Fascia as Metaphor and Narrator: Looking at the Things in Between

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"Understanding comes in the space between 2 words, in that interval before the word shapes thought. Understanding is neither for the quick-witted nor for the slow, but for those who are aware of this measureless space."[1]

— Simmer. Photo by Josh Klute[2]

I. Looking at The Things In Between

The word fascia originates from the Latin word *fasciae* for bundle, ribbon, bandage. It connects two things and is the in-between thing. But what is a thing? And if there is something in between two things, how can it not be a thing? Ontological philosophy examines the nature of being, coming in existence. How entities are grouped, how they relate to each other are also questions each choreographer, or any other kind of artist, faces regularly. Playing with fascia gives us the opportunity to deal practically with some of these questions.

I touch bodies, watch movement, and weave this into a dance and teaching practice. My physical experience is that images and feelings that arise when moving or being touched, often, originate in the fascial network. Fascia researcher Robert Schleip calls fascia our

most sensitive and most important sensory organ (Schleip 2015). So what is the kind of information that fascia modality can provide us with? I propose that fascia as a sensory organ gives us a different kind of information than our somatic nervous system is able to give us – otherwise it would not be worth the effort for our body to maintain this 'other' recording device.

Fascia is present as a parallel entity to my somatic nervous system, often just below the threshold of consciousness, feeding into my decision making process in moving, watching, teaching. Yet the voice of fascia is not pushy, not demanding to be heard. However I want it as a valuable contribution to my reflective process as a teacher and mover. And fascia makes moving more effortless, gracious, fluid, and connected.

Researching fascia's ability to record and communicate lead me to think that fascia has the ability to narrate its experience, and that we can learn to listen to it speaking – leading us to insights about teaching and moving habits. This experience differs from a rationally framed analysis after a dance class. I propose two pathways: fascia as metaphor and fascia as narrator on how fascia is able to provide reflective insights for dance teachers. It then becomes a source of information for reflecting a dance class and not as class content. Your participants do not need to be aware of your fascia score when you follow the scores I propose below.

Before going to the Reflective Teaching Practice, try out the Introductory Exercises, especially if you have little experience in somatic movement. Be ready to play with your senses, intuition, and imagination to find out what fascia is for you.

WHAT FASCIA IS

Fascia is also known as connective tissue and is called our organ of form (Varela, Frenk 1987). Fascia is everywhere in the body. Its shape, size, and quality depend on the location, function, and local forces. Fascia is in between: material in between two organs or muscles, in between different bodily systems, even in the brain. It is a structural *transition* and a whole system in itself. Fascia: "all collagenous fibrous connective tissues that can be seen as elements of a body-wide tensional force transmission network" (Schleip 2015,3).

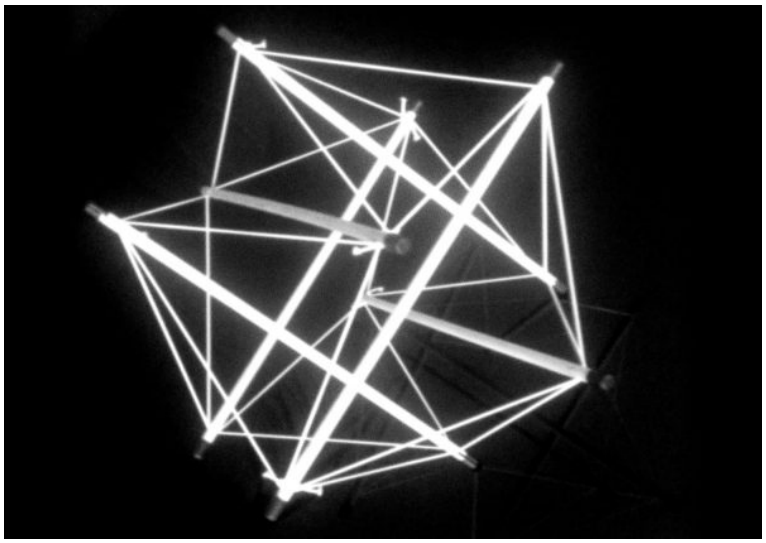
In the three dimensional interconnected web of fascia, single strands organize themselves depending on the forces that apply to them. Unused fascia, that is not asked to move a lot, looks like wire wool. Trained fascia organizes more symmetrically, often in a diamond shape: form follows function. It is a communicating structure connected throughout the whole body and is closely connected to muscle function. Muscle and fascia need to work together for us to move efficiently. "Fascia acts as a servo-mechanism for an energy efficient muscle use" (Klingler 2015). The kinetic energy stored and released in human fascia is substantial and comparable to that of a gazelle or kangaroo. Schleip describes the mechanism as *elastic recoil*. He suggest rhythmic movement where both feet leave the ground – such as running, hopping, skipping – as fascial training. (Schleip 2015, 93)

