that lecturers need to inform study program directors and coordinators that recurring student complaints about the lecturer may be an important part of the didactics. Without the support of superiors, this participatory format is difficult to achieve and maintain (Schuster & Radel, 2018: 309).

Fig. 83: Detailed view of the authority of the lecturer(s)

Internal (individual) **authority**	**Professional** (subject-specific) **authority**	**Institutional authority** (authority by virtue of office) lecturer(s) as representative(s) of the (UAS) system

Source: Adapted from »A Reflection on the (Harvard) Case Method from a Group Dynamics Perspective« by Schuster & Radel (2018, 286)

Including a given situation and consciously recognizing, reflecting on, and working through necessary contradictions is the core of didactics inspired by intervention science. According to Krainer and Heintel, necessary contradictions are those "that are always given and always must be solved … They produce conflicts in our everyday life, our organizations, and our global society" (Krainer & Heintel, 2015: 254–256).

13.3 The connection between experience, consciousness, feelings, emotions, and thinking

The connection between experience, consciousness, feelings, emotions, and thinking will provide an orientation for this study. Based on Nina Bull's attitude theory of emotion (1968: 23), I will distinguish two opposing poles of human data processing – the Feeling-Thinking-Behavior (FTB) process and the FTB program. For the sake of clarity, the term "experience" will be used in a narrow sense in the context of this chapter. Specifically:

(1) There is no other moment for experience than the now. In addition, the past can be remembered, and the future can be imagined.
(2) There is no way to repeat experience in this narrow sense.
(3) The entire body experiences. Consciousness is the result of a very complex metabolic process based on that experience.
(4) Becoming conscious includes a very complex metabolic process and takes approximately half a second (Nørretranders & Sydenham, 1998: 213–250).
(5) Conscious experience is a contradiction. It is not possible to experience the now without a metabolic process that takes time to unconsciously process an enormous amount of data.

(6) Becoming conscious of experience involves the reduction of a massive amount of data; therefore, consciousness is highly selective (Norretranders, 1998; Zimmermann, 1985: 82–139)
(7) The final step in human data processing of experience is thinking (e.g., reasoning, conceptualizing), which can lead to consciousness. According to Norretranders, it is a biological fact that thinking in relation to experience can only be in the past. (Norretranders, 1998: 213–250).

The human creation of consciousness is related to experience. Damasio (1999: 314–315) emphasizes the function of feeling in relation to consciousness, arguing that:

> Feeling is, in effect, the barrier, because the realization of human consciousness may require the existence of feelings. The ›looks‹ of emotion can be stimulated, but what feelings feel like cannot be duplicated in silicon. Feelings cannot be duplicated unless flesh is duplicated, unless the brain's actions on flesh are duplicated, unless the brain's sensing of flesh after it has been acted upon by the brain is duplicated.

Damasio argues that the individual's body (the flesh) plays an important role in consciousness. This being the case, experience will vary in different bodies (individuals). This leads to the assumption that it is useful to be aware of human data processing in order to find and transcend unconscious individual and/or collective prejudices.

Levine (2010: 338), a trauma specialist, points out the accuracy of a concept developed by Bull (1968), stating:

> what Nina Bull has deeply grasped, is the reciprocal relationship between the expression of emotion and the sensate feeling of emotion. When we are mindlessly expressing emotion that is precisely what we are, in fact, doing. Emotional reactivity almost always precludes conscious awareness. On the other hand, restraint and containment of the expressive impulse allows us to become aware of our underlying postural attitude. Therefore, it is the restraint that brings a feeling into conscious awareness.

This is consistent with Damasio's (1999: 150) view that the brain is the "body's captive audience" and that:

> under no normal condition is the brain ever excused from receiving continuous reports on the internal milieu and visceral states, and under most conditions, even when no active movement is being performed, the brain is also being informed of the state of its musculoskeletal apparatus.

