

# HUMAN CONCEPTION: HOW TO OVERCOME REPRODUCTION?

– A phenomenological approach of human fertilization –

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*In the very moment  
that we became the Other  
JvdW*

## Abstract

The phenomena of human conception as revealed during the last decades of research are reframed by a phenomenological approach (so-called dynamic morphology). Viewed and considered in this way it is shown that human conception appears not to be an act of reproduction. In the human process of fertilization a process of “de-biologicalization” occurs which leaves room for an act of incarnation in which spiritual energy might be able to bind to or manifest itself by means of physical (biological) substance. The consequences of this view in respect to the definition and quality of *artificial conception* are discussed briefly.

## Introduction – the approach of the dynamic morphology

The approach of *dynamic morphology* is rooted in the scientific tradition of phenomenology, in particular the Goethean phenomenological approach of living nature. Like the phenomenologist the dynamic morphologist is interested in the perception of the language of shapes and forms of living organisms rather than in explaining those forms in terms of causes. He describes the form of an organism in its appearance in order to perceive the dynamics of the underlying formative gesture. Dynamic morphology may not only be applied to the appearance of living organisms as a whole, but also to the dynamics and gestures of the shape of organs and body parts within the framework of an organism. Often the morphodynamic gesture of a biological shape can be recognized by the formative shaping gesture of the embryonic development and/or by the way the definitive form of an organ or body part is achieved in the adult organism. But such knowledge is not an absolutely necessary prerequisite for understanding the *gesture* that *speaks through* or is expressed by a form or shape.

The gesture that speaks through a form may be recognized by the internal psychological restating of the *underlying motion* that is being expressed in the form. By *getting the sense of the movement instinctually* so to speak. In this way the gesture of form can be recognized as an internal motion or gesture, which means: psychologically perceivable and imitable (capable of being imitated). This does not mean that the recognition of the morphodynamics of a given form has to be considered as a *subjective* action in the sense of related to a personal and individual imagination that cannot be transmitted in an impersonal objective way. The next example might elucidate this. The containing character of the skull with which it protects and shields a given content from the outer environment as an opposition to the openness with which an extremity interacts with that outer environment, can be recognized and admitted by everybody. The gesture of the form is evident in this case. The related mental act may have aspects of an *emotion* rather than of a rational objective fact, but this does not mean it is only *subjective* and therefore nonscientific.

Taken together it might be stated that dynamic morphology does not apply an analytic and anatomical process to describe shapes and forms. It tries to understand the gesture (*Gestalt*) that is being expressed by and through the form or shape in a more integrated and holistic way. Goethe himself referred to the perception and awareness of a so-called transcendental or *supersensible* (German: *sinnlich-übersinnliche*) quality of the form. By this expression he

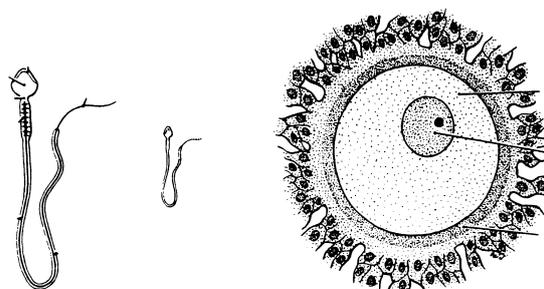
meant that the gesture or *forming language* of a form cannot be placed in the Cartesian category of a sensorially perceivable entity (*res extensa*).

Since shape and form (i.e. gesture and dynamics) are recognizable at every level of nature and living organisms, the dynamic morphologist may perceive a similar or homologous gesture of form at the level of an organism as well as on the level of an organ, a tissue or a cell. He may also recognize the gesture of a certain plant process in the way a given animal organ is *gesturing*. Goethe for example studied the basic morphic principle of *ballen und spreizen* (concentrating and diverging) in plants, but this gesture is also recognizable in mammalian embryonic processes. Considered as such the dynamic morphology is a transdisciplinary approach.

In this essay human conception will be described by means of a dynamic morphological approach. The aim of the article is to understand the essence of human conception in terms of motion and gesture. It will be shown that such an approach generates a completely different idea about what **essentially** is taking place during a human conception than the one that is produced by the mechanically oriented description of current morphology and biology.

### To start with: the dynamics of the human egg cell

The human egg cell (see figure 1) exhibits a number of features and properties that are basic to nearly every cell in the human body. The uniqueness of the egg cell however is the fact that it (*she*) exhibits those basic and common properties in such a pure and fundamental way (nearly as an *archetype*).<sup>1</sup> The almost absolute spherical shape of the egg cell is an example of this unique and basic property. No other cell in the human body exhibits the (mathematically absolute) spherical shape as perfectly as the egg cell. Normally body cells exhibit all kind of shapes. This phenomenon might be understood or explained by the fact that cells have certain functions that require a certain shape but mostly by the fact they usually have relations with other (neighboring) cells. In this respect, there exists cubic and cylindrical cells that form a limiting layer (epithelium) that like cobble stones on a road surface. Look at neurons (nerve cells) that have an enormous number of long extensions (axons and dendrites) to make functional networks via synapses with other neurons. Therefore it might be stated that the spherical shape of the egg cell is related to her **solitary** existence. The egg cell exists so to speak on its own, *she* is alone (all-one?). The ovary is not made up of *egg cell tissue* or built up by egg cells. The tissue of the ovary has special cavities (*follicles*) in which the egg cells are stored separately and solitarily.



