

IMAGES AND WAYS OF KNOWING - THE HISTORY OF PREGNANCY AS AN EXAMPLE

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A. Captatio

This is particularly welcome occasion to seek criticism from colleagues on a topic that Ivan Illich and I have explored over nearly two decades. We have approached our theme by ever new routes which most of the time were complementary one to the other. In a few words I can sketch some of the issues that we had to deal with:

- = the history of the syn-aisthese, above all the demise of the sense for proportionality which was usually referred to as the "common sense".
- = the history of the gaze which we subsume under the term of opsis as something distinct from the history of optics, in other words, the states of reflection on the perception of light.
- = the history of anatomical representations and the style of their graphic illustration. My prime instance to elucidate this point has been the graphic representation of the unseen; the iconography of the unborn.
- = The epoch-specific differences of the somatic experience characteristic for men as distinct from women.
- = Which has led me to focus on the epistemic status of a woman's knowledge of her pregnancy as distinct from its medical, philosophical and artistic portraiture.
- = Both, the way this ception state is intuited, and the way it is the outcome of self-attributed diagnosis (especially during the last 20 years) depends to a large extent on the overarching assumptions about knowledge that are dominant in society. We learned to distinguish pregnancy under conditions where knowledge is the result of a pursuit of truth, and knowledge is determined by its degree of certainty. This led us to differentiate between the awareness of going pregnant and the acceptance of the diagnosed state and status of pregnancy.
- = finally we have analyzed transformations of pregnancy in this latter sense which has come about through the popularization of techniques of visualization. I have spent much time on this interface between the pregnant woman with various photographic, sonographic, and digital abstractions that define her, again graphically, as a member in risk within a statistical population.

There is evermore evidence of the intensity with which this identification of the "felt self" with its mechanical facsimile is concomitant with the prenatal disembodiment of her fruit, and not just of herself.

**B. The "Body", Both Known and Knowing,
Is Not The Object of Knowledge.**

("body" refers always to the invisible that is "seen".)

In the mid fifties my interest in the historicity of the experienced body focussed ever more on the historical characteristic of sense-perception: the history of the gaze, of haptics (inner and outer touch) and also smell and taste. From this point on the exemplary instance to conduct my argument became the autoception of the pregnant woman. At that time, barely 15 years ago, I considered my DoktorVater a courageous man, when he accepted my thesis as a legitimate theme within the domain of historical studies. Take an example: the learned publications in the field labelled as the 'history of vision' have unbelievably grown in quality, quantity and variety of approaches which the last ten years. When with my inner eye I survey the meetings on this subject, and the partly still unpublished high-quality research studies on the subject, this meeting here, in Kyoto, to which you have invited me, holds for me a triple attraction which makes it unique:

(1) With unequalled clarity you define as your crucial research-orientation the distinction between what I would call *epoch- and era-specific somatic autoception* in contrast to its contemporary *representation of it*.

(2) Further, your invitation highlights a methodological aspect that is all too often overlooked: more than in any other historical inquiry any historical probe of the "body" which arises in a given cultural milieu requires that the historian simultaneously pay attention to the corresponding, always incomparable characteristic of the "sense" which witnesses the embodied person.

(3) and, thirdly, that you offer me the opportunity of a kind which, so far, I have never been privileged with: to discuss this historical triangle of "past autoception", "past representation" and "past, and mostly lost characters of sensual perception" by contrasting two traditions as distant from each other as that of Galen, and the other one so foreign to me that I do not even know how to name it. This became very clear to me which in a conference comparing scholarly ways of knowing in medicine (Hippocratic/Galenic, Ayurvedic, Chinese in different epochs) Kuriyama contrasted "visual knowledge in classical Chinese medicine" with Greek ways of seeing (drawing) and understanding the body. He juxtaposed a Chinese drawing of acupuncture points

with Vesalius muscle-man in the hills of Tuscany and posited the question, how we can understand the strange disparities between the human body described in classical Greek medicine - Vesalius being a late part of that tradition - and the body envisaged by physicians in ancient China. How is it, Kuriyama asks, that "this basic and most intimate of human realities came to be conceived by two sophisticated civilizations in radically divergent ways?" (205)

I am struck by and grateful for Kuriyama's sensitivity to the affinity between visual knowledge, imaging and subjective experience of being a person, that is his rare awareness of the unique and culture-specific interrelatedness between sense perception, medical imaging and the notions and perceptions of 'soma', i.e. the person. In the end of his argument, Kuriyama makes us understand why in the Chinese perception of the body botanical metaphors give a clue: as flowers so also persons do 'flower', and the state of this inner 'flowering spirit' is what the experienced and masterly physician is able to "see".