FLOATING COMPRESSION: TENSEGRITY

Tensegrity is a way of explaining fascia biomechanically. Tensegrity is a word made up by designer Buckminster Fuller, combining *tension* and *integrity*, based on the floating compression sculptures by artist Kenneth Snelson. Traditional understanding of structures, such as animals or buildings, fall short of explaining how force transmission is possible: Big animals would break their bones, a fishing rod would pose an impossible challenge for a human were they (the human and the elephant for example) to rely

on column structures (Levin 2007). Tensegrity is a much more helpful model to explain how this force transmission works.

A tensegrity structure is made of islands of compression (here: wood; in a human body: bones) in an ocean of tension (here: rubberbands or wires; in a body: muscles and fascia). As dancers we can translate compression into push and tension into pull. The compression elements act as space-holders enabling space through compression. The ocean of tension suggests integrity, connection, and environment. Tensegrity structures are often decentralized: the center of gravity is empty; they are light, stable, and responsive to impact from outside and from within.



— *Icosahedron Tensegrity Model.* Photo by Kerstin Kussmaul

The following identifiers need to be present for a tensegrity structure:

— It is gravity-independent. You can turn it around and it won't fall apart. It also works in outer space.

— It is a continuous connective tensional network with compressed parts in between.

— It is based on triangles as the core structure.

— It is a self-contained, interdependent system. "A change in one part is reflected throughout." (Flemons 2006)

— It is an integrated structure. An entire tensegrity structure can become part of a much bigger structure, thus changing the scale.

A sailing boat is not a tensegrity model although some parts of it use a tensional network. But it is not a tensional network throughout – once you turn it upside down, the mast breaks. A spider web is not tensegrity structure because it depends on the frame. Whereas balls, an atom, DNA, bicycle wheels and solar systems constitute a range of examples for tensegrity structures. Human tensegrity examples are: the bladder, a human cell, the combination of muscles, bones, and fascia structure as a whole. Here bones are the compressed parts and function as distance creators, muscles and tendons are the ocean of tension. Fascia is tensegrity.[3]

— *Montreal Biosphere.* Photo by Jean Deapeau[5]

FASCIA IS A SENSORY ORGAN

> *"Those who study the fascia as an all-pervasive system (…) will recognize that one of the most vital relationships in the body has to be the relationship between the connective tissue and the nervous system."*
> — Oschman 2012, 104

Inside the fascial web a variety of sensory cells register tension, length, vibration, stretch, temperature, pressure, shear forces, and subtle muscular activity for the regulation of blood flow. There are surprisingly high number of neurons to be found within the fascia – they can be 6 times higher than in their muscular counterparts. Fascia listens in to the muscle. For some body parts it is now thought that the main task of fascia is the proprioceptive act, and movement only plays a minor role.

Receptors record and pass on information to the spinal cord and brain. So we could say that fascia is a recorder. Fascia memorizes information (think of posture), which can be inferred from the form of fascia changing over time, based on its use. This makes fascia not just a recorder: it becomes also a documenter[4] – a documenter in and of the bodily experience. Over time our experiences accumulate in our individual form. Form follows functions, and remember the wire wool?

Fascia not only documents physical habits, but is also involved in more complex issues regarding proprioception, viscероception, and interoception: informing us about spatial relationships within the body and the body within an environment, about sensing our organs, and of the comprehensive perception of our whole physical and emotional being respectively.

