

Social Space: from Freedom to Freedom of Movement*

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The first man who, after he had enclosed a piece of land, had the idea of saying “this is mine”, and encountered people who were simple enough to believe him, was the real founder of the political society. How much crime, war and murder, how much misery and terror the human race would have been saved if someone had pulled out the posts or filled in the ditch and called out to his fellow humans, “guard against listening to that cheat; you will be lost if you forget that the fruits are for everyone, and that the Earth belongs to no one.”

Jean-Jacques Rousseau in ‘Du Contrat Social’

Since ancient times, everyone has longed for an idyll, for that garden where nightingales sing, that harmonious domain where the world is not strange to man and man not strange to other men, but where, on the contrary, the world and all its people are created from one and the same material and where the fire that burns in the heavens is the same as burns in the human

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soul. There, everyone is a note in a brilliant fugue by Bach, and anyone who does not want to be, will remain just a black spot, a superfluous spot, robbed of purpose, and which one can pick up and squash between your nails like a flea.

Milan Kundera, 'The Book of Laughter and Forgetting'

The boy ran through the desert for forty days until he came to the splendid castle on top of a mountain. There lived the wise man the boy was seeking. He walked into a hall full of tremendous hustle and bustle: merchants were rushing in and out, groups of people stood talking in every corner, a small orchestra was playing charming melodies, and a plentiful table had been laid, overflowing with all the most delicious dishes from that part of the world. The wise man was talking to everyone and the boy had to wait for two hours before it was his turn. The wise man listened attentively to the reason for his coming, but told him that unfortunately he did not have time at that moment to explain the secret of happiness to him. He suggested he go for a two-hour walk around the castle and to come back afterwards. "I would however like to ask you something," said the wise man in conclusion, as he handed the boy a teaspoon from which hung two drops of oil. "I would like to ask you, while you are walking, to hold this spoon so that the drops of oil do not drip off." The boy began to walk up and down the stairs of the palace with his eyes fixed rigidly on the spoon. After two hours he returned to the wise man. "And," asked the latter, "did you see the Persian carpets in the dining room? And the garden that took ten years of the head gardener's life to complete? And the superb parchment scrolls in my library?" The boy shamefully admitted that he had seen nothing. His only concern had been not to spill the drops of oil the wise man had entrusted him with. "Well go back and acquaint yourself with the wonders of my world," said the wise man. "You cannot trust a man unless you know his house." The boy started off, walking around the palace all over again, but this time he looked at all the works of art on the ceilings and walls. He saw the gardens, the surrounding mountains, the beauty of the flowers and the sensitive arrangement of the works of art. When he returned to the wise man he gave a detailed description of what he had seen. "But where are the drops of oil I entrusted

you with?” asked the wise man. The boy looked at the spoon and saw that he had spilt them. “This is the only advice I can give you at this time,” said the wise man. “The secret of happiness lies in looking at all the wonders of the world without ever forgetting the two drops of oil on your spoon.”

Paulo Coelho in ‘The Alchemist’

A week ago the teacher and his students had met each other on the lawn of the garden of Academe. On this occasion they had agreed to meet on the Grand’ Place in Brussels. They were looking for a table on the first floor of the café called ‘Le roi d’Espagne’, with a view over the splendid square. While the waiter was taking their orders a conversation developed.

1 Movement in Social Space

“After our last discussion I read a lot of newspapers from the second half of the twentieth century,” Ernest said, “and it was remarkable how universal the problem of unemployment was. Creating employment was a priority for every government. Many European, American and Japanese companies were obliged to employ fewer and fewer workers in order to remain competitive on a world scale.”

“Surely that’s strange,” said Sonia, “why did they have to dismiss workers to remain competitive?”

“It was a complex situation, one we can hardly imagine these days,” said Jan. “The governments of the Western countries, mostly social democratic ones, had committed themselves to developing and maintaining a social system which derived most of its income from tax on work. This tax was paid partly by the employer and partly by the employee. In the second half of the twentieth century the system had grown so much that the employer had to pay almost twice as much as the employee actually received. So, in concrete terms, for every 100 Euro of a worker’s net earnings, another 100 Euro went to the state, so the employer had to pay 200 Euro.”

“Wasn’t that the same in all parts of the world, then?” asked Ernest, “and was it for competitive reasons that people had to be dismissed?”

“Yes, it was,” continued Jonito, “since the less developed countries, which had a far less sophisticated social system, could provide much cheaper workers. This brutal fact set an initial change in motion: big multinational companies, which had the resources, moved to the less developed countries, where they could manufacture the same products much cheaper.”

“There was also a second reason,” said Jonito. “The increasing role of technology in production made it possible to have machines do a large proportion of the work formerly done by people. This also saved money, because a machine only has to be maintained, not paid for its work. That’s why the big multinational companies systematically switched to more machines and fewer workers.”

“And in addition to that we should also mention here the mechanism of the repeated and almost unending economic recessions,” remarked Ernest.

“Yes,” said Jan, “the fact that a lot of people became unemployed, and thereby ended up in the social security system, meant that the state needed more and more of the money they wanted to use as a safety net for them, and so it became more difficult to make savings. On the other hand, savings had to be made if the system were not to collapse completely, and this meant that the employees who were not unemployed were paid less and less, which reduced their purchasing power, so that the market did not function so well, creating even greater problems for highly competitive companies. And so the cycle of recession was complete.”

“Now I understand why workers had to be dismissed in order to remain competitive,” said Sonia, “but I have a second question, which is, why for heaven’s sake, was it necessary to remain competitive?”

“That was a situation that was not really questioned at the time,” replied Jan.

“Yes, I understand what you mean, Sonia,” said Jonito, “why didn’t the states protect their own companies from this antisocial competition from low-wage countries?”

“I think you have all stated the problem very well,” said the teacher, “and it was indeed a distressing situation, a downward spiral which was hard to get out of. And your second remark was very interesting, Sonia, we shall have to think about that one.”

“Last time you told us,” said Sonia, “that the transition from an observational to a participatory paradigm finally brought a solution to this situation. You also pointed out the importance of the change in education in this respect [1]. But I can no longer see so clearly how this change of paradigm played a part in solving this problem.”

“Stated in the clearest form,” said the teacher, “unemployment was a problem of participation. The society of the time did not succeed in allowing people to participate in the life of society. As the participatory paradigm became stronger and more knowledge and experience was acquired about the way participation could be achieved, it also became easier to solve this problem. But even so, it was a very complex one. Perhaps we should reflect

on that today, the subtle way the change from an observational society to a participatory one was the basis of the solution of the crisis situation at the end of the twentieth century.” The teacher paused for a moment and the students nodded in assent and interest. In the meantime the drinks had appeared and everyone had taken a glass. The teacher continued. “In order to make the problem clear I must first tell you about the essential difficulty of ‘maintaining a social entity’. Since we now live in a society that is organised on much more participatory lines, we are probably no longer aware that ‘maintaining participatory collaboration’ is no trivial matter. These conditions had to be fulfilled in order to develop into a participatory society. Experience, knowledge and understanding in this area only came about in small steps.”

“Does that mean the desire for co-operation is not the main issue?” asked Ernest.

“It may seem like that from the comfortable position we now find ourselves in,” said the teacher, “but in fact it is definitely not the case. A subtle balance of forces and dynamic changes is necessary to maintain participatory collaboration. The nature of these forces and the laws of these dynamics have only very gradually become clear. Due to the great confusion that prevailed regarding this issue it was only at the very end of the previous century, when the spontaneous movement from an observational society to a participatory society was already up and running, that actors and thinkers started to guide this evolution in a more or less systematic way. To this end, all sorts of measures were taken to solve the crisis, most of which were aimed at the short term and thereby sometimes even hindered the move from an observational to a participatory society. If we want to see clearly what happened at the time and how we arrived at the situation we now have, we have to list a number of aspects.”

“Surely there has been collaboration as long as humans have existed?” asked Ernest.

“Yes, there has,” replied the teacher, “but ‘collaboration’ did not always mean ‘collaboration in a participatory way’, and that is what it’s all about. There are various ways of maintaining collaboration, and the participatory is only one of them. There is also the hierarchical way, for example. We do not want to call purely hierarchical collaboration participatory.”

“But surely there is collaboration in hierarchical organisation too?” commented Ernest.

“Quite right,” replied the teacher, “a hierarchical way of organising things allows collaboration, as has often enough been demonstrated throughout history. But that way of collaborating is very specific: in a purely hi-

erarchical society all explicit decisions in connection with possible actions will come from a central point, and the majority of the individuals taking part only carry out these decisions. Although it is a way of co-operating, we shall not call it participatory. By participatory we mean that every individual takes part in co-operation with his or her whole being (as far as possible): as co-actor, co-decision-maker, co-executor, co-observer, co-planner and co-thinker.”

“It’s true, that situation is certainly not achieved in hierarchical collaboration,” said Jonito.

“Humankind has come a long way in achieving the situation as it now is,” continued the teacher, “and perhaps we should also discuss the various structures involved in this path if we want to have a clear view of the dynamics of participation.”

“That sounds like a very good idea,” said Ernest.

“Traditional societies have often had participatory forms of collaboration,” said the teacher, “and that is why they have often been idealised.”

“What do you mean by a traditional society?” asked Jan.

