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Coaching elite athletes: How coaches stimulate elite athletes' reflection

Per Øystein Hansen ^{*a}, and Svein S. Andersen ^{bc}

^a Department of Cultural and Social Studies, Norwegian School of Sport Sciences, Oslo, Norway

^b Department of Leadership and Organizational Behavior, Norwegian Business School, Oslo, Norway

^c Centre for Training and Performance, Norwegian School of Sport Sciences, Oslo, Norway

* Corresponding author. Email: per.oystein.hansen@nih.no

Coaching elite athletes: How coaches stimulate elite athletes' reflection

This article investigates the coaching behavior of five Norwegian national elite team coaches in cross-country skiing. It identifies how they acted as 'sensegivers' towards the athletes. An important part of this is how coaches, assisted by support personnel, stimulated athletes' reflections in ways that improved the quality of everyday training. It draws upon social and relational aspects of learning within an organizational setting. The theory of mindful organizations, with its emphasis on sensemaking and sensegiving, is introduced to capture how coaches and support personnel can influence athletes' reflections. The article makes both an empirical and theoretical contribution. First, it directs attention to sensegiving as an important element of coaching behavior. Second, it identifies key mechanisms of sensegiving not previously discussed in the literature.

Keywords: coach behavior, sensemaking, sensegiving, reflection, mindful organizations, cross-country skiing, Norwegian elite sports

Introduction

An important part of the sport coaching literature directs attention to coach behavior, illustrating how coaches interact with the athletes to improve the latter's skills and competences (Cushion, 2010; Cushion, Ford, & Williams, 2012; Jones, Armour, & Potrac, 2002; Jones, 2004; Jones, Potrac, Cushion, Ronglan, & Davey, 2011; Ronglan, 2011; Smith & Smoll, 2007; Smoll & Smith, 1984). Several studies have directed attention to how coaches reflect on their own practices (Cassidy, Jones, & Potrac, 2009; Cushion, Armour, & Jones, 2003; Gilbert & Trudel, 2001; Gilbert & Trudel, 2005; Gilbert & Trudel, 2006), while other studies have explored how coaches influence athlete learning as an outcome (Cassidy, Jones, & Potrac, 2009; Hughes, Lee, & Chesterfield, 2009; Toner, Nelson, Potrac, Gilbourne, & Marshall, 2012). However, little attention has been paid to how coaches influence athletes'

reflection as a key mechanism of learning. In line with Goffman's (1974) frame analysis, reflection can be defined as the way athletes perceive and organize experiences. Sometimes coaches want athletes to frame their experiences in ways that increase motivation, commitment, and well-being (Mageau & Vallerand, 2003), whilst respecting the decisions of the coach (Potrac, Jones, & Armour, 2002). In this article, we explore coaching behavior in terms of how coaches influence athletes' reflections so as to enhance learning through fine-tuning training.

Influencing athletes' reflection to enhance reliable learning from experience may be an important element in coaching behavior. To be successful, coaches need to intervene on key elements of reflection. To address this, we introduce the theoretical perspective of 'mindful learning' (Hernes & Irgens, 2013; Weick, Sutcliffe, & Obstfeld, 1999). Building on Goffman's (1974) frame analysis, it directs attention to sensemaking and interpretation as conditions for reliable learning. Sensemaking and interpretation is the key mechanism of reflection. Sensemaking consists of two parallel processes: noticing and framing. What athletes notice depends on the kind of cognitive frames that they hold. Interpretation is an evaluation of what is noticed. Thus, to stimulate athletes' reflection, coaches need to intervene in the sensemaking process. This is called sensegiving, and corresponds to how coaches guide and control the way athletes perceive and interpret training advice (Jones, Potrac, Cushion, Ronglan, & Davey, 2011).

The present study covers the coaching behavior of five national elite team coaches in Norwegian cross-country skiing. It is the sensegiving of the coaches that is the key concern. The study is conducted as a qualitative case study (Yin, 2009). The data come from in-depth interviews with the coaches. In addition, we also interviewed elite athletes and support personnel in order to better understand how the coaching behavior was perceived. The research questions related to, (1) to what extent do national elite team coaches represent

different approaches to sensegiving?; and (2) to what extent do such coaches allow support personnel to act as sensegivers?

The rest of the article is organized as follows. First we present the background, outlining key values within the organizational context of Norwegian elite cross-country skiing. We then explain the concepts of sensemaking and sensegiving, and relate these to the theory of mindful organizations before reviewing the method and research strategy. We then proceed to present and discuss the empirical findings. The findings, in turn, are organized around mechanisms of sensegiving identified in the theoretical analysis. In the final section, we summarize the major findings and discuss some practical implications.

Cross-country skiing within the Norwegian elite sport context

It is important to acknowledge that the national team coach in cross-country skiing operates within a highly organized elite sport system. Olympiatoppen (OLT) has the overall responsibility for elite sport in Norway. It is a centre for competence development, drawing upon scientific expertise as well as experiences from many different sports. The national elite team coach is mainly responsible for training and development. However, OLT coaches with extensive experience from various sports may intervene in ongoing training and development. In this respect, they challenge and support the national team coaches. Through such initiatives, the national elite team coaches are exposed to the institutionalized values and attitudes inherent in the Norwegian elite sport system. These include;

1) The combination of scientific and experience-based knowledge: There is a strong emphasis on experience-based knowledge as the basis for exploiting scientific knowledge. This is reflected in the structure and content of coach education within Norwegian cross-country skiing (Böhlke, 2007).

