Introduction

The IRB Rule Book states that “the purpose of the scrum is to re-start play, quickly, safely and fairly, after a minor infringement or a stoppage”. The IRB directives to referees (in effect saying how the rules should be enforced) are further aimed at ensuring that scrums remain a genuine contest unlike the “your ball in – your ball out” philosophy of Rugby League.

There is no doubt that each of the stakeholders in a Rugby Union match (referee, coaches and players) can have a different agenda where scrums are concerned. The referee could be mindful of the IRB directives (positive assessment leading to promotion depends on strict adherence); the coach could have prepared the pack to gain whatever advantage they can from the scrum contest and, to some players, the scrum could just be about beating your opposite number.

This discussion paper sets out to examine what the current state of scrum play is at Open level and offer some possible improvements either by way of rule changes or change in philosophy. I am grateful to Adrian Thompson (Assistant Coach Qld Reds) and Ian Scotney (IRB Referee Assessor) for providing some statistical and historical background regarding scrums.

In each of the 2002 Super 12 games involving Qld Reds there were 18.2 stoppages for scrums on average. However the average number of scrums packed was 29 (difference is due to number of repacks called). A straight forward scrum packed without delay and in a correct manner should be over in 15 to 30 seconds. If we adopt an average of 25 scrums per game at 20 seconds per scrum, about 8.3 minutes of an 80 minute game of Rugby Union is devoted to scrums.

When referees are assessed one of the statistics is the percentage of scrums which have to be either repacked or result in a penalty/free kick as a proportion of the total scrums in the game. Below 35% is considered as an acceptable standard (ie no more than a third of the total scrums has to be repacked or results in a penalty/free kick). This level is not always reached and the reasons would be a combination of poor refereeing, poor coaching and poor playing. In the recent Australia vs Argentina Test this percentage was 56%. It is easy maths to work out that a spectator would need to really like scrums to enjoy watching that type of game.

This paper will discuss what should happen in a perfect scrum sequence and will then discuss what can frequently happen in an actual scrum sequence. It will then go through the critical “phases” of the scrum sequence (engagement, ball put-in and action after the ball put-in) before drawing some conclusions aimed at improving this aspect of Rugby Union.
Perfect scrum sequence

The referee blows the whistle and sets the mark to award a scrum. Both packs move quickly to the mark and bind a good distance apart and stand in a reasonably upright awaiting the referee’s call. The referee calls CROUCH then HOLD as the two packs lower into position to pack. When both sides are ready to pack referee calls ENGAGE and the two packs come together in a square hit with a clear middle line, good grips between opposing front rows and not much foot movement. Referee steps back from the tunnel allowing the attacking halfback to feed the scrum along the middle line. Attacking hooker (being closest to the ball) strikes and wins the feed as the attacking scrum pushes forward and over the ball. Ball is quickly cleared to the Number 8’s feet and the halfback moves to the back of the scrum, picks the ball up and passes it to another player in his team.

Actual scrum sequence

Generally one pack will be ready before the other but this is rarely an issue as the sequence can not start until CROUCH is called. The first problem is generally that one hooker will start to move before ENGAGE is called leaving the other hooker with little option other than to also pack. The second frequent problem is that the scrum will be moving after the engagement (particularly if one scrum is superior to the other) so the referee needs to stay in the tunnel and instruct the two front rowers to stabilise the scrum. This is turn can lead to the third problem of the scrum collapsing so a repack will need to be called. A fourth problem can occur if the defending scrum starts to wheel before the ball is put in. A fifth problem is where a prop is pulling his opposite number down (or forcing him up out of the scrum) to negate the shove. A sixth problem is where the halfback does not feed the ball straight along the middle line allowing for a genuine contest to win the ball (IRB directives stress this as an essential feature of the scrum). A seventh problem can occur where the ball is won but the attacking side takes too long to clear it and the referee has to instruct them to play the ball. Add to this a possible eighth problem of the defending backrow breaking too early.

It is easy to see how quickly a scrum can go from taking 20 seconds to taking perhaps a minute (with several repacks) and the percentage of repacks/penalty/free kicks can rapidly rise above the 35% acceptable standard.

Engagement

Most open scrums involve two packs weighing in order of 800 kg each coming together explosively driven by 16 pairs of feet. It is a simple act of self preservation that a hooker who sees the opposing hooker (driving a 800 kg pack) start to pack will follow suit regardless of whether the 80 kg referee has called Engage or not.
Experienced referees understand this and pay particular focus to making sure that **BOTH** packs are ready **before** CROUCH and HOLD are called. They then call ENGAGE as **quickly as possible**. Inexperienced referees use the stage between HOLD and ENGAGE to check that both packs are ready to pack and this is where the problem of early engagement arises. In every competitive sport involving an audio cue as a starting point (eg starting pistol in running and swimming) **athletes reflexes are geared towards the earliest start possible to gain an advantage over the opposition**. A scrum starting from an ENGAGE call is no different.

Audio tapes clearly show referee discrepancy in this area. It is noticeable at all Open levels from Premier competition and similar overseas competitions through to Test level. All too frequently you can watch a scrum sequence and you will see the front rows coming together before the referee hurriedly calls ENGAGE. In the 2002 Premier Competition in Brisbane it was noticeable that experienced referees would make sure that both packs were right and call CROUCH and HOLD followed by a fairly quick ENGAGE call. Other referees would take too long checking the packs after the HOLD call and the packs would ENGAGE before the referees call. There was a system of providing written feedback to referees and this forum was used to highlight this aspect of scrum control resulting in some improvement by the end of the season.