“Well,” continued the teacher, “for the sake of simplicity, since history is naturally much more complex than the outline we are proposing here, let us call a traditional society that sort of society which is organised mainly on the basis of a fixed social structure, sometimes hierarchical, but not necessarily so. In a traditional society every individual had his fixed ‘place’ within the forms of co-operation that existed there. These forms of co-operation were chiefly determined by tradition—that is where the name comes from—and were kept stable and bearable by a covering of rituals and customs that were sustained by this tradition.”

“Were most old civilisations in that way traditional societies?” asked Jonito.

“You could put it like that,” said the teacher, “although I would like to say once more that we should beware of employing too general an outline. The break with this traditional way of living together started slowly and reached a high tempo during the rise of modernity in Western Europe in the 16th and 17th centuries. In the 20th century this movement away from traditional communal living drew the whole of mankind along with it. Traditional societies are characterised by the specific way they succeed in stabilising forms of collaboration. In the classification I want to employ, traditional societies are often participatory, but generally static. The social entities they stabilise are not particularly mobile within social space, but they are stable and often participatory.”

“What do you mean by that?” asked Ernest.

“In the analysis I would like to propose, the concept of ‘social space’ is an important one,” said the teacher.

“But what do you mean by ‘social space’?” asked Jonito.

“We shall talk about that later,” said the teacher, “now I think it’s time we went for something to eat.

The teacher and his pupils walked through Brussels looking for a restaurant. They sauntered across the Grand’Place and admired the uniformity of the Town Hall, the Breadhouse and the surrounding houses, all of them dedicated to particular medieval guilds. They then walked towards the Beenhouwersstraat and looked for a quiet table in one of the many restaurants. The conversation then resumed.

“I must explain to you what I mean by ‘social space’,” the teacher started. “Social space is the collection of potentially differing social patterns that individuals and groups within a social organisation can adopt. I want to use the word ‘space’ deliberately here, because the physical space in which we move with our bodies is in fact also the collection of all the potential places where objects and collections of objects can be in relation to each other.”

“Is that really a useful analogy?” asked Jan.

“Certainly,” answered the teacher, “it is possible to examine the nature of physical space in a very fundamental way [2], and then one comes to the conclusion that on the basis of this analysis it is correct to introduce the concept of ‘social space’. If a certain individual or group of individuals changes their social pattern in a social context, we shall interpret that as if they are moving in social space. You will notice that this description puts in a new light the changes in the forms of human society throughout human history, and explains a lot of apparently contradictory aspects of it.”

“So is social space the collection of all possible forms of communal living?” asked Jonito.

“That’s right,” replied the teacher, “you could consider social space in its totality in that way. In the rest of our talk it will become clearer in what way we can understand certain phenomena in this new context, and that will also make it clearer what ‘social space’ is.”

“Can you give us an example?” asked Ernest.

“Well,” said the teacher, “let us consider the way traditional societies, which we have already discussed, are present in social space. We could say that these traditional societies were mainly static in social space. The social pattern and individual experiences in such a traditional society, as well as the network of patterns in a group in this traditional society, are very much determined by tradition and customs and subject to little movement. In a

traditional society every individual and every group has its clearly defined place and hardly moves in social space. We should note, however, that locally, in the proximity of this place, the individual has a great deal of individual freedom of action and growth. This form of society is stable and in a particular way has averted many possibilities of internal conflict. In fact, since the place is allotted by tradition and is thereafter no longer questioned, the freedom an individual can experience in one such clearly defined place is never under threat, nor is it a threat to the freedom of the others. Social space is large and proportionally well filled, but there is little movement within this social space: it is a social space filled with static social patterns. Since individuals are allotted other social patterns as they get older, there is actually a systematic movement, but it is controlled by tradition and customs. So one might generally say there is markedly little 'free' movement. If we look for an analogy with physical space, we might compare the fixed places social patterns have in traditional societies with the fixed places trees—physical patterns—have in physical space. Once a tree has been planted, its position in physical space remains fixed throughout its existence. The changes in the tree consist only of 'growing' in relation to the other trees in the wood. In this analogy the rules of tradition correspond to the ecological laws of the wood. These traditional cultures are often very hospitable to foreign visitors, because they have provided a 'fixed' place for the patterns of such visitors in their social space. This visitor can move very freely within this position in social space, and participate in society while still remaining himself."

"The example of the tree is interesting," said Jan, "but I would like to say that trees and plants do exist in a spatially static relationship without craving each other's place in the field. But there clearly is competition for the space in the third dimension, and a tree even has the capacity to spread germicidal substances so that it is difficult for any competitors in its immediate surroundings."

"That is true," said the teacher, "but it is only an example, intended chiefly to illustrate the difference between animals and plants in their presence in physical space."

"I see where you are leading," said Jan, "the social patterns of individuals in modern forms of society do of course move within social space."

"Yes, that's right," said the teacher, "and as we continue our story we shall see that the fact that the social patterns in a modern society do move is the cause of a lot of extra difficulties. It is not surprising when one reflects on it. Working together in a society of moving social patterns is naturally much more difficult than when they are static. Trees in a wood have to 'concern'

themselves with little more than the ecological balance of the whole. For example, they cannot take each other's place, since changing position is not possible for them, and so their 'own' place is never under threat. This is why there is little envy (the desire to be or become like another), since this possibility barely exists in traditional societies" [8].

"So it was the possibility of 'moving' in social space that gave a free hand to negative forces like envy?" asked Sonia.

"That's right," said the teacher, "though envy existed before that. Remember that in the Old Testament it was branded as one of the greatest sins. But in a traditional society social space was conceived in such a way that the destructive aspects of envy could be kept more or less under control. One of the main elements in this control was the static aspect of social space in the traditional forms of society. However, it is clear that in the traditional societies from which we are still able to collect data, the individual's attempt to move his or her social patterns within social space had already started. For that reason envy was already recognised as a dangerous force which would have a disintegrating effect on the whole society if its negative aspects could not be checked. The actual birth of envy, which took place thousands of years ago, was the first sign of the start of movement in social space, at the same time as the awakening of social awareness among social mammals, and more particularly human consciousness among hominids."

"But what was there before that?" asked Ernest.

"We still do not have a clear idea of that," replied the teacher. "It could be one of the more important objects of study in social biology. If we look at the social insects, the ants, termites and bees, it turns out that the social structure is maintained chiefly by the instinctive behaviour of the individual insects [13]. More primitive social mammals, such as wolves, also act within the group in a way that is primarily determined by instinct [19]. Instinctive social behaviour was probably the predecessor of the social behaviour that was co-ordinated by customs, rituals and traditions. All these more primitive social structures are static and do not move in social space."

"So movement in social space is the main element distinguishing the new, modern behaviour from the previous forms of social organisation?" asked Jonito.

"That's right," said the teacher. "When the impulse towards movement was already present, but was still seen as a great danger, threatening the disintegration of the existing static society, most thinkers actually rejected this movement. Aristotle, free of complexes, defended the image of a society ruled by a 'natural hierarchy'. Everyone has his place in a naturally organised cosmos, and men and women have their own place, the man's place

being 'higher' than that of the woman. Some people are by their nature more suited to ruling and others to serving [24, 25]. In 'The Republic' Plato also describes why a natural hierarchical arrangement is necessary to organise society in balance and harmony. He pressed for a form of state in which society was ruled by a small elite" [26].

"The way you describe it to us now sounds as if it was all simpler and functioned much better in those static, traditional societies," commented Sonia.

"That was partly true," replied the teacher, "you should not forget that the static, traditional societies had themselves slowly developed out of earlier forms of communal living that were based more on instinctive social behaviour. This made them very well-balanced and stable and they had absorbed rituals and traditional mechanisms that were able to ward off great disasters. To give you an example, there was the mechanism of the 'scapegoat'. In the twentieth century this scapegoat mechanism has been described at great length by the French philosopher René Girard [11]. According to Girard, envy could also suddenly flare up in a traditional society. Let's imagine the situation where several people want to possess the same object. It could be food or any other valuable object or even a woman. This dispute may then develop further and envy may then infect the whole group. When a peak of disorder is reached all the aggression and animosity is often concentrated on one individual in the group. This one person attracts, as it were, every calamity and is eliminated by the others. This sacrifice means the aggression departs all at once: killing the scapegoat brings about catharsis for the whole group. Harmony is restored because the person identified with the calamity has been removed. According to Girard, this scapegoat mechanism was fundamental to traditional societies, and the scapegoat, whose sacrifice has returned harmony and union, was later often deified. Since the rituals and customs were the cement that held traditional societies together, the scapegoat became an exemplary figure in the ritual. The process as a whole will on the one hand serve as a model for the ritual it wishes to repeat (on the basis of the principle that one must always repeat what the victim, as long as it was salutary, did or underwent) and on the other hand as a counter-model for the prohibitions, on the basis of the principle that one should never repeat what this same victim did, insofar as it was malicious. In this way, disaster and the danger of disintegration of the entire society is stored in the ritual memory of the traditional society on the basis of the sacrifice of scapegoats."

"I have studied Girard," said Ernest. "I was indeed greatly surprised to learn that this mechanism existed in many primitive societies and was even

considered by Girard to be inseparably linked to the origin of the culture. I still remember that scapegoats were usually people who were special in some way, so that they were distinct from normal individuals.”

“That’s right,” said Jonito, “throughout the world, mythology is teeming with cripples, people with one eye or one arm, twins and others with a special characteristic. Girard claims they were often the object of the scapegoat mechanism.”