2) A concern with how knowledge is applied to athletes' individual needs: The experiences of former athletes and coaches are adapted to current needs in planning,

implementing, and evaluating of everyday training within the national team context (Sandbakk & Tønnessen, 2012). Both athletes and coaches, hence, are socialized into an approach where lessons from everyday activities are discussed and shared within and between national teams.

3) A strengthening of athletes' responsibility for their own as well as their team-mates' development: Within the Norwegian elite sport system, as within the Norwegian society, there is strong emphasis on individual responsibility for personal development. Furthermore, making athletes aware of their responsibilities for the development of team-mates is a core value (Andersen, 2012).

4) Ensuring that athletes benefit from the expertise available within OLT: The coach is the leader of the national elite team, and plays a key role in both structuring training activities and actively taking advantage of the support personnel within the Norwegian Ski Association as well as within OLT (Hansen, 2012).

We studied five national cross-country skiing team coaches in the period 2002 to 2011. The coaches were responsible for the men's and women's teams in different parts of this period. We were interested in exploring to what extent the coaches' thinking and actions were consistent with the institutionalized values and attitudes embedded in the elite sport system. As emphasized by OLT, a key aspirational aspect of the system is that athletes transform experiences into knowledge through reflection (OLT, 2011). This is considered a critical factor in achieving individual development. Indeed, Tønnessen and Sandbakk (2012) view reflection as essential to improve the quality of training in cross-country skiing.

The focus in the present article lies in how coaches stimulate and shape athletes' reflection in ways that strengthen reliable learning. This directed our attention towards the concepts of sensemaking (Starbuck & Milliken, 1988; Weick, 1995; Weick, Sutcliffe, & Obstfeld, 2005) and sensegiving (Foldy, Goldman, & Ospina, 2008; Gioia & Chittipeddi,

1991) as key elements of coaching behavior. These concepts highlight the importance of social relationships and interaction in developing mindful reflection and reliable learning from experience. Below we develop the theoretical perspective in more detail.

Theoretical framework: Sensegiving stimulating reflection

Reflection concerns the way experiences are perceived and organized (Goffman, 1974). This involves sensemaking and interpretation. Sensemaking comprises a continuous interaction between framing and noticing (Weick, 1995). Individual frames are cognitive schemes that guide what individuals notice as situational cues when they train. In this sense, they are subjective. Multiple fine-grained frames make it possible to notice more, and thus generate richer data about a situation (Weick, 2007). Sensemaking is ‘*about the ways people generate what they interpret*’ (Weick, 1995, p. 13). People may see the same event quite differently. For example, ‘what is play for the golfer is work for the caddy’ (Goffman, 1974, p.8). Cues may also vary with respect to the vividness of the experience (March, 2010). Noticed cues become feed-back signals, and how actors make sense of such signals depends on the frames that they hold (Snook & Connor, 2005).

Interpretation involves a process of evaluation and a search for significant patterns in relation to expectations guiding behavior; for instance as generated by a training plan. This involves making inferences and judgments that contain delicate trade-offs. Mindful reflection requires the ability to critically question assumptions governing both sensemaking and interpretation. In such situations, learning from experience implies the continuous testing and refining of existing knowledge (Weick & Sutcliffe, 2001). Thus, mindful reflection is about both confirming and disconfirming interpretations. The degree to which athletes are able to engage in mindful reflection is essential for them to learn reliably from experience, and to provide the coach with detailed and relevant knowledge about how they respond to different training activities (Jordan, 2009; Weick, Sutcliffe, & Obstfeld, 1999).

Given the challenges related to mindful reflection, a coach's ability to influence reflection through sensegiving is essential to improve the quality of training. Sensegiving is about influencing people's perceptions, attitudes, and beliefs (Foldy, Goldman, & Ospina, 2008; Gioia & Chittipeddi, 1991). Consequently, the ideal form of sensegiving in order to foster athlete reflection is to activate several frames, or to point out new distinctions within frames that actors already apply. This makes it possible for athletes to notice cues that they might overlook through giving significance to signals not perceived as important, thus providing a better overall understanding of experiences. Such sensegiving enhances the athlete's capacity for mindful reflection, whilst generating a rich experiential knowledge.

Coaches may use their comprehensive formal knowledge and experience to make demands on athletes in ways that pay little attention to athletes' sensemaking. For such autocratic coaches, sensegiving may literally replace athletes' sensemaking (Potrac, Jones, & Armour, 2002). This directs athletes' attention towards a few and fixed feed-back signals that confirm coaches' expectations. Another type of sensegiving aims to stimulate athletes' own sensemaking in adapting knowledge to fine-tune training. Such democratic coaches may also experience that athletes need or demand authoritative sensegiving to overcome uncertainty. The athlete-centered approach to sensegiving emphasizes that athletes have responsibility for their own development (Cushion, 2010). An important part of this is to stimulate their ability to transform experience into reliable knowledge through mindful reflection. The underlying assumption is that this is the key to assuring continuous development and sustained success (Weick & Sutcliffe, 2001).