The gist of Kuriyama's argument runs as follows. In Chinese classical medicine the basic approach of a physician in tending a patient is by way of 'seeing', while this 'seeing' did not mean just looking and observing the patient, but the object of the gaze lies much deeper. 'Seeing through', and perceiving the 'color' of the patient meant to visually grasp his aura, and this was the craft of the physician. The Chinese term for this capacity and action is *se*, "to gaze expressed the effort to see what can be perceived only darkly, or from far away. Seeing *se* somehow involved a straining of the eyes, the reach toward something absent or obscure." (216) Unravelling layers and layers of the meaning of *se*, Kuriyama argues that it meant *seeing through*, seeing as divination, or: "to peer into the obscurity of things to come." (218). Medical inspection in Chinese classical medicine likened "atmospheric prognostication" (218). "To gaze and know things -the pinnacle of medical acumen- is to know things before they have taken form, to grasp 'what is there and yet not there'." (219) Seeing thus entailed much more than just looking at outer aspects of things or their apparent morphology, in fact the true art lies in visually apprehending those hidden aspects, "still visible, but fleeting and dim, that 'seem to be there, but not there, seem to exist and yet not exist. *Se* corresponds to that latter." (219f.)

Kuriyama contrasts this way of looking and divining by way of sight with the Greek anatomical seeing, and stresses that the Greeks (also Galen) attributed a different insight in visual inspection when they concentrated on muscles, on body tissue, on *sarx*, on flesh. But Kuriyama is well aware that one would oversimplify

the contrast between ancient Greek and classical Chinese approaches if one would not take into account, that Greek anatomical looking, especially in the Aristoteleian teaching, also did not mean just plain looking at surfaces and masses, but implied that one 'see the *intentions of body parts*', the hidden causes of movement, volition and will underneath the plainly visible surface. The Greek term for this was seeing and understanding the underlying cause. The gaze "grasps" the process of actualisation, of some potency becoming real, an idea (*causa formalis*) shaping *hyle*. Such, also in Greek medicine, the outer aspects and the morphology of body parts led the onlooker toward some unifying deeper and invisible principle. "How we see is something is influenced by what we imagine the thing to be, "that is, how we see is guided by an awareness and expectation that is ultimately rooted in experience. Just as for the Chinese the latent 'flowering aspect' of the person, so for the Greeks the principle of *intentionality* was embodied in flesh, was tied to the concepts of the person. The divergent concepts and percepts of the one who suffers and seeks the understanding of the physician thus ultimately grounded the heterogeneity between Greek and Chinese classical medical knowledge.

Kuriyama writes: "For it is commonly acknowledged that how we see something is influenced by what we imagine the thing to be. But in the case of the body, that imagined object is ourselves. ... It is that the difference in how Greek and Chinese physicians looked at the body, as an internal object, derived in large measure from differences in how they conceived and experienced themselves from within, as persons." (227)

C. The Exceptional Status of the "Body" in Historical Research

In this presentation I will try to avoid the a priori assumption that "body" is an a-historical category for which a concept or word must exist in all languages and cultures. Snell has remarked on this for Greek. For biblical Hebrew see *sarx*. We want to avoid beginning our analysis with the prejudice, according to which it is possible to distinguish a Greek from a Chinese apprehensions of one and the same *objectum* "body". We want to leave open the possibility, that in a poignant and unique manner, the perceived and perceiving sensuality which is referred to as "the body" has an epistemically exceptional status: that like no other entity it lacks the characteristic of an "ob-jectum", of a "Gegen-Stand". We want to inquire if the stuff that is constituted by *autoception* can be compared with any other category, which I, for one, doubt. Because, inevitably all sense-perception is mediated

through this "fresh of history". And, plausibly, the senses, which are an arousal of this fresh will color, season, shape, pattern, orient, perfume whatever presents itself to them as a Gegen-Stand, an Object. If this way of dealing with the issue is legitimate, then the attempt of recovering the mode of autoception of a past time represents "the" eminent task at the very heart of historical research.