“Heroes and gods also often played a part in a mythology that can be traced back to an original scapegoat incident,” continued the teacher. “Mythology often tried to cover up the original violence of the murder of the scapegoat so that in later stories these figures became gods or heroes. When the change to a dynamic form of society was set fully in motion, these old mechanisms turned out not to function any longer. Changes like that are always dramatic events. One of the first philosophers who reported on this at length was Thomas Hobbes in 17th-century England.”

“Hobbes? Was that the man who proposed the great Leviathan?” asked Sonia.

“That’s right,” replied the teacher, “Leviathan was Hobbes’ greatest work and it was there that he focused on the failing mechanisms of what he called a ‘natural’ society [27]. According to Hobbes, 17th-century English society had degenerated into a ‘condition of war of everyone against everyone’, and this war was kept going by ‘envy’. It is also interesting to note that Hobbes’ analysis is based on an analogy with the laws of mechanics formulated not very long before by Galilei. For example, Hobbes said that something that lies still will always remain lying still, unless something else sets it in motion. This is a truth that no one doubts. But the idea that something in movement remains forever in movement unless something else brings it to a standstill, is not so easily accepted. Galilei had in fact formulated the law that claims that an object in uniform rectilinear motion will always remain in motion if one does not bring any force to bear on it to change its state of movement. Drawing inspiration from this law, Hobbes stated that people’s desires are always in motion and only come to a standstill if compelled to do so by a force. Hobbes is here referring to envy. Hobbes proposes a solution that ‘regulates’ this ‘uncontrollable’ movement, and that is the great Leviathan, a powerful form of state that issues laws and regulations that are able to check this pernicious movement caused by envy.”

“It is odd that Hobbes used the concept of movement,” said Jan.

“Yes, it is,” said the teacher, “but although he was certainly not thinking in terms of movement in social space, the way I am trying to clarify these

events for you, the inspiration he drew from Galilei's discoveries did point in the same direction. One might say that the most important later social philosophers have again and again struggled with this problem that Hobbes brought up in a most intriguing way. They were always looking for solutions that would give a structure to these uncontrolled movements in social space."

"Without being aware that they were dealing with a new state of 'movement'?" asked Jan.

"One could put it like that," said the teacher, "although on the other hand it is also clear that most philosophers agree that one cannot return to a traditional static situation. A solution has to be found for the new situation. This solution of course exists: it comes down to finding a situation in which the dynamic situation is stabilised: in which individuals learn to move their social patterns together in social space without posing a threat to each other's movement. However, it appears that there were plenty of hidden snags to impede the establishment of any such stable dynamic situation. A lot of problems were created by the rising 'concept of equality' and the misunderstandings this way of thinking brought about."

2 Equality: Mistakes and Diversions

The students were astonished by the teacher's last statement. 'The rising concept of equality' was a phrase that appealed to their imagination, though they suspected that the teacher used it primarily to draw their attention. The teacher felt the tension and paused while taking a deep breath.

"The rising concept of equality," said Jan, "that was surely a very good thing."

"One cannot put it so simply," said the teacher, "the concept of equality arose as a reaction to the movement that had started from the static traditional society to the dynamic modern one. We must realise that in a traditional society there was no 'inequality' because the act of 'comparison' was largely absent. Let's have another look at the situation of a wood and its trees. The trees are not unequal because they are in different positions. The problem of the equality or inequality of the trees does not arise because the trees cannot move into each others' positions and so the differences between the positions cannot therefore be compared by the trees themselves. The mathematician and physicist Henri Poincaré, who lived in the late 19th and early 20th century, and was also involved in the foundations of relativity theory, analysed this situation very thoroughly on the basis of a highly formal approach. He came to the conclusion that knowledge of the reality

of space is linked to the possibility of moving in that space [28]. So we are now able to note the differences in the position of the trees because we look at the wood from a dynamic situation and we are able to move about in the physical space in which these trees take up various positions.”

“I see what you mean,” said Jonito, “since the traditional form of society is primarily static, no comparison is possible in connection with differences that only appear as a consequence of movement in a dynamic form of society. In the static traditional society there was hardly any knowledge with regard to the existence and the nature of social space.”

“That is correct,” said the teacher, “and so it was only when the static pattern began to move, and at the same time social space was created, that comparisons became possible in connection with differences that arose as a consequence of this movement. The result of the new situation was that one and the same place in social space could be desired by several individuals. And it was therefore also meaningful to compare the various positions since it was in principle possible to force someone out of their social position and take up that position oneself. The battle for the various social positions was able to commence. It was mainly due to this that the old force of envy was given a great new field of action. The concept of equality was also a consequence of this new state of movement.”

“I still have the feeling this concept of equality was very beneficial,” said Jan.

“And you are right,” said the teacher, “the concept of equality was borne along by a beneficial force, but can easily lead to a great many mistakes and derailments. If the concept of equality states that we are all essentially ‘equal’, then it is arguing, among other things, for a homogeneity and isotropy of social space at the deepest level, and that is a very good requirement, which we in fact also intuitively sense to be so.”

“Yes,” said Jonito, “I see what you mean. Physical space, which you have used as an example several times, is also homogeneous and isotropic. Every position is potentially equal for every object that wants to occupy that position.”

“That is right,” said the teacher, “the analogy brings great clarification to this point. Every position in physical space is equal for every object that occupies that position, and when an object moves in space it leaves its position intact and with the same potential for a future occupant. If the aspiration of the concept of equality is a homogeneity and isotropy of social space, this is an aspiration to be applauded, but there are often a great many mistakes made in the process. Equality should not mean that we all want to occupy the same position in social space. If that is the case, the

only consequence of the concept of equality is a shrinkage in social space. In the most extreme case social space implodes to one single position or a very limited number of available positions.”

“But homogeneity and isotropy of social space is not enough to implement the idea of equality,” said Jan. “I find the meritocratic principle to be a more complete basis for the concept of equality, whereby transition within the social structures takes place purely on the basis of merit, regardless of the identity of the individual. The fact that the transition of the individual in social space is independent of his identity does not so much say anything about the metrics of social space. The transition from one position to another in this space is dependent solely—in the best of cases—on the two positions themselves. In a less favourable case the transition would be determined by the history of the entity, right back to the situation at its start. Determination in the cradle is not non-existent.”

“You are absolutely right,” answered the teacher, “Homogeneity and isotropy are only possible conditions. If we again think of the analogy of physical space, the movement of a material object in that space is subject to yet other symmetries. It would make an interesting study to disentangle the various symmetries that characterise the concept of equality in physical space.”

“I can easily imagine the possible mistakes in connection with the concept of equality,” said Ernest. “After all, in his work ‘*Het rijk van de schaarste*’ (*The Realm of Scarcity*), Hans Achterhuis made a penetrating analysis of the ways the concept of equality has resulted in scarcity [29].”

“I know Achterhuis’ work,” said the teacher, “and it certainly inspired me when it came to the image of social space I want to bring out here. Achterhuis thoroughly analysed the various incorrect ways of interpreting equality, and he does indeed demonstrate how they always lead to ‘scarcity’. Scarcity, as Achterhuis treats it, corresponds to a diminishing of social space. The situation of a dynamic form of society is even more complex than an analysis of the concept of equality and scarcity can demonstrate. What it is about is how humankind learns to move in this social space in a harmonious manner. The example of physical space and how objects move within it is able to show us the wealth of possibilities. It’s true that objects can move in many different ways in relation to each other. But it is clear that an object cannot take up the position of another object while that object is still there.”

“Objects can collide and one can force another from its position,” remarked Sonia.

“That’s true,” said the teacher, “but if we consider the movement of the

bodies of people and animals in physical space, in general very little serious damage is caused by such collisions. Any body that tries to oust another body from its position by violence and against the will of that other body, is in general acting in a way that is experienced as not ethical.”

“And then there were the traffic accidents in the twentieth century,” commented Sonia. “We have already talked about unemployment in the late twentieth century, but there was an even greater scandal at the time. I recently read that an average of an enormous amount of people per year—I do not remember exactly how much—most of them young adults and children, were the victims of traffic accidents. Those were accidents that involved only movement in physical space.”

“I am glad you mention that situation,” said the teacher, “because we can see there how a very old stability can be upset by new developments. The fact that our bodies, and those of other moving living beings—which are in fact sets of millions of co-operating cells—are the way they are, has to do, among other things, with the fact that they have to withstand collisions with other moving bodies and objects. One of the causes of this is what is often called Darwinian evolution. When man began to use tools a new element appeared. Tools and weapons made of stone, and later of metal, were a threat to the old balance. It is possible to shatter someone’s skull with an axe and thereby literally oust him from his position by killing him. The development of traffic in the twentieth century, and particularly the use of the car, is a technological continuation of this evolution. Man started moving about in cars in a way that was not in balance with the construction of his body. This has resulted in the enormous and incomprehensible harm done by this evolution. There was hardly any resistance to the rise of the car and dangerous traffic, since this change took place in an area of reality that had already been stabilised hundreds of thousands of years previously and where there was therefore no longer a ‘struggle’ for stabilisation.”

“So is mankind’s task to learn to move in a harmonious way in social space?” asked Sonia.