Within the Norwegian elite sport context, several actors may act as sensegivers towards athletes. As the elite team head coach is closest to the athletes, he or she is naturally the most important sensegiver. Coaches may engage in sensegiving in two ways. First, the coach's frames are reflected in athletes' training plans; giving direction to what the athletes

should be aware of when they train. Secondly, by observing and interacting with the athletes coaches may also notice cues the athletes themselves don't notice. Such cues are identified through the coaches' sensemaking process, and may relate to signals indicating that the training has to be adjusted.

The support personnel within the Norwegian Ski Association and OLT, or experts outside the elite sport system, may also act as sensegivers towards the athletes in two different ways. When specialists with detailed knowledge share their competence with athletes, they provide athletes with specific frames. For example, a nutritionist may raise the athletes' awareness of what type of food they should eat before or after the training session. In addition, they provide the athletes with information from laboratory tests; information athletes themselves are not able to generate.

How actors within the context of Norwegian elite cross-country skiing context may act as sensegivers is summarized in our theoretical research model (Figure 1). Note that when athletes communicate their interpretations of training, they also become sensegivers. The model integrates the context of Norwegian elite cross-country skiing and summarizes the theoretical arguments.

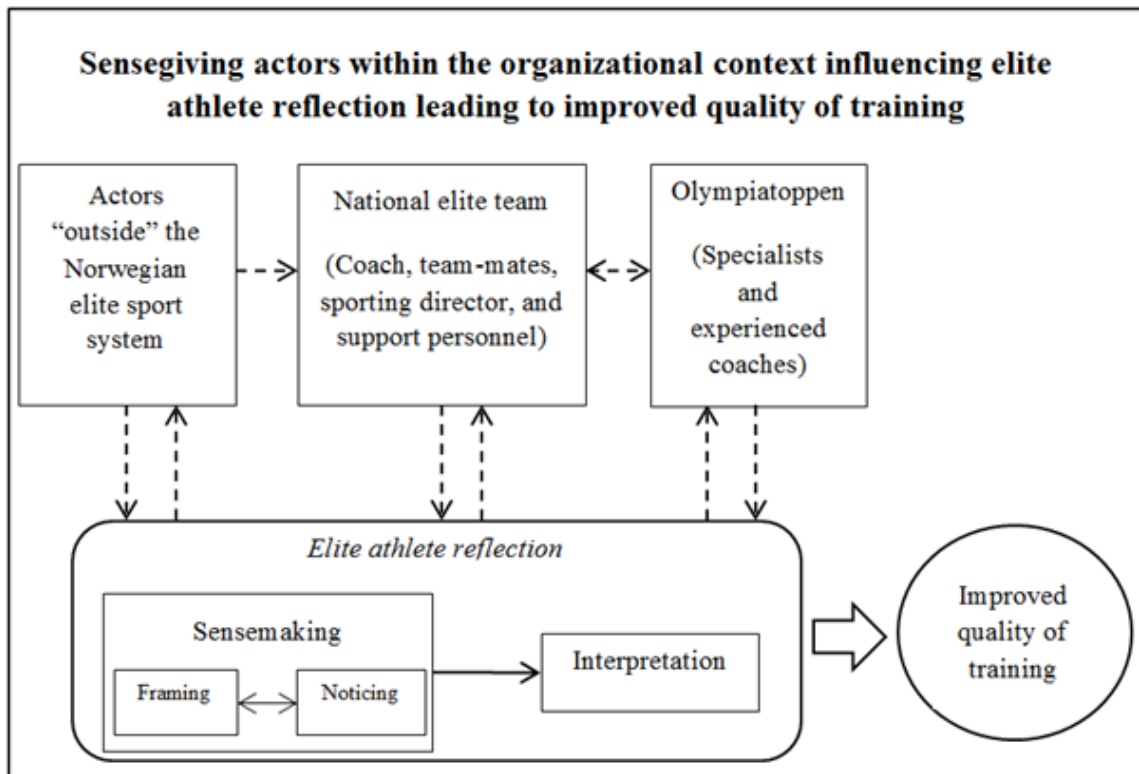


Figure 1: Potential sensegiving actors and their influence on elite athlete reflection.

In an athlete-centered elite sport organization, emphasizing the importance for athletes to take responsibility for their own development, reflection plays a key role. Hence, for such organizations, stimulating reflection would appear to be the ideal. Such an approach to the management of development processes is analogous to the theory of mindful organizations (Weick, Sutcliffe, & Obstfeld, 1999; Weick & Sutcliffe, 2001), which is an organizational sociology perspective on how to improve the quality of core processes. Central to this, is how “organization and leadership influence social interactions in ways that encourage mindful reflection and a capacity for action” (Ray, Baker, & Plowman, 2011, p.199).

Method and research strategy

The study consisted of five cases of how coaches act as sensegivers to stimulate athletes’ reflection. The sensegiving process is the unit of analysis. All the coaches worked within the context of the Norwegian Ski Association (NSA) and the OLT. The national elite team coaches in cross-country skiing were strategically selected (Charmaz, 2006). First, Norwegian

cross-country skiing represents a sport with extraordinary sustained success for both men and women (FIS, 2013). Second, cross-country skiing is an endurance sport where athlete reflection is considered key to achieving the necessary quality of training (Tønnessen & Sandbakk, 2012). Finally, Norwegian cross-country skiing is situated within a elite sport context where the athlete-centered approach to coaching is actively pursued (OLT, 2011).

