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博士（スポーツ科学）

Proposal Regarding the Elite-Coaching Framework Based
on Philosophical Discussion by Husserl's
Phenomenology: Highlighting the Role of Coaches and
Researchers

フッサールの現象学を用いた哲学的考察を基盤としたエ
リートコーチングフレームワークに関する提案 -コーチ
と研究者の役割に着目して-

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The 1st chapter: Introduction

1. Purpose

This study explores the elite-coaching framework between the researchers, coaches, and athletes. Against this framework, this study especially focuses on issues in the role of coaches and researchers. The purpose of this study is to address these issues through philosophical discussion based on Husserl's Phenomenology and offers philosophical proposal to make the role of coaches and researchers more efficient.

The main mission of the elite-coaching framework is to support elite athletes in order to coach them to high performance and win the competition. Previously, this mission has been challenged from the framework between elite coaches and athletes. But on the present day, along with the popularization of performance analysis in sport science field, the modern elite coaching is explored from the collaborative framework between the researcher who specializes performance analysis, elite coach, and athlete (Williams & Kendall, 2007). However there are several issues regarding the role of coaches and researchers. For instance, the role of coaches has an issue of practical coaching education.

Similarly the role of coaches has an issue of “knowledge transfer” (Williams and Kendall, 2007; Reade et al, 2008a). This study addresses these questions through philosophical discussion based on Husserl’s Phenomenology.

2. Background and Issues

2.1. The Role of Coaches

The role of coaches is not only coaching athletes or teams to high performance but also developing into them well-rounded and successful human through sport activities (Saunders, 2005; Jones, 2006). Further coaching task will differ depending on the developing stage of each athlete and circumstances (Grad, 2010). Against these tasks, coaches should learn knowledge and idea to develop each stage of athletes: the kid (7-12 years of age), youth (13-15 years of age), senior (after 16 years of age), and elite athlete. As from 2007, in order to develop elite coaches, International Association of Athletics Federations offered certification system (CESS), are featured from Level I :Youth Coach, Level II : Assistant Coach, Level III : Coach, Level IV : Senior Coach, and Level V : Academy Coach Program and certification¹ (Online. IAAF) (See Table 1). Even if coaches learn idea and knowledge through coaching education, practical coaching however more diversifies over academic knowledge, one of the theories in sport science field like Physiology and Sport Biomechanics. For instance, one of the practical tasks are to organize practice sessions, develop techniques, skill and tactics for

competition, ensure optimal physical preparation, and guide the athlete or team throughout the season training session (Nash and Collins, 2006, 466). Therefore coaches cannot deal with practical tasks from only academic knowledge of coaching education.

Nevertheless, experienced coaches can make an appropriate decision to coach athletes or teams through cognitive process with her or his coaching experience and experienced knowledge (Lyle, 1999) : in this cognitive process, coaches should consider an coaching policies and procedures from their judgments (Glad, 2010, 8) (See figure 1). Therefore, a large number of researchers gave attention to their experiential abilities and knowledge in practical coaching situation (Bourdieu, 1977; Meinel. 1981). For instance, Meinel (1981, 127) dealt with abilities “sympathy of movement” (Mitvollziehen der Bewegung), which refers to sympathizing with an athlete’s performance from a coaching perspective. Similarly, Launder (1999, 3) and Nash & Collins (2006, 467) highlights “decision-making skill,” which provide the athlete or team with an appropriate decision for coaching including advice. However, how coaches enables these abilities and how coaches are possible to expand these abilities through coaching

education has yet to be clarified. This study addresses these questions in the 2nd chapter. In the 2nd chapter, this study especially deals abilities “sympathy of movement” and discusses coaching education to expand practical abilities.

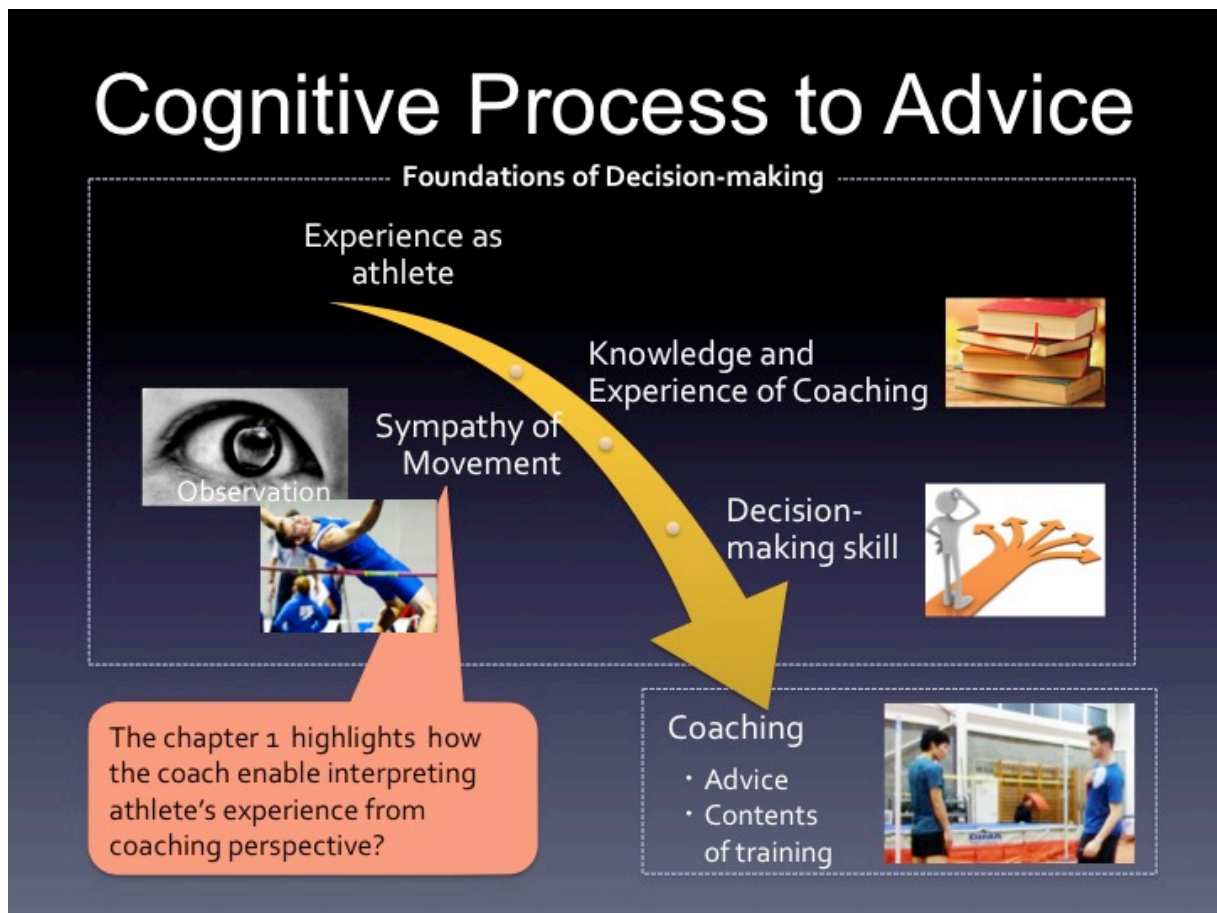









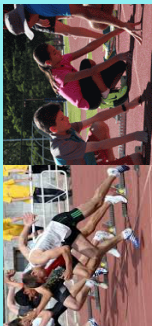



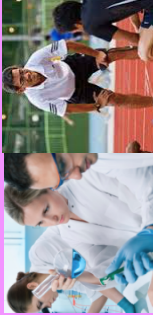


Figure 1: Cognitive Process to Advice

Table 1: Certification System of IAAF

| Level Aim Target | PROMOTION AND TALENT IDENTIFICATION | | DEVELOPMENT OF PERFORMANCE | | PERFORMANCE MANAGEMENT |
|------------------------|---|---|---|--|---|
| | <p>Level I Youth Coach Teachers and Talent Scouts</p> <p>10 days education program by member federations</p>  <p>+</p> <p>6 days lectures Course</p>  | <p>Level II Club Coach • Assistant Coach Teachers and Coaches</p> <p>10 days education program by member federations</p>  <p>+</p> <p>7 days lectures Course</p>  | <p>Level III Coach Coaches</p> <p>14 days education program by IAAF</p>  <p>+</p> <p>7 days lectures Course</p>  | <p>Level IV Senior Coach Performance Coaches</p> <p>14 days education program by IAAF</p>  <p>+</p> <p>7 days lectures Course</p>  | <p>Level V Academic Coach Experienced and Active Coaches</p> <p>3-12 months education program by IAAF</p>  |
| Duration | 6 days lectures Course | 7 days lectures Course | 7 days lectures Course | 7 days lectures Course | |
| Contents | <p>Initial Attraction to Coaching Athletics</p> <ul style="list-style-type: none"> • Focusing on Kids and Teens • Kids (7-12 years of age) coaching • Teens (13-15 years of age) Coaching  | <p>Introduction to Coaching athletics</p> <ul style="list-style-type: none"> • All Events  | <p>Introduction to Performance Coaching</p> <ul style="list-style-type: none"> • Specific Event • Select Event to beginner and developing athletes • Sprint and Hurdle, Middle and Long Distance, Race Walks, Jumpers, Throws and Combined Events.  | <p>Development of Performance Coaching</p> <ul style="list-style-type: none"> • Specific Event • To coach a selected event group to performance athletes • Sprint and Hurdle, Middle and Long Distance, Race Walks, Jumpers, Throws and Combined Events.  | <p>Elite Coaching Performance Management</p> <ul style="list-style-type: none"> • Blending Scientific Knowledge, in Sport Science with Experienced coaching  <ul style="list-style-type: none"> • Elite Coach, Youth Chief Coach, Chief Coach, and Coaching Development Director |
| Detail | | | | | |

2.2. The Role of Researchers

In the present day, researchers explore social meaning and value of scientific knowledge in order to contribute social issue in the world. In the case of researchers, specialized performance analysis, they also look for this meaning and value with “knowledge transfer.”

Generally coaches must constantly refine their ideas by learning in order to coach athletes to high performance (Werthner and Trudel, 2006). Regarding their learning, coaches look for practical knowledge to address a specific coaching issues of their athletes or teams (Williams and Kendall, 2007, 1578; Reade et al., 2008b). Against this requisition, researchers can contribute coaches through “knowledge transfer.” Several previous studies however indicated that since the researcher clarifies scientific knowledge, based on –ology as academic perspective, they cannot deal directly with scientific knowledge as bearing on practical coaching. For instance, (Theodoros et al, 2012, 472) indicated that since performance is dealt with parts as objects in a determinate environment in performance analysis, this achievement does not indicate athlete’s experience and performance as a whole. Bartlett (2001, 123) and Franks (2002, 3) also indicated

that since the credibility and validity of data in performance analysis is clarified on the base of analytic model theory using AI, it is difficult to put it into diversified coaching practice with a limited researching environment in the base of analytic model theory. Muraki (1993, 975) Further pointed out there is viewpoint gap between researcher and athlete against performance analysis. Generally, researchers in performance analysis involves external viewpoint, clearly divides performance into several phases from their objective viewpoint, and identifies science knowledge focusing on each phase and scientific field. (Against Muraki's opinion, this study discussion the difference between scientific and practical viewpoint regarding performance analysis.)