**This area of the scrum can be improved by coaches stressing the need to wait for the ENGAGE call and referees making sure that the two packs are right before the calling sequence is started so an early ENGAGE call can be made. As stated earlier it is very difficult for a hooker crouched and waiting to pack not to respond to the opposition pack starting to engage.**

The part of the scrum sequence dealing with the ball put-in is dealt with below but the objective of the engagement is to provide a stationary scrum with a middle line parallel to the try lines. A big explosive engagement will often lead to some movement as the two packs adjust. Generally two fairly even packs will not need to adjust much (due to similar weight and skill level) but uneven packs exist even in the Test arena. A question that needs to be asked is **if a scrum has to be still before the ball can be put in (and not shift off the mark), why is their a need for a big hit at engagement?** In the case of two even packs they are jostling to be in the best possible situation to strike at and win the ball when it is put in but it is in the case of slightly uneven packs that scrum problems will arise from the engagement.

As a possible solution to this problem normal sequence of CROUCH HOLD ENGAGE should only apply if the engagement results in a suitable scrum for the ball put-in. **For any repack (whatever the reason) referees should use the Under 19 engagement sequence of CROUCH TOUCH HOLD ENGAGE.** This means the props need to touch their opposite numbers shoulders after crouching and would make sure the two packs were square and the right distance apart. It could still be an aggressive engagement (high level Under 19 scrums certainly are) but would be more likely to provide a suitable scrum for the ball put-in. Note the balance of the Under 19 Scrum Variations would not apply (only the actual engagement sequence).
Adopting this rule change should lessen the number of repacks required (should only be one normal and at most one modified for each scrum mark). This would keep the time taken for scrums to a minimum which should mean more time would be spent with the ball in play.

**Put-In**

IRB directives are very clear about the need for scrum to be steady and ball to be put in straight along the middle line so a genuine contest for the ball can occur. The requirement for a steady scrum can cause problems with a total unit weight of 1,600 kg driven by sixteen pairs of feet. Many referees look for scrum to be completely still before they move out of the tunnel to allow the halfback to feed the ball. **Referees should realise that staying in the tunnel longer eventually gives the contest advantage to the heaviest pack** (due mainly to the fact that the lighter pack has to do more physical work). Experienced referees **look for stability and balance rather than total stillness and let the halfback put the ball in as soon as possible after engagement**. Again if the engagement process occurs correctly a scrum suitable for faster ball put-in will result.

**Action after the ball put-in**

When there were no restrictions on wheeling it was common for attacking scrums to wheel almost to 180 degrees and then have a backrower launch the next phase from a favourable scrum position. The IRB decided this was not attractive or safe Rugby Union and changed the Rules so that the scrum feed is reversed once the attacking front row is wheeled through 90 degrees. This is the only way a scrum feed can be reversed apart from where a scrum has won a tight head (against the feed) but the scrum was not completed for some reason. As with most rule changes, coaches and players look for the angle that suits their agendas rather than understanding the IRB intent in making the Rule change.

Reversing a scrum feed is a valuable possession and many coaches **train their packs to achieve a wheel by pulling rather then pushing**. This normally happens on the attacking loosehead side. That is, the defending tighthead prop will pull the attacking loosehead prop backwards after the ball is put in. This can lead to the front row of the attacking scrum wheeling 90 degrees and the scrum feed being reversed. **It creates a point of weakness for the wheel to occur and this is dangerous play given the forces and stresses involved in a scrum**. The prescribed position for all players in a scrum (under IRB guidelines) is a **pushing position where all front rowers must be in a position to shove forwards**. To have to shift weight backwards or sideways to counteract a wheel can create instability and danger in a scrum.
Coaches and players should not attempt to wheel the scrum by pulling because of the instability it creates. Experienced referees watch for this and penalise the offending pack. Inexperienced referees may not be aware of what is happening and may reverse the scrum feed. As an easy point of reference the scrum feed should only be reversed (due to front row wheeling 90 degrees) if the two defending props are in front of the middle line of the scrum. For this wheel to have occurred, it would have to be through a pushing or shoving action which is within the intent of the IRB Rules.

Conclusion

The scrum is a major part of Rugby Union and is a valuable “starter phase” from which to launch a go forward play (either by running or kicking the ball). Considerable effort goes into training for this part of the game and the IRB has ensured that scrums remain a genuinely contested restart. Rule changes and referee directives have seen the scrum evolve to the role it plays in the modern game. Efforts must continue to be made to ensure that scrums remain an attractive part of the game rather than something that detracts from the game due to time wasting and injuries.

Responsibility for scrums being an attractive and admired part of the modern Rugby Union game is shared between the referee, the coaches and the players. The points made in this paper rely on each party taking responsibility for the overall scrum. The main points are:

1. Coaches must stress that pack must wait until the ENGAGE call is made (it is similar to a false start in running or swimming in that it can and should lead to a penalty).

2. Referees should make sure both packs are ready BEFORE CROUCH and HOLD are called so an early ENGAGE call can be made.

3. For any scrum repack (whatever the reason) referees should use the Under 19 engagement sequence of CROUCH TOUCH HOLD ENGAGE.

4. Referees should look for stability and balance rather than total stillness to decide whether scrum is suitable for ball to be put in.

5. Referees should aim to shift from the tunnel quickly and let the halfback put the ball in as soon as possible.

6. Coaches and players should not attempt to wheel the scrum by pulling because of the instability it creates.

7. Scrum feed should only be reversed (due to front row wheeling 90 degrees) if the two defending props are in front of the middle line of the scrum.
These points are obviously only the view of the author. Some are commonsense and are already widely practiced while others involve Rule Changes so are really raised for debate. There is no reason why the percentage of repacks/penalties/free kicks can not fall below the currently accepted 35% benchmark if all of the stakeholders have the common view of making the scrums a genuine contest but keeping the time taken to a minimum. This in turn will mean that more of the 80 minutes will be spent with the ball in play.

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