**Figure 1.** A sperm cell (left) and an unfertilized egg cell (right). In the center a sperm cell on the same scale as the depicted egg cell.

The spherical shape is also the shape that couples a minimum of contact with the outside environment to a maximum of volume and content. "That is why" a ball can so easily be rolled or moved. The spherical shape of the egg cell represents the quality of a world on its own. The egg cell relatively has a lot of *inner space* (content): it is the cell with the largest volume that is found in the human body. Her diameter of about 150 $\mu$  to 200 $\mu$  is very large in

<sup>1</sup> Of course it is known to the author of this article that **genetically** (i.e. on the level of chromosomes) the egg cell has to be discriminated from any regular body cell (somatic cell) by the fact that "she" (just like "her" male counterpart, the *sperm cell*) possesses only half of the regular number of chromosomes. But this fact is not of any importance for the dynamic morphologist who is concerned with describing the egg cell **as a cell**.

comparison with the average cell diameter of about  $10\mu^2$ . The ripened egg cell is as big as a grain of sand and therefore visible with the bare eye, which is an extraordinary feature for cells. For the dynamic morphologist it is important to realize that the egg cell is not only large in the sense of quantity and measurement but that *she* also exhibits the **gesture of being large**. A characteristic of the egg cell namely is the enormous swelling and enlargement of volume during its ripening process; from  $10\mu$  as a beginning (primordial) gamete to  $45\mu$  at the end of the first phase of ripening and development till *she* reaches a diameter of more than  $150\mu$  at the end. During the ripening process the egg cell gathers a relatively large amount of cytoplasm, which is expressed in a relatively high nucleus-cytoplasm ratio. This fact represents the *gesture* of being-large.

The next particular characteristic of the egg cell is its *openness*. By this is meant the fact that the egg cell intensively interacts and communicates with her environment. It is known that very early after fertilization the egg cell produces substances that effect the direct environment of the cell (which is the mucous coat of the ovarian tube). This *openness* has to do with and is demonstrated by the fact that the cell is very sensitive to noxious influences from the environment. It is a vulnerable cell so to speak. To interpret and describe this complex of features as *openness* is a good example of the dynamic morphological categories and definitions (frame of notions). Being open, being vulnerable, interacting as gesture and dynamic may be recognized easily as an "internal" gesture and motion. One may feel and can resonate with the gesture of an organism, which is *open* and has an interactive relationship with the environment on the one hand but on the other hand might be relatively vulnerable to influences and signals from that environment. The reader just has to resonate or entrain in order to feel the gesture as an internal psychological motion in order to perceive it.

### **The other way around: comparing and contrasting as method**

The classical analytical and anatomical approach usually divides the organism in to organs and body parts in order to describe those elements in more detail on the level of tissues and cells. On the contrary the approach of dynamic morphology always considers the shape of the organism in relationship to its environment (context) and equally so the shape of an organ to the context of the organism and so forth. In this respect applying the method of *contrasting* is important. Within the whole of the organism we could look for polar tendencies regarding form and biodynamics, for example the skull in contrast to the extremities. Contrasting is a kind of intensified comparison. As noted above comparison reveals features that escape the view of the observer who only applies the anatomical and analytical approach, which is a reductionistic and isolating view. Taken **out of** their context, certain features escape the observer's eye that are discerned by the morphodynamic and contrasting view.

It would be fruitful and sensible to take its context into account in the description of the egg cell in order to get more deeply and essentially acquainted with the gesture of this cell. In the process and dynamics of conception of course the sperm cell is the right candidate for that! In the following it will be demonstrated that one may understand the morphodynamic characteristics of the egg cell by comparing it and contrasting it with the sperm cells and .. the reverse. This so to speak makes space for both types of cells and their morphic characteristics and gestures and will help us to understand both of them better.

### **The one to be met: the morphodynamics of human sperm cells**

In case of sperm cells there is a tendency to use the plural (as in the title of this paragraph). This is based upon a particular feature of the human sperm cell. Unlike the solitary egg cell a

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<sup>2</sup>  $\mu$  represents one thousandth of a millimeter (or: micrometer)

sperm is never on its own. The production of sperm cells in the human testis is characterized by the production of enormous numbers of cells. On the other hand the process of oogenesis (i.e. the process of ripening and production of egg cells) is characterized by a tendency of diminishing and reducing in number. The facts will support this view. During the fetal phase of a female, at first millions of egg cells are produced by means of cell division. Next the number is reduced to about 2,000,000 cells at birth until about several hundred thousand remain at the beginning of the menstrual cycles (menarche). In every cycle however some ten to twenty egg cells may reach the final stage of ripening, but only one of them (very seldom two or three) is released (*ovulation*). The rest of the ripened cells disintegrate. So the whole process of egg cell production and ripening might be described as a **converging** tendency (gesture). On the contrary the male process (*spermatogenesis*) exhibits a **diverging** tendency: continuously enormous numbers of sperm cells are produced within the testis. Millions per day, thousand per second! This huge numbers are also functional. Very many sperm cells will be sacrificed in the process of overcoming a lot of anatomical, physiological and biochemical barriers, which a sperm has to face in order to finally make contact with an egg cell. The production of egg cells from the ovary is a process of titration (one by one), the production of sperm cells in a testis is massive and explosive. These features cope with the polarity of *one* and *solitarily* for the egg cell versus *many* and *community* for the sperm cells.