We conducted in-depth interviews with five national elite team coaches. In addition, we interviewed 11 athletes (6 men and 5 women). Several of these athletes had experience of being coached by two of the sample coaches. The interviews were guided by a general interest in how athletes plan, carry out, and evaluate everyday training within, and as a result of, interaction with the head coach and support personnel.

The interviews with the coaches covered topics related to their: emphasis on experience and scientific knowledge, philosophy of coaching and leadership, views on OLT, and their general approach to elite athlete development. The interviews with the athletes concerned four key topics: How everyday training was planned, implemented and evaluated; their interaction with support personnel within and outside the elite sport system; their experiences with different coaches; and the interactions within the national team. All of the interviews could be described as conversational, but structured around the key topics given (semi-structured interviews). The interviews lasted from 45 minutes to almost 2 hours, and were conducted in Norwegian. They were all recorded and subsequently transcribed. When translating, discussion surrounding meaning was variously engaged in between ourselves as authors and other respected colleagues fluent in both languages (Norwegian and English).

Within qualitative methods, there is more than one way to analyze interview data (Saldaña, 2009). In the present study, we first conducted an initial coding, corresponding with the explanation given by Charmaz (2006). Hence, commencing with the research questions, 31 data categories were initially identified from the interviews. Following the initial coding,

we conducted focused coding leading to the discovery of both variations and similarities across the interviews. We utilised the same strategy when analyzing the athletes' interviews. Having pursued the first steps of data reduction inductively, we started to conceptualize the findings by conducting axial coding.

Our interest in how reflection could influence the quality of training directed our attention to the literature of mindful learning as a theoretical framework. Initially, we focused on athletes' reflections. Through this analysis we realized that the coaches' active intervention was crucial in shaping how athletes make sense of, and interpreted, their experiences. Within this phase, we started to relate and interpret the data in light of coaching behavior. Finally we conducted a theoretical coding, linking five key mechanisms of sensegiving to coach behavior.

Findings and discussion

The presentation and discussion of the findings are structured around five key mechanisms of sensegiving derived from the theoretical analysis. The empirical categories of coaching behavior that emerged from the analysis are viewed as sub-categories of the general mechanisms of sensegiving. This is consistent with how we described the theoretical coding in the method section, and presented in Figure 2.