Heinz von Foerster (2003: 221) on the interaction of experience and human data processing states that:

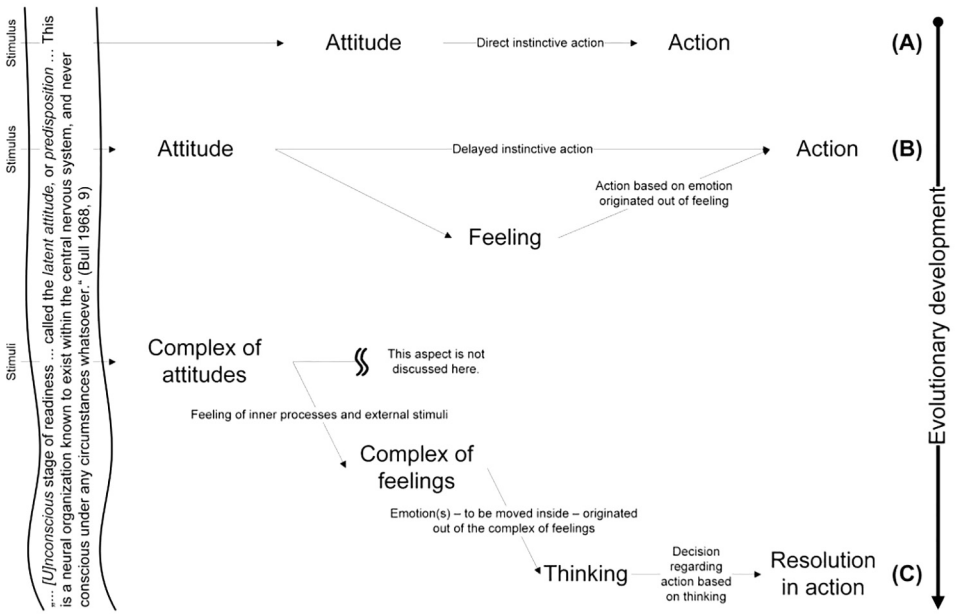
> the synaptic gap can be seen as the microenvironment of a sensitive tip, the spine, and with this interpretation in mind we may compare the sensitivity of the central nervous system (CNS) to changes of the internal environment (the sum total of all microenvironments) to those of the external environment (all sensory receptors). Since there are

only 100 million sensory receptors, and about 10,000 billion synapses in our nervous system, we are 100 thousand times more receptive to changes in our internal than in our external environment.

The above quote shows that emotions are an integral part of the human body's production of consciousness, and have an impact on thinking. The thinking process, as described by Schuster (2018:65-69), is presented as follows:

(A) In response to a given stimulus, unconscious bodily processes cause a postural attitude that ultimately results in a purely instinctive action.
(B) As evolution progresses, the body begins to process changes in postural attitudes as well as by the acceleration of the heartbeat *and* the original stimulus through feelings. This perception through feelings leads to the experience of emotion in the sense of *being moved*. *Being moved* means that the decision regarding the action is already anticipated.
(C) Subsequently, social and individual factors, as well as changes in the quality of the stimuli, lead to a complex set of attitudes, bodily reactions, and feelings. These feelings and the emotions they generate lead to the development of further processing through thinking, which ultimately leads to conscious action.

Fig. 84: Evolutionary development of thinking

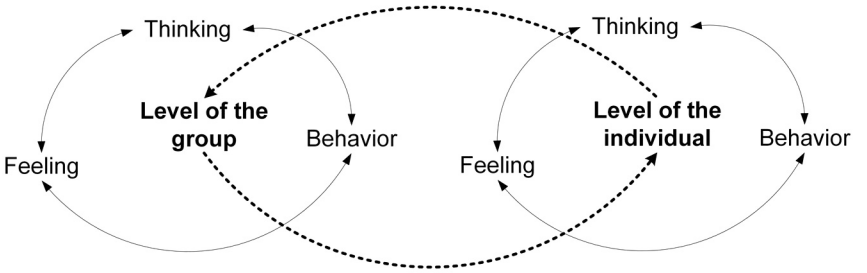


Source: Adapted from "The Attitude Theory of Emotion" by Bull (1968: 23) and from "Lehren, Lernen und Emotion" by Schuster (2018, 65–69)

Figure 84 shows, in a highly condensed and simplified way, the evolutionary development of thinking.