As to their shape the contrast between the two gametes is very strong (see figure 1). The egg cell could be described as purely spherically shaped. On the contrary the sperm cell, with its total length of about 60 $\mu$ , with a diameter of the head of the cell of about 3 to 4 $\mu$  (at the most) and a diameter of the so-called tail of not more than 1 $\mu$ , should be characterized as a radius-shaped cell. In the sense of morphodynamics the polarity here is evident and impressive. The egg cell is a ball. Isn't the ball a form with (endlessly) many **non-visible** radiuses? The sperm cell on the opposite brings the principle of *radius to appearance*. Later on, prior to and during conception, many sperm cells will converge and focus on just one egg cell. Don't they bring in this way *transcendentally* (*sinnlich-übersinnlich*) a ball shape to appearance, with the sperm cells as visible rays of the sensorially perceivable manifestation of that ball? The sperm cells are making visible what is present in a non-visible way within the egg cell! See figure 2.

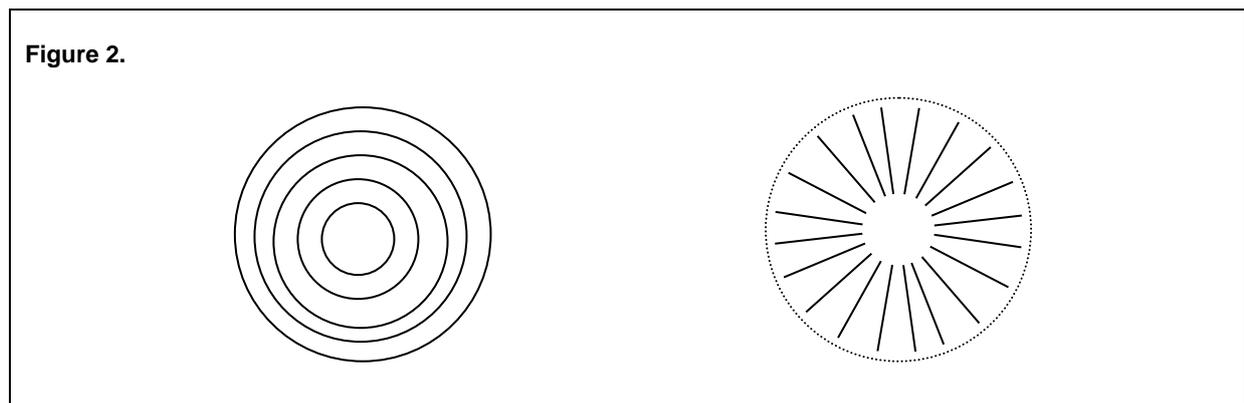
Describing the egg cell previously it has been argued that the spherical shape represents the spatial form with the least environmental contact that could be adapted to by a cell. It therefore represents par excellence the shape that fits to being brought into motion (being moved). On the other hand the radius-like shape represents the principle of motion and (self) mobility. The fact that the sperm cell is an **actively** moving organism (in opposition to an egg cell), is not actually surprising or unexpected for the dynamic morphological observer. It is the same flow of fluid within the ovarian tube by which the egg cell is being transported passively in the direction of the uterus, that offers to the sperm cell the resisting stream against which he can exhibit his potency to move. At the same time the flow of fluid is directive and guiding for his movement.

The sperm cell is a very small cell (see figure 1). Like in the case of the egg cell it is not the quantitative features that constitute the actual convincing argument for the dynamic morphologist to describe the sperm cell as *small*. The volume of a sperm cell indeed is very small: some 60,000 of them fit into a mature egg cell! The end of spermatogenesis however is marked by the event of seemingly eliminating nearly all its cytoplasmic content. This process therefore results in a cell with a cell membrane, a very small amount of cytoplasm and with merely a nucleus as its cellular content. The dynamics of a ripening egg cell may be characterized as one of enlargement, swelling and diverging, the formation of a sperm cell as a gesture of concentration and diminishing (loosing volume). Just like in the case of the egg cell and its *being-large*, the signature of *being-small* of the sperm cell represents a qualitative rather than a quantitative characteristic, and therefore represents a morphodynamic gesture.

What could be said in this respect about the relationship and the interaction of the sperm cell with its environment? As expected a remarkable polarity may be distinguished here again. The egg cell actively and metabolically relates to its physiological context, the sperm cell on the contrary does not exhibit any metabolic exchanges or interaction with its environment. Could the egg cell therefore be described as *open* and vulnerable and the complete opposite be true for the sperm cell? Apparently without any difficulty the sperm cell might undergo all kinds of mechanical and physical manipulations (maltreatments) – for example being centrifuged, being frozen to more the 60 degrees Celsius below zero – without any evident or notable damage. In terms of morphodynamic gesture the sperm cell may be characterized as a *closed* or *non-open* cell.

### What is visibility? The question of contrast and/or polarity?

Coming to this point of the essay it may have become evident that there exists a contrast between the two gametes. But what actually is the nature of this contrast in terms of dynamic morphology? Are we dealing with a contrast or opposition or with a polarity? This will be made clear by means of the feature (gesture) of mobility. This might open the perspective of a very special **relationship** between both cells. *Looking at it from the outside* means: on the level of extracellular mobility – the sperm cell may be described as active and mobile. Thus the egg cell on the contrary would be characterized as *passive*. When however the level of comparison is directed to the **intracellular** level – *looking at it from the inside* so to speak – , then the egg cell represents the *active* cell. This is in line with *her* characteristic as a metabolically active cell interacting with the extracellular environment. The cytoplasm of the egg cell could be described as relatively very *mobile*. Such in strong contrast to the intracellular inactivity of a sperm cell! More than ninety percent of the content of the sperm cell is nucleus or DNA-substance. Moreover the DNA in the sperm cell is structuralized and even nearly crystallized by a process of strong dehydration. Within the sperm cell (pure) form and structure are dominating <sup>3</sup>, within the egg cell the activity of the cytoplasm is present! From the dynamic morphological view something different is arising than simply an opposition: in gesture and behavior both cells are a **polarity** to each other. Essential features of a polarity are reversibility and inversion, in this case: external mobility - internal structure (of the sperm cell) versus external rest - internal activity (of the egg cell).



