political and military achievements of King Harald Blåtand (950-985) and his conversion to Christianity in 960, there are no written sources concerning the four *Trelleborg* fortresses

from this same period. That is why the connection of the labyrinth-named fortresses with symbols of royal power remains dubious. It seems rather to be a twentieth century retro-projection of "military" and "political functions" onto past times, whose social practices are too difficult to understand for modern thinking.

It is more convincing to understand the *Trelleborg* fortresses in connection with some older fortresses in North Frisland – Archsumburg and Tinnumburg on Sylt and Trælbanken or Trælborg in North Slesvig. These ringwalled structures were circular or oval, and are dated to the first century CE. Recent archaeological research has excluded a fortification purpose for them and concluded their character as ritual places, used only briefly, for offerings and other cult purposes. They can be understood in the light of what an early historian from the 15<sup>th</sup> century said about the local people of this region: "In old times, there were pagan people living here who had so strange beliefs that one cannot tell enough about it" [Harck 1987: 258-259]. The fact that these ringwalls also often bear labyrinth names, such as *Trælborg* near Kolding and *Trolborg* near Jellinge, has not yet been included into the comprehensive interpretation of these "fortresses."

After all, it is possible to draw a line, just as in the case of procession towns, from movement culture to the sacral meeting place, and further to the semi-permanent settlement. The Nordic development from the movement labyrinth to the permanent town became aborted by the religious shift of early Medieval Denmark. A closer and comparative examination, thus, shows that the labyrinth withdraws from the dual classification of city vs. open land, stone prison vs. nomadic lifestyle, though it is placed in relation to this contradiction. The hypothesis of the labyrinth as a picture of the entangling stone town is too simple. The labyrinth is first of all about movement, and therefore, it may help to form a more complex theory about the relation between city and movement.

#### **Movement, Perspective and Power**

The focus on movement calls our attention to a strange double aspect of the labyrinth; the contradiction between the circuitous labyrinth and the maze. The name of the labyrinth is normally given to two patterns, which are fundamentally different, both in design and bodily movements. The twofold signification of circuitous labyrinths and maze can be seen as the base for many misunderstandings of the labyrinthine pattern.

The circuitous labyrinth, *Trelleborg* or *Troyborg*, is the older model, spreading from Neolithic rock carvings and the Cretan crane dance to the Nordic stone settings, and also represented by Indian tattoos as well as by American Native games. This model consists of one single way, without alternative diversions. One cannot go astray in this labyrinth. It is rather a movement of dance and swing.

The labyrinth of quest – the maze, *Irrgarten* or pseudo-labyrinth – is of younger date. Though described already in the story of the Cretan myth, it is not visualized before the Renaissance, when illustrations of court garden architecture presented the maze among other geometrical patterns, as an innovative construction. The maze looks as entangling as the original labyrinth, but it consists of a series of situations of choice. With its demand for a permanent quest between alternatives – to the left? to the right? – the maze has progressively dominated the Western perception of the labyrinth.

Whilst the intellectual approach leads to astonishing confusions, the approach from the aspect of movement leads to a clear contrast. The labyrinthine movement is swinging rhythmically, taking the detour and striving towards the turning point in the centre. By its flow, the movement answers to bodily and sensual challenges without offering the "right" or the "wrong" solutions. In contrast, the movement in the maze is characterized by discontinuity, jumping from cross-point to cross-point, from one situation of decision to the next one. Again and again, the flow is interrupted by choice and doubt: Have I decided on the right way?

The different movements correspond to different psychologies. The maze as prison delivers an imagination of anxiety. The labyrinth as a landscape of fear has found a literary expression in Franz Kafka's story "Der Bau" (1923/24), and Gaston Bachelard [1948: 210-260] has on this basis developed a "materialistic psychoanalysis" of the labyrinthine imagination — underground, cave and grotto, narrowness and anguish of mind, feeling of losing and being lost, claustrophobia and traumatisation.

Mainstream psychology registers under the key word "labyrinth" the construction of Skinner's laboratory, made for experiments with rats. This is also designed as a landscape of stress. The circuit labyrinth as a choreography of dance, in contrast, is about experience, trust, rhythm and swing. What is strange is that this old contradiction, of movement and of psychology, suddenly gives new meaning for the movement and the quest of identity in the modern urbanized world. In this relation, the two pictures are not only contradicting each other, but they are also connected.

