



## In Search of a Coaching Paradigm

### A CASE FOR WEST INDIES CRICKET

The impetus for this article was derived from comments attributed to former Australian cricket captain Greg Chappell in an article written by Tony Cozier in the Trinidad Express of September 21<sup>st</sup> 2004. Chappell expressed concern that West Indian cricketers were in danger of having their natural abilities stifled by an unbalanced focus on biomechanics. He felt West Indians were attempting to emulate the highly technical and often confusing programmes originating from Australia and England instead of developing a curriculum and youth coaching method suited to the natural attitudes and instincts of the West Indian.

His comments were met with mixed responses by the local sporting community. Many experienced commentators felt his suggestion that our players should not be confused by complicated coaching systems and tactics was culturally and racially offensive.

This article will attempt to put the comments made by Chappell into proper perspective. It will draw heavily from Chappell's web site where articles by then head of the Shell West Indian Cricket Academy, Rudi Webster; Peter Spence who was at the time the programme manager at the Victoria Institute of Sport and Percy Cerruto of the International Athletic Center in Portsea Australia, all conform to Chappell's way of thinking. Such perspectives will be reinforced with information from the relevant motor learning literature to explain the rationale behind the ideas expressed.

Much has been said about the inability of West Indian cricketers and sportsmen in general to adapt to the requirements of the modern sporting world. Quite often as is the case with our cricketers, poor technique is established by the *pundits* as our Achilles heel. New coaching programmes implemented by our administrators emphasize what is called proper technique

and biomechanics. However, the question remain – “Have we properly diagnosed the problems or are we taking hold of the first plausible reason for our regions lack of performance in a sport that we value?”

Coaching is not only a science it is also an art. While applying scientific principles the instructor must find creative ways to stimulate an athlete's mental and physical ability. It is obvious that our athletes' skill development has been lagging behind the rest of the world. It is possible that we have placed too much emphasis on the movement execution and neglected other key dimensions of skill acquisition.

Skilled movement can be divided into three phases. The first is the perceptual phase where our senses i.e. touch, sight and smell are used to assess the situation we are confronted with on the field (the athlete determines what is happening). The second phase is cognitive or mental where the player uses the sensory information he has

gathered to decide on a course of action (determine what needs to be done). The third and final phase and the area in which our experts believe we are falling short is that of skill execution which deals with the selection of the appropriate movement patterns for the situation the athlete is confronted with (producing the correct action). Failure in any one of these areas often leads to the inability of an athlete to produce a high level skilled performance.

In the article “Is There More To Cricket Skill and Performance than Mechanics” (2005) Rudi Webster says ability and good mechanics, even though they are important elements of a high quality performance, do not guarantee it; they just indicate potential. He goes on to explain that when these areas are combined with perceptual and cognitive skills along with effective motivation, performance automatically improves. Webster notes that the sudden decline in West Indies cricket has coincided with our preoccupation with biomechanics; he says that in the fifties, sixties, seventies and eighties players learnt the game in less structured and more creative environments. Poor pitches and unpredictable bounce forced players to concentrate harder and watch the ball longer.

He advocates that innovative players and coaches ought to be able to recreate some of these challenges by designing game situations, manipulating training environments and restructuring practice sessions to enhance learning and improvement of player’s perceptual and motivational skills.

Similarities with Webster’s ideas can be found in the principles of schema learning as advocated by Schmidt (1975). Schmidt believed that when people practice a number of specific distances of a throw (or any motor skill), they are able to generalize the experience to the performance of throws that must travel other distances. According to schema theory when people practice a particular class of movements (example throwing, kicking) they acquire a set of rules called a schema. It is this schema that will be used to determine parameter values that allow performers to adjust movement patterns to meet specific environmental demands or different versions of an action. By producing hundreds of thousands of throws of different distances the athlete is able to develop a set of rules that govern a general relationship between, for example, force, velocity and distances thrown.

Schema learning is enhanced by the use of varied practice in which performers rehearse a number of variations of a given class of actions (e.g. throwing different objects different distances to different targets) which allows learners to develop competence in parameterizing different dimensions of the action. In the example given the athlete is able to adjust the generalized motor programme with the necessary force and velocity to produce a throw of the desired distance. This has particular bearing on open skills such as batting where the environmental factors are constantly changing. An important part of such events is the acquisition of the capability to cope with novel situations.