Against above background, researchers should discuss the logic for transposing their work to practical knowledge (Williams and Kendall, 2007; Reade et al., 2008a). However, this logic has yet to be clarified. This study addresses this question in the 3rd chapter.

3. Phenomenological Approach

In the present day, we are looking for the elite-coaching framework from the relationship between the research, coach, and athlete. There are however unclear issues linked the role of coaches and researcher. On the above background, this study explores two issues through philosophical discussions based on Husserl's Phenomenology.

Phenomenology is one of the philosophical theories, which is based on Descartes's scepticism, focusing on principle of perception and interpreting first person's experience. This theory should engage phenomenological reduction. Regarding phenomenological reduction, Phenomenology does not postulate the existence of meaning and value in an objective world. This concept is called "epoché" (Husserl, 1979, 139). It requires suspending judgment against natural attitudes (*natürliche Einstellung*) regarding the world's existence. For instance, to interpret meaning of crying face, Phenomenology should sets aside judgments about an objective perspective like crying face caused from sad feeling. This is because Phenomenology "is interested in phenomena only in so far as their relation to consciousness goes, in identifying structures of consciousness"

(Martínková & Parry, 2011, 188). As the result, we might interpret crying because of happiness. On the base of this theory, this study explores two issues in the role of coaches and researches.

4. Discussion Process

After the 1st chapter, this study divides discussion into the 2nd, 3rd, and 4th chapter. The 2nd chapter focuses on the role of coaches and explores abilities “sympathy of movement” and coaching education to expand these practical abilities using Husserl’s Phenomenology. Through this chapter, this study offers philosophical proposal to make the role of coaches more efficient. The 3rd chapter focuses on the role of researchers and explores the issue of “knowledge transfer” highlighting knowledge gaps between scientific and practical knowledge. Through this chapter, this study offers philosophical proposal to make the role of researchers more efficient. Finally, the 4th chapter explores the elite-coaching framework in Japan and discusses future issue to make this framework more efficient.

Note

1. Level I offers knowledge and idea to develop the education aspect of kids (7-12 years of age) and teens (13-15 years of age). It highlights age-appropriate coaching to transfer the elite athlete from kids or teens. Level II further offers knowledge and idea of the practical skill and a theoretical base in order to make effective work with youth and beginner athletes. Since above levels are featured from developing general abilities based on their age, it does not offer specific knowledge and idea focusing on each event like high jump and long jump. Level III is designed to learn specific idea and knowledge focusing on each event which is divided into six event: sprint and hurdles, middle and long distance running, race walks, jumpers, throws, and combined events. Therefore coaches can learn the basic competition model for each event within an event group and appropriate training sessions with in the context of an annual training plan. Level IV focuses on coaching of elite athletes, more specific knowledge, and idea from macro cycles in a multi-year plan. The Level V is highlighted professional education of the highest level offer coaching knowledge and idea from blending scientific knowledge in sport science with practical experience of elite coaches.

The 2nd Chapter: The Role of Coaches and Issue regarding Practical Coaching Education of Sympathy of Movement

1. Introduction

The 2nd chapter focuses on the role of coaches and deals with an issue of practical coaching education highlighting “sympathy of movement” (Meinel, 1981, 127) through philosophical discussion by Husserl’s Phenomenology. Through this chapter, this study offers philosophical proposal to make the role of coaches from perspective of coaching education.

In coaching education, “sympathy of movement” corresponds to a “precondition to coach another person” (Meinel, 1981, 453). This is because coaches can consider and provide appropriate advice for individual by accurately interpreting each athlete’s performance. In order to offer philosophical proposal, this study deals with three questions: (1) what is the phenomenon “sympathy of movement”, (2) how the coach enables “sympathy of movement, (3) how to expand abilities of “sympathy of movement” in coaching education through five philosophical discussions. Since this study already explained general background

at the 1st chapter, this introduction cuts general introduction and starts exploring the concept of “sympathy of movement” by previous studies in the following.

From phenomenological perspective, the concept of sympathy is to project consciousness into an observed other and interpret other experiences (Fremderfahrung) through an observer’s subjective belief (Smith, 1989, 112). Applying this interpretation to coaches and athletes, it is phenomenon to project the coach’s consciousness into an observed performance and interpret the athlete’s experience, such as consciousness and sense during performance, through the coach’s subjective belief. This study mainly explores how coaches are possible to project their consciousness into an observed performance and interprets the athlete’s experience from coaches’ perspective, in order to discuss the phenomenon “sympathy of movement,”

This study further focuses on coaches’ activities to support “sympathy of movement” in order to deeply interpret the phenomenon. To date, “sympathy of movement” has been captured using three coaching activities: “the observation of movement,” “inquiry”³⁾ (Kaneko, 2005, 199) , and “virtual self-movement”^{4) 5)} (virtuelle Selbstbewegung) (Kaneko 1987, 123). Meinel (1981, 176) indicated that

observation of movement focuses not on the external observation against a performance but on subjective “simultaneous experience of movement” into an athlete’s performance.⁶⁾ However, even if a coach projects her or his consciousness into an athlete’s performance and tries to interpret the athlete’s experience through the observation of movement, the coach can only gain a rough or partial impression (Kaneko, 1987, 123). Therefore, to comprehensively interpret athletes’ experiences, the coach should interpret not only their performance as an observed subject (Gegen-stand) with an external standpoint but also subjectively imagine this performance with internal standpoint with “inquiring” and “virtual self-movement” (Figure 2). This study deeply discusses the relevance of this phenomenon and three activities from phenomenological perspective in order to interpret the phenomenon “sympathy of movement.”

Activities to sympathizing

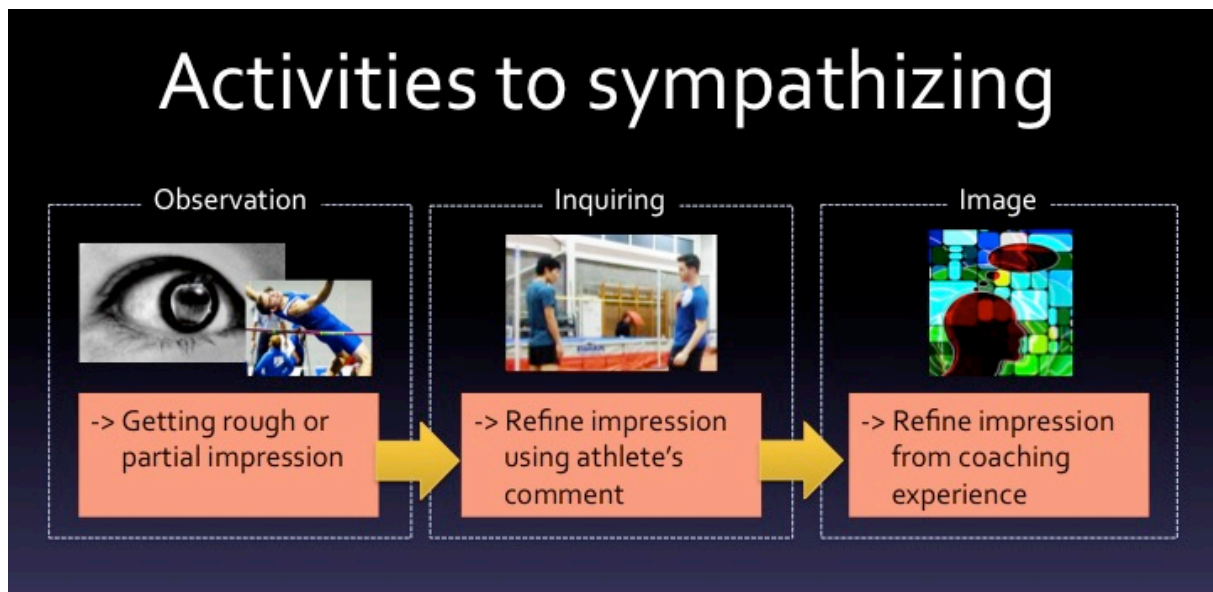


Figure 2: Activities to sympathizing

2. Method and Discussion Processes

This study explores phenomenon and abilities “sympathy of movement” through philosophical discussion based on Husserl’s Phenomenology. On the basis of Husserl’s Phenomenology, this study deals with three questions: (1) what is the phenomenon “sympathy of movement,” (2) How the coach enables “sympathy of movement using three activities in the forth discussion. (3) how to expand abilities of “sympathy of movement” in coaching education. Through above discussions, this study offers philosophical proposal of coaching education to expand practical abilities in order to make the role of coaches more efficient.

3. Discussions

3.1. What is the Phenomenon of Sympathy of Movement

3.1.1 General Insight Regarding the Phenomenon, Using the Schema of Natural Science

First, to interpret the phenomenon “sympathy of movement,” this study focuses on the schema of natural science regarding subjectivity and objectivity. It discusses whether coaches can directly understand athletes’ experiences. This is found to be impossible because it requires that athletes’ experiences must be directly understood as consciousness and sensations during a performance experience.⁸⁾ Thus, the concept of subjectivity and objectivity is used to interpret the coach as the observer and an athlete’s experience as an observed subject. Subjectivity denotes the coach’s viewpoint, whereas objectivity refers to athletes’ experiences. Furthermore, objectivity is interpreted as the absolute meaning of a subject (i.e., athletes’ objective experiences mean that they have an absolute consciousness and sense during their performance experience, which a coach cannot understand).

However, athletes’ consciousness is created by an image of the generation of performance. Thus, coaches are unable to objectively understand this image in

athletes' experience itself. In addition, since subjectivity varies with each coach, it is likely that an athlete's experience is interpreted by differing subjectivities of coaches. Hence, coaches cannot understand athletes' experiences unless they imagine and interpret them by observing successive physical expressions, such as facial expressions, physical gestures, and words.⁹⁾ Therefore, this study indicates that subjectivity and objectivity in the schema of natural science is not satisfactory as the fundamental principle to interpret the phenomenon (See Figure 3).

Generally, our natural attitude is to try to interpret a cognitive phenomenon using the schema of natural science. It means that we tend to believe the existence of meaning as being subjectivity in the world. However, this study points out coaches cannot directly understand athletes' experiences from a coaching standpoint.