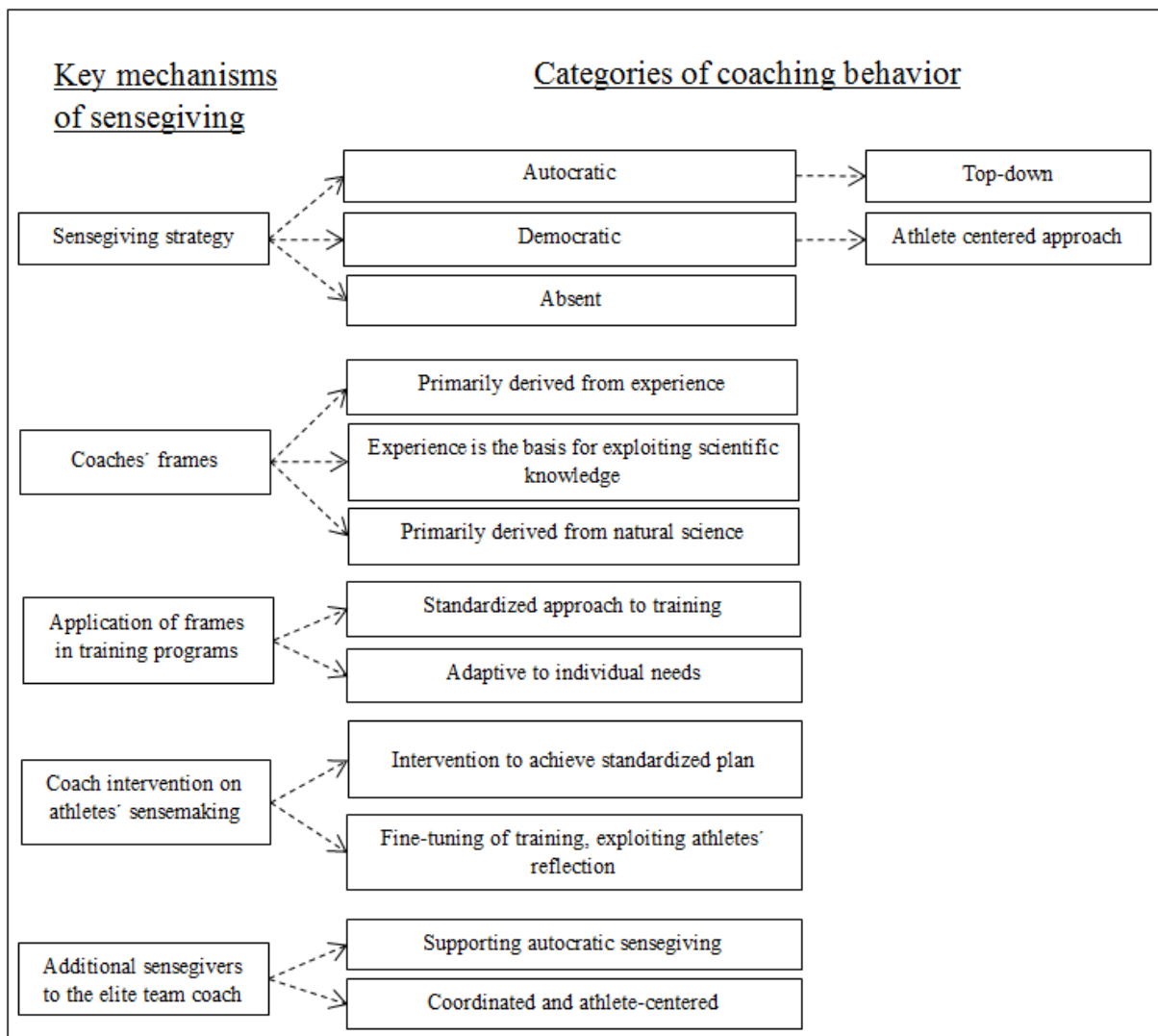


Figure 2: Key mechanisms of sensegiving in an elite sport context

Sensegiving strategy

The primary role of the coach is to facilitate the development of athletes' skills (Cushion, 2010). Central to how coaches manage processes of training and development is their interaction with individual athletes and teams. As pointed out in our brief presentation of cross-country skiing within the Norwegian elite sport context, a democratic athlete-centered approach has a central value. However, our data show that coach 1 approached sensegiving quite differently from the other four coaches.

Autocratic sensegiving

Before coach 1 was appointed, the national elite team had suffered from lack of a clear training philosophy, with the athletes treating each other as major rivals. As long as you beat

your teammate, it didn't matter if you failed to perform well in international races. In order to strengthen the social interactions within the team, and thus make the athletes more united, coach 1 used team-building as an organizational strategy:

The view of the rival was much more internal than external. (...) I tried to move the focus of whom to beat, and thus create a common interest in how to improve the results of the whole team. We agreed on a common goal that Norway once again should become the best female skiing nation; so we focused more on the relays and team-building events than the former elite teams did (Coach 1).

The coach emphasized social interaction within the team, but approached this from a 'top-down' perspective. He encouraged athletes to share their views on how to improve their technique (in classic and skating). However, his desire for control meant that the athletes were not stimulated to actively reflect on their own experiences (as discussed later).

Democratic sensegiving

Contrary to the coach 1, coach 2, (who took over the team) provided the athletes with few clear answers about how to train. An important part of Coach 2's behaviour concerned stimulating athletes to reflect upon their training. Nevertheless, coach 2 had to consider to what extent each situation called for creating beliefs or challenging athletes' reflection:

You have to exploit every opportunity to facilitate the athletes to reflect upon their training. However, you need to consider in which situations you can stimulate reflection. (...) When athletes are struggling, you need to communicate that you have the right solutions, whereas when athletes perform well, you can challenge their reflection to a larger extent.

Coach 2 took over a team with some very successful athletes. In his interaction with these athletes, he asked critical questions rather than simply telling them how to train. This created a challenge for both the coach and athletes, as the latter were used to being told how to train. Thus, his democratic sensegiving strategy, emphasizing dialogue, led to uncertainty among

the athletes. One of the athletes who had experienced great success under Coach 1, didn't feel that Coach 2 was able to create strong beliefs in the training process. This athlete decided to continue to work with Coach 1.

He [coach 1] created strong confidence and belief in what we did. The new head-coach was very different. Whereas the first coach was crystal clear and never expressed his uncertainty, his successor was much more eager to discuss how to train and expressed more uncertainty. So, I decided to keep in touch with the former coach (Athlete 2).

However, after the three first seasons, the athletes got to know coach 2 and his coaching behavior better. They understood the importance of communicating their own experiences when discussing the training plan. Emphasizing dialogue, the athletes' own experiences with training were thus considered vital to create optimal individual plans. Hence, sensegiving was characterized by the coach through introducing context-specific frames based on athletes' individual needs and experiences.

Coach 4 expressed a similar attitude towards sensegiving as Coach 2. However, his challenge during the initial years was to use much time on logistics (taking care of plane tickets, rental cars, accommodation, and budgeting). Coaches 3 and 5 meanwhile balanced an autocratic sensegiving strategy with a democratic approach. Both coaches emphasized that the most important task for an elite team coach was to be a leader.

You are of course a pal of the athletes. On the other hand, they need to be aware that you are their leader. It is important that you show leadership and make decisions, because many elite athletes tend to have quite strange ideas about how to become the best (Coach 5).

Although the athletes perceived the coaches as leaders, the coaches' sensegiving was still more democratic than autocratic. The coaches, on the other hand acknowledged that the

athletes were the most important source of information (knowledge) about responses to training. Thus, a close dialogue was deemed important:

I believe that it is very important to listen to the athletes because they know their own body best, and know what it takes to become better (Coach 5).

These two different strategies of sensegiving have important implications for how coaches try to influence athletes' sensemaking. The data illustrate that coaches 2, 3, 4, and 5 encouraged athletes to generate more experience that could be evaluated through the interpretation process. This was considered important to promote mindful learning. As Huxley argued (cited in Weick, 1979, p. 147): "*Experience is not what happens to a man. It is what a man does with what happens to him*". Enabling athletes to generate more experiences through sensemaking is, therefore, an important condition for making reliable judgments in the training process.

What frames do coaches rely on?