In front of the audience you have gathered it is barely necessary to insist on the fact that "image" is not and never can be an a-historical entity. At first this may sound like beating a dead horse: in the last decade historians of art, science and medicine have argued for and demonstrated the historically heterogenous status of images. The object as it is represented on the canvas - say the 'heart' - as an artefact in the 16th, 17th, 18th, 19th century each time *embodied* incommensurable concepts. Never does it refer to the same 'heart' as natural object. Not only the mode of representation, the techniques of brush and colour, the object thus 'seen' and depicted on paper or canvas are historically incommensurable, but especially the eye of the artist, his 'vision', his epoch-specifically engrained *opsis* is given shape in that 'heart'. Professor Kuriyama rightly stresses: "how we see something is influenced by what we *imagine* the thing to be". I would go one step further and say, that the way of imagining the thing to be as it is given outer visible two-dimensional form and shape embodies visual conventions, expresses *opsis*. 'Opsis' is something other than 'seeing' as a physiologically definable activity, because the 'eye as experience' in the course of Western history underwent deep transformations. The haptic eyes emitting rays to touch and 'grasp' the thing in Greek vision, the spirited 'vision' in medieval times, the observing eye gazing through the squared grid onto the object in the Renaissance, the retina on which an image is being physically projected in Kepler, the 'eye' devoid of 'visuality' as it is being scrutinized by the 19th century physiologist, each 'eye' acts or grasps, receives or records images according to the then prevalent *opsis*, the sight-habits of each culture. Each time this *opsis* is mediated and given shape in the representation. In order not to miss out on the full challenge that our meeting faces, we must reinsert the problem of the historicity of 'imaging and 'visual knowledge' into the history of *opsis*. Bringing the 'eye' into the history of anatomical drawing will be one of our tasks. "It is the realization that spectatorship (the look, the gaze, the glance, the practices of observation, surveillance, and visual pleasure) may be as deep a problem as various forms of reading (decipherment, decoding, interpretation etc.) and that visual experience of 'visual literacy' might not be fully explicable on the model of textuality.

I have tried different routes to focus historical research on this issue, but have found none more challenging to raise the question about "imaging and knowl-

edge", none more revealing about the interrelatedness of visual concepts and carnal percepts than the focus on "the unborn", the *non-dum*, the not-yet. It belongs into the realm of invisible "bodily" entities; has something in common with "the dead" or "ghosts" or elemental forces that are known, imagined and even governed as *hypostases*. Further, the unborn belongs to the class of entities that call for conjuring, entities which only the privileged can have intercourse with: which for some, namely women, are present in a totally different way than for others, men. It was a transliminal being. Before recent techniques of visualization, media-popularization of fetal images and biomedical thinking created the entity "fetus" and entitative pregnancy, the child to come, the unborn unquestionably had carnal existence and yet, in spite of its social recognition, it existed beyond the margin of society. It was here and yet still had to come. It was in a beyond which lies beneath the skin.

I would like to ask Professor Shigehisa Kuriyama if I go wrong, when these historical characteristics of latency, inwardness and orientation towards revelation in the future reminded me of the characteristics of the aspects which "seeing" se in classical Chinese medicine stood for. Of course, I do not want to draw a direct or literal parallel between the object of Chinese medical gaze and the unborn, but as a total outsider to his world, I am struck by the resemblances: "that seem to be here, but not there, seem to exist and yet not exist" (219). Seen from this angle, both the fact of pregnancy and the very essence of the unborn may be privileged points of departure to discuss the historicity of the interrelatedness between vision, visibility, imagination, depiction and somatic experience.

I therefore propose a seemingly paradox approach to the core-issue under discussion: three times, at three different junctures of recent western history I will attempt to understand what it means to "see" or to "visualize" the body, by reporting on the history of the unborn.

1. First, reporting on an experience which is painfully confusing for women wherever the screen has become the mediator of most of what they see, engendering a state that I shall call schizo-aistheses.
2. Then, by going back to a crucial point in the history of anatomy when in 1799 that, which we know as the foetus, appeared for the first time in the *tabulae anatomicae*.

D. SCHIZO-AISTHESIS

Let me start with an anthropological study which compares the effect that

fetal ultrasound has had on the reality-status of their expected child among women in Canada and in Greece. In both cultures, Canada and Greece, early and extensive exposure to television has socialized women into regarding the image as an "objective glimpse of what is 'really' happening inside their wombs". One quote might suffice:

"I didn't believe I had a baby inside me. When you don't feel it or see it, it's hard to believe. It's something that you can't imagine - how the baby is, how it's growing, how it's moving... After I saw it on the screen, I didn't believe it. I felt it was more alive in me... I had also seen it (a fetus) on television, but it's different to see your own."

However, in spite of experiences like this being reported from the Mediterranean and from Hudson Bay, there is still a striking difference. Greek women never spoke of the fetus as an independent and autonomous subject, nor did they talk about it as a separate person or individual. The anthropologist suggests that their eyes may have been trained early on to be 'relatively flexible readers of images'. Greek culturally ingrained notions of motherhood still hampered the disembedding of the sociality of a "child"; made it nearly impossible to misplace its concreteness into an autonomous fetal personhood.