“Yes, it is,” replied the teacher, “and a whole lot of new aspects are involved, and again the analogy with what once took place in physical space is able to throw light on the subject. It is clear that if, as a group, we move with our bodies in physical space in a peaceful and pleasant way, there is no need at all to move into each other’s positions. If a group can sit round a table, as we are now, its members will have no need to deprive each other of their places. In fact in this case we all expressly wish to sit in different physical positions, since it is only possible to have a conversation like the one we are having now because of the explicit differences between the

places. The difference in physical position and the lack of inclination to take each other's place is one of the conditions for productive co-operation. The example we are considering now, of ourselves sitting at the table, is a static example. And it's true that in general positions are not changed, although it is possible in principle. The situation at a reception, where everybody walks round and where new conversation groups are constantly forming is an example of a dynamic situation. There are a great many examples of dynamic situations in which various people together peacefully move their bodies in physical space: sport, dance, theatre, walking, etc. What makes the being or working together interesting and productive is the way the various places where the individuals move are related to each other in the eyes of the group."

"Yes," said Jan, "it is no coincidence that it is only in fights and situations of human violence that a real attempt is made to capture other people's positions."

"Yes, that's true," said the teacher, "it is no coincidence that the customs that harmonise the movement of people's bodies in physical space are violated when two individuals attack each other violently."

"But how do you see a thing like that working in social space?" asked Ernest.

"Well, let's think about that for a moment," said the teacher. "We have to clearly identify what 'equality' means in social space. It should be the condition for the construction of a homogeneous and isotropic social space, in which any social position is in principle accessible to everyone. This means that all social positions also offer everyone the same fundamental potential, which is what makes them into positions in social space, if there is movement towards them, and in which harmonious movement is possible for everyone. There are two essential conditions to be able to achieve this sort of equality and this sort of movement. The first condition has to do with the amount of space: social space has to be large enough to provide a comfortable place for all patterns of social interaction in which an individual or a group of individuals wants to move. The second condition has to do with stability: social space must possess those qualities that make stability and co-operation possible and which also guarantee stability of movement. We shall see in the course of our conversation that neither of the conditions is fulfilled in a commonplace way, and that their accomplishment has far-reaching consequences for the nature of society."

"That will be fascinating," said Jonito.

By this time the teacher and the students had finished their meal and the waiter came with the bill. They then left the restaurant and walked

through the King's Arcade where a few musicians were playing sonatas by Telemann on the recorder and guitar.

3 Stability of Social Patterns of Movement

They decided to have some dessert and a drink in the Mort Subite, a traditional Brussels café, where it is still possible to have a pleasant conversation without being bombarded by Japanese decibels. They ordered a few beers and the conversation resumed.

“What are the conditions under which a social entity is stable and can move in a stable manner within social space?” asked the teacher. “That’s an issue we should explore now.”

“Or how can people work together?” reacted Ernest.

“Quite,” said the teacher. “That’s another way of phrasing the question. And the conditions for fruitful and stable co-operation are certainly not trivial. In fact, different aspects of this basic issue, the stability of a social entity or how forms of co-operation are structured, have been studied by various academic disciplines with an interest in the subject, such as sociology, economics and psychology. A typical situation in connection with this issue has even been highlighted: the prisoners’ dilemma.”

“What is the prisoners’ dilemma?” asked Jan.

“Imagine there are two prisoners,” replied the teacher, “who have committed a crime together and have been arrested. They are interrogated in separate cells so that they cannot agree on a story. They are told that the first one to confess will be set free as a reward for helping the police with their enquiries. The one who does not confess will get a ten-year prison sentence. If neither of them confesses, there is enough circumstantial evidence to convict them anyway and they will both be sent to prison for one year. If both confess, they will each be sentenced to five years in prison.”

“What a terrible situation,” said Sonia.

“A fascinating situation,” said Jonito. “The best solution for both of them would be for neither of them to confess.”

“Exactly,” said the teacher, “but that solution is not stable, in the sense that there is still the risk that the other one will confess, leaving his accomplice with a 10-year prison sentence.”

“It’s not really a very realistic example,” remarked Sonia. “The world is a bit more complex than the rather artificial situation that these two criminals find themselves in.”

“You are quite right,” said the teacher. “Personally I do not really

like the prisoners' dilemma and the way it is constantly used as an example. Nevertheless we can recognise in it the basic issue of the stability of social entities. If I may, I would like to look at this basic issue separately from the example of the prisoners' dilemma, and describe it in more general terms. Assume we are considering a general situation involving co-operation between various individuals. If there is co-operation, this means that the actions and decisions of one of the individuals will be dependent on the actions and decisions of the other individuals. If this is not the case, then all we would have is a collection of individuals who are not working together, but are simply together, like separate, fragmented entities in social space. This situation of non-co-operation is a limit situation of the co-operation situation, that is to say the limit situation where the interactions between the individuals are negligible. The nature of the interactions will of course determine the nature of the possible dynamic configurations to a large extent. Let us just consider the situation of a deterministic interaction. That is the situation in which objects, and hence also our bodies, find themselves in physical space. If we mention this, it may become increasingly apparent why the comparison with physical space, a comparison that we have made several times, is relevant. Physical objects in physical space have developed all kinds of dynamic and participatory stable interaction patterns, which are all, however, controlled within a deterministic framework. Deterministic means that the behaviour of objects in this physical space is 'determined' by the states of these objects and the interactions between them. The laws that deduce this behaviour from states and interactions are the laws of classical mechanics developed by Isaac Newton [30]."

"But this determinism is only a feature of classical mechanics and not quantum mechanics," remarked Jonito.

"That is not quite true," said the teacher. "Quantum mechanics demonstrates that the behaviour of quantum entities, photons, electrons, protons, neutrons, atoms and molecules, is no longer determined only by the states and interactions of the entities in question. There is an essential element here, which emerges as a consequence of the way these quantum entities can locate themselves in physical space. Quantum entities seem to have a fundamentally new aspect, which is related to the way in which they can place themselves in a particular macroscopic structure, and this aspect is mistakenly associated with indeterminism [31]. It often happens, particularly when quantum entities move from one macroscopic structure to another (photons moving from one atom to another, for example), that these quantum entities find themselves in a non-local state, and are not located within physical space [36]."

“You mentioned this non-local behaviour of quantum entities earlier,” said Jonito. “Do you think there is an analogous non-local behaviour of entities in social space?”

“Wait a second,” said the teacher, “that is a bit of a leap. But it is a question I definitely do not intend to avoid. There are analogies that point to a very profound connection, but first I have to tell you about how a social entity can stabilise itself. Once we have explored that in depth, we shall come back to the question of quantum entities. Incidentally, I should mention at this point that it still has not been proved that social behaviour is non-deterministic. That is an intuition that we may personally feel because we think that we have a ‘free will’ and can make ‘free choices’, which are ‘not determined’ by the states and interactions that are found in the world around us. But the way in which this ‘free will’ is connected with determinism or indeterminism is another issue that we need to talk about sometime.”

The teacher paused and took a sip of his beer, then continued: “The stability of a collection of moving material objects in physical space is given by the solutions to Newton’s equations, and we know several good examples of these.”

“Which ones do you mean?” asked Ernest.

“Think about the movement of the Earth around the sun,” said the teacher. “Incidentally, the question as to how this structure of movement could be stable was one of the greatest theoretical problems ever solved by mankind. As a link between forms of co-operation in social space and the determined way in which material objects move together in physical space, it consists in co-operation between lower social animals based on instinctive behaviour, which we have already talked about. The extent to which instincts determine this behaviour is also open.”

“But if we do not know whether the same mechanisms are at work,” volunteered Jan, “can we really compare the different types of stability conditions?”

“We have to proceed cautiously,” said the teacher, “but you will see that the mechanism of stability does not fundamentally depend on the type of interaction. So far we have talked about the negative power of ‘envy’ in a far from specific way because of the possibility of jeopardising forms of co-operation. That is an extreme simplification of the real situation. One might also be led to suspect that this negative power is one that is only present in a particular individual, namely the individual who is envious. But this is only a tiny part of the story. Let us therefore try to describe the disintegrating and destructive force for co-operation in social space in a more general way,

and then look at how parts of it are given other names depending on the situation in which they occur. Let's assume that we are considering a group of individuals who want to carry out a specific project as a joint venture. The 'envy' that we mentioned above is just one aspect of the various ways in which these disintegrating forces can materialise: it is the situation where one of the individuals covets the position that another individual occupies in the joint venture. This is one of the simpler manifestations of the destructive possibilities. We came across another example of the possibilities of destructive forces in the prisoners' dilemma. The main emphasis here is on the fact that often the one who takes the first step towards destroying a social entity can immediately benefit greatly from it personally. Let me give you an example that illustrates the same dynamics. Suppose a group of shopkeepers agree between themselves that they will only open for business three days a week, since they have all realised that they can sell everything on those three days that they would normally sell in a whole week. This mutual agreement will give them more free time to improve the quality of their shop and of their own life, with the result that they all win if they stick to the agreement. It is clear, though, that if one of them does not stand by the agreement, he will be able to make a lot of profit initially. That is why the situation of this kind of agreement is fundamentally unstable."

"Yes, I understand that," said Jonito, "and it's clearly a pure form of instability. If one of the shopkeepers decides to go back to opening his shop all week, some of the others will quickly follow his example because they feel that the contract has been breached and they should not have to be the victim of such a breach. This triggers, as it were, an avalanche, with the result that even if there were still a few shopkeepers who wanted to stick to the agreement, they would find themselves forced to give in and open their shop all week again, because otherwise they would be marginalised and would really be at risk."