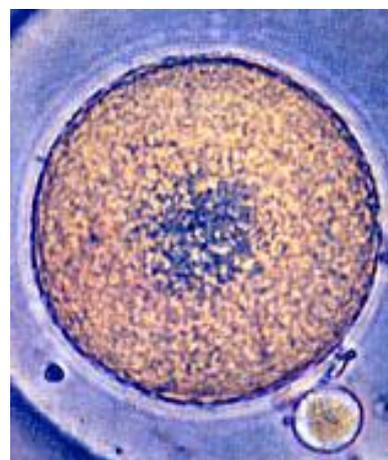
**Figure 2.** Circumferences and rays: the two polar principles of the circle. On the left the morphological "egg cell principle", on the right the morphological "sperm cell principle"

The polar character of the two human gametes can also be discerned by studying their behavior regarding cell division and ripening. Inherent to the phenomenon of bisexual reproduction the egg cell undergoes two reduction divisions (*meioses*) in order to reduce the number of chromosomes to half of the normal (i.e. diploid) number (See footnote 1). As a

<sup>3</sup> Isn't it meaningful in this respect that DNA usually is interpreted as a *form-ula* (i.e. small form)?

rule the result of a cell division are two so-called sister-cells, both about as large as the so-called mother cell they are derived from. This is not at all the case for the meiosis of the egg cell. She divides into one big voluminous sister cell which represents the actual *oocyte* and into an unusually small cell, the so-called *polar body*. The latter only contains the necessary half of the chromosomal substance and does not play a significant role in the process of conception in humans as far as is known. See fig. 3. In the dynamic morphological view this *behavior* perfectly suits the dynamics of *conservation of volume and content* (being-large) which has been described as one of the most significant characteristics of the egg cell. On the contrary the morphodynamic characteristics for spermatogenesis are *fragmentation* (being-many), division and reduction of volume (being-small). In such a context cell division seems a suitable gesture. Sperm cells indeed do not resist the reduction divisions occurring during the production process. The two spermatocytes that are the result of their meiosis are both equal in size. As noted before the sperm cell strives for reduction its volume and for concentration. In the final stage of ripening from spermatocyte to the actual sperm cell (*spermatozoo*) it is biologically necessary that the sperm cell gets rid of its superfluous cytoplasm. This process is completely in line with the signature and gesture of *being-small*.

As a rule pathological phenomena confirm the essential characteristics of the normal, non-pathological process.<sup>4</sup> In the ejaculated sperm of a sound man, a large percentage of the sperm cells are malformed because they have attached to their necks a relatively large sack of cytoplasm, that greatly reduces the mobility of the cell. A sperm cell obviously is handicapped by the preservation of cytoplasm whereas the same phenomenon for the egg cell is a must. It is a necessary condition for proper functioning as an egg cell! In this respect the polar body of the egg cell (after the first *meiosis*) may be considered as a kind of strangulated sperm cell and the sack of cytoplasm of the malformed sperm cell obviously as a kind of egg cell that should have been sequestered in the normal ripening process. The egg cell seems to preserve her egg cell signature by expelling and having vanished the sperm cell principle. The sperm cell reaches its proper being, functioning and character by a completely opposite morphodynamic process.



**Figure 3.**  
Egg cell (oocyte I) with a polar body just before conception.

The dynamic morphological description of both gametes is not exhausted yet with the phenomena described in this article until now. A lot more characteristics of these two types of cells could be described. Every time however the result will be that the sperm cell and egg cell represent a principle of **polarity**: in a given complex of features or gestures the one cell is the complete **reverse and inversion** of the other one.

### **Periphery and center: cytoplasm versus nucleus**

Dynamic morphology searches for gestures of form, or gestural behavior. It may be obvious that the description which has been provided here, leads from the level of sensorial and observable, opposite and polar phenomena to the level of *supersensorial* (*sinnlich-übersinnliche*) morphodynamics. Figure 1 might still be characterized as an **anatomical** figure of the two gametes, while figure 2 is an attempt to visualize the **morphodynamics** of sperm cell versus egg cell. However, it is only with the view and the lens of dynamic morphology that one can see the oocyte in figure 3 as *egg cellular* and the related polar body

<sup>4</sup> In case of a polarity the pathology of forms and processes often confirms the view on the essential characteristics of the gesture of the normal process or of the normal shape. What seems to be sound and normal for the one pole, is a handicap and pathological for the opposite pole.

as *sperm cellular*. What could be the comprehensive characterization of both form gestures? One could make a long list of pairs of polar notions that characterize an egg cell respectively from a sperm cell. For example: big – small, open - closed, active – passive, process – form, diverging - concentrating. One has to take into account that these pairs of characteristics each may be turned around and reversed, depending of the level at which the observation is directed.