Random practice sequences have also been proven to improve schema development. With random practice the same task is never repeated on consecutive trials, but is performed in no particular order thus avoiding or minimizing consecutive repetitions of a particular task.

According to Dr Charles Krebs, much of the control of motor action occurs outside of consciousness in the cerebellum (totally subconscious brain centre). So much of the control of motor action occurs outside of his consciousness that the batsman needs to devote most of his mental resources to planning where and how he wants to hit the ball. This “where” and “how” then leads to the modification of his “intended action”. Krebs suggests that one of the key differences between an experienced batsman and a relative novice is the larger number of successful opportunities the former has had to store a variety of specific pre recorded motor programmes that enable him to better match the exact delivery faced at any moment.

Webster (2005) states that many of the cricket coaches are so preoccupied with the positioning of the batsman’s body (conscious control) that they miss one of the most important fundamentals of the sport – tempo. He goes further explaining that the great West Indian players of the past all displayed distinctive and effective techniques and that all shared the common features of good timing and rhythm. In Dr Webster’s opinion the conscious control of body positions during the very short time between the start of the back swing and the impact of the ball is very difficult to train and can distract the player from watching and hitting the ball. He suggests the posi-

tions coaches espouse are the effect of a good backswing, not the cause of it. He goes on to add that any player with reasonably good mechanics and good tempo will not have to worry about the mechanics of a swing, it will happen instinctively and reflexively.

While many have had problems with Chappell’s statements few will argue that the West Indian batsman is for the most part a sportsman who plays with instinct and reacts sharply to events around him. Why, therefore, do we not try to understand and improve our ability in these areas as a platform for developing a system that facilitates our cricketers’ ability to adjust to the modern game?

Peter Spence (1999) talks of the use of machine models for most of what we do in sport or life. This he says often involves breaking things down into parts, correcting them and reassembling them as a whole. He advocates a new level of thinking where coaches recognize that there are so many components interacting in any open system (such as sporting performance) that development may actually occur in chaotic and unpredictable fashion.

Spence advocates facilitation enabling the human body to work in natural ways to achieve success rather than human beings attempting to control the elements and forcing things to happen. Evidence that this approach can be successful in international cricket can be found in the player /coach relationship of John Buchanan, the most successful Australian coach ever, and Andrew Symonds, the player of West Indian origin, who played under his tutelage for Queensland and Australia. Buchanan believed that Symonds was not the type of player to benefit from too deep an analysis of the game which he believed worked against his naturally instinctive style of play.

Spence advocates the adoption of four protocols:-

1. Step back and view athletes and ourselves in our wholeness;
2. Realize the dynamic and interconnected nature of the world;
3. Understand that instability and chaos are not necessarily bad as they may be what is needed to achieve superior levels of performance in the dynamic sport environment;
4. Seek trends and flow rather than causes and control.

“Much has been said about the inability of West Indian cricketers and sportsmen in general to adapt to the requirements of the modern sporting world”

Again the ideas expressed by Spence (breaking down whole movements and assembling them as parts can have a negative impact on skill acquisition) seem to find a ready ally in motor learning research by Naylor and Briggs (1963) who hypothesized that the organisation and complexity of a skill could provide the basis for a decision to use either whole or part practice. They used complexity to mean the number of parts or components of a skill, and organization to mean the relationship among the component parts of a skill.

According to them successive parts of a highly organized skill are like a chain of events in which the spatial and temporal performance characteristics of any one part are dependent on the spatial and temporal characteristics of the other. It is precisely because of this characteristic that it is difficult to perform only one part of certain movements. As a result, very often the athlete finds it difficult to put the movement back together after it is broken down into parts and the movement has lost its purpose.

Findings by Shea and Morgan (1979) also show familiarity with the ideas expressed by Spence (instability and chaos can lead to improved performance). Their experiments showed that variables that slow improvement and retards the overall level of performance in practice can be potent in facilitating retention of technique. This performance learning paradox is seen when variable and random practice may not result in immediate visible improvement in performance. However such a practice schedule where practice on one task is usually followed by practice on another completely different task promotes comparative and contrastive analyses of the actions required to complete these tasks and leads to a more memorable representation of each movement task resulting in more elaborate distinctions between the various task versions (contextual interference and the elaboration hypothesis Shea and Zimmy 1983).