"That's right," said the teacher. "That's a good description of the instability of the shopkeepers' situation. The one shopkeeper who breaches the contract does in fact trigger an avalanche and no-one seems to be able to escape it. You no doubt feel that this example of the shopkeepers has brought us much closer to a general characteristic of the possible destructive forces. Perhaps you are also better able to understand why I emphasised the word 'stability' with respect to a social entity. And I would like to consider again the useful analogy with the situation of interacting material objects in physical space. Classical mechanics gives a definition of stability and instability that applies perfectly in social space. The definition is as follows: suppose we are considering a number of interacting objects in physical space that are

in a certain state. It is possible that this collection of objects is subject to a ‘disturbance’ so that they are shifted slightly out of this state. As a result of this disturbance and change in state, new forces may spontaneously arise, which influence the collection of objects. We shall assume that the original state these objects were in is ‘stable’ if the natural forces that arise as a result of disturbing this state act in such a way that the disturbed state will shift back to the original state. If, however, the forces that arise as a result of the disturbance tend to shift this disturbed state even further away from the original state, then we call this original state unstable.”

“Just a minute,” said Sonia. “Can you give us an example to clarify that?”

“There is a very simple example that will illustrate this mechanism,” said the teacher, “and that’s the example of the pendulum. If we consider a pendulum in its equilibrium state—in other words hanging straight downwards—this is then a stable state for the pendulum. Now suppose that we move the pendulum out of its equilibrium state; the forces that arise are such that they will bring the disturbed state back to this original equilibrium state. If we let go of the pendulum, it swings back and forth from its disturbed state until it comes to a standstill again in its original equilibrium state. The pendulum in equilibrium is a typical example of an object that finds itself in a stable state.”

“Do you have an example of an unstable state in material reality?” asked Ernest.

“The same pendulum also provides us with a good example of an unstable state,” said the teacher. “Let’s consider what mechanics calls a fixed pendulum. That’s a pendulum on a pole instead of a rope. If we position the pendulum hanging vertically, there is one position in which the pendulum is at equilibrium, and that is when it is hanging exactly vertically. That is a typical example of an unstable state. In fact, if we disturb the pendulum, bringing it slightly out of this state, the forces that arise are such that the pendulum will go even further out of equilibrium and will never be able to return. The pendulum will start to swing and will gradually change to the stable equilibrium state that we described before. Hence this example of the perpendicular pendulum is an example of an unstable state.”

“Right, I can see what you mean now,” said Sonia, “and also how the state of the shopkeepers with their agreement to open for business for just three days a week is unstable. All that is needed is for their state to be disturbed slightly, for example by one of the shopkeepers not sticking to the agreement, and the forces that arise will set the whole network of shopkeepers in motion so that their joint state will shift even further away from their

original state.”

“The forces will very quickly involve all the shopkeepers in the change that has been brought about,” said Ernest, “so that the network of shopkeepers will change to a new state in which they are once more open every day of the week.”

“Quite so,” agreed the teacher.

“Give us an example of a stable form of co-operation in social space,” asked Jan.

“Well,” said the teacher, “you have already provided an example yourselves. If the shopkeepers keep their shop open every day of the week, that is an example of a stable state.”

“Why is that state stable?” asked Sonia. “Fundamentally it’s not so different. One of the shopkeepers might decide to keep his shop open even longer, which will set off another change in state and a shift towards a new state.”

“That’s quite true, of course,” replied the teacher, “but suppose for a moment that the Government has laid down the opening hours of shops by law. Further suppose that as a result it is illegal, for example, to open a shop on a Sunday. In that case, if one of the shopkeepers, all of whom now open their shop every other day of the week, nonetheless decides to open his shop on a Sunday, another set of forces would arise as a result of that action. Certainly, this shopkeeper will again make a profit in the short term, in accordance with the same mechanism as in the previous situation. However, since he is also committing an offence, the police will step in and, for example, fine him. This will mean that his profit will be converted to a loss. Even if the fine does not wipe out his profit completely, his brush with the law will harm him so much in the medium term that it would be a bad move all-round for the shopkeeper to open his shop on Sundays.”

“So that means that the law can stabilise states that would normally be unstable,” remarked Jan.

“That’s right,” said the teacher. “The introduction of laws has a stabilising effect. Many states of social entities that are unstable outside a State under rule of law become stable as a result of the existence of this rule of law.”

“That’s an important point,” said Jonito. “I had not realised what a fundamental function the law could fulfil. Stabilising social entities that would be unstable without the law.”

“There is another observation we can make,” said the teacher. “In many cases the forms of co-operation we label as ‘good’ are actually ‘unstable’. Anything good seems to move forward along the path of instability.”

The students sat up straight at this last assertion by the teacher.

“Good is unstable?” asked Sonia in amazement. “So does that make evil stable?”

“Well, there is certainly a connection between good and unstable, and between evil and stable,” replied the teacher. “Let me try and illustrate that using an example. Let’s compare the state of ‘peace’ with the state of ‘war’. Peace, or in the case of co-operation we might call it a ‘peaceful co-operation’, is an unstable state. In fact, it is sufficient for one of the parties in a peace situation to violate that peace, and the forces that arise will ensure that the peace is further violated. The party that does not want to violate the peace situation is often compelled to do so out of sheer necessity in the interests of self-defence. On the other hand, a situation of ‘war’ is a stable situation. In fact, if one of the warring parties decides to disturb the state of war by opting for peace, no forces will arise naturally that allow the whole situation to evolve into a state of peace. On the contrary, this peace-loving person will come up against the natural forces that push him back into a state of war.”

“That’s a very pessimistic analysis,” said Sonia. “Peace is unstable, while war is stable. If that’s a fundamental truth, does it imply that evil must prevail because it is stable?”

“That’s how it may look at first sight,” said the teacher, “but the situation is not as simple as that. Let’s just think about how mankind manages to ‘preserve’ and ‘stabilise’ peace. The first thing we need to mention is that at the end of the day no-one derives any good from a situation of “war of everyone against everyone”. In the end, war is perceived as bad by all parties involved and that’s exactly why it is associated with evil. One of the main reasons for this is that all-out war is a threat to older, previously acquired stabilities.”

“Aha, I see what you mean,” said Jonito. “Evil, though stable, is a threat to old, already stabilised instabilities.”

“Right,” said the teacher. “Just think of all the wrongs that happen during and as a result of war, and that are typical of war. Torture, betrayal, lies, rape, deterioration of faith, and so on, are all deteriorations of old, stabilised situations that could become unstable again as a result of the war. That is the first paradox we need to mention: although war and evil are generally stable, it is a stability that is a threat to other, previously acquired ‘good’ stabilities.”

“How odd,” said Jan. “That means that evil is only stable in the short term, since owing to the fact it is a threat to old stabilities, it too is doomed to disappear in the longer term. If a “war by everyone against everyone” is

really being fiercely waged, eventually there will be no more people to keep the war going.”

“Yes, you could put it like that,” said the teacher, “but there is something to do with the difference between ‘short’ and ‘long’ term that we have to understand. We can emphasise the analysis we have carried out just a bit more forcefully, and that will clarify things slightly. Suppose one of you were to go outside now and rob the first passer-by you met on the street. Within a very short time, namely the brief moment in which the robber takes the possessions of the victim, there is a large personal material benefit for the robber. He has in fact got richer by acquiring the possessions of the victim. In the longer term, however, this benefit turns into a personal disadvantage. This can come about in various ways. There may be bystanders who rush to the victim’s aid and overpower the robber, so that the robber’s very short-term benefit is immediately turned into a disadvantage: he certainly loses what he has gained, and a lot more besides in that he is also punished. If there are no bystanders around to help the victim, it may be that the police are called in quickly and the robber arrested, so that his short-term benefit is still turned into a disadvantage. The chances of this happening are not particularly high, however—though not alarmingly small either—so that robbery can still be profitable for the robber. Another aspect that goes hand in hand with the act of robbery, and one that I would like to set against the ‘short-term’ aspect, is the way in which the robbery destroys certain stabilised social entities. In fact, by attacking and robbing the victim, the robber violates an unwritten agreement of co-operation, which says that people who walk the streets do not rob one another.”

“But you can’t talk about an avalanche effect here,” said Sonia. “It’s not as if this act of robbery is going to spread to other people on the street.”

“Why is there no avalanche effect?” asked the teacher, and watched carefully to see who would answer him.

“That’s quite obvious,” said Jan. “If everyone were to start robbing people on the street, city streets would become intolerable.”

“That’s quite true,” said the teacher, “but that’s not sufficient reason. Real war makes normal life impossible for everyone, yet war often comes about as a result of the avalanche effect we talked about earlier.”

“Yes, that’s true,” said Sonia, “so how come ‘robbery’ does not create an avalanche effect?”

“Well,” said the teacher, “because the ‘walking-along-the-street-without-robbing-one-another’ social entity is still, for the time being, a stabilised social entity. And that is partly due to the fact that ‘robbery’ is a relationship between two people, the victim and the robber, from which bystanders

can hold themselves aloof. That is not the case with ‘war’.”

“That’s why the short-term benefit is too risky as well,” concurred Jonito, “because the whole of society is structured in such a way that an act of robbery gives rise to forces that work against the robber. In principle, the mechanism is probably the same as the one we described in the context of the shopkeepers and their keeping their shops open.”

“Quite so,” said the teacher. “In short, it is important for us to understand how the dynamic situations in social space we talked about can be stabilised.”

“Stable—that sounds so sterile and dead,” said Sonia. “I really have a problem with the analogies you are making. I get the impression that striving for stability cannot be the main objective. It’s like the road to everything that’s sterile and dead.”