Think about what has been said about external mobility versus internal mobility. All those polar and opposite aspects are also aspects of so-called *egg cellularity* and *sperm cellularity*. The proper or essential egg cell gesture with the sperm cell gesture may be considered as the sum of all those aspects and gestures. But it also goes extensively beyond all of them. For the next part of this essay, which will draw attention to the actual process of fertilization and conception, it is important to recognize the following comprehensive gestures or biodynamics. The egg cell and *her* gesture could be comprehensively characterized as *cytoplasm* and that of the sperm cell as *cell nucleus*. Features of the egg cell such as openness, internal mobility, the pursuit of cell volume, and the interactivity with the environment could all be comprehensively expressed and summarized as the *gesture of cytoplasm* or *cytoplasmicity*. As for the sperm cell the gestures of concentration, the tendency to structuralization, closedness and so on could be described and summarized as *nucleus* or *nuclearity*.

Once both gametes were similar in gestures and morphodynamics. Once at the beginning of the embryonic development both cells were similar in shape and characteristics as so-called *primordial gametes*. Next both cell types differentiated in opposite and polar directions and specialized (i.e. became one-sided) into a cell with a cytoplasmatic signature and one with a nuclear signature. It is obvious that the dynamic morphological descriptions create a gap or compete with the contemporary analytical and anatomical description. In the latter view both gametes are quite normal cells, each with a nucleus, with cytoplasm and a cell membrane. Maybe they are in different and various relationships, but each is unmistakably a variant of a normal cell. The **polarity** principle as described and suggested here can only be *seen* and conceptualized through a morphodynamic view and lens. For the dynamic morphologist therefore, the egg cell is to be characterized in her gestures and morphodynamics as a *sphere of cytoplasm* or *cytoplasmatic body* and the sperm cell on the other hand as a *nucleus* or *nuclear head*. The next part of this article will deal with the phenomena of fertilization and conception and with the gesture and morphodynamics of the interaction between both cells at the moment of conception.

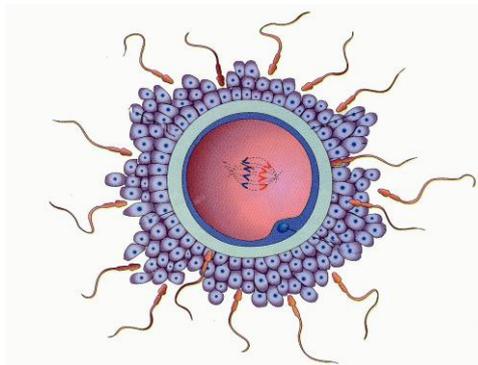
### **Mating dance: the pre-conception attraction complex.**

In humans fertilization takes place in the ovarian (fallopian) tube. Under normal conditions the egg cell arrives in the first (*proximal*) part of the tube directly from the ovary. In the mean time the sperm cells have completed a long journey up to there. They have been deposited in the female vagina and have swum all the way from the vagina via the uterus to the ovarian tube. Many millions of them (more than ninety percent of the number that were present in the male ejaculate) have *passed away* or have become *out of order* by all kinds of biological barriers that crossed their way (e.g. the sperm hostile properties of the cervical mucus). Anyhow there exists a reasonable chance for both gametes to meet each other.

The same fluid stream (produced by the activity of hair cells of the tubal mucous membrane) by which the egg cell is being transported into the direction of the uterus – slowly rolling along the numerous folds and niches of the tuba mucous membrane - provides for the sperm cells a kind of directive stream of resistance against which they exhibit their *swimming* behavior. It is also the large volume of the egg cell that creates a greater opportunity for both cells to meet. Moreover there exists a kind of chemotaxis (i.e. a biochemically induced attraction) between both types of cells: the egg cell as well as the tubal mucous membrane

excretes substances that attract and activate sperm cells. At the end some tens or hundreds of sperm cells will actually reach the egg cell and organize themselves in a circular or radial orientation with their heads directed towards and concentrating on the egg cell.

At this moment so-called nutritive cells, the *corona radiata*, still surround the egg cell. From the evidence of the *in vitro* fertilization procedure it is known that in the next phase a so-called *pre-conception attraction complex* (PCAC) is generated for several hours (see figure 4). Under the influence of the substances secreted by the egg cells and the nutritive cells, the sperm cells now undergo important changes. For example they lose their so-called acrosome (outside shell). Without this happening a sperm cell is not capable of fertilization at all. On the other hand the presence of sperm cells and related substances obviously evokes chemical reactions in the egg cell and her coat (*zona pellucida*), making her more receptive for the eventual fusion process between the two cells. So it is obvious that the mere existence of this biological attraction complex is a necessary condition for the actual process of conception. Both cells seem to exchange and settle **mutually** within the chemical and biological conditions for the eventual *decision* whether or not a sperm cell will enter (fuse), and if so, where, which one and when. In a very subtle mutual process of encounter and exchange of signals and substances both cells are prepared for the actual process of fertilization and conception.<sup>5</sup>