When approaching the city from outside, with the perspective of the windscreen, one will experience its entangling ways as a maze. The complex pattern of lanes, roads, yards and buildings confronts the foreigner, the invader and the colonial commander with a fundamental problem of orientation. The stranger, coming from outside, as well as the man of power, coming from "above," may feel threatened by the lack of overview. The stranger goes the way of the pseudo-labyrinth, the maze. One searches, tentative, unsure, fumbling. As a stranger, one is permanently asking oneself for the "right" way, now and then asking others, always oriented towards the aim one has chosen. One is in doubt and may feel the fear of going astray and losing one's way. One is not at home. Here we recognize the story of prison and anxiety from old Crete. The situation is especially challenging for the man of power, who feels his control being lost. The urban maze confronts with a picture of moving as stranger, in an estranged world. Seen from outside, it is a picture of alienation.

For the inhabitant of the city, on the other hand, the urban space offers a labyrinthine pattern of feeling at home – at home by movement and practice. The townspeople have it "in the body" where the way is coming from and where it is going. One can move automatically without checking one's position at every corner with a map. Moving through one's own town, one follows the swing and the flow of the circuit labyrinth. Seen from inside, the urban labyrinth is a picture of identity.

The characteristic feature of urban movement landscape is that it comprehends both aspects, the labyrinth and the maze or pseudo-labyrinth, the circuit at home and the quest in an unknown world. Movement in the city is the walk-around as seen from inside and the walk-astray as experienced from outside. It is related to identity and to alienation. The city is movement at home and abroad at the same time.

#### **Anti-Labyrinthine Geometry**

The two aspects of the labyrinthine are not neutral in relation to power. The structure of movement and building of a city tells about where the power is. The power coming from outside or from above, fearing the lack of survey, reacts by attempts to reshape the city - by straight lines and right angles, by axial symmetry and orders of simple geometry. It shapes the panoptical city, as Michel Foucault (1975) would call it. The strategy of fear is triumphing over the feeling of being at home in the labyrinth.

The anti-labyrinthine city got its classical shape from the ideal city of the Renaissance and Baroque Europe. The project of Western Absolutism reconstructed the social world from "the eye of the king," from the central perspective. This was translated into city designs with the bastion fortification threatening outwards and the citadel threatening inwards. The flanking line of canon fire delivered the basic principle for this construction, guaranteeing the control of the movement inside the city, whether organized in radial or in chequered patterns. Hygienic order and riot control united. However, this could have unexpected consequences. The construction of more and more complicated outer works of fortification created a new labyrinthine confusion, not only for the aggressor, but also for the defender, finally making the fortress in some way useless for its military purpose.

The panoptical planning of the city continued during the nineteenth century with the construction of the large boulevards. In post-revolutionary Paris, Baron Haussmann broke the boulevard through the "jungle of the city" in the interest of traffic flow and riot control. The twentieth century followed up with functionalism in the spirit of Le Corbusier and the Charter of Athens. Chequered patterns became the norm for urban planning, futurist poetry hailed the "dromocracy" [Virilio 1977], and the highways laid the network of straight connection over the whole country. The perspective of the windscreen was triumphing. On this base, Fascism and Nazism developed the axial neo-Baroque of urbanism, combining the rationality of *Autobahn* with monotonous monumentalism. Recent urban planning is continuing these panoptical logics and their inner contradictions.

Anti-labyrinthine strategies of urban planning were often united with direct colonization. The clash is especially visible in the Third World. Arab towns with their labyrinthine patterns are there confronted with, or replaced by, Western constructions along the straight line [Westman 1979]. For the Spanish colonial cities in Latin America, chessboard square patterns became the norm, organized around a dominating square central plaza. There is a connection between (neo-) colonial power and the straight way "forward," between the history of power and the geometry of human body dynamics.

### The Fractal Geometry of Social Movement

The city, as movement, as architecture and as urban life, is characterized by a complexity that is neither sufficiently described by panoptical geometry, nor just as chaos, as disorder. It has a third position [Maaløe 1976]. On the basis of recent mathematical discoveries and computer simulations, one has been able to describe this complexity of a third order more concretely, as fractal geometry. Indeed, the complexity of urban movement can be characterized as fractal. Fractals are geometrical forms, which contrast the "smooth" geometry of the classical Western tradition [Mandelbrot 1982]. Fractal figures are neither the triangles, circles, squares and spheres which we were taught at school, nor are they complete chaos and disorder. Fractal figures help us better to understand the structure, aesthetics and change of trees and human faces, water whirls and coast lines, leaves and clouds, body cells and town landscapes. One has characterized the fractal "monsters" of geometry as branching, confused, folded, hydra like, in-between, polyp-like, ramified, seaweedy, strange, tangled, tortuous, wiggly, winding, wispy, and wrinkled. These descriptions fit for the labyrinth, too.