How to call this co-existence of contrasting verities? This simultaneous acceptance and disregard for inherited certainty? To label and discuss this particular state of the sensorium, we have coined the term 'schizo-aisthesis'. By this we mean a mode of syncretism that is constitutive of the somatic experience of modern pregnancy, at least as long as sensual knowledge rooted in tradition and supported by rituals still finds a voice, an inner echo.

This schizo-aisthesis - this simultaneous commitment to contrasting verities, this twinning of two alien bodies characterizes the consciousness of pregnant women today. This Janus-like sensorium appears as the result of two incompatible sources of knowledge: the woman's inbred perception turned towards the past, and her acceptance of medical-professional definitions which focus her inner gaze on schedules, risks and therapeutic alternatives.

How differently the same woman can speak of the unborn comes out clearly in a study of Ecuadorian villagers in the 1990s. When they, women as well as their men, refer to the yet unborn, they speak of *criatura* or *venidero*, the "critter" the "creature" the one to come. They refer to the one still liminal, undefined and undefinable. The one in the womb that is ambiguous and uncertain. Their certainty

about its uncertainty; their reliance on the presence of the still absent make them accept and reject the offers of modern clinics, that presuppose an almost incomparable "process of pregnancy".

In a particularly attentive and careful way the transition from the unborn to the fetus has been studied in Sicily by Nancy Triolo. She found that well into the 1930s faithful, believing Catholic peasant women, who were already mothers of several children quite unburdened by any guilt induced illegal abortions and consistently referred to them as a moral act. They considered them sanctioned by socially rooted considerations and appropriate, given their experience of poverty and overwork. They never spoke of motherhood in terms of being physiologically determined or determinable. What they did, from their point of view, was to seek the help of a midwife to induce their faltering monthly flows. In their perception of a changed humoral state there just was no place for an entitative, -- a visually objectifiable -- pregnancy.

The same kind of evidence we know as well from Germany, well into the inter-war period. When they were questioned in court about their illegal abortions, working-class women stubbornly stuck to their testimony, that they had not 'really' been pregnant. What, to their mind, they had done was this: they had turned to a midwife or sought the services of a healer who in fact did help them to get back their healthy menses. In reams of testimony about such cases, the women never speak of anything like a fetus. They report on their blood having stopped and on their need to "loosen up" this stagnation. Confronted with the professional discourse of judge and physician about nidation and fetal development, they kept silent, and wordlessly stuck to their truth.

From the research of a dear friend and particularly careful investigator I know the testimonies of Bavarian farm girls, just one generation earlier. When they were called before the judge to be tried for killing their newborns and then disposing of them in gutters or dustbins, they consistently claimed that they had not killed a 'child'. Sometimes in vivid detail they describe how their bodies had brought forth something shapeless, something covered with clotted blood, a being that they had never imagined and that they could not possibly recognize as a true 'child'.

"I would have never imagined their growth this way" marvels Grafyn Kesselstadt, a German aristocratic lady 1799 when she is shown the drawings for the *Icones Embryonum Humanorum*, the first graphic representation of linear fetal devel-

opment from three weeks after inception until the sixth month. An enlightened friend and colleague of Samuel Thomas Soemmerring had brought these sketches for the ladies. Sommerring, a Frankfurt anatomist and physician was just about to publish his elephant-format anatomical atlas of human embryos. Grafín Kesselstadt, being the mother of several children, in spite of straining her over the tea-table to inspect these images, could not grasp that this series of fetal figures represented something that might be carnally 'real'.

From the large storehouse of recent womens' studies touching on cultural anthropology I have selected this hodge-podge of fairly representative stories which all lead to the same conclusion. Even today, among the second generation of women whose eyes got adapted to the pale shimmer of the screen, and whose eyes learned "see" the real, sensible, juicy world of actual experience in the shallow light of the digitalized image, the stance of accepted pregnancy has not as yet been reduced to the certainty of infoetation. The "schizo-aisthesis of the cross-cultural cyborg" (Mitchell/Georges) has not yet extinguished the synaesthesia of their inner sense, that makes them "intuit" -- the word bespeaks a mode of seeing that is often forgotten -- the grasp of a tangible truth below their skin. Even when these not "fully modernized" millions of women are shown their own innards by the Ultrasound Machines, -- that I am told are operated all through Latin America and parts of Asia by local smiths or grocers as adjuncts to the video-shop -- their haptic sense of the tangible imminence beneath their heart still contrasts with the illusion of recognizing themselves on the screen. But, even more important for my argument is its complement: court records from 19th century Bavaria and Gironde, Sicily and Styria show, that what women "saw" as their "fruit" in synaesthesia with their haptis, their touch, had none of the graphic, structural features of the "public foetus" that now defines reality and much less any of its symbolic referents.