**Figure 4.**  
Egg cell surrounded by sperm cells:  
pre-conception attraction complex

In the context of the dynamic morphological considerations of this essay it is important to establish that now a biological **entity** is formed by an egg cell with some sperm cells. (See figure 4). We are dealing with a *state of activity*, that is more than just a kind of passive composition and sum of two cell types. Specific interactions take place within this biological complex. It is a biologically active and interacting whole that is occurring here. Within the initial few hours that this complex exists, a conception is possible, but whether this actually happens or not depends on a number of subtle reciprocal chemical interactions and exchanges. Eventually it **might** result in a fusion of the cell membrane of the egg cell with that of a sperm cell. It should be emphasized here that describing the whole process as the penetration of a sperm cell is an inaccurate description. If the circumstances and conditions at a given moment and at a given place are appropriate, only then can the fusion of cell membranes take place and the content of the sperm cell (nucleus and the small amount of cytoplasm with some important cell parts) be brought into the egg cell. The continuity of the egg cell membrane is **never** interrupted or broken! The very common and somewhat *aggressive* image of a sperm cell *penetrating* the egg cell is not correct! In the pre-conception attraction complex there is no question of an active partner versus a passive partner complex, nor of a penetrating versus penetrated partner, nor fertilizing versus fertilized one. Rather cell and cell qualities are equivalent as a subtle equilibrium of exchange and interaction are maintained. The morphodynamic process of fertilization rather is like the gesture one may observe so very often in the animal realm when mating behavior and mating rituals are taking place. In a nearly never ending process of exchanging signals, of attraction and repulsion, a male and female animal can circumambulate each other before copulation happens. Almost literally this animal image, this gesture, this morphodynamics becomes discernible in the phenomenon (that is also observable during *in vitro* fertilizations)

<sup>5</sup> It is for this reason that the biological complex at stake is indicated as **pre-conception**. Current biology usually indicates the moment of fusion of the two **nuclei** of the both gametes as the actual moment of conception.

that the whole pre-conception attraction complex (PCAC) exhibits a tendency to rotate. The linear (radial) movement of the sperm cells turns into a spherical motion!

In order to understand the type of constellation that is actually being achieved in those first hours it is necessary to bring into memory the strong polarity (inversion) of the *sphere of cytoplasm* i.e. egg cell versus the *nuclear head* i.e. sperm cell. The power of attraction between these two types of cells is indicated on the physicochemical level by their reciprocal biochemical interactions. From the point of view of the phenomenological observer the attraction between the two cells however is not surprising. To summarize: an egg cell is everything that a sperm cell is NOT. And in reverse! The anatomical, physiological, chemical, biological features of the egg cell may as well be characterized as the **absence** of the opposite of those features. In the egg cell *sperm cellularity* is the most absent, at least at the sensorial level. One might state that a fulfillment or completion takes place if an egg cell encounters a sperm cell(s)! What has been separated and differentiated is unified and brought together again. In the description of the morphological characteristics of both cells as given in the first part of this essay, it has been concluded that the sperm cell reflects to the egg cell what the egg cell is radiating transcendently and supersensorially (*sinnlich-übersinnlich*). The fact that both cells eventually meet each other is not serendipitous, but in fact reveals an intrinsic *necessity* or purpose. Both cells belong to each other; they *fulfill* each other. This is achieved quite literally in the pre-conception attraction complex (PCAC) in the way both cells and their respective qualities constitute a unified entity as a reciprocal polarity.

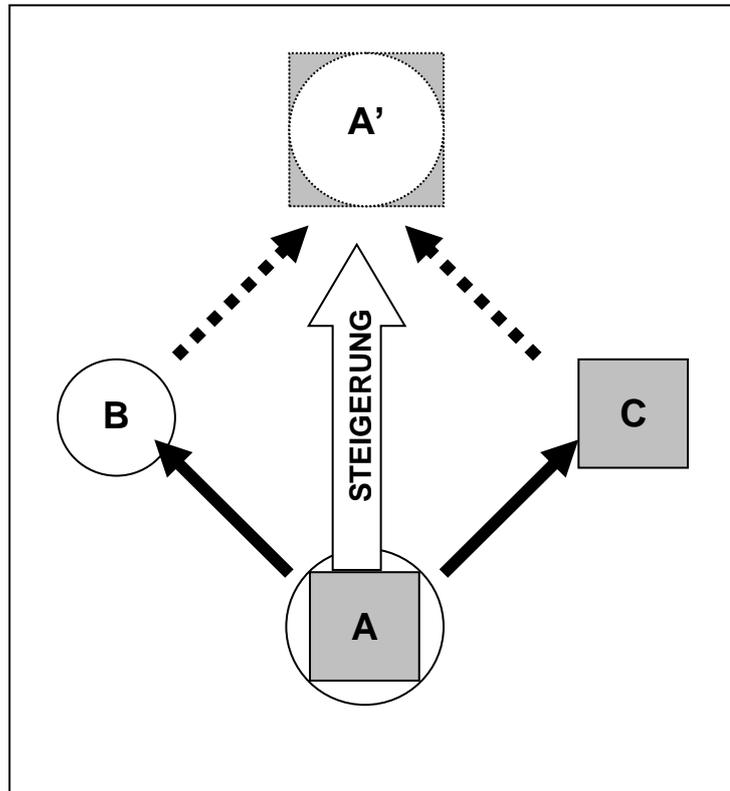
### **Exposition to a higher level: Steigerung (*Raising and intensification*)**

The sperm cell as well as the egg cell individually represent the polar one-sidedness of what is or once was the starting point for both cells, i.e. *a cell*. Both cells are differentiated from the same primordial gametes. In their characteristic one-sidedness one of them is polarized into a *nuclear head* and one into a *sphere of cytoplasm*. In this respect both cells are at the **end** of development and therefore are *dead*. Both cells are specialized intensively, each on their own is not capable of providing the substrate for a new or ongoing development. Only by the encounter, the meeting of both one-sided tendencies, can the substrate for a new development be provided. This however should not lead to the false conclusion that at conception the beginning or start of life takes place. As to development, as to gesture both gametes have come to an end, but they both are *living cells* biologically. The whole morphodynamics of conception as described above of course is constituted within the domain of life, of living cells, of biology. A human conception therefore does not mark the beginning of life, it marks the beginning, the **start of a new development!**