The argument in C represents the current state and is based on Ciompi's (2016: 263 et seq.) concept of affect logic. While the process of *feeling, thinking, and behaving* denotes the more general form of human perception, the program of *feeling, thinking, and behaving* is seen as an adaptation to a specific task, a specialization. These are circular relationships for the individual and between the individual and the collective level, with both levels influencing each other. In a practical, didactic application, experiences at the individual and group levels are shown in Figure 85.

Fig. 85: Circular coherences of feeling, thinking, and behavior



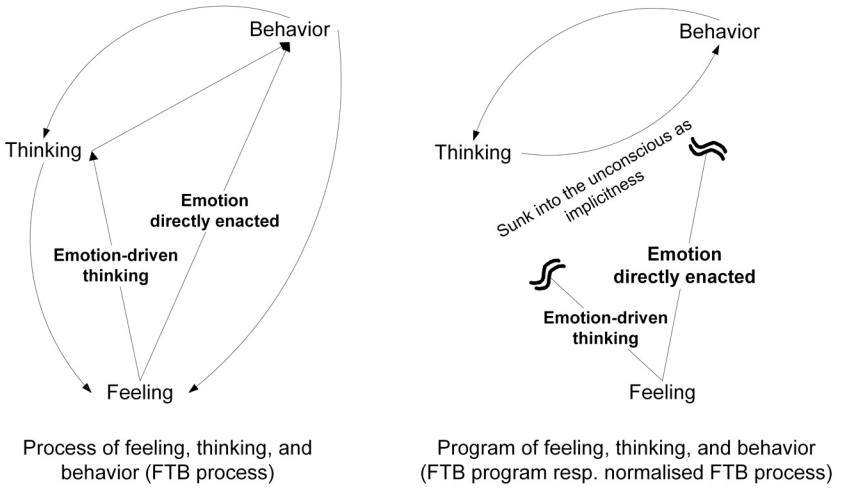
Source: Adapted from »Lehren, Lernen und Emotion« by Schuster (2018, 67)

When learning any (vocational) specialization, this general process of *feeling, thinking, and behavior* (FTB process) becomes the desired program of *feeling, thinking, and behavior* (FTB program). In this sense, culture can also be seen as an FTB program. In the FTB program, the connections between feeling→thinking and feeling→behavior become emotionally implicit and sink into the unconscious – like not noticing a daily tram that regularly passes in front of the window. This unconsciousness points to an essential contradiction – that learning can lead to certain automated sequences to achieve a goal economically, but can also be a limitation to new possibilities (Ciompi, 2016, 275). Figure 86 outlines this distinction of human data processing, namely the FTB process and the FTB program. The FTB process seeks a destination. The determination of the goal is the goal. The FTB program works toward a presumed goal.

The emotionally painful process of learning (Salzberger-Wittenberg, 1999: 54–59) must be reflected upon in order to teach learners to use the FTB process creatively. When people get stuck in the FTB program, the feelings and associated emotions degenerate into destructive doorkeepers of the norm. Conversely, failure to make a decision about a common goal may be a sign of being stuck in the FTB process. The assumption is that leadership skills must include the ability to distinguish between the FTB program and the FTB process and to switch into either mode depending on the situation. This can only be achieved by supplementing normative teaching with explorative elements. Therefore, lecturers must set aside normative certainty and be open to uncertainty as an outcome

of the explorative process – both at the course level and at the educational institution level.

Fig. 86: The process and program of feeling, thinking, and behavior



Source: Adapted from »Lehren, Lernen und Emotion« by Schuster (2018, 68)

13.4 Exploring the boundary of unknown territory

To illustrate how normative teaching can be supplemented with explorative elements, the practice of experience-centered leadership education is described below (Schuster & Radel, 2018: 305–309). A total of three sequences (Seq. 1–3) are presented. Each sequence includes a table with the lecturers' intervention and the assumption for the intervention. Selected examples describe the effects of interventions in teaching practice. How the sequences relate to the lecturers' *scope of action* is presented later.

Sequence 1

Regarding 1b: About a month before the first lecture, a student wrote an email to the lecturer introducing himself as a student representative and asking for information about the course. The email text ended with the line "I would then gladly share the information with my peers as the class representative" and was signed with the student's name and designation as class representative. I replied that course details would be discussed at the first meeting and invited students to read the required papers online before class. Immediately after sending the email, I uploaded the relevant papers for the course.