In the next step of my attempt to have historical studies on the understanding of the body as content, rather than as object of sight, I will now have to show the degree to which the western gynaecological tradition has been consistently blind to what we now see as the embryo.

E. REPRESENTATION OF SYMBOLIC FORMS

Court records are among the typical sources from which we can learn about the way women, especially pregnant women, "conceived" themselves; I will now turn to anatomical illustrations as a source which can tell me about the way physicians, all of them men, imagined the events *in utero gravido*. Since the beginning of

anatomical woodcuts and soon etchings in the Renaissance the unborn was shown as a little boy. The draftsmen "saw" and drew it as a child, gently covered by layers of skin; as a babe peacefully resting on the placental cushion. Rarely, but not infrequently they showed it a little skeleton man. When, occasionally, the physician's text explicitly described an entity that, to us, would inevitably evoke the features of a fetus, the anatomist described it as a mishap, and called it a big-headed monster, a mole or mooncalf. I have tried, and I hope to have succeeded, to place my eyes on every single illustrated anatomical text published between 1492 and the early 19th century, and the few seeming exceptions to this surprising finding, upon interpretation only confirm the just stated rule. What happened in 1799 is, for this reason, an event in the history of science which deserves to be placed with Galileo's definition of "velocity" or Kepler's elliptical orbits as a marker of a cultural mutation.

In that year, the Frankfurt physician and Enlightenment anatomist, Samuel Thomas Soemmerring published a thin elephant-folio-format book, "Images of human embryos." Its two engraved plates depict two series of fetuses, male or female, lined up according to age and size. In his pithy preface, Soemmerring starts out with a review of the graphic representation of the unborn.

"While browsing in the treatises of famous learned men, I discovered that, until now, none of them contains a representation of human embryos, showing them in a complete series, and this series so ordered, that while looking at it, one can observe the growth as the metamorphosis of the human body, starting from the third week after its inception until the fifth or sixth month. Thus, I decided to have such representations made."

Sommerring's claim for primacy in the history of visual documentation of fetal development at first sounds like a baroque form of self-advertising. However, upon ever so careful examination it turns out to be a well-reasoned statement. This is what my survey of anatomical illustrations of the unborn which is mentioned in anatomical texts makes evident. From the earliest sixteenth to the end of the eighteenth century, anatomical draftsmen, who were naturalist artists, seem struck by a blinding aversion to this shape and form, an inhibition that makes them incapable of drawing, painting, or etching the outlines, the shape, the appearance of a pre-term fetus or an embryo. This form seems protected from the gaze and from the draughtman's pencil by a visual taboo. This is so much more baffling when one considers that illustrations depicting "how the child sits and rests in the mother's womb" are not rare. Already in the sixteenth century, single sheet prints and mid-wifery treatises had shown "female privies, as they can be seen in their interior

shape and situation". 'Nascituri' (children ready for birth) were shown in profusion; but in all these I can find no pre-infantile, pre-human embryonic shape. In his boast, Soemmerring was right.

Further, considerable advances in natural investigation and representation such as artistic renderings of anatomy and dissection, new rules of perspective and shading, and an enhancement of plasticity and tactile quality with the step from woodcut to engraving had fostered ever more "realistic" representations of innards, tissue, tendons and subtle flesh, The finest detail on the surface of epithelia and capillaries in the transparent membranes of the uterus had been engraved with stunning realism, often drawn not "from nature" but from the prepared anatomical specimen itself. Yet for more than 300 years one shape remained invisible, in spite of the graphic techniques and tools. It is the shape that has populated gynecological textbooks since the early nineteenth century and becomes, in the late twentieth century, a mental fact for pregnant women: the fetal form.

F. THE INNOVATION WROUGHT BY SOEMMERING WITHIN THE LEARNED UNDERSTANDING OF THE *NONDUM* WILL BE BEST UNDERSTOOD BY CONTRASTING IT WITH THE ASSUMPTIONS THAT DETERMINE THE CONCEPTIONS AND PERCEPTIONS OF: LEONARDO, VESALIUS AND FABRICIUS

Until the time of Soemmerring, gynecological graphics showed a child, the "child" one hoped for. Graphics did not represent tissue inspected by the anatomist as a "fetus", but rather as a dymbol and emblem of the child-to-be or the future "man", The Danish anatomist Thomas Bartholin(1616-1680), in his "Revised Art of Dissection"(1677), shows triplets dancing the placenta. With grave faces and the posture of frown-ups, they stand on their feet, well attached by their umbilical cordas. The Dutch taxidermist Fredeick Ruysch (1638-1731) frantically collected what had been brought forth from the vagina, sealed these things in bottles, and made a museum-collection out of his booty. He constructed dramatic ensembles from fetal skeletons, had them stand on top of gall-stones, dried their eyesockets, and pointed to their decayed flesh. The fetuses exhibit themselves as dramatized *memento mori*.