What is the quality of the matrix of both cells during those few hours in a morphodynamic sense? To understand this thoroughly the reader should consider the image of "the cell" as it is usually presented. Very often a model of "the cell" is shown on the first page of a regular book about biology, since "the cell" still may be held as the foundation, the corner stone, the basic entity of life on this planet. The cell is considered the *archetypical entity* of life. What becomes visible (or better: knowable) in a pre-conception attraction complex (PCAC), if one takes the central issue the morphodynamic revelation of an egg cell as a *sphere of cytoplasm* and the sperm cell as a *nuclear head*? When one turns "the cell" inside out, reverses or inverts it so to speak, then the pre-conception attraction complex appears! In the current relations of living nature and biology (so of "the cell") the nucleus should be in the center; now however, in the PCAC, the *nucleus* appears in the periphery. Normally **one** nucleus in the cell is present as the coordinating and organizing center. Here in the PCAC however there are **many** nuclei present in the periphery represented by the numerous sperm cells that group and gather themselves around a sphere of cytoplasm. Cytoplasm as a rule should be metabolically active around a nucleus. As a rule the nucleus should be the center of the cell structure. Now however nuclei (plural!) are moving in the periphery and it is a sphere of cytoplasm that represents a resting center around which things are turning and

moving. As a rule the periphery of *the cell* should be an open boundary where the cell is communicating and interacting with its milieu. In the pre-conception attraction complex the situation is quite the reverse: the dynamic, active component formerly in the center, in the middle, is now in the periphery. The *closed* quality of the sperm cell (*cellularity*) is actively present. The complex as a whole seems to be a *cell* turned inside out and completely reversed.

Many more phenomena may be discussed. Here the aforementioned facts will do because it will have become clear to the wise that the pre-conception attraction complex is the complete reverse and inversion of a *cell*. In the hours before the actual conception something is built, constructed and achieved! This is not a matter of cell fusion in the sense of the mixture of two qualities on an energetically lower level. Something **actively** is achieved! During this achievement, the interaction between the normal and usual relationships of biology are ruled out and overcome! The whole process seems to be a kind of *de-biologicalization*: normal relationships are reversed inside out, usual biological relationships are lost or left behind. Goethe applied the term *Steigerung* (*raising and intensification*) for situations like this. He meant that two interacting polarities may bring to light some features that each quality on its own does not exhibit. Can we apply this phenomenological notion to the biological events that are taking place in the context of human conception? It may be stated that here *cytoplasm* and *nucleus* are translated or *raised* (*steigern*) to the level of *the cell* (which in fact also represents a *cell*).



**Figure 5.**

Schedule of a so-called "Steigerung" or functional elevation (synergy) in the pre-conception attraction complex. A: the level of the cell; B: egg cell as "cytoplasm"; C: sperm cell as "nucleus"; A': the "turn inside out" of situation A on an energetically higher level.

Gray-square: "nucleus"; white-circle: "cytoplasm".

But what a *cell* is being achieved here! A complete world upside down, inside out! The normal relationship of the sensible and perceivable order of things is put up side down, turned inside out. That is why the neologism *de-biologicalization* is applied here. The normal cellular biological relationship is reversed to its opposite. What should we imagine about this opposite? In the world of our senses and perceptions the relationship of time and space is evident, it is *the way it is*. Everyone who takes the hypothesis about the idea of the reality of an immaterial, spiritual dimension seriously, could agree with the next logical consequence. Such a reality has one simple fact clear and evident: a dimension like the latter one contains a polarity, the opposite or the reverse of the relationship of time and space as we know it from our daily life and from the reality of our senses and perceptions! Considered as such the pre-conception attraction complex could be characterized as an opening of the usual and regular relationships of biology and life towards their *opposite*, their *reverse*. It seems as if the *material* world and dimensions are being opened to their *spiritual* counterpart. In this subtle game and equilibrium of weighing the pros and the cons, of en-counter, of meeting,

the cellular biological dimensions may be opened for the meeting, influence and participation of a *third* dimension. Third, in the sense that this could be the dimension of a new (to be born) human being, a spiritual being, spiritual energy that **may** make contact with this biosubstrate offered and opened up by two other humans. Which also means that this being is not forced: nothing *must* or *should*. Considered in the way as it is done here this also means that we are not dealing with a process of fusion to a new dimension. Nor are we dealing with the dynamics of the fertilization of the one (passive) element by the other (active) element in the sense that sperm fertilizes egg or spirit fertilizes matter. Here the dynamics of a true conception takes place in the literal meaning of the word, not in the sense of *making* or *building* but in the sense of *receiving* and *accepting*. The essential morphodynamics of human conception is that in and during the so-called pre-conception attraction complex the potential circumstances for fertilization are balanced and weighed that are necessary and conditional for the consequence of the event i.e. the fusion of the two cell membranes. This takes place **before** the moment of fusion and represents a subtle interactive meeting in which all might happen but nothing has to happen. Next the content of the sperm cell is injected into the ovular cytoplasm and within a few hours the fusion of the two (pro)nuclei follows, an event that usually is indicated as the moment of conception. However within the dynamics of the whole process as analyzed and described here, the latter processes (fusion of the nuclei and so on) are to be interpreted rather as the result or **consequence** of conception than as the cause! At that very moment the usual and *regular* biological relationships are restored and *normalized*. The fusion of the two gametes may be considered as the manifestation on a (energetically) lower level of a connection that evidently occurred between matter and mind, between spirit and matter just before that moment. The pre-conception attraction complex as a necessary but not sufficient condition for a kind of “vertical” conception, an acceptance of spirit in and by matter.