“Very good point, Sonia,” said the teacher. “There is indeed a link between stability and death. The example of ‘peace’ and ‘war’, and their clear similarities with ‘instability’ and ‘stability’, is slightly misleading. To clarify things a bit more, let me use another analogy from the material layer of reality. You all know that matter is organised in different ways. Broadly speaking there are four easily distinguishable ways in which matter is organised: gases, liquids, crystals and living matter.”

“That’s interesting,” said Ernest. “How are these different ways distinguished from one another?”

“That’s just what I want to talk about now,” said the teacher. “and we shall see that when we understand it clearly, it will shed new light on each of the questions we asked ourselves about social entities and about the ways in which these can stabilise?”

The waiter appeared and they ordered another round of drinks. The students were paying close attention because they felt that the conversation was getting closer to the essence of the problem. The teacher waited until the waiter had come back with the drinks before resuming his story.

4 Different Types of Organisation: Life and Death

“As we have already mentioned, physical space is homogeneous and isotropic,” continued the teacher, “and offers a variety of possible stable forms of movement. The idea of equality is nicely realised through this homogeneity and isotropy, as it makes the places of all moving objects potentially equivalent. It is in no way necessary that objects try to occupy each other’s place, which in any case is impossible because of physical laws. Nevertheless they

all manage to bring about stable patterns of co-operation, in which it is essential that they are fundamentally 'distinct' from one another. Yet places are not monopolised either. The stable pattern in which the objects find themselves is a dynamic pattern where movement is essential, and where this movement implies that objects can occupy one another's place, one object taking up the place that another has vacated, without, however, coming into conflict with one another. Only these conclusions might give us inspiration for a dynamic development of social space, which permits and fosters stable movement patterns. It becomes even more interesting, however, if we note that this matter has stabilised itself in fundamentally different ways within these possible dynamic movement patterns. Let's take a closer look at these different ways. First of all there are the gases. These are entities made up of atoms and molecules that interact mainly by just hitting each other continuously. Then there are liquids. These are also entities made up of atoms and molecules, but which interact as one imagines what happens with a box full of frogs rolling and slithering over one another. The interaction between the various atoms and molecules in a liquid is not really giving rise to constructions. In the case of gases and liquids, one could not talk about 'constructions' of atoms and molecules. Both types of organisation are collections of atoms and molecules and are not constructions. Then there are crystals. Here we should perhaps first observe that all 'solid substances' are made up of crystals, with the exception of a few substances that are liquids, but which set so hard that they appear to us to be solids."

"Normally people think of splendid precious stones when they talk about crystals," said Ernest.

"That's true, but it's misleading," said the teacher. "Those superb stones, such as quartz, ruby, sapphire, diamond and many others, are highly pure crystals and are simply made up of a few kinds of atoms and molecules. Diamond, for instance, is a crystal that is made up purely of carbon atoms. All solids are composed of crystals; even metals are crystals. Many solids, such as most stones, are not precious stones or semi-precious stones since they are a disorganised mixture of many different crystals, while others, such as the metals for example, are composed of just a few kinds of atoms or molecules, but because of the way in which these specific atoms or molecules interact they look completely different from precious stones."

"Which liquids do we think of as being solids?" asks Sonia.

"One example is glass," replies the teacher. "Glass is a liquid that sets so hard that it appears to us to be a solid. That is also the reason why a pane of glass placed in a frame will gradually flow downwards. Window panes that have been in a frame for a long time are thicker at the bottom than at the

top. Pitch is another example of a liquid that looks like a solid to us. But we are getting away from what I wanted to tell you. The point we should make is that crystals are actually constructions of atoms and molecules. Crystals are made up of atoms and molecules according to particular symmetrical and geometric patterns. There are a few basic patterns that are repeated again and again, eventually culminating in a gigantic construction.”

“You persistently use the metaphor of a ‘construction’ when talking about crystals,” said Jonito.

“I have done that deliberately,” said the teacher. “Like constructions, crystals are made of basic entities, atoms and molecules, put together according to a few simple building principles, based on symmetries and repetitions.”

“How is the fourth type of organisation you mentioned different from the others?” asked Ernest.

“Well,” said the teacher, “I would like to come on to that now. The fourth type of organisation, living matter, is not a construction. It is a form of co-operation.”

“That’s an interesting idea,” said Jonito. “Living matter as a form of co-operation.”

“Once again I would like to draw your attention to the fact that these comparisons are metaphors, in principle,” continued the teacher. “Nevertheless we can still find out a few fundamental things in this way. A living cell organised around the macromolecule that we now call DNA is an association of macromolecules that we call proteins. It is the co-operation between all these macromolecules that stabilises the cell and gives it life. This form of co-operation experiences the same stability problems as the social forms of co-operation we mentioned earlier. If some of the proteins no longer fulfil their role in the co-operation, the cell becomes sick and may possibly die. Multicellular living beings are, in turn, forms of co-operation between all cells and the macromolecules. This co-operation is participatory and is not controlled from a central point. The co-operation between the sub-entities of living matter takes place in a self-organising way. There are no specific rules that are fixed once and for all, but instead general principles that can stabilise the process of self-organisation. Living matter is a form of co-operation that brings about a stabilised unstable situation.”

“Fascinating,” said Ernest. “I am starting to see where you are heading. So is it the case that self-organising social entities can be regarded as the continuation of life?”

“And hierarchical social entities as a division of life, so that they are actually dead, like crystals,” added Jonito.

“You are on the right track,” said the teacher. “Life has always tended to move in the direction of the instability of forms of co-operation and then stability, while at the same time creating space for this stabilisation. Look at the diversity of life. Life has not let itself be contained in narrow, normative forms of space, but instead has created a highly diverse presence.”

“It is precisely this diversity that is required for the survival of life on Earth,” said Jonito. “That fact has already been recognised.”

“And this diversity also serves as the starting point for the Darwinists’ theories about natural selection as a mechanism for evolution,” said Jan.

“Quite so,” said the teacher. “The Darwinists base their theories on a situation that is already highly diverse. They forget, however, that this diversity must arise in order to stabilise the original instability of the early forms of co-operation between macromolecules. Diversity is not just a magnification of space as a result of chance mutations, which then permit natural selection; it is also necessary for the stabilisation process of each individual form of co-operation in itself. Environmentalists have already realised this, though in a more intuitive way, without clearly understanding the basic principles.”

“Why is diversity an essential element in this type of organisation?” asked Jan.

“In order to understand that, we have to look at this type of organisation more closely,” said the teacher. “Incidentally, we can take the emergence of forms of co-operation going on in social space as an example. We can see that different types of co-operation are being tried out there. Some of these are strictly hierarchical, a good example being the structure of an army or a police force. These hierarchical forms of co-operation are organised in a way that is more like that of the crystal in physical space. There are simple principles, generally based on insights of symmetry and geometry, which externally describe the way an organisation functions. This must be the case, because in a hierarchical type of organisation the underlying sections must be known, overseen, controlled and directed by the hierarchical superior of this underlying section. An intrinsic feature of this hierarchical type of organisation is that it can be described as cognitively reductionist; otherwise the hierarchical superior would be unable to fulfil his task properly. Hierarchical types of organisation therefore have no need for the emergence of new regulating principles, over and above the rules and regulations that have been introduced, but which, in principle, can be known and controlled by the most senior person in the hierarchy, and used by him to direct the whole organisation. Clearly we are talking about a pure hierarchy here, something that is never found in society. The structures of an army or

a police force are actually attempts to come as close as possible to this hierarchical type of organisation.”

“But as far as I am concerned, diversity is not an essential ingredient here,” remarked Ernest.

“That’s quite true,” concurred the teacher. “A hierarchical type of organisation does result in a certain diversity, but it is a diversity that has to do solely with the various ‘structures’ that can be erected, based on the primitive behavioural patterns that go with hierarchical behaviour. We could try to give as full a description as possible of the elementary behavioural patterns that go with the hierarchical type of organisation: these include elements such as ‘obeying one’s hierarchical superior’, ‘giving clear orders to one’s hierarchical inferior’, ‘planning the collaboration between one’s hierarchical inferiors to the letter and in as much detail as possible’. Incidentally, that’s why the diversity of the world of dead solids, i.e., crystals, is limited, certainly when we compare it with the diversity of living matter.”

“I still don’t understand what diversity—as a necessary state—is the result of,” said Jan.

“We can understand the creation of diversity as follows,” said the teacher. “Natural selection, the Darwinian mechanism that brings about evolution, starts out from a situation in which there are various entities from which a selection can be made, and a mechanism of mutation that allows various new entities to be created that will contribute to the process of natural selection. This Darwinian analysis is generally based on a given moment in time, or more accurately a phase in the whole development process, a phase that is historically determined by the main area of interest of Darwin himself, namely the evolution of the ‘species’. This is a phase in which various entities already exist, entities that are diverse and compete with one another in the fight for the ‘survival of the fittest’, and in which a mechanism—for the specific Darwinian situation, the mechanism of mutation—exists, which can arbitrarily give rise to new entities. The phase that we particularly wish to examine here in the context of social entities is a slightly, though not completely different phase, as we shall see immediately. What we are talking about here are entities that are forms of co-operation between individual human beings. If we wanted to find an ‘older’ analogous phase, such a phase would have more in common with the phase in which different living cells started working together to bring about stable multicellular organisms. By definition there will be a lot of opportunities for establishing stable forms of co-operation between individual human beings, and it is this brutal fact of the ‘under-determinateness’ of the demand for stability that will bring about diversity as a natural consequence. This diversity is still growing,

which explains the possibility of diversity. The necessity of diversity lies in the buffer effect of the network of diversified entities. Think, for example, of the food chain in a biotope, where populations start to fluctuate if the diversity of species in the biotope decreases. It is simply the case that every new form of co-operation is more robust, as a new type, if it hedges its bets. The situation of different variations of this type will have a better chance of becoming stable since these variations are better able to cope with all kinds of external destructive forces.”