When Leonardo da Vinci in the years between 1510 and 1513 draws the infant in utero, he depicts a fully grown little boy sitting in the center of the spheres of the *matrix*, a symbol for the human in the center of the spheres of the universe. In the 1489 introduction to his anatomy project, Leonardo planned to begin with conception (*concettione del uomo*), the nature of the womb and how the child is

housed in the matrix. No doubt, Leonardo wants to offer to the beholder stages in the human existence, but *concettione del uomo* is not an event happening in a precise moment, nor a process in linear time, but something evolving in a duration of being, an *arche*. Leonardo scribbled in the lower left part of one of the sheets: "the *putto's* heart does not beat, and it does not breathe, because it lies in water, and it would drown when taking breath. It needs no breath, because it is quickened and nourished by the mother's life and nourishment (...). One and the same soul (*anima*) governs these two bodies."

A remark written on the side of the sheet about the book on water "reminds us that Leonardo was keenly aware at this time of the infant or microcosm growing within the sphere of water like the macrocosm." This is the meaning of *l'eta del putto* the child sits in his cave full of clearest water (*chiarissima acqua*), it does not piss (because it 'pisses' through its navel), mouth and anus are closed, it does not breathe, cry or whince, the umbilical cord is exactly as long as the child is tall (K/P 197v), the navel lies exactly in its centre (length and breadth K/P 198v), it grows enveloped in its 'shirt' *di(chamicia)*, it is enclosed by layers of petal-like skin (*panjchuli*), entrance and exit in the body are centrally situated at the navel, the "gate through which our body is engendered" (K/P 153r).

In the *Fabrica* Vesalius discusses the particular difficulties the foetus presents to the hands and the eye of the craftsman of dissection. At the end of book 5, in a chapter following the images of the unborn child, Vesalius carefully documents how he proceeded. More than a third of the text in which he deals with the dissection of women's bodies, is devoted to the procedures in handling the foetus. He takes great care to instruct how the knife must be sharpened, in what manner the womb shall be cut open, how the fingers shall gently draw apart the flesh, how to grope for the *secundina*, how to lift out the whole thing. But the attention orienting these manual actions is oriented toward the right handling of the *involucra*, and it is this unlayering, this peeling off one after another of covering skin which Vesalius describes. When he finally reaches "the foetus" his eyes do not strain to see, what is there—no further investigation or description. Fingers and utensils *uncover* and lay bare and bring to light and see what had been searched for: the child to come, no ripe-human shape.

The four depictions (Figure 30 Book 5) document visually the nature of the unborn: what is to be uncovered—but not discovered—is envisioned as the child's essential inwardness, its enclosedness, its being covered and hidden from sight. At length Vesalius comments about the layers protecting the child: *de involucris Foetum*

in utero tegentibus Vesalius' *Fabrica* for generations of illustrators in midwifery books and anatomical atlases gave graphic, emblematic shape to the *involucra*, the *tegumenta*, the swaddling clothes of the unborn. I want to stress the heterogeneity between the child, as it is depicted shining through layers of tissue, and all other anatomical objects inspected by anatomists. No doubt, the interior of the human body had been opened, the innards located and imagined in a two-dimensional topology, but these steps in revealing morbiography bypassed one entity, even conceived it as the epitome of the hidden: the fruit in the womb. The little creature, in the midst of the womb like a kernel in a nutshell, is shown emblematically as a human yet to come.