Lee and Macgill (1983b, 1985) used the reconstruction hypothesis to explain the above phenomena. According to them the value of a practice trial depends on the amount of reconstructive processing undertaken. This deals with the possibility that repeating two different movements in succession forces an athlete to quickly reconstruct a new programme for the second movement. A random practice schedule produces short term forgetting of the action plan when a different task must be produced. This may be detrimental to immediate skill acquisition but beneficial to retention (an athlete's acquisition of a skill is retested at a later date) and transfer (tests to see if the accuracy and consistency shown during practice can be transferred to more realistic game like situations) because it

forces the subject to undertake reconstructive processing.

Percy Cerruty of the International Athletic Centre in Portsea Australia says the brains of a coach are never to be completely trusted. He expresses horror on the occasions he has observed a technique perfectly executed in nature (naturalistic technique) and yet has heard authoritative coaches and athletes condemn some such *perfect* thing as wrong. Regarding athletic technique Cerruty remarks that much more has to be discovered than we have ever learnt in the past. According to him superior performance will rest more than ever in future developments than in outmoded techniques. He denounces coaching that attempts to develop techniques based on theories worked out solely based on intelligence. He emphasized that ideas are firstly derived from personal experience and feeling.

Dr Webster's support of implicit learning conforms to the above philosophy advocated by Cerruty. Implicit learning is an unstructured, unconscious and instinctive process that can be contrasted to structured or explicit learning which is an unconscious or verbal process. Webster concedes that players use both methods to learn their skills, but those who learn implicitly retain their skills longer and handle pressure better.

He adds that though explicit learners acquire their skills quicker, under pressure they tend to lose touch with the important concentration demands of the situation and focus on the mechanics of the game. According to Dr Webster they suffer from *paralysis by analysis syndrome*. Implicit or instinctive learning increases player awareness and responsibility and guides them to identify and correct their own performance problems. It teaches them to think for themselves, manage pressure better and improve performance without being too dependent on instructions and feedback from the coaching.

Webster ends by stating that first rate coaches are often reluctant to preserve or provide solutions for their players. They prefer to challenge players to find their solutions.

In no way is the suggestion being made that the approaches to skill acquisition mentioned above are novel, or it is being advocated that they are adopted as a West Indian coaching model. Our coaches must incorporate a system that takes into consideration the culture, psyche and movement patterns of our athletes. This can only be achieved by a change in coaching paradigm. Clive Lloyd and Vivian Richards are two batsmen whose perception, decision making and technique though absent from the modern coaching manual can be a revelation to players such as Chris Gayle and Dwayne

Smith. Most importantly our coaches must strive to provide our batsmen with movement experiences that will facilitate a skilled performance that can be classified as distinctively West Indian.

## REFERENCES

- Briggs, E.G., Naylor, C.J. (1962). The Relative Efficiency of Several Training Methods as a function of Transfer Task Complexity. *Journal of Experimental Psychology*.
- Briggs, E.G., Naylor, C.J. (1963). Effects of Task Complexity and Task Organization on the Relative Efficiency of Part and Whole Training Methods. *Journal of Experimental Psychology*.
- Cerruty, P. "How to become a Champion". [www.chappellway.com](http://www.chappellway.com)
- Krebs, C., Brown, J. (1998). *A Revolutionary Way of Thinking, From Near Fatal Accident to a new science of Healing*. Hill of Content Publishing.
- Macgill, R. (2007). *Motor Learning Concepts Applications and Control*. Eight Edition. McGraw Hill. International Edition.
- Spence, P. (1999). "New Thinking", *Sports Coach*, Volume 22.
- Schmidt, R., Lee, T. (1999) *Control and Learning. A Behavioural Emphasis*. Human Kinetics.
- Schmidt, R., Wrisberg, T. (2005) *Motor Learning and Performance a Problem Based Approach*. Human Kinetics.
- Wilson, J., Wilson, G. *Specificity Part VII: The Effect of Part-Whole Practice and Variable Practice on Performance Learning*. [www.abcbodysbuilding.com](http://www.abcbodysbuilding.com).
- Wulf, G., Shea, H.C. (2002). Principles derived from the study of simple skills do not generalize to complex skill learning. *Psychonomic Bulletin and Review*.
- Webster, R. (2005). "Is there more to Cricket Skill and Performance than Mechanics." [www.chappellway.com](http://www.chappellway.com).
- Webster, R. (2005). "Tempo, the Forgotten Factor." [www.chappellway.com](http://www.chappellway.com)



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