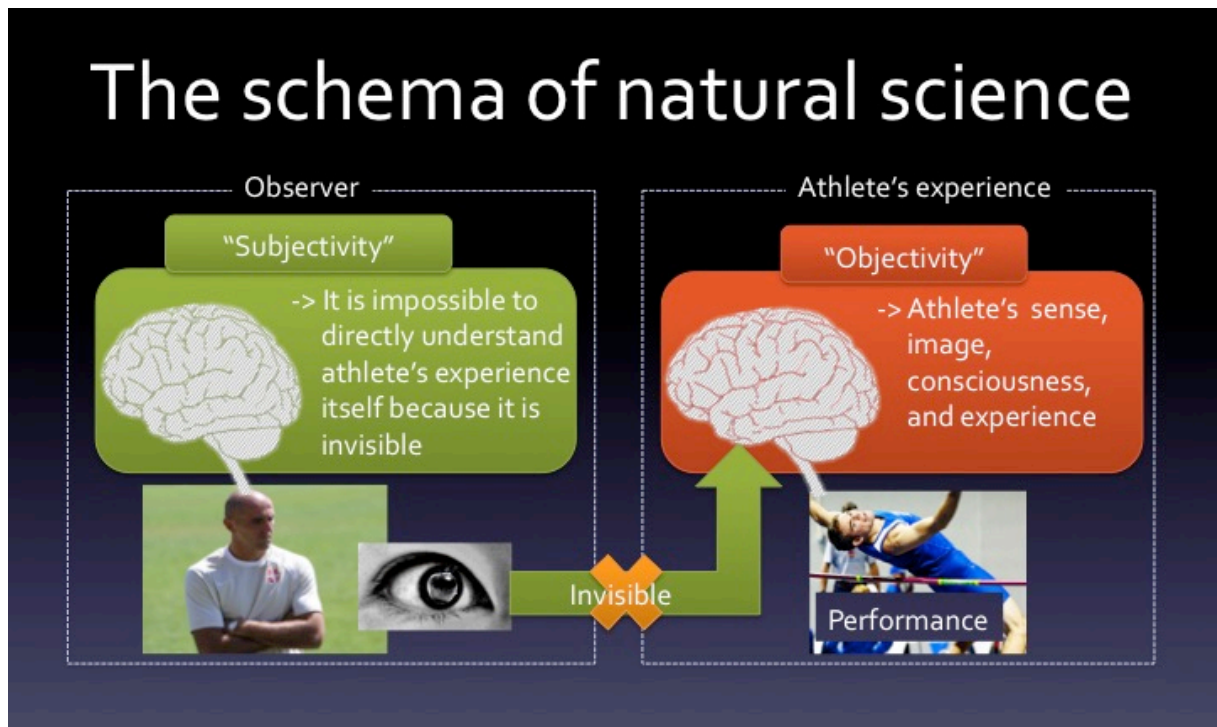


Figure 3: The Schema of natural science

3.1.2 Phenomenological Insight Regarding the Phenomenon, Using the Phenomenological Schema

Second, this study furthers the discussion using the schema of Husserl's Phenomenology. Phenomenological discussion begins with Descartes's skepticism and interprets a cognitive phenomenon using subjective belief.

Husserl's Phenomenology does not postulate the existence of the world¹¹⁾ and further interprets the essentiality of a cognitive phenomenon through a reduced framework of subjective belief. This is because we can infinitely distrust the existence of the world using Descartes's skepticism. In this context, in the

phenomenological schema, a subject, such as an athlete's experience, is interpreted as "transcendence" (Husserl, 2001, 58), which means that we cannot understand its existence in the world. Similarly, the cognitive phenomenon is interpreted as "transcendental subjectivity," (Husserl, 2012, 409), which is a subjective belief and merely interprets the athlete's experience as "transcendence."¹²⁾ (See Figure 4)

Based on this schema, this study indicates that coaches can interpret athletes' experiences during a performance. This is because, when coaches try to interpret "transcendence," they observe that something exists despite the quality of interpretation. Therefore, this study interprets the phenomenon "sympathy of movement" using the phenomenological schema.

The schema of Phenomenology

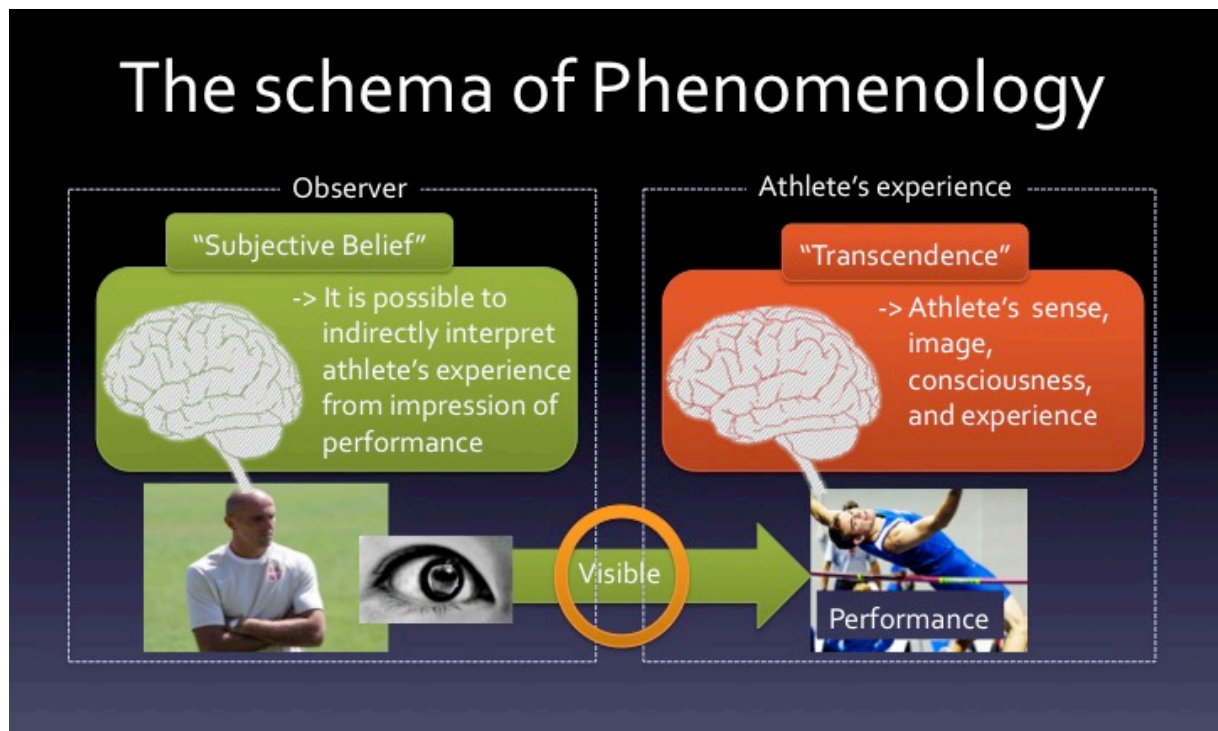


Figure 4: The Schema of Phenomenology

3.3. A Phenomenological Concept to Interpret the Phenomenon

According to the phenomenological schema, a coach can infinitely doubt an athlete's experience as having existence in the world. However, in "transcendental subjectivity," the coach cannot doubt a subjective belief itself would go against the athlete's experience. Based on this undoubted horizon of subjective belief, this study discusses a key concept to enables the phenomenon "sympathy of movement."

Generally, when we interpret another's experience from their physical

expression, this belief is given as an intuition. For example, if we see a crying face, we intuitively and instantaneously interpret a sad feeling as the meaning of this expression (Figure 5). However, in this situation, although we try to project our consciousness into observed crying face from our standpoint, it does not mean to sympathize the person's experience during crying. This is because it focuses not on the person's experience during crying but on meaning of facial expression as gestalt. For this reason, we might misinterpret her or his experience from the face (Figure 4). On the other hand, by questioning and imaging the person about her or his experience, we can get the materials (hylē) to get a closer conclusion about her or his feeling. For example, by question, we might realize she or he is crying because of happiness (Figure 6). Similarly in coaching situation, "sympathy of Movement" is also not established only by observation of movement and coaches should try to collect materials using "inquiry," and "virtual self-movement".