The type of knowledge that the coaches deemed most important was fundamental to their philosophy of training; that is, what they believed to be critical success factors. Such beliefs were reflected in their frames. Here, all the coaches addressed the importance of knowing the institutionalized cross-country skiing philosophy (derived through years of experience). Despite this seeming convergence, variations existed between the coaches concerning the relationship between experience-based and scientific knowledge.

The primacy of scientific knowledge

Coach 1 considered scientifically grounded theories of physiology and training to be vital:

In my opinion, it is very difficult to conclude something that is based purely on experience! I emphasized the numbers, exploiting the results from physiological tests.

Furthermore, he argued that the scientific literature offered a recipe for how to achieve excellence:

You can find the answers of how to train in the literature. The Swedes have tested their athletes for a long time... Studies... have established causal relationships in this regard.

In other words, this coach relied on a few and fixed frames derived from the scientific literature about the physiology of endurance training. The data also indicated his reluctance to refine his frames in the light of newer experiences. Contrary to the theoretical perspective (Weick & Sutcliffe, 2001), coach 1 engages in sensegiving in a mindless way; he did not question the underlying assumptions derived from the scientific literature in light of newer experiences.

Experience and scientific knowledge

Whereas coach 1 strongly emphasized scientific knowledge, the four other coaches held a different view on the relationship between experience-based and scientific knowledge. Their belief was that scientific knowledge could be used to complement the experiences of successful athletes and coaches. This was reflected by Coach 3:

No theoretical studies have ever revolutionized training in cross-country skiing. Our training philosophy rests on experience. Throughout the years we have, of course, received some 'impulses' from science, like the high-altitude training regime, but it doesn't budge our overall training philosophy. Rather, it contributes to an adjustment of small parts of it.

Similar views were expressed by the other coaches. The following statement was given by Coach 4:

Most of what we do is based on experience. However, I try to keep an eye on what is happening in the field of science in order to get a grasp of how to train in the future.

By combining these two types of knowledge, the coaches had multiple perspectives (and thus, multiple frames) about how to develop excellence. These coaches then were able to refine existing frames, hence, their training philosophy was more nuanced than that of Coach 1.

Application of frames in the training plans?

Standardized approach to training

Coach 1 pursued training procedure in a fixed, objective and standardized way. The procedure, derived from formal knowledge, was the basis for individual plans. Training plans were adapted to individual differences only to a very limited extent. Although there were some individual variations concerning how much each skier should focus upon different training movements (roller-ski or running), they all followed the same philosophy in terms of periodization and the balance between high and low intensity training. There was, in other words, very little tolerance for individual variation. Hence, the plan was viewed as recipe for achieving great results, and had to be followed.

To convince the athletes that his philosophy was the best path to success, coach 1 presented the athletes with scientific evidence. The following statement from an athlete highlights this:

We were told that the desired philosophy of training was the only way to success. I didn't dare to raise my hand and express my concerns, because they presented evidence from science (Athlete 1).

Relying on a few and fixed frames reflecting formal knowledge, Coach 1 operationalized his frames in the training plans which, in turn, became a strong normative framework. The statement given above by Athlete 1 also illustrates that Coach 1 was a strong sensegiver as he had considerable influence over athletes' beliefs (Foldy et al., 2008). However, his sensegiving was quite mindless, as he neglected the fact that the athletes may experience training activities different to that documented in scientific studies. Although creating strong

beliefs may be of importance, it seems to reduce athletes' capacity to learn mindfully (discussed under coach intervention).

Individualized best practice

The four other coaches had a much stronger emphasis on adapting standardized routines and procedures to individual needs. Objective routines and procedures were thus socially embedded, combining scientific and experience-based knowledge with athletes' own experiences with training. Coach 2 expressed the importance of individualizing the training plan for every athlete:

I believe that it is very difficult to demand that all the athletes on my team follow the same training philosophy because every athlete is different. If you demand that every skier is to follow the same 'recipe', one or two athletes may succeed, but the rest of the team is likely to fail. In order to succeed, you need to adapt the training plan to individual needs. Then, every athlete has a greater chance for reaching his or her full potential.

Coach 4 had a similar approach to knowledge application as coach 2. Dependent upon what type of athlete he was discussing and planning training with, the coach presented a plan that either could be very detailed or rather rough:

Every athlete is different. Some need to have a strict training plan, whereas others need a draft plan that identifies the key trainings, and then make the most of the planning themselves.

By focusing on how to adapt training to individual needs, Coaches 2, 3, 4, and 5 emphasized there were several paths to success. They did not believe in a standard recipe that could bring out the best in all athletes. This was highlighted by Coach 3:

Some believe that athletes can be told how to become the best. However, I have not seen any athlete being 'controlled' to become the best in the world. They [the best

athletes] know what it takes, and are able to adjust the training continuously to their own needs.

Consequently, two of the most successful athletes on his team in terms of results (and in the history of Norwegian cross-country skiing) approached training very differently:

There were great variations. Two of the athletes I trained, trained so differently that you wouldn't believe that they did the same sport. (C3)

The quotations indicate that adapting formal knowledge and standardized routines to individual needs adds to cumulative knowledge development. This, in turn, leads to more mindful sensegiving, as the athletes benefit from coaches' abilities to provide them with multiple frames that guide noticing when they train. The result is that the athletes generate more insightful experiences during training (Goffman, 1974; Weick, 1995).