Moreover, the fascia research leads us to an interesting field of information in relation to our brain. The anterior insular cortex is part of the cerebral cortex, and is thought to be related to self-recognition, the awareness of environment, and to the integration of feelings related to the body. The fascial free nerve endings lead us thus to this interesting part of the brain and suggest that fascia might also be related to these functions.

As the organ for interoception, fascia is telling us about our inner state in an associative manner – including sensations, emotions, and images. Fascia is linked to our parasympathetic nervous system – dealing with rest, relaxation, and regeneration. Therefore if we are stressed, we do not have easy access to sensing in general and specifically sensing fascia.

THE IMPORTANCE OF WATER

> "Slime slime, long I feel and loose… all my tendons have stretched themselves. I am water I am elastic, because I am you are. I hold you together like the cheese holds the sandwich, am I in all living beings, only in humans or also in animals? Am I in plants. Am I a plant."
> — A participant's freewriting after an introductory exercise to the *Mind of Fascia* in Kerstin Kussmaul's workshop during *IDOCDE Symposium 2016*, Vienna.

Fascia contains as much water as the average in the body: around 70%. According to Guido Meert (2012), the communicative abilities of fascia depend on mechanical components, electrical and electromagnetical components, chemical components (with the interstitial fluid as driving force), and an energetical component where liquid crystalline (or structured) water enables information flow and signal transmission. Water can be a shape-shifter or the formless, and yet it is the substance that gives form. Remember fascia as organ of form?

Picture a happy plant and a thirsty plant – without water the unfolded form is lost. For fascia to be a bouncy, creating and communicating form water is essential.

Sandcastles also demonstrate how important water can be for structures. On a beach both water and sand seem limitless, and yet the water has the ability to shape the sand into form, and to keep it there. The mechanism behind is called liquid or capillary bridge.

An icosahedron is an example for an interdependent system. "It is the interactive process between the system and its environment and the dynamics of feedback that result from this interaction that nurtures the emergence of sophisticated properties that characterize complex systems, such as the capacity for learning and self-organization. In the context of human systems, this highlights the role of perception, interpretation, meaning, and purpose as an integral part of the system…." (Hammond 2017, p.17)

— Mangrove in incoming tide. Photo by Kerstin Kussmaul

— *Sand castle.* Photo by Kerstin Kussmaul

II. Dancing with Fascia

Fascia likes to shake rhythmically as well as arrhythmically, likes to give up control – to bounce and rock, to create tingling and buzzing sensations in the body. It wants you to listen to what is happening inside, to the ebb and flow of currents and waves – constantly changing parameters within your body in order to create balance. Fascia wants you to be aware of sensations and images. It is possible to listen into fascia in a resting mode: close to the floor, coming into a supported stretch, sensing and breathing into the fascial network throughout your body, releasing tightness, tension, and any held emotions, slowly modifying your relationship to gravity. Fascia covers a wide range between release and activation.

MUSIC OF FASCIA

Thinking of fascia as a textural composition, we can link it to the textural composition of minimal music: creating webs of connection through temporal distances. Minimal music is made of small motifs that repeat, vary, and slowly change. It becomes a connective tissue.[6] Or we could look for music to physically evoke some of fascia's aspects such as jumping, bouncing.[7] Or be inspired by water.[8] *Which music to use for the fascia scores below?*

> "*Intentionally not to use muscles, to leave the work to someone else so it does not become strenuous. To be able to hold the arm away for very long, to lift and move the arm with the help of gravity, to be able to rotate. To be able to release the neck because muscles can let go. To come into a stretch, to elongate oneself longer and longer. But movement is slow and meditative, not yet an idea how faster movement could emerge, or even abrupt movement. All is slow and fluid. Good to be in movement finally it feels light, still a little stiff in the wrists, as if the threads were connected on the inside but still a little stiff and not always lubricated. It feels how everything is connected but not so elastic as it could be. It needs concentration to come into contact, it is not so self-evident, but it is grateful to be called upon. There is release. The muscles cannot release by themselves, but this system can…*"
> — A participant's freewriting after an introductory exercise to the *Mind of Fascia* in Kerstin Kussmaul's workshop during *IDOCDE Symposium 2016*, Vienna.