Limitation of observation

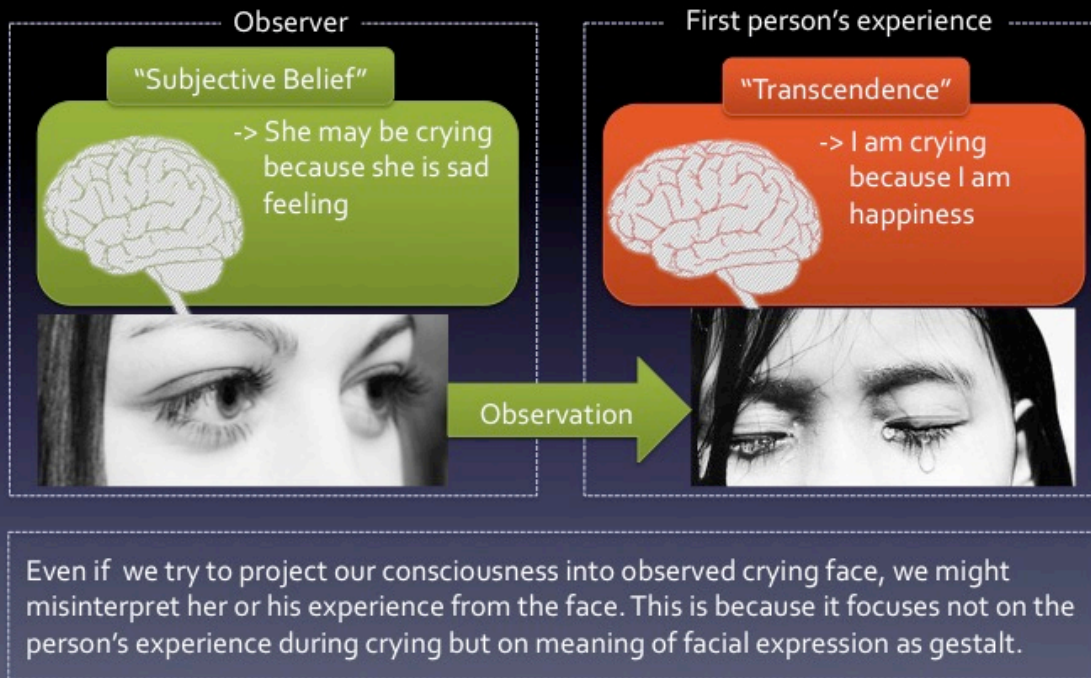


Figure 5: Limitation of observation

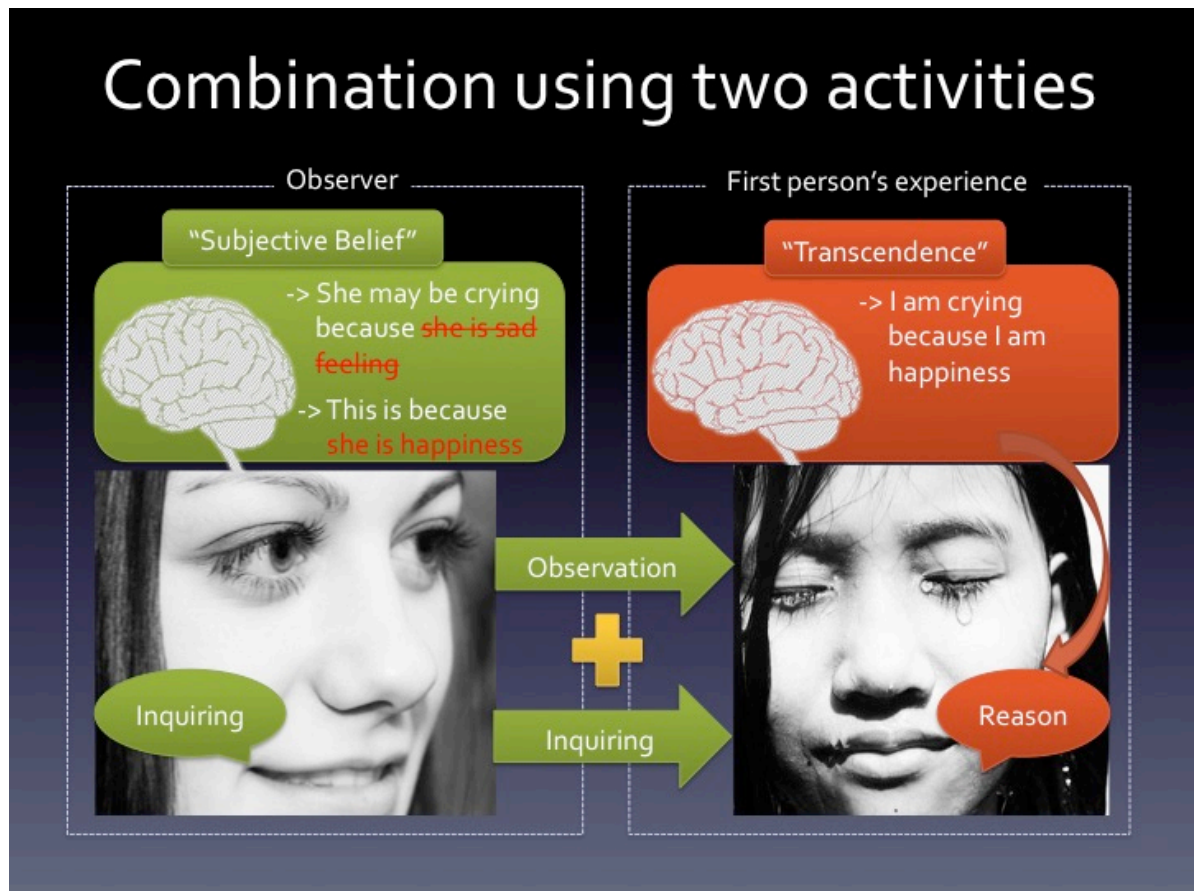


Figure 6: Combination using two activities

On the above phenomenon, Husserl (2001, 87) indicated that belief as overt intuition accompanies the passive horizon to passively integrate materials into an empirical meaning as experience. It is interpreted as an organized “passive synthesis” (Husserl, 2001, 145). In terms of incorporating this concept into the phenomenon “sympathy of movement,” it means that coaches have an organized “passive synthesis” to passively integrate materials into an empirical

meaning as athlete's experience. In other words, they associate an observed performance with the empirical meaning through a "passive synthesis" and interpret the athlete's experience through a belief in "transcendental subjectivity." In Husserl's Phenomenology, this concept is called "association" (Husserl, 1950/2001, 46; Husserl, 1952/2001, 146) using "passive synthesis" (See Figure 7).

Processes to sympathy

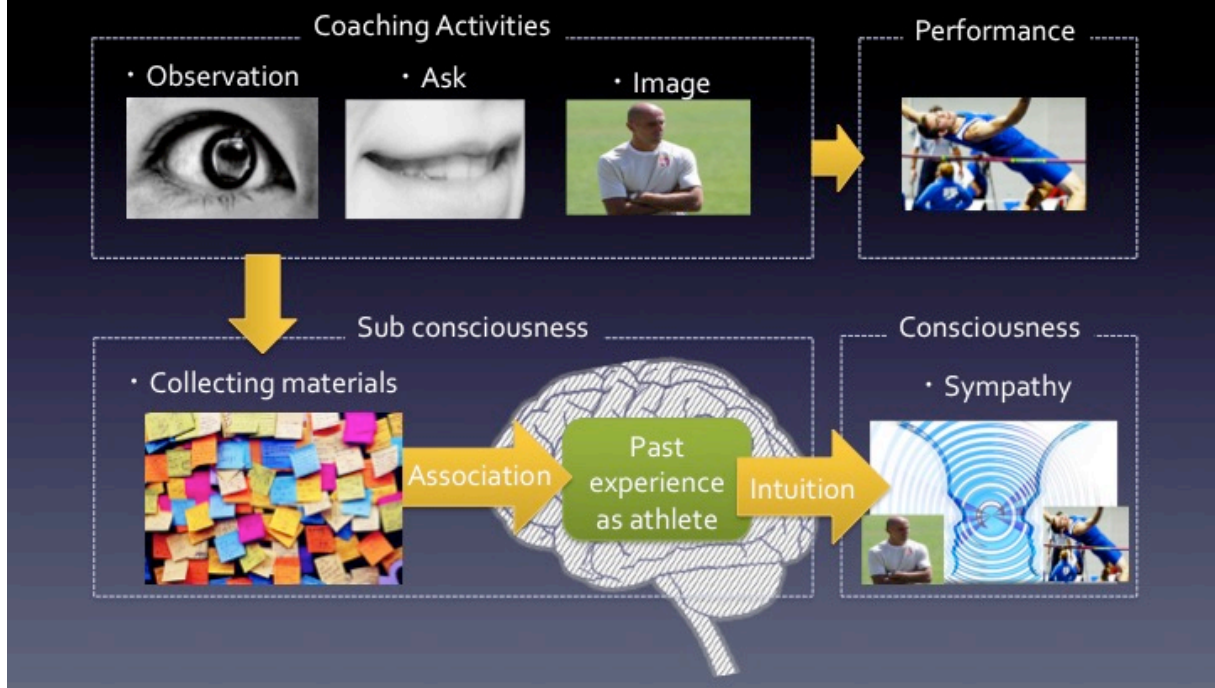


Figure 7: Processes to sympathy

Therefore, based on the key concept “association,” the phenomenon “sympathy of movement” is interpreted in terms of two factors. First, this phenomenon is interpreted as belief in “transcendental subjectivity.” Second, it is an intuitive belief, which intuitively associates an observed performance with the meaning of an athlete’s experience using “passive synthesis.” On the above factors, this study further discusses abilities of “sympathy of movement” in the following.

3.2. How the Coach enables “Sympathy of Movement using three Activities

In Husserl’s Phenomenology, phenomenon “sympathy of movement” is interpreted that my experience not as other experiences in the approved world but how I interpret another’s experience from “transcendental subjectivity” (Hamauzu, 1995). Against this interpretation, Husserl (2001) used the concept “association.” Using this concept with “transcendental subjectivity,” interpreting other experience through “sympathy of movement” is regarded as being intuitively given, using passive references to a “flamed background” or “horizon,” which are accumulated through past experiences (Husserl, 2001, 89). On the base of this interpretation, this study discusses three activities, which are “the observation of movement”, “inquiry,” and “virtual self-movement” in “sympathy of movement.”

Regarding the observation of movement, the medium to interpret an athlete’s experience is an observed performance. On this occasion, a coach should project their consciousness into the observed performance and interpret the athlete’s experience from the quality of the observed performance. Further the athlete’s experience is interpreted through “association,” which intuitively associates the observed performance quality with the athlete’s experience, using

organized “passive synthesis.”

Regarding “virtual self-movement,” this is not the action of interpreting an observed performance as an observed object (Gegen-stand) from an external standpoint but an action of imagining the observed performance as her or his own performance in her or his internal standpoint (Kaneko, 1987, 123). Therefore, the medium to interpret the athlete’s experience is the coach’s image to the performance. Therefore “virtual self-movement” depends on imagining a performance, which is based on the observed performance and to deeply sympathize with an athlete’s experience through “organized “passive synthesis.”

Regarding “inquiry,” the medium of interpreting an athlete’s experience is to obtain the athlete’s reflection on that experience as consciousness and sensation during performance. Through this activity, coaches can interpret not only overt consciousness but also passive consciousness of performance. Based on these interpretations, coaches can deeply interpret an observed performance using the observation of movement and can imagine a performance using “virtual self-movement.” Therefore, contents of “inquiry” are shaped by organized “passive synthesis” toward “sympathy of movement,” using the observation of movement

and “virtual self-movement.” Thus, the activity to use “inquiry” involves reducing the essential experience of performance.

Therefore, this study points out the organized “passive synthesis” shapes abilities “sympathy of movement” with three coaching activities. Further coaching education should be discussed from this interpretation.

3.3. How to expand Abilities of “Sympathy of Movement” in Coaching Education

3.3.1. Philosophical Proposal

Since abilities “sympathy of movement” are shaped by and associated with the organized “passive synthesis,” coaches should learn experienced knowledge and practical knowledge. Through this learning, coaches can sophisticate sympathizing with each athlete’s experience. Furthermore it helps to deeply consider an advice and makes a training program to inspire each athlete’s consciousness. On the base of this learning perspective, this study further discusses coaching education in the following.

To learn experienced knowledge and practical knowledge, several previous studies offered importance of informal education like the position of

assistant coach, who support experienced coach's session (Lyle, 1999). To date, observing experienced coach's session remains primary sources to learn practical knowledge (Cushion, 2001; Gilbert & Trudel, 2001). Especially novice coaches can learn the behavior of experienced coach (Cushion et al., 2003, 217). Similarly, Bloom (2013) also pointed out mentoring, by experienced coaches, expands assistant coaches' practical knowledge and skills and it is a core component of professional responsibilities of more experienced coaches. Further they can deeply interpret meaning and value of this behavior through communicating with experienced coach. In the case of learning experienced knowledge and practical knowledge regarding "sympathy of movement," it is important to deeply inquire their intuition based on their experienced knowledge and practical knowledge. This is because "sympathy of movement" is invisible phenomenon and it is impossible to interpret their knowledge through only observing their coaching session. Regarding this learning, this study indicates importance to that learn the difference between external and internal standpoints on performance. This is because a gap exists between an observed performance from an external standpoint and an athlete's performance from an internal standpoint. For

instance, in jumping performances in athletics, we tend to interpret the take-off motion, when putting the take-off leg on the ground, from an external standpoint (Schmolinsky, 1978; Killing, 1993; Tidow, 1993). However, jumpers plan their take-off motion before putting the take-off leg on the ground from an internal standpoint (Muraki, 1993, 975). If a coach lacks this experience and knowledge, they cannot project their consciousness into an athlete's performance and interpret others' internal experiences.