“So there is competition and natural selection,” said Jonito.

“Quite so,” said the teacher. “The differentiation between these two phases is merely to clarify matters. These two mechanisms, under-determinateness, which gives rise to natural diversity, the kind of diversity that gives rise to robustness, and the ‘survival of the fittest’, which gives rise to selection, are both still at work. There is simply a shift in emphasis in the two different phases. I also wanted to mention them because it enables us to some extent to broadly outline which mechanisms will play a key part in our society in the near future.”

“That’s interesting,” said Jan. “Which mechanisms do you specifically have in mind?”

“The situation in which we now find ourselves,” continued the teacher, “i.e., under-determinateness of the stability conditions, which mainly keeps the mechanism of the creation of natural diversity going, will result in more and more different and diverse types of co-operation being developed. The first signs of this are already evident. Often, if there are relevant examples, these major forms of co-operation are called sub-cultures. More and more diverse sub-cultures will surface, leading to a very diverse range of possible forms of society. This is the real expansion of social space, which will become increasingly large. Individuals and groups will be able to choose between various forms of society, will be able to occupy different places in this social space, and, most important of all, bearing in mind our previous analysis, individuals and groups will move dynamically through this social space. Everywhere they will be able to integrate themselves within a different form of society, and all these diverse forms of society will be stable compared with the disintegrating social forces we mentioned earlier. Not one of these forms of society, and this will by definition be true, since otherwise they simply will not arise in social space, will be subject to these disintegrating forces. The opportunities presented by freedom, which, if just one or a few forms of society exist, have either had to be curbed in the case of most individuals, or were subversive and consequently destructive, will now be turned into opportunities for movement, with people ‘surfing’ between the various types

of society offered.”

“So, freedom becomes freedom of movement?” asked Jonito.

“Exactly,” replied the teacher. “This will be one of the most unexpected consequences, and will mean huge changes for today’s society. There is evidence that these changes are already well under way.”

5 From Freedom to Freedom of Movement

“Can you just explain that a bit more?” asked Ernest.

“Well,” continued the teacher, “as social space expands, the diversity of the places offered in this social space will increase. These places that are offered are none other than the various forms of society we talked about. Individuals will be able to move in this social space, which means that they can look for various forms of society. Each of these places in social space will be stable, which means that each of the forms of society offered will be internally armed against the disintegrating forces.”

“Do you mean that each of the forms of society offered will be governed by laws and regulations, whereby situations such as the ‘prisoners’ dilemma’ and ‘the war by everyone against everyone’, as a result of the destructive forces of envy, will be impossible?” asked Jan.

“Exactly,” said the teacher. “This will, by definition, be the case since social space will comprise places that are offered to ‘stable forms of society’. Just as physical space comprises places that are offered to stable physical systems.”

“I get it,” said Ernest. “Forms of society that are not stable will, by definition, not be present in this social space.”

“Yes, that’s it,” concurred the teacher.

“And the freedom of the individual will be that he can choose again and again to shift from one form of society to another,” added Jonito.

“Quite so,” said the teacher. “The natural course of life of an individual or a group of individuals will be to travel, as it were, between the various forms of society offered and move thus within social space. In each place one will find oneself in a form of society governed by other, different stabilising laws and regulations. One lives within this form of society if one obeys the laws and regulations. There are no restraints placed on individual freedom, however, since one can decide at any time to move to another place in social space and choose a different way of living. And diversity will lie in the enormous number of different forms of society that will co-exist.”

“This scenario implies that all forms of society are open to everyone,” remarked Sonia.

“True,” said the teacher, “and here we can see that the analogy with physical space sheds yet more light on the subject. I mentioned the isotropy and homogeneity of physical space, and it is precisely these properties that are linked with openness. Social space will be fundamentally isotropic and homogeneous, which means that every place has the same potential with respect to each individual or group of individuals. This isotropy and homogeneity therefore implies a particular form of ‘openness’ for the ‘empty’ social sphere. It is always possible to try a new form of society. There is certainly room for it.”

“On the other hand,” remarked Jan, “I remember that you also came to another conclusion. One of the useful analogies with physical space was the one that showed us the destructive power of envy. Why the ‘place’ of an entity could not be occupied by another entity in physical space, even in a dynamic situation. I think there’s a contradiction with openness as a fundamental option. This tends more towards closedness.”

“A very accurate observation,” said the teacher. “There is indeed a fundamental closedness that has to do with the individual character of the individual or the group of individuals. The fundamental openness we talked about is that of the ‘empty’ space, the potential place for no matter what type of society. Many forms of co-operation are open in terms of their environment, but closedness is also an option. If we do something ‘stable’ in physical space as a group, for instance go for a walk with a few friends, there will be openness with respect to the way in which people take part in the walk. At the same time, however, though not in contradiction—and that is an important point—will each individual retain most of his or her individuality during the act of co-operation that the walk constitutes. The same combination of environment-openness and identity-closedness will probably be useful states in social space. We can already see examples of this, incidentally.”

“What examples are you thinking of?” asked Ernest.

“Even the competitive capitalist market has basic built-in mechanisms to protect information relating to the identity of, for example, a company,” said the teacher. “But on the other hand, there is also a fundamental environment-openness.”

“That’s true,” remarked Jan. “It’s prohibited to use the name or logo of an existing company, but it is permitted to operate within the business environment of that company.”

“That is one example,” said the teacher.

“Nevertheless there will be competition between the various forms of society,” said Sonia, “so that they will still threaten one another’s place.”

“Quite so,” said the teacher, “and that is a fundamental observation: there will be competition between the different forms of society. Incidentally, this kind of competition has played an important part in our history, and has often deteriorated into war, with individuals who were part of one form of society being killed or taken prisoner. They were also often forced to become integrated into the victorious form of society. In this context there is an important point I would like to make. This competition between forms of society, which leads to war, death and enforced integration, will take place on a grand scale. There is obviously a consensus on the fact that this is a ‘bad’ thing. It might come about, therefore, that if social space is big enough, this specific form of competition might no longer have a place.”

“That seems very utopian to me,” remarked Jan. “Let us just go back to another analogy that you have often made, namely that of living matter, animals and plants as forms of co-operation between cells and macromolecules. It is evident that competition, with all its ‘bad’ consequences, is still raging fiercely in this area. There are animals—I am referring to animals of prey—that can only survive by destroying other animals. Other animals survive by destroying plants. Things do not look so good, even though this layer of reality, the biological layer, has had millions of years in which to form. Is it not highly unrealistic to hope that the competition between social ways of living will proceed any differently?”

“You are absolutely right,” said the teacher. “Nature is ruthless, as it is so often said. Living matter survives by ‘eating’ other forms of living matter. In the same way the various forms of society will certainly ‘survive’ by ‘eating’ other forms of society.”

“That seems to me to be a terrible vision of the future,” said Jan. “OK, humans will have a wide range of diverse forms of society from which to choose, and between which they can move, but at the same time they will be torn apart by ruthless competition and war between these different forms of society.” A long silence fell and the teacher looked at the circle of intent students.

“You are right,” he said. “Evil will not be driven out by the evolution I am outlining, however irrevocable this may be. But there is one aspect we are overlooking. If one animal eats another, this is bad news for the animal that is eaten. If ice melts and becomes water, this is bad news for the ice. If one form of society absorbs another, this will be bad news for the society that disappears. It is noticeable that we do not feel that it is ‘bad’ in the example of the ice, but we do in the example of the animal. What might

the reason for that be?”

“Because we are much closer to the animal than to ice,” said Sonia.

“That is one aspect,” said the teacher. “But there is another one that I would like to discuss. If one animal is eaten by another, is this bad for the macromolecules of the eaten animal?” Again there was silence as the surprised students thought about the teacher’s question.

“Aha,” said Jonito, “I understand what you mean. When animals eat plants or other animals, the basic constituents—i.e., the atoms and molecules—are not destroyed. When these are eaten they are simply moved to another entity of living matter. So they are not really being destroyed.”

“Exactly,” said the teacher. “Animals or plants that live off other animals or plants do not, as a rule, destroy the basic constituents of these animals or plants. It is much more efficient, and hence more competitive too, to use these basic constituents in their own structure of living matter.”

“It is Darwinian competition itself that has most likely ensured that this is a better strategy than destruction,” argued Ernest.

“You are probably right,” said the teacher. “So it is reasonable to expect that the basic constituents of forms of society, i.e., individuals or groups of individuals, will be respected just as much in this competition between different forms of society.”

“I see where you are heading,” said Jan. “If that were the case, competition between different forms of society would occasionally result in a large group of people abandoning a particular form of society in favour of another.”

“This kind of migration would happen,” said the teacher. “Migration can always be looked at from two points of view. From the viewpoint of the individual or group of individuals who emigrate to a ‘better’ form of society, or from the viewpoint of the forms of society themselves, where one of the two forms of society is destroyed by the other.”

“In the same way as you might consider the fact of a plant being eaten by an animal from the viewpoint of the macromolecules,” said Jonito. “The simple macromolecules of the plant would then get the opportunity, as a result of this migration, to play a part in the form of co-operation between the much more complex animal macromolecules.”