Accessing Your Fascia in Touch and Movement: Introductory Exercises and Scores

Touch your fascia: Find it *below* your skin, but *above* your muscle. Can you direct your attention there? Can you find the bouncy quality underneath your skin? See how the quality might differ in a variety of body parts. You can find the *mind of fascia* hidden behind your touch-attention and your whole bodymind will respond to this by attending your fascia.

Touch: Shape Holding (with a partner)

Partner A stands. Partner B takes A's arm and supports it fully. A releases all muscular tension in the arm. Once the position of the arm and the release is clearly felt by both, B very slowly takes away the support from the arm. A only uses the absolutely necessary muscular action (not more) to hold the arm in space where B left it. A can feel now the mind of fascia in this arm. It is almost no muscle action, but a deep attention to the shape of this body part. Repeat this exercise in a variety of positions and with a variety of body parts. Switch roles.

Movement: Bouncing

Find fascia-related music (see music suggestions in footnote 5). Stand in space, close your eyes, attend to non-doing and on your breath, how you stand on your feet, the tiny little adjustments and twitches of your muscles to keep you vertical. Feel the padding of your feet, the arches, how little energy is required for being vertical. Find some variations of pliés – small and big, roll down once or twice. When ready, switch the music on and bounce, hop, skip, shake, jump in all levels and spatial situations. Expect some cardio-vascular action, as blood vessels are integrated into fascia!

Movement: Tensegrity

Play around with a tensegrity model, alternatively watch a video of tensegrity demonstration.[9] Picture your bones as islands of compression, fascia and muscles around them as your ocean of tension. Move with or without music and distribute any impact or gravity change throughout the whole body. Keep a bouncy muscle tone, finding the bridge between readiness to move and a relaxed attitude. Some dancers feel their body as tensegrity structure in Yin Yoga positions – bones within a breathing ocean of tendons, muscles, and fascia.

III. Reflective Teaching Practices

Fascia as Metaphor

A metaphor is a kind of analogy; it carries over or transfers a meaning into another field. We look at the function and relationship of fascia in the physiology of the body and transfer these function into a dance class setting – exploring what could be the connective tissue and its function in class: in the material, in the relationship between teacher and/or students, in between things. It looks for unasked questions to reflect on a dance class, suggesting hidden viewpoints. Fascia becomes a conceptual model to prepare and reflect on a dance class. The class becomes the body, and we search for the ideas of fascia that might lie within this body.[10]

I invite you to look at the dance class as a tensegrity structure, searching for patterns, interdependencies, emergent situations, feedback loops, complexities… So if the dance class is a body, what is the fascia in the dance class? And what is the information we can derive from this viewpoint?

Pose yourself one question at a time, and then write three timed minutes about this question. Choose

between looking at one particular class or your teaching in general. Add you own questions, or ask your students to share their thoughts.

Reflective questions for your teaching:

- How do the *form of* and the *form in* your teaching support the learning process?
- What is the role of *transitions* in your class? Might there be hidden potential you have not yet unearthed?
- What is the *relationship* of your students to each other – do they learn from each other?
- What is the relationship of your students to you? Is there a *hierarchy*? *Complexity* and *interdependency*?
- What role does the *environment* play in your teaching?
- How do you create space? What is the importance of *emptiness* and *space* for you?
- Is there *fluidity*, and if so in what way?
- What is a *thing* and what is *in between* in your teaching?
- What would happen to your teaching if you stayed in between the whole time (whatever that means to you)?
- Do you rely on your *interoception* while teaching? What is the role of feelings or sensations in your own body or of the students' in your class?
- How does the *in-form-ation* integrate into the dancing?
- *Gaps*, *emergences*, *surprises*: How do you integrate them into the class, do you even wish to do so?

Fascia as Narrator

Fascia narrates a story of our experience in a dance class – as student, teacher or observer. It is based on

physical experience, rooted in many cases in semi/sub-consciousness. In fascia as narrator I propose a pathway to access fascia somatically as sensory organ in order to obtain a new viewpoint on a dance class. Fascia becomes a storyteller of our experience. This process is based on the premise that it is possible to listen to what the fascia has recorded for us during a dance lesson, and that this might be different from our conscious thought. **Here, step by step, we dive into some somatic experimentation for documenting:**[11]

1. **Access your fascia** by touch and movement right before teaching your class. Use one or more of the introductory exercises for that, or pick a fascia-minded music. Then think and read about one or more aspects of fascia such as liquid crystals or tensegrity, and dance with it as long as you like.