Unfortunately, present coaching education however places a heavy emphasis on formal education than informal education from perspective of systematization. Therefore this study emphasizes on importance to positively incorporate not only formal education but also informal education into the present coaching education or certification system. In order to incorporate this proposal, it is important to match an experienced coach's and an assistant coach's coaching philosophy through matching opportunities. Rathwell et al (2014) discussed the relationship between experienced coaches and assistant coaches from coaches' perspective. As the result, they pointed out the importance of the loyal to experienced coaches' philosophy to expand practical knowledge and skills.

However many coaches, who look for their mentor, rely on their personal connection and this exploring is limited in their personal connection. In order to support a good matching, we should make a good matching system in practical coaching education. This study considers that this system should be constructed by sport association because each person belong in this association and they can connect each coaching philosophy.

3.3.2. Researching support to close up invisible athlete experience

This study furthermore offers philosophical proposal to researchers who are specialized Husserl's Phenomenology. On the based of phenomenological reduction, researchers can close athletes' experience. These achievements help learning practical knowledge of coaching.

In order to interpret athlete experience, researchers should focus not on asking their experience using prescript phases and range in performance analysis but asking their experience by a phase in each athlete's individual viewpoint. It means researchers should try to sets aside judgments against natural attitude in performance analysis. This is because researchers focus on athlete's experience,

his or her consciousness and sense during performance is should be interpreted from a phase in each athlete's individual viewpoint. Against this topic, phenomenological approach using description or interview is one method to interpret it because this approach has a base to suspend natural attitude and interpret first person's experience in pure consciousness (Finlay, 2009; Martinkova and Parry, 2011). However "phenomenological research makes our field difficult for novices to access" (Finlay, 2009, 7). For example, some researchers seem to try interpreting athlete's experience using prescript phases and range in performance analysis. On the above present situation, this study points out since Husserl's Phenomenology is base in previous studies, which focuses on performance phenomenon (kaneko, 1987; Meinel, 1981), researchers using phenomenological approach should return to the base and deeply interpret phenomenological concept and method in order to provide correct information to coaches.

4. Conclusion

In the 2nd chapter, this study explored practical coaching education focusing on “sympathy of movement.” In order to discuss practical coaching education, this study especially highlighted three topics: (1) what is the phenomenon “sympathy of movement” through the first to third discussions, (2) how the coach enables “sympathy of movement” using three coaching activities through the fourth discussion, (3) how to expand ability of “sympathy of movement” in coaching education through the final discussion.

Regarding (1) what is the phenomenon “sympathy of movement,” this study firstly discussed this phenomenon using schemas of natural science. The adequacy of this schema is discussed regarding whether coaches can directly understand athletes’ consciousness. However, this is impossible because an athlete’s consciousness is interpreted through an image of performance and coaches cannot directly experience an athlete’s performance. This study further discussed this phenomenon using the schemas of Husserl’s Phenomenology. The adequacy of this schema is discussed regarding whether coaches can interpret athletes’ experience in a subjective belief. In this case, if coaches misinterpret an

athlete's consciousness, there is nevertheless a belief that would go against the athlete's experience. Therefore, the phenomenological schema can be used to interpret the phenomenon "sympathy of movement." On the base of the phenomenological perspective, this study furthermore deeply discusses a horizon of belief in terms of the relevance of overt intuition to an athlete's experience and an organized "passive synthesis." Through this discussion, this study pointed out that the phenomenon "sympathy of movement" is interpreted using the concept of "association," which associates a coach's past experience of performance with a belief that would go against the athlete's experience.

Regarding (2) how the coach enables "sympathy of movement" using three coaching activities: the observation of movement, "inquiring," and "virtual self-movement," this study discusses these activities through the concept "association." As the result, this study pointed out three coaching abilities in the phenomenon "sympathy of movement" are shaped by and associated with the organized "passive synthesis."

Regarding (3) how to expand abilities of "sympathy of movement" in coaching education, this study pointed out importance to learn experienced

knowledge and practical knowledge regarding abilities “sympathy of movement.”

In order to learn this knowledge, this study offers proposal to incorporate informal coaching education like a position of assistant coach. This is because, through this position, coaches or students can learn the behavior of experienced coach (Cushion et al., 2003, 217) and further can deeply interpret meaning and value of this behavior through communicating with experienced coach. Unfortunately, present coaching education however places a heavy emphasized on formal education than informal education. In order to incorporate this proposal into present coaching education, this study it is importance to make a matching system assistant coaches and experienced coaches. This system should be constructed by sport association because each person belong in this association and they can connect each coaching philosophy.

Note

- 1) Meinel (1981, 142) indicated that a practice of “sympathy of movement” has the possibility to expand coaching experience, and coaches and physical teachers can acquire certainty and can plan their coaching through interpreting athletes’ experiences.
- 2) For coaching experience, Muraki (1993, 976) emphasized the importance of focusing on athletes’ consciousness during performance. This is because, in practice situations, problems of performance are often founded in an athlete’s consciousness of performance, without there being physical conditioning problems.
- 3) “Inquiry” is the questioning method used to interpret overt and potential consciousness during performance. To do this, coaches and physical teachers should constantly ask the meaning of motions in performance and consciousness during performance.
- 4) Based on an observed performance, “virtual self-movement” is to virtually imagine this performance processes from a coaching standpoint.
- 5) Regarding the reason of categorizing three activities in “Sympathy of

Movement”, Kaneko (2005, 126) pointed out even if coaches get information using the observation of movement and “Inquiring,” it does not mean interpreting athlete’s experience. This is because it is only objective material and does not lead to interpreting the athlete’s experience. In order to interpret athlete’s experience, “Virtual self movement” should be practiced, which focuses on the athlete’s experience from the coach’s internal standpoint.

- 6) During the observation of movement, experienced coaches can sympathize with an athlete’s performance from a coaching standpoint and analyze performances, such as jumping, running, and throwing (Meinel, 1981, 176).

Using this sympathy, they can consider advice for each individual.

- 7) In this consciousness, the movement process is interpreted as overlaps of past, present, and future processes. This internal phenomenon is called “the consciousness of internal time” (Husserl, 2001, 85). Thus, phases in an athlete’s internal viewpoint are captured as the overlap structure, and they differ from the objective viewpoint.

- 8) Regarding an implicit assumption of all psychological discussions in classic period, Merleau-Ponty (1951/1997, 171–172) highlighted that “psychological

actions or psychological things are given something,” and we cannot access subjectivity in another’s mind. In contemporary psychology, phenomenon of sympathy is interpreted using the “theory of mind” or “simulation theory” (Goldman, 1989; Gordon, 1986). These theories also share the implicit assumption that others’ mind is hidden (Gallagher and Zahavi, 2008, 183).

9) Regarding the phenomenon of sympathy, Merleau-Ponty (1951/1997, 172)

indicated that “I see you combining bones and flesh. I cannot understand your thinking even if you are here. I have to imagine and interpret from a witnessed sequence of physical expressions such as facial expressions, gestures and words.” Similarly, since coaches cannot directly understand an athlete’s consciousness, it is impossible to interpret the phenomenon “sympathy of movement” using the schema of subjectivity and objectivity in natural science.

10) This is because even if a person misunderstands substantiality in objectivity,

there can be no doubt about an interpretation being a subjective belief in transcendental subjectivity (Husserl, 2012, 54).

11) This concept is called “epoché” (Husserl, 1979, 139). It is to suspend judgments against natural attitude (*natürliche Einstellung*) about world existence. Based

on this concept, a cognitive phenomenon is interpreted from a pure consciousness using a transcendental attitude.

12) In this study, understanding and interpreting have different meanings. In a case of cognition in objectivity, since there is a true and false cognition of substantiality, the cognition is judged using understanding or misunderstanding. On the other hand, in a case of cognition in “Transcendental Subjectivity,” since a true and false cognition does not exist and there is only subjective belief to interpret a subject, this cognition is regarded as an interpretation.

The 3rd Chapter: The role of Researchers and Issue regarding

Knowledge Transfer

1. Introduction

1.1. The Role of Researchers

The 3rd chapter focuses on the role of researchers and an issue of “knowledge transfer.”

The main mission of researchers in performance analysis is to identify ideal physical position, motion, and timing during performance as key factors enabling high performance (Lees, 2003, 713) through collecting movement dates, which are evaluated and filmed by camera or analysis tools, i.e., as per the above (Bartlett, 2001, 123). Researchers objectively divided jump performance into seven phases: ① the straight run-up, ② curve of the run-up, ③ take-off preparation, ④ take-off, ⑤ jump for the bar, ⑥ clearance, and ⑦ landing phase (Figure 8) .