“Quite so,” said the teacher. “It depends on how you look at it.”

“I am starting to get a picture of your vision of the future,” said Jan. “I have another question, however. You argue that only those forms of co-operation that are stable will exist within the new social space. Does this mean that there will be no more free-riders, no prisoners’ dilemma and no more envy? Will the individuals who cause this kind of destructive force

simply be ‘eliminated’? Does not sound like much of an outlook for those individuals.”

“Well,” said the teacher, “one could argue that individuals are not present in social space anyhow. Social space is, by definition, the sphere where forms of co-operation between individuals have found a place. Once again ‘by definition’ this social sphere will be occupied by forms of co-operation that are stable, and in which people have solved this problem of ‘destruction’. It is not so clear what will happen to individuals who set these destructive forces in motion. Again we can look at the material layer to provide us with some answers. The molecules of which matter, including living matter, is composed are not present in physical space either. This property is called ‘non-locality’ [36]. If a photon travels from one macroscopic entity to another, en route it is not present in space, and has the freedom that it once possessed before physical space shaped itself as a theatre for the forms of co-operation of macroscopic material entities. In the same way I suspect that once a well-defined social space has been created, individuals will not lose their freedom. While they travel from one form of society to another they will simply not be present in social space.”

“Aha,” said Jonito, “does this mean that you think that social space is more likely to have a quantum structure? What I mean to say is, If we had to build a mathematical model of this social space, would it be a quantum model?”

“That will depend on the level of the description,” said the teacher. “Let’s consider for a moment what happens in physical space. The classical Newtonian description of physical space is not quantum. Only the movements of the forms of co-operation—in this case the macroscopic physical entities—are described. If one also wants to describe the behaviour of the individual entities, i.e., the atoms and molecules, one comes up against quantum mechanics.”

“I would like to come back to the link with the paradigm shift from observational to participatory society,” said Sonia. “Do we understand this any better now?”

“Yes,” said the teacher, “it’s time to look at that aspect again.”

6 The Missing Interactions: Observational and Participative World View

“In an earlier discussion we talked about the transition from an ‘observational society’ to a ‘participatory society’,” said the teacher [1]. “I would

now like to try and fit this transition into the evolution from a static form of society to a dynamic form of society, in order to gain a better understanding of the participatory deficit, the greatest excrescence being the scourge of unemployment in the late twentieth century.”

The students listened, fascinated, now that the teacher had broached the subject with which the discussion had begun. The teacher continued:

“We have already mentioned that the transition from a static to a dynamic society led to great upheaval due to the fact that old mechanisms to combat the destructive forces were no longer efficient. We have also clearly seen how social space was created at the same time as this transition from static forms of society to dynamic forms of society. We have also analysed how the ‘law’ acts as a stabiliser of the new forms of society that are reluctantly learning to move in this social space [41]. We have often used analogies from physical space to explain this construction process within social space. For instance, we have analysed the way in which macroscopic physical entities stabilised on the basis of the current physical laws. We have seen how living matter, which we can regard as a ‘form of co-operation’ between macromolecules, is distinguished from other forms of organisation of matter, i.e., crystals, liquids and gases, which we can classify as being ‘dead’. We can now say that the physical entities ‘interact’ within physical space and it is through these interactions that they become stabilised. A very special act of creation occurred, however, during a particular phase in the evolution of living matter. Animals and their descendants, people, developed ‘eyes’. We should consider this fact for a moment if we want to grasp the problem of participation more clearly. What is the main function of ‘the eye’?”

The teacher paused for a moment and watched the inquiring expressions on their faces.

“To make a model of physical reality,” said Jonito.

“That’s quite right,” said the teacher. In fact, the eye does something very special if you classify it among interactions that frequently take place between physical entities. The eye interacts with the surrounding physical entities in a specific way that is different from the types of interaction that underpin the stabilisation of the physical entities. The eye primarily wants to ‘observe’ and therefore tries to interact in such a way that the ‘effect’ on the ‘observed’ physical entity is minimal. It wants to cause as little ‘disturbance’ as possible in order to be able to understand the individual reality of the physical entity studied. This is an interaction—let us call it an ‘observation’—that is not aimed at stabilising the physical entities. Within the context of an overall evolution, observation appears much later on the

scene, namely during the phase when the variety within physical space has already increased enormously and Darwinian competition and selection are playing high. In this phase it is definitely an advantage to have an ‘observed picture’ of the surrounding reality, on the basis of which ‘predictions’ can be made.”

“Whereas the interactions that are necessary for the stability of the physical entities are of a different type?” asked Jan.

“Yes, this is clearly the case,” said Jonito. “The typical interactions that bring about stability are usually symmetrical. It is not the case that one of the interacting entities observes the other, forms a picture of it and then ‘decides’ on the basis of this picture which reaction will be sent to the observed entity.”

“Quite so,” said the teacher. “Typical interactions, such as those between macroscopic physical entities in classical mechanics and those between microscopic entities in quantum mechanics, are not of the ‘observational type’, as is the case with the ‘eye’.”

“I think I see where you are heading,” said Sonia. “On account of the fact that this ‘observation’ has been crucial for us in acquiring most of the knowledge we have accumulated about reality, the ‘observation’ type of interaction is a very powerful archetype for us. Is that perhaps the reason why we are constantly tempted into taking an ‘observational world view’?”

“Yes, I think that is in fact the main reason,” said the teacher. “I have to say, however, that by putting forward the special ‘observation’ interaction as being important to us because of the development of the eye, I am probably making this observation interaction too specific. It is indeed a very important type of interaction in itself, in that, on the one hand, it disturbs the observed entity as little as possible and, on the other hand, it enables as much information as possible to be gathered about the state of the observed entity. This observation interaction can be distinguished from other types of interactions in a very formal way [42]. It is quite possible that quantum entities that interact with one another have already used it, though current quantum theories provide no definite answers on this point. In any case the interactions that are important for the stability of the co-operation between entities are of a different type.”

“So is that why it’s so difficult for us to intuitively grasp the nature of these stabilising interactions?” asked Jan.

“Exactly,” said the teacher. “We have now reached the stage where we can express our criticism of the observational world view, which we formulated intuitively in our earlier discussion [1], in a more structured way. During the process of construction of social space, the construction of the

interactions required to stabilise these social entities was also taking place. The process of forming these interactions in our present-day society is fully under way: it is the legislative, executive and judicial powers that play a principal part in this. These powers largely operate, however, on the basis of the observational world view. They implement regulations and laws by reasoning on the basis of ‘observational’ models of social entities. The laws are largely based on an observational view of the social entities in society. It is very difficult to capture a truly dynamic situation with this.”

“What do you mean?” asked Ernest.

The teacher continued: “The stabilising interactions are not observational from one entity to another because they require ‘continuous’ feedback about the movement of one entity towards the other. If one tries to capture such a situation of continuous feedback in a model that is observational—in other words where one entity is observing the other—one comes up against serious problems. It can be compared with the attempt to integrate by summation.”

“I get it,” said Jonito. “Only continuous mathematical models can describe this continuous feedback. Is that also perhaps one of the reasons why the stabilising interactions of material entities in physical space can be readily captured in mathematical models?”

“Yes, that’s right,” said the teacher.

“And that’s why the complex structure that stabilises a truly dynamic situation cannot be described using an observational approach,” added Sonia.

“You could put it like that,” said the teacher.

“Is that also the reason why you claimed in our last discussion that ethical forces can bring about this stabilisation of social entities, whereas cognitively formulated rules and laws, i.e., those resulting from the observational world view, cannot?” asked Sonia.

“Quite so,” replied the teacher. “We have to be aware that the problem of the construction of the stabilising interactions was not just posed within a dynamic form of society. It is simply more complex within this kind of dynamic form of society, but it was already present within the static form of society in primitive societies, where these stabilising interactions took the form of rituals and customs and were expressed in ethical structures. Ethical structures ensure that destructive, disintegrating forces do not hold sway. These ethical structures were often, and still are, to a great extent implicit. But in this case implicit also means ‘not purely observationally interactive’.”

“What does this mean in concrete terms for our present-day society?” asked Sonia.

“Let’s just go back to the issue of unemployment, which was one of the fundamental expressions of the participative deficit in twentieth-century society,” continued the teacher. “In the first place we can say that there was certainly no ‘shortage’ of work. There was a tremendous amount of work available. The real problem was that all this work was in an area of social space where the interactions that were maintained by the free market economy could not penetrate. The work available was mainly in that area of social space where mobile individuals or groups of individuals had appeared, and was often associated with quality improvement, for instance in the welfare sector, health care, ecology, and so on. Often, however, it involved efforts to solve harrowing human problems in less developed areas: starvation and malnutrition, water supplies, etc. The interactions that were maintained by the free market economy, and that were chiefly based on the exchange of material goods, could not penetrate into these areas of social space. Incidentally, this fact was recognised by many philosophers at the end of the twentieth century, but they failed to draft regulations or laws that would bring about the interactions that would have made co-operation in these areas of social space possible. The main reason for this was that regulations and laws were still constructed on the basis of the observational world view. There is an urgent need to introduce interaction patterns into our present-day society that make it possible to involve this area of social space—where there is now sufficient work, but where the present interactions of the free market cannot penetrate—in the total stabilising dynamics of society. How we might go about this could form the subject of another discussion, since a number of steps have already been taken in this direction.” It was now very late and the teacher and his students decided to call it a day and keep this subject for their next meeting.

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