2. **Teach your class** as usual. No fascia related theme is necessary for your class! Your fascia will be involved no matter what you do.

3. **After your class:** without much talking or socializing find a moment of rest. Then access your fascia as in "1" as you did before the class. Rest again if needed.

4. **Fascia rising from below the surface:** is the time to find fascia's voice. I suggest using free (automatic) writing or drawing. If you have an existing compatible practice, use it. If not, in the glossary[12] you will find further links on how to free write. The point is to find a non-judmental stream of consciousness in uninhibited and continuous writing or drawing. It does not need to make sense. A funny little discovery was that my fascia likes to speak as 'we' not as 'I'. Be also aware: do you let fascia speak or do you talk about fascia?

5. **Sit back and look** at what you wrote or drew, and gather your conclusions. You could also go on with a path from here.[13]

"Jumping shaking resistance what do we do with that? Beyond hating that we are imbalanced left & right & front and back holding not letting go being under being over it. Then we stress the circulation with it. Oh yeah. At times nice and we feel we should be doing this more often although we simply hate jumping. It is our job to do and we give it over to the muscles. We do not want to do form, we want to have time to follow or own rhythms to get us organized. Organize yourself! The sheep at Wallace and Gromit do wonderfully organized tensegrity aspects. Wool.
Jumping left to right. Who would have thought of it. Silly. Why so much resistance?
Yours truly, your Fascia"
— A participant's freewriting after a guided warm up in *An Unfamiliar Technique* in Kerstin Kussmaul's workshop during *IDOCDE Symposium 2016*, Vienna.

Instead of steps 4 and 5, as an alternative, think of the body itself as documenter. Let the experience stay ephemeral trusting the process. You could also dance it or authentic-move it. It might still bring a different quality to your teaching – having the memory, but leaving it on the shore of consciousness. What if?

"Wrapped in vibration, Shrouded by trembling,
In nothing
That I do not want to permeate
In silence
I rest in silence
Having lost my thoughts."
— A participant's freewriting after an introductory exercise to the *Mind of Fascia* in Kerstin Kussmaul's workshop during *IDOCDE Symposium 2016*, Vienna. Translated by Kerstin Kussmaul from German.

NOTES

1. Attributed to Krishnamurti in *Contact Quarterly*, 1977, Vol 3 No 1.
2. www.freeimages.com [01.02.2017].
3. For looking at living fascia see www.youtube.com/watch?v=eW0lvOVKDxE. Notice the web, but also the space in between. Much of what we considered previously the filling material of the body consists interestingly of space.
4. For another point of view you can see Annouk Llaurence's Introduction to Warming Up the Attention as she mentions "our nervous system records our perception".
5. commons.wikimedia.org/wiki/File:Montreal_Biosphere,_jean_deapeau.jpg?uselang=de [01.02.2017].
6. Textural composition / Minimal music would be Steve Reich's *Drumming* and *Piano Phase*.
7. Music that encourages this kind of physicality ranges from *Bollywood* i.e. Shreya Ghoshal & Abijeet's *Dhoom Thaana* to Van Halen's *Jump* to African and Brazilian music with a strong drumming emphasis.
8. An example for music that emphasizes the fluid aspect is The Waters Ritual from Unpanishad.
9. A good example of a demonstration for tensegrity can be reached here: www.youtube.com/watch?v=Y-Ny3BfhVdw [01.02.2017].
10. For an example practice of fascia as metaphor see: www.idocde.net/idocs/1711 [01.02.2017].
11. For an example practice of fascia as narrator see: www.idocde.net/idocs/1710 [01.02.2017].
12. See *Fascia as Metaphor and Narrator Glossary of Terms*
13. Bertha Bermudez Pascual article's A Path for the Documentation of Teaching Practice, specially the part on Reflection / Collection can be a good place to continue from here.

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