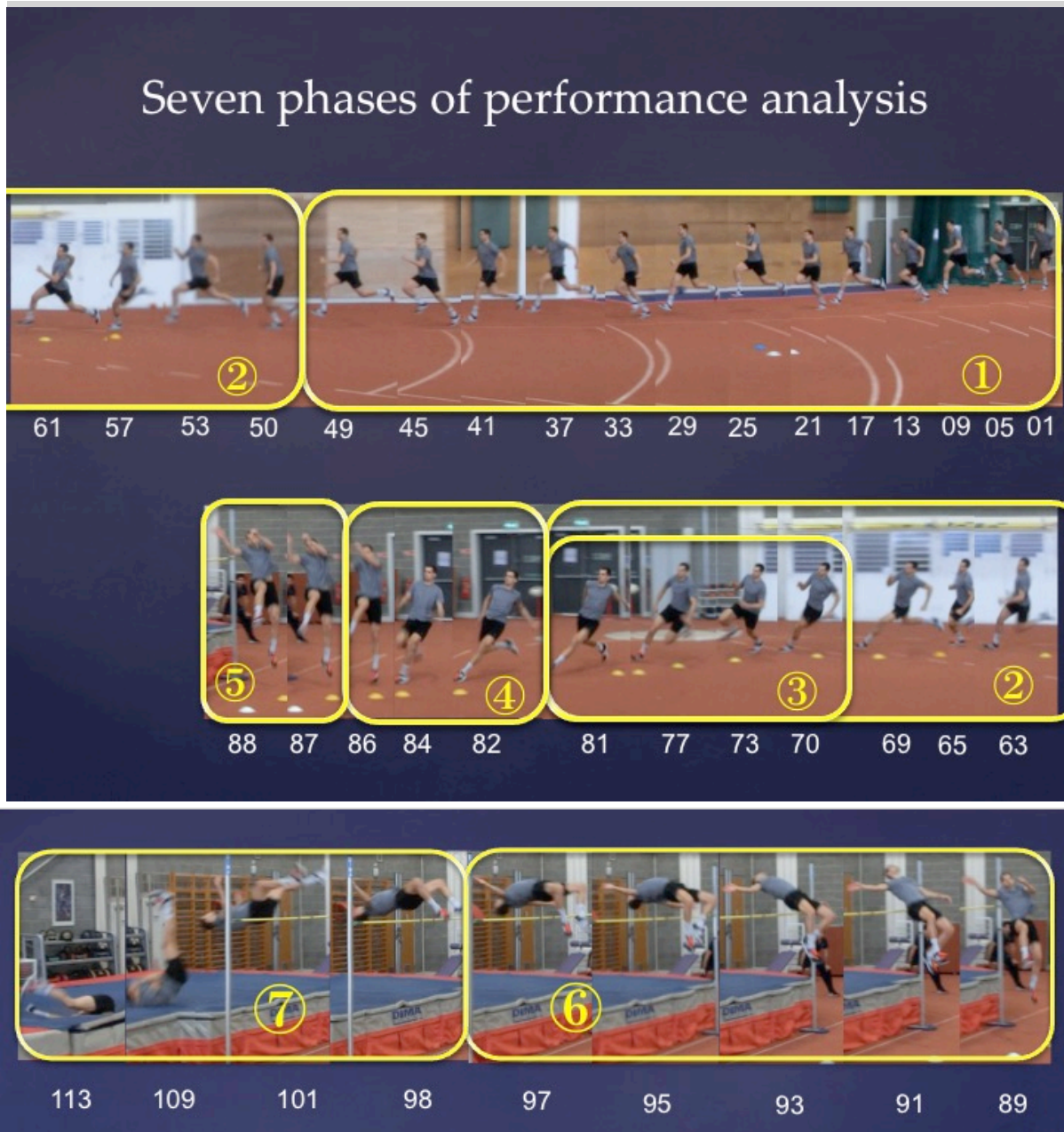


Figure 8: Seven Phases of Performance Analysis

The run-up is captured from the first step in the run-up to the last stride for the take-off (Schmolinsky, 1978) and comprises the straight and curved run-up phases from the objective form (Wilt et al., 1978). The straight run-up was

cropped from 01 to 49 and the curved run-up was cropped from 50 to 81. The take-off preparation phase: From the researchers viewpoint, the range of the take-off preparation phase was captured from the penultimate step to the last stride for the take-off phase (Tidow, 1993). The take-off phase occurs when the athlete places a take-off leg on the ground (Wilt et al., 1987). Tidow (1993) described the take-off phase as extending from placing a leg on the ground to straight physical postures on the ground. The jump for the bar phase can be captured from a take-off leg leaving the ground to the body crossing the bar. The clearance phase is from the curve of body to the peak of this movement. The landing phase is from the release of the curve of the body to landing on the mat (Tidow, 1993). Therefore, in Figure 8, the jump for the bar phase was cropped from 87 to 88. The clearance was cropped from 89 to 97 in Figure 8. The landing phase was from 98 to 113.

On the base of above phases, researchers identified scientific knowledge. For example, Schmolinsky (1978) and Wiltet et al. (1978) pointed out that the inner position of center mass during the curved run-up phase helped in achieving the Fosbury Flop. Dapena and Chung (1988) suggested that acquiring high speeds

in the run-up phase aid the expansion of vertical jumping force. Tidow (1993)

focused on motion during each phase and clarified model techniques for each

phase (Table 2). Ritzdorf (2009, 33) focused on clarifying the universal technique

during take-off preparation phase and pointed out the importance of keeping the

knee vertical position on the ground during the penultimate stride (Figure 9).

Watanabe et al. (2009) described types of techniques from the viewpoint of motion

characteristics in each phases.

Table 2: Model Technique Analysis Sheets (Tidow, 1997)

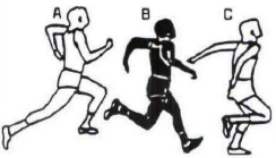
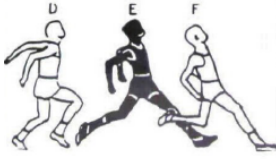

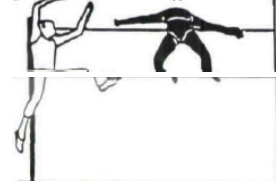
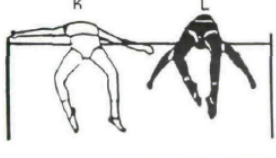
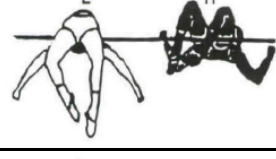
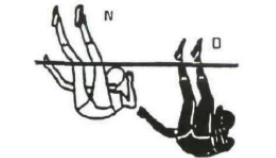
| FOSBURY FLOP | PHASE | Reference | Criterion & Assessment |
|---|-----------------------------------|-----------|--|
|  | 1. Approach: Prenultimate Stride | A 1 | Foot Plant Contact with ball if the foot in curved path |
| | | A 2 | Body /Trunk Inclination/slight forward lean |
| | | A 3 | Arms Counter arm swing |
| | | B 4 | Front supp Heel lead |
| | | BC 5 | Supp. Knee Yielding |
| | | B 6 | Rear Arm Held Back |
| | | C 7 | Arms Parallel/behind trunk |
|  | 2. Approach: Last Stride | D 8 | Trunk Upright |
| | | D 9 | Supp. Leg Horizontal pushing action |
| | | DF 10 | Take off leg Fast & active plant/pre-tensioned/long |
| | | E 11 | Arms Starting double swing |
| | | F 12 | Body /Trunk Inclination/backward lean |
| | | F 13 | Foot Plant Through' the bar /optimal position |
|  | 3. Take off | FG 15 | Take off leg Minimal and passive tieling |
| | | FH 16 | Arms Active and double arm swing |
| | | FH 17 | Free Leg Active Knee drive |
| | | GH 18 | Free knee Opening |
| | | H 19 | Arms Blocked/bent |
| | | H 20 | Shoulders Lifted/jorizontal |
|  | 4.1. Rising | I 22 | Head Looking down onto the bar |
| | | I 23 | Outside arm Leading |
| | 4.2. Opening | I 24 | Body Rotation about longitudinal axis |
| | | IK 25 | Arms Opening |
| | | IK 26 | Free leg Lowering |
| | | IK 27 | Back Parallel to bar |
| K 28 | Head Backward movement | | |
|  | 5. Over extension (Arching) | KL 29 | Arms Extended/driving action |
| | | M 30 | Hips Overextended/elevated |
| | | M 31 | Legs Bent/directed downward |
| | | M 32 | Back Arched |
| | | M 33 | Head Layed back |
|  | 6. Closong (Unarching) | LM 34 | Longit axis At right abgles to the bar |
| | | LM 35 | Pelvis Active lowering |
| | | M 36 | Head/trunk Re-active counter movement |
| | | M 37 | Hips Active bending |
| | | M 38 | Legs Synchronous active knee extension |
|  | 7. Preparation for landing | M 39 | Arms Bending |
| | | NM 40 | Head Raised |
| | | NM 41 | Hips Bent/Blocked |
| | | NM 42 | Arms Spreading |
| | | NM 43 | Body In L position |
| NM 44 | Legs Extended/directed upwards | | |



Figure 9: Comparison of the shin of the same athlete in two competitions

(2.34 m clearance and 2.27 m foul jump) (Ritzdorf, 2009)

1.2. The Issue of Knowledge Transfer

Coaches generally must constantly refine their ideas by learning in order to coach an athlete and team to high performance, (Werthner & Trudel, 2006); they are motivated by their current practical coaching issues (Reade et al., 2008b). Several previous studies have researched sources of learning materials among coaches. Scientific journals however are not included in preferred sources of materials. Generally, coaches demand practical knowledge for specific coaching issues regarding an athlete or team (Williams & Kendall, 2007, 1578). Scientific journals offer limited knowledge in scientific fields like physiology and psychology

(Irwin et al, 2005; Williams and Kendall, 2007; Reade et al., 2008a). Such sources focus on scientific issues, state the settings for pursuing evidence, and produce scientific knowledge. Therefore, scientific journals are not proper learning sources for coaches' practical needs; coaches demand not scientific but practical knowledge meeting their specific coaching issues (Williams and Kendall, 2007; Reade et al., 2008a). Even if coaches attempt to obtain practical knowledge through these sources, it is difficult for them to understand scientific writing (Reade et al., 2008b, 342). Therefore coaches are looking to fill the gaps in their scientific and practical knowledge. However how researchers should transpose scientific knowledge as bearing practical situation has yet to be clarified. This chapter addresses this question through philosophical discussion comparing scientific and practical knowledge.

2. Discussion Process

This study divides discussion into two parts. The first part focuses on athletes' performance experience from phenomenological perspective and explores practical perspective and knowledge. This study secondly focuses on the difference between science and practical knowledge. On the base of this difference, this study explores how researchers should transpose scientific knowledge as bearing practical situation.

3. Discussion

3.1. Practical Perspective based on Performance Experience

Several previous studies explored practical perspective and knowledge by highlighting elite athletes' performance experience. These opinions are divided into two opinions. The first is that elite athletes automatically or unconsciously perform their performance. Therefore there is not perspective and knowledge. The second is that elite athletes perform their performance with conceptual and thematic consciousness. This study explores two opinions in the following.

Regarding the former opinion, Dreyfus (2002) distinguished five stages of motor learning according to proficiency and consciousness. Novices, to acquire a new skill, need to focus on how to move their bodies. Elite athletes, however, automatically and intuitively perform unconsciously, instinctively moving and judging. Dreyfus interpreted these phenomena from the standpoint of neuroscience: "As the brain of performer acquires the ability to discriminate among a variety of situations, each entered into with concern and involvement, plans are intuitively evoked and choosing those plans or deciding to adopt that perspective" (Dreyfus, 2002, 371). This interpretation is supported by experiments using fMRI (functional magnetic resonance imaging). Rosset et al. (2003) and

Milton et al. (2007) comparatively measured brain blood flow volume for novice and elite athletes using fMRI. Elite athletes' brain blood flow volume was less than novices'; these phenomena were connected to unconscious performance in elite athletes. Dreyfus's opinion is also supported by psychological ideas like "being in the zone" and "flow" (Csikszentmihalyi and Jackson, 1999).

However, are elite athletes indeed unconsciousness in performance?

The later opinion pointed out two questionable points: is there a direct relationship between neurological phenomena of brain blood flow volume and philosophical phenomena of qualitative consciousness? and can neuroscience using fMRI be used to interpret qualitative consciousness? Jeannerod & Frak (1999) respond that since we cannot directly interpret qualitative consciousness from brain blood flow volume, there is a logical gap between brain blood flow volume and qualitative consciousness. To fill this gap, neuroscientists should put forward a new theory to directly connect qualitative consciousness to brain blood flow volume. Brich (2010, 276) wrote "If neurosciences want to say something about the mind of the athlete, they'll need a base neuroscientific theory of mind. If not, it will remain just neuronal talk." Such a theory however has yet to be

published. Therefore, even if there are differences in the phenomena of blood flow volume in performance between novice and elite athletes, it is impossible to directly connect them to elite athletes' performance as automatic performance from the standpoint of neuroscience.