Coach intervention on athletes' sensemaking

Intervention to achieve standardized plan

Coach 1 admitted that he was probably too eager to control the athletes, making them very dependent upon himself:

Perhaps I should have been more able to let go control or stimulate the athletes to take control over their own training. One athlete became particularly dependent upon my presence because I was in a better position to notice whether things went well or not. She was not able to identify the signals indicating whether she was tired or not.

As the quotation indicates, the coach instructed the skiers to strictly follow a given training plan. This was confirmed by an athlete:

If we were tired, or felt that we didn't respond to training, we were told to continue following the training plan because it should be exhausting (Athlete 1).

Hence, the coach became a more important sensemaker of daily training than the athletes themselves. Contrary to the institutionalized training philosophy in Norway, the coach

believed that empowering athletes to take responsibility for their own development was of lesser importance:

In Norway, it has been a philosophy that the athletes are to take responsibility for their own training. In such cases, the coach makes himself redundant (Coach 1)

The data highlight that the coach himself was the most important sensemaker within the national team. How the coach perceived the athletes became the basis for how the athletes evaluated the quality of training. Instead of providing the athletes with frames directing attention towards certain feed-back signals from the training process, the coach gave feed-back himself. Consequently, the athletes became very dependent upon him believing he was in a better position to make sense of how they responded in and to training. The result was that the athletes were less likely to actively reflect upon their own experiences. As indicated by the quote given by Athlete 1 (above), this appeared to restrain mindful learning and, hence, the quality of training. Although the mindless approach to sensegiving may produce success, the data illustrate that continuous improvement from it seems hard to attain as there is no real fine-tuning of athletes' training. Contrary to the theoretical perspective, such an approach to sensegiving is about searching for signals that confirm the coaches' frames rather than searching for feed-back signals that also disconfirm the frames (Weick, 1995).

Fine-tuning of training, exploiting athletes' sensemaking

Throughout the training process, coaches 2, 3, 4, and 5 continuously made an effort to empower athletes, and reduce their roles as autocratic sensegivers. To stimulate the athletes to reflect upon their training, they believed it was important to ask critical questions. However, their interaction towards young and inexperienced skiers compared to experienced skiers differed:

Young athletes need to be educated. You need to explain to them what is wise and what is not. For the experienced skiers, you are more like an interlocutor, a person

who asks critical questions which stimulate them to consider why they are training as they do (Coach 3).

By coaching experienced skiers this way, the athletes became more competent in making small adjustments to the training process when they were training by themselves. More comprehensive, monthly adjustments, which were more far-reaching, were made in close collaboration with the coach. The statement also illustrates that sensegiving is situational. A mindful approach to sensegiving refers both to the importance of providing athletes with frames that guide their behavior, and challenging their interpretation of how they perceive their training (Goffman, 1974).

How the athletes' made sense of their training served as the foundation for the Coaches' 3 and 5 sensegiving actions. Hence, the coaches' sensegiving in this regard was primarily focused on challenging athletes' interpretations. For example, the coaches often introduced context specific frames directing athletes' attention towards corresponding feedback signals in the subsequent training process. Similar to how Coaches 2, 3 and 5 interacted with the athletes, Coach 4 also emphasized the value of a close dialogue in order to identify small deviations in the training process:

I believe that a close contact with the athlete is of crucial importance in identifying small deviations. I have some signals that I look for with every athlete, based on how they act when they are tired.

When I got more time with the athletes, it became easier to ask the right questions.

This in turn leads to that the athletes become more conscious concerning their own development (Coach 4).

Hence, a close interaction was considered crucial to engage in mindful sensegiving towards the athletes; i.e. stimulating mindful reflection by activating context-specific frames, adapted to athletes' situational and individual needs.

Additional sensegivers

Within the national elite teams, the coach is the primary sensegiver. However, support personnel with specific knowledge within a given field may also be brought in on matters such as nutrition, strength training or physiology. Such support personnel sensegiving can provide athletes with specific frames about aspects of everyday training. We identified a relationship between sensegiving strategy and the extent to which the coaches allowed other sensegivers to interact with the athletes.

Support for autocratic sensegiving

Since coach 1 emphasized the importance of scientific knowledge, most of his discussions regarding training were undertaken with scientists or experienced coaches outside the elite sport system with such insight. Although OLT is believed to have competence on theoretical issues related to training, the coach thought that OLT lacked the required competence. Consequently, he found it very difficult to benefit from the expertise available within the elite sport system:

I wasn't very impressed by the competence at Olympiatoppen. Those working within the field of physiology were educated as sociologists and social economists and only had personal experience with training as former successful coaches. It was impossible to have a discussion with them based on theoretical insights.

The coach also saw it as a problem that support personnel from OLT intervened with the athletes directly. In his view, coaches should limit the contact between the athletes and support personnel holding different opinions about training:

They [the OLT-staff] are all experts. When we were at a high-altitude training camp, this person from Olympiatoppen chatted with the skiers at the lunch-table. The person asks them about how the training works for them and gives advice. That is simply not acceptable! In such cases, it gets very hard for the skiers because

they start to believe that everything that this person talks about is as important as what I and my staff talk about – and that is evidently not true! (C1)

Coach 1 then was the only sensegiver within his national elite team. Although he discussed principles of training with scientists and coaches outside the Norwegian elite sport system, they did not serve as sensegivers towards the athletes. By being the only sensegiver, the coach ensured that the athletes were provided with frames that corresponded to his philosophy of training.