One final example may suffice to prove the deeply engrained traditional optical prejudice in favor of the child to come: it is Fabricius of Aquapendente, who succeeded to the chair of anatomy in Padua formerly held by Vesalius. He published a treatise *De Formato Foetu* (Venice 1604) in which he had drawn the embryonic stage of different animals: mice, dogs, sheep and horse, among others. We see their embryonic forms in the *matrix* in a style of depiction that still today appears to the zoologist as "realistic". But when Fabricius demonstrates on plate III the content of women's wombs, he shows a fat little boy in his round, dark, egg-like container, swimming in his own sweat. The legend to this plate clarifies: "sudor cui innatat foetus". The little boy depicted, according to the legend, three months after conception, swims in his perspiration in this cradle, rooted in the maternal tissue with a thick umbilical cord. This plate does not show to us, does not represent "what is" in the same way as the depiction of animal embryos. Its epistemic status refers to a different realm. Rather we see an illustration of prophecy: "Unde in haec erumpit Propheta", writes Fabricius; "thus it bursts forth from the prophet, My God, I am miraculously created!" In his preface, Fabricius marvels how the human child is made as a frail and fragile little being in the womb, "without senses, without movement, without reason, insight, without the gift of air and light. And yet it is nourished, it grows." Fabricius offers for contemplation the genesis of that which does not yet exist *in actu*, but only *in potentia*. In one image he visualizes three aspects: the idea of the human yet to come, the conviction that he does not yet exist in actuality, and his beyondness, apart from the world which can be seen *tout court*.

Now, however, back to Soemmerring: after reviewing the heritage of gynecological illustrations, he asks himself in 1799 about the prejudices that hindered anatomists from "seeing" and depicting the embryonic or fetal form. In the preface to his *Icones Embryonum Humanorum* he writes: "Seduced by old wives' tales, not only lay people who are ignorant in physiology, but also artists (...) perceived the

form of the human embryo as repulsive, nay disgusting or monstrous." This is one reason why the being "hidden in the womb" had been eclipsed from visual demonstration on the printed page. Soemmerring ponders the age-old inhibition against seeing the "forma substantialis" of the human being in pre-infantile stages. He also considers the readiness to expect surprising and unpredictable issues from the womb, and to interpret the issue as a monster if it does not have the shape of the child. Finally, he names a fourth cause that has hindered "seeing": that is, "willful disregard". What midwives brought, what had been stored in curio cabinets, and what was bleached in alcohol, scarcely elicits admiration: "They do not want to see - *intueri* - what is according to the order of nature, but what fits into their opinions. So they disregard not only the putrid (rotten) and corrupted fruits, that they can get, but also those fruits that are perfect according to their age."

Soemmerring thus begins his discourse on the pre-infantile form with a critique of the false aesthetics of lay people, artists, and especially old women and midwives. The old norm of the human being as a well-proportioned figure that permitted a "big-headed thing" to be classified as monstrous or misshapen now was giving way to an appreciation of the inherent beauty of organic structures in nature. Soemmerring argues that a human being in different moments of its existence may be differently shaped and still in each stage may be seen as beautiful: "each age enjoys its own form and beauty, that in each stage is quite different forms the preceding or the following stage". He insists that "different forms of the human body which can be called beautiful as well as perfect, can be found in embryos, others in fetuses, others in infants, others in adolescents, others in men, others in women, others finally in old age." Soemmerring's choice of the specimen, which he took from the natural cabinet collection of embryonic specimens in Kassel's anatomical theatre, or which had been sent to him as a present from all over Europe, is guided by his perception of their "beauty". Carefully, he arranges the specimen according to their position at a point in an imagined linear evolution of embryonic morphology. Carefully, too, the anatomist guides the attention of artist and has the fetal bodies posited in the manner "in which they have been entrusted to me". And in no way shall the wrinkles, swellings, or deformations that were caused by preservation in alcohol be drawn. Only what the anatomist sees as "important" shall be rendered by the draftsman and brought onto the paper. Soemmerring wants portraits, but he does not want to depict the minor or trivial individual details. He aims for an "individual portrait", while at the same time he wants an "archetype": "I have put them all in the same manner, i.e., that the light falls on them in 40 degrees." With these precautions, the anatomist struggles to realize both the accuracy of an individual portrait and the representation of a type.

To realize this paradoxical combination of individuality and type, Soemmerring must eliminate the eye in the making of scientific visual representation. Three generations before the first photography, Soemmerring relies on a new technique that gives the semblance of nature's self-representation without the creative action of the human hand. Until then in anatomical drawings, the human body had been drawn according to the rules of central perspective drawing. Central perspective projection presented to the beholder's gaze the same impression as if the real object lay in front of him. Soemmerring was inspired by a dialogue between the Leiden anatomist Bernhard Siegfried Albinus and his friend Peter Camper, a distinguished Dutch anatomist, artist, and theoretician of vision in the practice of art. He had learned from Camper that perspective is a technique that misleads the eye, brings inaccurate impressions to the beholder and deceptions onto the page, because vanishing-point perspective depicts "not how things are but how things present themselves to the sense."