Furthermore, in a philosophical study, Breivic (2013) discussed elite athletes have conceptual and thematic consciousness in performance. Especially in the case of closed sports like the high jump and gymnastics, elite athletes tend to rehearse a few key points before performance to perform their task while monitoring these key points. For instance, "in the high jump one can observed the athlete rehearsing mentally with small bodily movement before the jump in order to prepare and take in the necessary cues" (Brevik, 2013, 6). Similarly, Greg Joy, a high jump medalist at the 1976 Summer Olympics in Montreal, described his rehearsal of key points in the beginning of the run-up and run-up flow before performance, performing these key points during performance (Martin et al., 1982). Since elite athletes are conscious of a few key points in performance, they are not entirely automatic and unconscious. This means we cannot interpret athlete's consciousness only from consciousness during performance but must

examine other relations, including rehearsal and training.

While elite high jumpers focus on a few key points and monitor them during performance, they do not focus on others: how to move their legs, arms, and bodies (O'Shaughnessy, 1995, 178). However, this is not interpreted as being unconscious but a tacit side of consciousness: "tacit knowledge" (Polanyi, 1966) and "a dark zone" (Merleau-Ponty, 2002, 115). This is because, if necessary, they can focus on how to move their bodies with awareness (O' Shaughnessy, 1998, 175). When they face difficult or dangerous situations, they can transfer how to move their body into their awareness (Breivic, 2013). Furthermore, the tacit side is made possible by conscious and deliberate practice (Brevik, 2013, 6); meaning and value can be reflected in the tacit side through their reflection in consciousness, experience, and philosophy regarding their performance. For instance, Greg Joy described how he focuses on run-up as a key point for his best performance. Nevertheless, when he was asked about his skills on the tacit side, such as how to move his body, he answered in detail, in terms of skill, meaning, and value, according to his consciousness, experience, and philosophy of his performance (Martin et al., 1982). Greg Joy's answer is neither a fake story

crafted by the unconsciousness nor a story limited to consciousness during performance. It is a story reflected by his consciousness, experience, and philosophy regarding his performance.

Through this discussion, this study captures practical perspective and knowledge as conceptual and thematic.

3.2. Comparing scientific and practical Perspectives

From scientific perspective, researchers objectively divide performance into several phases and objectively identify scientific knowledge from. On the other hand, practical perspective and knowledge are interpreted as conceptual and thematic consciousness. In this gap, researchers would be able to discuss practical knowledge deeply, beyond their limited scientific fields. To fill gaps in knowledge, researchers should focus not on an objective phenomena in their scientific field and scientific knowledge itself but use a holistic sense, including athlete consciousness, experience, and philosophy in performance, from their scientific experience. If this effort is not made, it is not expected to be a preferred method of “knowledge transfer” for coaches’ demands. This is because it would be only scientific talk.

Further, experienced coaches, who have close relationships with sport scientists, tend to explore practical knowledge not only through communicating with coaches but also from coaching clinics or consulting with researchers (Cushion et al., 2003; Irwin et al, 2005 ; Williams and Kendall, 2007). This means that researchers are able to contribute to experienced coaches through coaching clinics and directive consultation. However communicative opportunity of interaction between researchers and coaches is limited. Therefore we should make a chance to connect each person. For instance, a matching system between researchers and coaches might be useful in order to inquiry coaches' practical issue to researcher on daily basis. In this case, the researchers focusing on performance analysis cannot deal with all practical issue in practical situation. For instance, they cannot deal with psychological issue and physiological issue in practical situation. It means coaches hope to make their practical issues with various sport scientist in sport science field. Therefore, in order to make a good matching system, we should deeply discuss coaches' perspective in practical situation. In addition, if we make this system, it is important to focus on relationship between each sport associations and universities as researching

institutions because each can become the contact to connect coaches and researchers.

4. Conclusion

In order to make the role of coach in the elite-coaching framework more efficient, this study focuses on issue of “knowledge transfer” from the difference between scientific and practical knowledge.

This study indicated that researchers would be able to discuss practical knowledge deeply, beyond their limited scientific fields. To fill knowledge gaps, researchers should focus not on an objective phenomena in their scientific field and scientific knowledge itself but use a holistic sense, including athlete consciousness, experience, and philosophy in performance, from general standpoint. This study furthermore indicated an importance of a matching system or communicative opportunity between researchers and coaches. However this opportunity is limited. If we make this system, it is important to focus on relationship between each sport associations and universities as researching institutions because each can become the contact to connect coaches and researchers.

The 4th Chapter: General Discussion

This study mainly explored the elite-coaching framework by foreign researches. In foreign countries, the role of coaches and researchers more became specializing than Japan. However the more each role become specialized, the more it is difficult to be generalization between each perspective. “Sympathy of movement” and knowledge gap are one of the example issues with specialization of roles. Against these issues, this study points out two keys to make a cooperative relationship between researchers and coaches by highlighting philosophical perspective. The first key is the mutual recognition between each perspective. Even if coaches and researchers lead difference knowledge from different perspective, they cannot deny each opinion because the correct understanding does not existence in the world. Therefore they can enter on the elite-coaching framework from the mutual recognition. The second key is general discussion from each perspective. Coaches and researchers should discuss each opinion, beyond their specialized perspective in order to share idea to coach an athlete and team to high performance. On the base of these keys and ideas in two chapters, this study hopes making the elite-coaching framework more efficient.

Furthermore, in order to explore the elite-coaching framework in detail, future study should address two questions. The first is to explore elite athletes' performance experience from athletes' perspective. This is because the athlete is also one of the centerpiece in this framework. They not only passively involve coaches and researchers but also positively involve them. If researchers will focus on elite athletes' performance experience and perspective, phenomenological approach is the one approach to close up it. On the base of Phenomenology, they should set aside judgment of prescript phases in natural science.

The second question is about the elite-coaching framework in Japan. The large numbers of the elite-coaching frameworks are formed by the researcher, amateur coach, and amateur athlete. In Japan, even if an athlete is Olympian, she or he generally belongs to a company and continues her or his challenging. In the case of amateur coach, the role of coaches is often played by PE teachers in school, researcher in university, and company staff. The author of this study however pointed out there is difference between the educational specialty of teacher and coaching specialty of coach. Kubo (1990) focused on the role of coach and clarified three roles of coach: (1) learning coaching skills, (2) sophisticate these skill, and

(3) coaching athletes or teams to high performance and winning competition.

Therefore the main value in the role of coach is to focus on winning and it does not include the value as the role of educator. Even if a PE teacher learns coaching and coaches an athlete or team, her or his profession is coach. In addition, this teacher who learned coaching, tends to retain educational specialty in her or his coaching.

Therefore the author of this study pointed out the importance to back to the concept of the role of coaches and athletes in elite-coaching framework.

To address the issue of role conflict, several previous studies indicated proposal: (1) to employ coaches from social sport clubs at local area (Sage, 1987, 224) and (2) to put sport opportunity after school to social sport clubs at local area (Kneer, 1987, 28-29). Several schools and universities already carried out them.

These ideas however are not always welcome. This is because sport opportunities after school and educational value by PE teacher is already have taken root into our sport culture. It means that several people hope to keep present sport culture.

In contrast, several researchers pointed out the issue “intra role conflict” (Lock & Massengale, 1987, 174) of PE teachers. In this conflict, one of the parents hopes a PE teacher focuses on coaching and value of winning the competition. Another

hopes that the PE teacher focuses on education and educational value to teach social abilities. The PE teacher however cannot fulfill each demanding because it is conflicting allegations. Therefore the large number of PE teachers concerns “intra role conflict.”

Against above situation, several sport associations like soccer and basketball implemented professionalization from amateur and addressed above issue. In amateur system, each team exists in a company. In the new system, each team carried out independence from each company and making a new company by their self. They should run their team by making an independent living. As a consequence, this paradigm shift creates employment of professional coach and athlete. In addition, they also make a junior and youth academy as a position of substructure against top team. This substructure has a possibility to address issue regarding role conflict of PE teacher because junior and youth team also run by professional coach. If one parent hopes the value of coaching against sport, this parent can chose not sport at school but this academy.

Athletics however has yet to be professionalization. In order to implement it and run professional team, we should discuss different ideas from different

viewpoint of soccer and basketball because it is individual sport. Since the large number of games hold on home stadium of each team, each soccer and basketball team can earn money to keep their challenging from the sale of entrance fee of stadium, goods, a fun club. Athletics however cannot do that. Instead of it, several competitions of Athletics like a diamond league prepare prize money to winner. Winner can keep her or his challenging. Other athlete should make an endeavor to make a sponsorship with companies. From a prize money and sponsorship is possible to offer an opportunity of professionalization to limited athletes. However several athletes, who have great talent, might retire from lack of money. Therefore we should deeply discuss a professional system of Athletics with future studies.

The 5th Chapter: Conclusion

To make the elite-coaching framework more efficient, this study explored the role of coaches and researchers and discussed their present issues through the 2nd and 3rd chapter.

Through philosophical discussion by Husserl's Phenomenology, the 2nd chapter explored the role of coaches and the issue of practical coaching education highlighting "sympathy of movement" (Mitvollziehen der Bewegung) (Meinel, 1981, p. 127). To date, each sport university and each sport association offers certification and education programs in order to learn practical coaching knowledge and skills in coaching situation. However coaches and university students in sport universities cannot learn practical knowledge like practical management skill, making strategy to coach a specific athlete or team, decision making-skill, and "sympathy of movement" through the previous formal education like indoor lecture or skill practice with sport activities. Therefore they cannot deal with the practical complex nature from only learned idea and theory at university or certification programs. Against this present issue, this study emphasized on importance to positively incorporate not only formal education at university but also informal education like a position of assistant coach into the

present coaching education or certification system. Through this position, they can learn experienced behaviors, ideas, and philosophy in practical coaching. Therefore this study offered a proposal to incorporate informal education into the present coaching program.

Through philosophical discussion by Husserl's Phenomenology, the 3rd chapter explored the role of researchers and the issue of "knowledge transfer" (Williams and Kendall, 2007; Reade et al, 2008a) by highlighting the knowledge gap between scientific knowledge and practical knowledge. In the elite-coaching framework, researchers, specializes performance analysis, has two missions. The first mission is to clarify scientific knowledge by performance analysis. The second mission is to transfer this knowledge to coaches and athletes.