The labyrinthine logic is fractal. It is therefore not surprising that urban planners use fractal geometry for a deeper understanding of the processes of change in the "organic" patterns of urban settlement. The discovery of the fractal configurations was anticipated by an avant-garde of artists, by the Austrian painter Friedensreich Hundertwasser (1983), the Danish artist Asger Jorn (1963), the Argentinian writer Jorge Luis Borges and by Umberto Eco.

The artistic and intellectual approaches of the avant-garde were soon accompanied by labyrinthine innovations and fashions in the broader popular culture. The labyrinth reappeared as a children's game in print media and as an esoteric symbol, as dance practice in feminist groups and as a logo of psychotherapeutic institutes. Labyrinth expositions have obtained surprising public success. The number of Internet sites under the keyword "labyrinth" increases rapidly. Commercial use has discovered the labyrinth as well as the pseudo-labyrinthine maze, as a profitable field of architecture and engineering. Particular dynamics of the technology and economy of labyrinth construction have recently developed in Japan and America [Fisher/Gerster 1990]. The labyrinth has become a ("post-") modern craze.

Some of the neo-labyrinthine tendencies have been driven by cultural motivations of reconstructionism and symbolism, with more or less romantic and nostalgic undertones, whether focusing on historical and archaeological, spiritual, feminist, ecologist or national identity aspects. However, the picture becomes more complex if labyrinthine elements of youth culture and technology are included. Among these, the pseudo-labyrinths of computer games and the labyrinthine scripture of graffiti are especially conspicuous. What is specific with the graffito, in contrast to other wall writings, is that it "talks" by pure movement, by visualized rhythm. This also makes it comparable to the labyrinth. It is by bodily "swing" that the graffito marks an opposition to the order of the established public space. It creates a third space, which is neither public nor private: There is life in the world of concrete, nevertheless. A difference between labyrinth and graffiti in relation to identity vs. alienation may, however, be that the graffito sets a mark of identity, challenging by affirmation - "I was here!" - while the labyrinth shows rather a quest of identity, a question - "where and who am I?"

#### From Movement to Town to Movement - The Labyrinth Reveals a Human History

First step: Human beings move. They walk and run, jump, trail and turn. Qualities of meeting and erotic encounter develop in labyrinthine chain dances, which we know from the Roman Troy game, the Basque snail dance and the Breton *fest noz* as well as from Swedish and English flirtation games in the labyrinth.

Second step: Movement is fixed in a choreography, marked in stone on the ground or carved into the rock. This labyrinth is the dance ground of Ariadne, the Nordic stone setting and the rock carved labyrinth from Neolithic times. Parallel to this, the movement becomes ritual. It is sacred by repetition and may enter into shaman practices. The Nordic "dises' hall," the Finnish "maiden's dance" (jungfrudans), the English "Gillians bower" and the Indian labyrinth of the "female yogis" have matriarchal undertones.

Third step: From this labyrinthine pattern grows the imagination of the city. *Trelle*- (trail) becomes *Trelleborg*, *troian* becomes *Troy Town*. Palaces of power rise in Knossos, Troy and Rome, starting the process of the Western metropolis. As a superstructure to this, the classical myth is constructed. It tells about the labyrinth as a prison, a place of fear. The myth is about men: the king, the monster, the engineer and the warrior hero. The patriarchy seizes power and becomes afraid – this is the origin of the "idea" of the maze.

With this inner contradiction, with the confusion between the labyrinth and the maze, the conflict between movement practice and the imagination of fear, the clash between body and idea, the Western culture has lived for many centuries. In the fifteenth century, the maze (as *carcer* and *Irrgarten*,) appears for first time as picture. The idea of the myth becomes bodily, and colonizes the labyrinthine movement. Since that time, when saying "labyrinth," we tend to mean maze.

Finally, industrial modernity creates a new dynamic of panoptism and the straight line, as expressed in sport. This provokes the return of the labyrinth, as opposition, as alternative practice and imagination. New hybridisations connect the labyrinth and the maze, the virtual game and the graffito, the bodily flow and the alternative idea.

The labyrinth has, however, not only the historical and empirical side of what it was, once upon a time, and how it became what is it today. The labyrinth is not only good for metaphorical use: What does the labyrinth symbolize, what does it mean? What do we mean when talking about the labyrinthine city? It also has a methodological and epistemological side. The labyrinth is, as a historical-poetical picture, related to the bodily and sensual practice of human beings and to the contradictions of their lives: Which movement does the labyrinth describe, and which human enlightenment does this movement contain? Not only can we "remind" the labyrinth, we can also "remember" it, rediscovering it bodily by our members, by our limbs.

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#### Literature:

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