Soemmerring therefore instructs his draftsman to depict not what his eye sees, but an "architectonic-geometric measurement" (*architectorum fere more...delin-eandos curavi*), an elevation (projection) of each fetus. First he shall measure the object, then give graphic representation to the results of this measurement. The draftsman must target each detail of the object and draw it in a parallel-perspective convention, that is, as if he were looking at it in a series of right angles from infinite distance. The device used to distance the object from the artist is called the diopter. In this way the object can be represented in a new "objectivity" as "it stands for itself", because it is projected in no relation to the eye nor to the point of view of the beholder. Soemmerring wants a *simulacrum of the object* and not a *facsimile of inspection as the object was seen*. He does not want "realistic" representation, but a blueprint, a construct. The fetuses are thus projected on the "farther shore", in a virtual nowhere as no man's naked eye could ever perceive them. The simulacrum posits a new kind of objectivity: a forcefully distanced sight of the object.

The twenty fetuses were sent to Soemmerring by coach over long distances from all over Europe or were taken from the princely cabinet in Kassel. They had been conceived by twenty unknown women. Soemmerring lifts the little corpses, girls or boys, out of their jars, and arranges them according to height and morphology. Thus he constructs not the epigenesis of one individual human being but a series of individual bodies representing an imaginary linear evolution of general fetal development. He visualizes the invisible dynamic of a lawlike natural process. Most of the fetuses do not even have an umbilical cord, a memory to a maternal relationship. They appear out of context, without relationship to a woman, to flesh,

to a placenta, to origin. They are shown in an aperspectival objectivity as materializations of specific points or stages in a developmental process whose author is the anatomist. The isometric projection reassembles each individual specimen in the distanced space of natural evolution and in a topology that could never be touched or grasped by the beholder. Totally distanced, each fetus at the same time appears in life-like endearing and suggestive nearness. The little figures are drawn in a striking plasticity, exhibiting their genitals, hair, tiniest wrinkles, and other details—yet they are cast in a space of disconnected visibility. Aperspectival objectivity posits each fetus as individual, yet as general fact, as a thing.

The first "objective" (that is, aperspectival) representation of the pre-infantile human form in subsequent stages of natural development implied the instrumentally enforced eclipse of the artist as seeing subject in the creation of the image. The metamorphosis of the unborn child of a woman into a disembedded "fetus" begins with the planimetric-architectonic method of drawing that Sommerring put into practice. The history of the modern fetus begins with Sommerring's double *velum* of isometric projection. First made visible in Sommerring's series of embryonic stages, later by Röntgen's x-ray, then microphotography until the advent of ultrasound imaging in the 1990s, the fetus is the result of mechanically produced "records". The idea of the unborn as a pre-child emerges as part of a series of technogenic constructions and can be grasped by the historian in its novelty if it is inserted into the history of disembodied vision.

The first depiction of the pre-infantile human being is something new, radically unprecedented. Motherhood, pregnancy, and birth are no longer somatic experiences of women expecting a child that will come, but the result of acceptance and interiorization of biomedical measurements. I understand the *Icones embryonum humanorum as Icones embryonum nostri temporis*: heralds of a redefinition of the perception and apperception of the pregnant woman and her body. Today this is becoming self-evident. Pregnant women are redefined as uterine environments for the development of fetal growth. The pregnant body—formerly the metaphor for the hidden, the secret and the invisible—is turned into a space for public inspection. Pregnancy,—formerly perceived as a haptic somatic experience of being with child,—is redefined into the disembodied realization of an optical imputation. Women learn to ascribe to themselves what appears in the virtual space of the screen; they are invited to embrace as their "baby" a fetus that is shown to them on the farther shore; by ascribing subjectivity to a visotype that the woman interiorizes she reduces her own subjectivity to a virtual phenomenon.

G. CUI BONUM

What is to be gained for the knowledge of "body", of "image", of "vision" or of "gaze" by the examination of something which by definition is both unquestionably real in the flesh, but not entirely, something which is present beyond the horizon, but ever elsewhere), which is the source of all flesh (the *arche* of *sarx* and possibly *soma*), and which is so exclusively, poignantly feminine? One thing at least can be gained by us in an exquisite way: that distance of which Kuriyama speaks as "straining of the eyes, that reaches toward something absent or obscure". You have invited me to contribute to our general theme and you have allowed me to make this contribution in my special way. The theme you have defined is as fundamental as it is original. No heuristic makes sense without a clear understanding that "body" is historical, no matter if "body" is used to identify a *dimension of autoception* or if it is used to *designate an object represented*, the "body" in autoception or the "body" as the representation of a representation. As the way that might open the discussion on this unique type of ambiguity I propose that we try to start out from the liminal body of the *nondum* ... the body which only women, and women only when they are about to become mothers, can grasp.