### Human conception: beyond the act of reproduction

It can be concluded that in or during a pre-conception attraction complex the biological relationships are raised to a higher level of energy. Those are the circumstances that offer the right condition for a non-biological immaterial principle to make contact and to connect with the biomatrix which is discussed here. We may be dealing with the dynamics of a “vertical” conception as the link or interaction between mind and matter. It is an act of incarnation. This has the ethical consequence that we are not dealing with the dynamics of making a new human being, of making a child. In the conditions of a pre-conception attraction complex offered by a man and a woman, a third person, an other one **might** or **can** incarnate. A man and a woman get a baby. They receive a child. This is not a matter of making or building. In the dimensions depicted here there is no room at all for that! In the subtle equilibrium of interaction of this *cell* it is a meeting, an encounter, a reception that takes place.

There is good evidence that this way of conception is unique for man. In comparison to other primates and mammals human reproduction is often considered as extremely crippled and inefficient in the sense of reproduction. So in a literal sense the act of recreation of the individual, the recreation of a species – bisexual reproduction itself, is not at all an efficient method or way of reproduction. But this *handicap* is not specific for man as a species. The benefit of bisexual reproduction (in comparison to unisexual reproduction) is considered to be a viable option and a possibility for genetic variation and exchange of genetic materials. The chance however that a human sperm cell meets a human egg cell is relatively very small compared to many other animals. There are many so-called hazardous factors that *define* whether or not a fusion will take place. Moreover in the human being a lot of other thresholds are to be encountered before it might come to a full-term newborn human being. For example only a few embryos succeed in nidation to actually implant into the uterine mucous membrane. Such facts give many biologists the *excuse* to qualify man as a very *bad and*

*inefficient reproducer*. But the conclusion of the way of human conception is described in this article however may be that human conception in fact is **not** a matter of re-production. **Man is not reproducing himself**. Two parents do not recreate themselves in their offspring and progeny. Every human conception is a matter of Three, of a Third one. The ultimate consequence of this line of thought is that in humans evolution culminates in a being that is able to escape reproduction or recreation of the species! Every human being is a unique biography and individuality. The morphodynamics of conception as presented here are suitable to this idea. The culmination of human evolution is a conception of and into freedom.

### **Artificial reproduction technology (ART): what are we doing?**

What about artificial human *reproduction*? What actually happens in an *in vitro fertilization* in view of this essay? What happens during ICSI, a relatively new method of artificial fertilization in which a sperm cell is injected into the cytoplasm of an egg cell? The former method, the *classical in vitro fertilization* can be interpreted as the forced i.e manipulation of the conditions that are **necessary but not sufficient** for a human conception. Obviously a pre-conception attraction complex can *function* under such artificial conditions. The difference is time and place. One could compare the actual moment of *in-carnation* of a spiritual human germ into or by means of a pre-conception attraction complex to the process of the awakening of someone. In the latter process one could speak about the returning of a person into his or her body, at least if considered phenomenologically. Clearly we are able to wake up people at the moment **we** want it to happen by shaking up someone. We more or less force someone to return from his sleep and absence. Obviously we are nowadays able to *shake up* the subtle biological conditions of conception in order to *wake up* a new human being. But also evidently there are less subtle ways to get people to wake up! Considered in this way the ICSI procedure is no more or less than biological and conceptional violence! If one has the mind for it, one could observe that the egg cell sprawls under the attack of the incoming needle. The needle is not received with hospitality as it seems. Suddenly the cell membrane (zona pellucida) collapses and the needle intrudes. A rape on cellular level? This is very far away from the subtle "are-we-going-to-or-are-we-not-going-to-dynamics" of a pre-conception attraction complex, it looks like a rough corruption of the latter. Nothing is perceivable anymore of the subtle freedom and liberty that is so characteristic of a human conception. In ICSI we deal with biological constraint and compulsion. Obviously, however, it works. But "the success does not prove that one has understood it right" as the proverb states. In about ten to twenty percent of the ICSI trials, the procedure is "successful" and results in a fertilization (conception). So it is beyond doubt that obviously also in such circumstances and under such conditions incarnation is possible and happens. The facts tell so. Comment might be given as to the **quality** of the process of incarnation in such circumstances. Considerations as such however are beyond the scope of this article. Here the aim was no more or less than to show that the **facts** do not interfere or stand in the way of the concept, the idea of incarnation during a conception. But on the other hand the same facts do not **prove** that conception also involves the "vertical" dimension of receiving and connection. Who wants to see conception as an event of binding between matter and spirit has found the scientific phenomenological foundation for this hypothesis, not the proof for it. In the "regular" description of human conception there is no room or space at all for such considerations. More often it turns out that we are not dealing with facts but with interpretations (of those facts). Dynamic morphology is the methodological equipment that offers view on other and different qualities of human life and of reality than the current and usual morphological descriptions.

Fall 2002  
Jaap van der Wal

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