Coordinated and athlete-centered

Similar to Coach 1, Coaches 3 and 5 also emphasized that a key to success was to control the interaction between the support personnel and the athletes. Limiting the interaction between the athletes and support personnel was considered as being especially important when athletes struggled with training:

We believed that having as few people as possible in direct contact with our team was a key to success. (...) When too many people surround the national elite team, the athletes are exposed to too many ideas. And it is really important that an athlete who struggles with achieving the desired results doesn't get too many diverse opinions about how to improve (Coach 3).

According to coaches 3 and 5, the role of support personnel sensegiving was to generate objective feed-back from laboratory tests and, to a lesser extent, provide athletes with specific frames reflecting their area of expertise. In addition to obtaining such feed-back, the coaches used one OLT specialist as an important discussion partner. He served as a significant sensegiver towards the coaches, sharing his formal knowledge and experience concerning how to achieve excellence. Despite this close collaboration, they were highly critical of OLT coaches who demanded changes in the overall philosophy of training. The interaction with personnel from OLT was very dependent then upon personal relationships.

Coaches 2 and 4 also emphasized the need to limit the number of support personnel in direct contact with the athletes. However, coach 2 saw the use of OLT expertise as vital since he saw himself as a generalist. Nevertheless, the potential sensegivers had to be coordinated through the coach, making sure that the athlete didn't lose the 'big-picture':

As a coach, you need to know a little bit about everything. And if there is a need to include an expert, the expert needs to provide very detailed expertise. However, there is a challenge to include experts, because the expert often makes his role bigger than it really is. And my job is to coordinate the experts and make sure that they understand that their expertise is part of a whole. No one is more important than others.

Aside from exploiting OLT expertise on training, coaches 2 and 4 also utilized the competence OLT possessed to strengthen social interaction within the teams. This worked well for coach 2. Two years later, coach 4 initiated the same processes. The assumption behind these efforts was that social interaction within the team was important for stimulating mindful reflection, and consequently athletes' quality of training. Although very willing to employ specialists and experienced coaches from OLT, similar to the other coaches, Coaches 2 and 4 stressed that such support personnel had to be coordinated (and controlled). However, contrary to coaches 1, 3, and 5, they were much more amenable towards specialists intervening directly with the athletes. Thus, the athletes were introduced to specific frames that increased their capability to generate rich information in the training process.

The extent to which the coaches took advantage of additional sensegivers illustrates a key challenge for coaches: how to include support personnel who don't create uncertainty and confusion. Consequently, to succeed with the mindful approach, there is a need for coaches to inform the athletes about how the frames provided by support personnel point either to new frames or to new distinctions within the frames that the athletes already hold.

Concluding remarks

Sensegiving as a key element in coach behavior

The study explored how five elite team coaches approached sensegiving to stimulate athletes' reflection-on-action, and their willingness to include support personnel as additional sensegivers. Central to our analysis was how sensegiving is a key element in coaching behavior. As described in the method section, we identified the theory of mindful learning as a useful framework for analyzing and organizing the data. Two main approaches to coaches' sensegiving were subsequently identified, reflecting the weight attached to athletes' sensemaking and their own coaching behavior. This is summarized in Table 1.

Table 1: Mechanisms of sensegiving

Type of sensegiving	Less mindful sensegiving	Mindful sensegiving
Mechanisms		
Sensegiving strategy	Autocratic (top-down)	Democratic (athlete-centered)
Coaches' frames	Primarily derived from natural science	Experience is the basis for exploiting scientific knowledge
Application of frames in training programs	Standardized approach to training	Adaptive to individual needs
Coach intervention on athletes' sensemaking	Intervention to achieve standardized plan	Fine-tuning of training, exploiting athletes' reflection
Additional sensegivers	Supporting autocratic sensegiving	Coordinated and athlete-centered

Coach 1 actively challenged the value of athletes' reflection, emphasized scientific knowledge as the basis for the design of the best training programmes, with little attention given to individual differences. The aim of his coaching was to make sure that athletes followed the plan. He was the authoritative sensegiver leaving little space for other sensegivers to intervene. There was no effort to stimulate or exploit mindful reflection among the athletes. As such, it violated core values that dominate Norwegian elite sports. Despite this, the coach had considerable success with some of the athletes within a limited period of time.

In contrast, the other four coaches (2, 3, 4, 5) saw the stimulation of mindful reflection among the athletes as a key to success. Their approach reflects institutionalized values and

attitudes in the wider elite sport system. These coaches emphasized the importance of stimulating and developing athletes' capacity for reflection. Such an approach makes it possible to individualize training that exploits both experience-based and scientific knowledge, and allows athletes to take greater responsibility for their own development. Looking at the success of these four coaches, the picture is mixed. Part of the reason is that one experienced a generation shift among the best athletes (Coach 4), and two took over a team of exceptionally successful athletes (Coaches 3 and 5). The last coach (Coach 2) took over the team from Coach 1. Adjusting to a new approach to sensegiving was painful and took time. However, once these athletes accepted and understood the new approach the results were exceptional in the following years.

The study's implications principally point to a need for coaches to become increasingly aware of individual differences and to intervene to influence athletes' reflections in accordance to the latter's needs. Additionally, coaches need to orchestrate carefully the role of supporting personnel, who also hold considerable potential for developing and enriching athletes' productive reflections.

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