Generally, coaches demand practical knowledge for specific coaching issues regarding an athlete or team (Williams and Kendall, 2007, 1578): they are motivated by their current practical coaching issues (Reade et al., 2008b). Several previous studies however indicated that since the researcher clarifies scientific knowledge, based on -ology as academic perspective and cannot deal directly with scientific knowledge as bearing on practical coaching (Bartlett, 2001; Franks,

2002; Theodoros et al, 2012, 472). This is the issue of “knowledge transfer.” In order to address the issue of “knowledge transfer,” this study pointed out two key points. (1) Researchers should not only focus on scientific knowledge by performance analysis but also transpose this knowledge as bearing on practical coaching situation, by interpretation athletes’ consciousness, sense, philosophy. (2) Researchers should interpret coaches demanding. If this effort is not made, it is not expected to be a preferred “knowledge transfer” for coaches’ demanding.

Furthermore, In order to make “knowledge transfer” more efficient, it is important to share practical issue in coaching situation. However communicative opportunities between researchers and coaches are limited. Therefore we should make a chance to connect each person. For instance, a matching system between researchers and coaches might be useful in order to inquiry coaches’ practical issue to researcher on daily basis. In addition, coaches might hope to communicate with various sport scientists in sport science. This is because, a researcher who specialize performance analysis cannot deal with psychological issue and physiological issue in practical situation. Against this request, it is important to focus on relationship between each sport associations and universities as

researching institutions because each institution can become the contact to connect coaches and researchers. These are philosophical ideas to address the present issue of “knowledge transfer” in the role of researcher.

I hope that future studies will make the elite-coaching framework more efficient through philosophical proposal in this study.

Appendix

This appendix focuses on one elite high jumper, who has been a medallist at the Olympic Games and the World Indoor Championships, and his feedback against seven phases of performance analysis. In order to clarify them, this study uses ideographic approach based on Phenomenology in the following.

1. Ideographic Questionnaire

This study designed an ideographic questionnaire using a phenomenological base, incorporating: (1) phenomenological reduction against natural attitudes; and (2) description regarding experience in phenomenon; and (3) the search for essences. Since this study focuses on the seven phases in the athlete's feedback of the seven phases using his experience, the athlete should suspend knowledge regarding the objective seven phases in performance analysis and then focus on his individual viewpoint using his own experience. For this reason, before conducting this questionnaire, I explained that the questionnaire focused on his feedback, which is based on one's own consciousness and experience during performance. In addition, the study again explained the aim using the text in the questionnaire. Using these explanations, the study tried to suspend his

natural attitude toward performance analysis. On the base of this, I design of the ideographic questionnaire is with the performance movie, which featured the jump with all steps of the approach, tracked by a camera at 24 fps (Casio, EXILIM EX200), and a question forming phenomenological basis. The questionnaire was answered using an electronic device (MacBook Air).

The question asked for a range per phase and was answered using expression using non-verbal description. The second question asked about meaning and value against per phase and it was answered using expressions using verbal description. In the following, this study explains each question in detail.

The question: The first question asked the athlete's performance movie to be cropped into different phases using his feedback, based on his experiences during performance. The instruction was written as follows:

“Please view the attached movie and crop it into seven phases as described in the introduction. Crop it into seven phases according to your personal

feelings during performance (overlaps are possible). If you are not aware of your thoughts during performance, please reflect about them.”

Furthermore, in order to crop per phase using the athlete’s feedback using consciousness and sense during performance, the question was answered using the following two steps:

- (1) To observe his performance movie using actual speed¹⁾ and imagine his consciousness and sense for the jump performance (Figure 10).
- (2) To reflect per phase from his consciousness and sense during jump performance and crop per phase according to this movie (Figure 11).

During these processes, the author of this study further tried to ask the athlete to crop per phase from the whole performance movie every time in order to prevent cropping per phase from the relevance of each phase range.

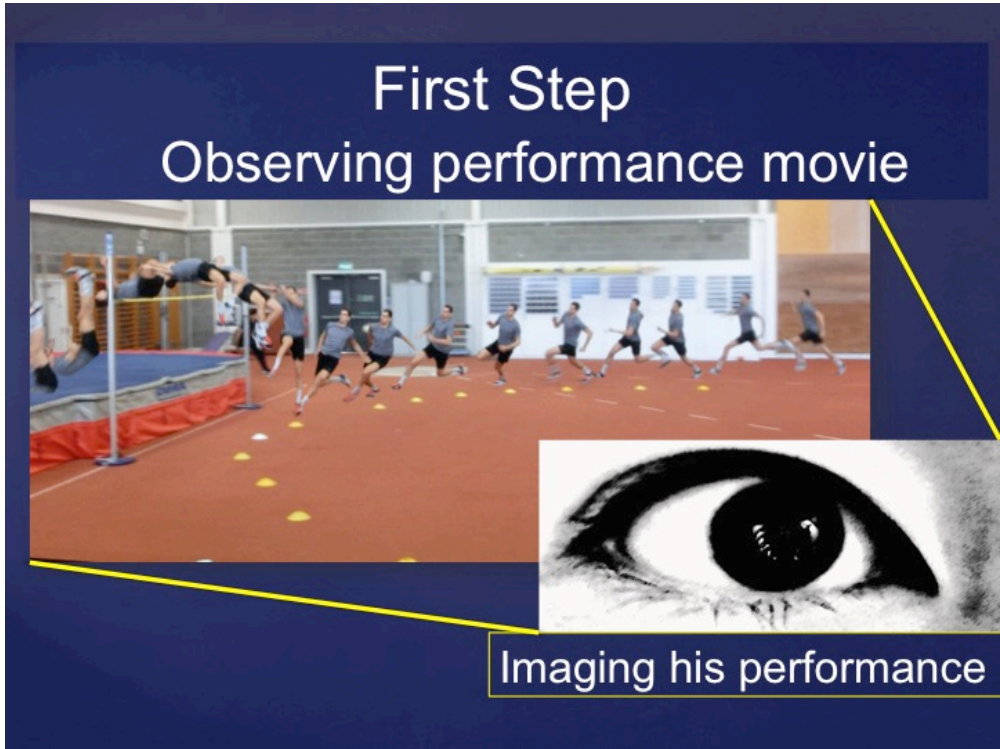


Figure 10: First Process



Figure 11: Second Processes

2. Result

The athlete answered a range of per phase questions and this study put per cropped phase into the following sequenced photos: ① The straight run-up, ② The curved run-up, ③ The take-off preparation, ④ The take-off, ⑤ The jump for the bar, ⑥ The clearance, and ⑦ The landing phase (Figure 4).

In Figure 4, there are two overlapping points. The first overlap is between the straight run-up and the curved run-up phases. The second overlap is between the take-off and the jump for the bar phases. However, there are no other overlapping sections. In addition, there is a blank from 62 to 69.

The Athlete's Individual Viewpoint

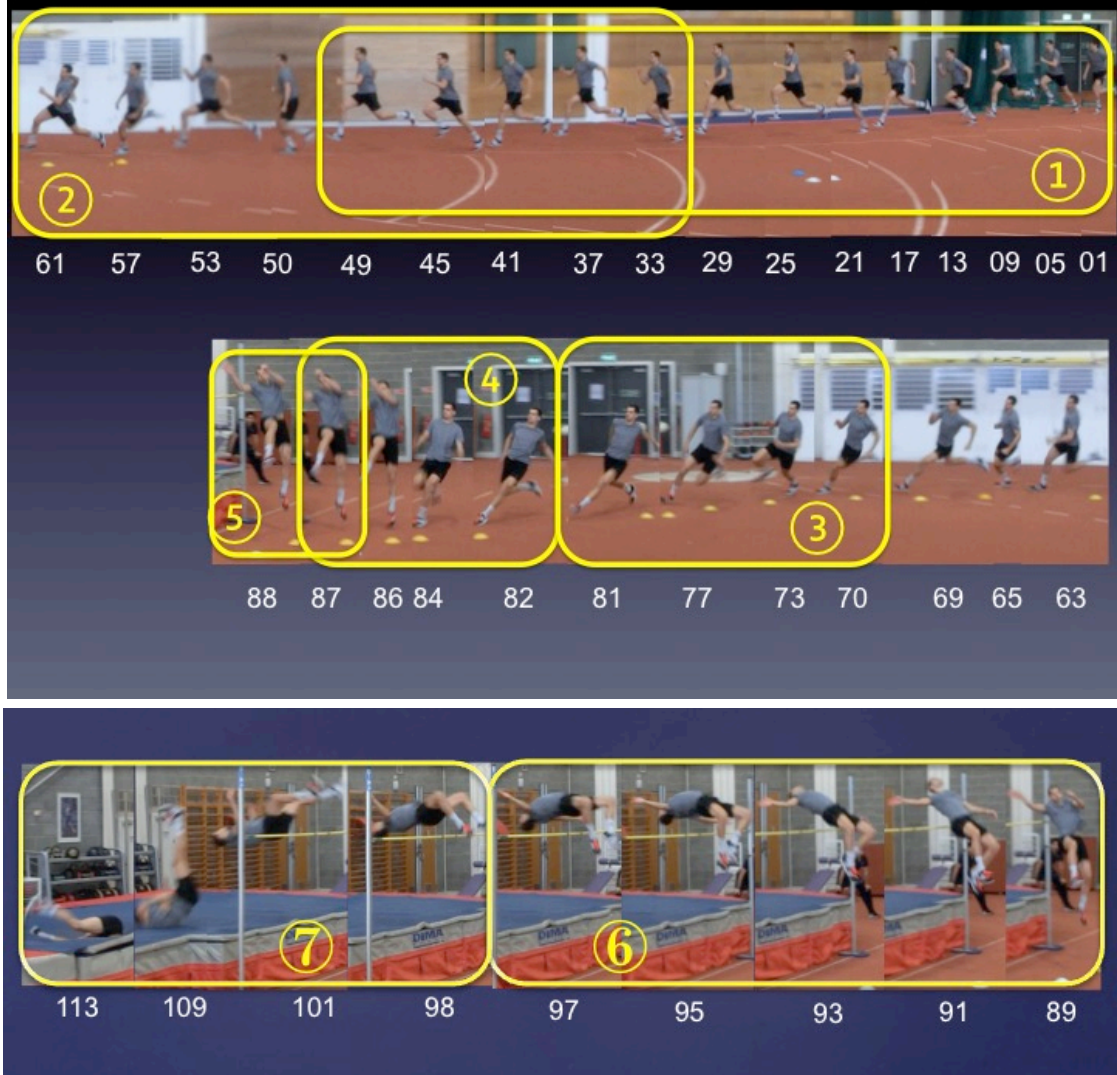


FIGURE 12: Seven phases in athlete's feedback

Notes

- 1) This performance movie should be tracked and observed using actual movement speed. This is because Greg Joy, a high-jump medallist at the 1976 Summer Olympics in Montreal, described that athletes could not take a feedback to the consciousness using photos and slow-motion movie (Martin et al., 1982. 62).

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