Mini Quincala Knocking End Game Tactics with Many Towers

Correction 28/8/2012: “twin defence” renamed to “twin response”; second exhaust example corrected, removing Black winning line.

To load a score into Quincala Game Viewer, just *copy* the relevant “QSF-string” (enclosed by < >), then click the *Paste* button in the software (or use the keyboard to type Alt + v). If you cannot see the Paste button click the “Fn:” button until you see it.

In Acrobat Reader, to enable selection and copying, you might have to click “Select” on the top bar before you can highlight and copy the QSF-string. (Note: loading game scores will be much easier with the next version of the software.)

Introduction

The fundamental end game tactics in mini-Quincala knocking game for positions with lots of build up potential are based on the three types of endgame exchanges, which are:

1. twin response – defender wins quickly
2. twin attack – attacker wins quickly
3. exhausting material - attacker wins if at least equal force and it starts with a knock

Type 1 and 2 depends largely on “geography”, the third type happens when neither player can make a twin in the two turns following the attack; in this case the outcome depends on if the initial attack involved knocking, as well as the potential and connectedness of the pieces on the board. Here are some examples (with nonsense moves to build example starting positions):

Twin response

Twin response is when the defender after clearing the locking pieces puts two largest pieces next to the attacking one:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646362626 8696a6a636262696a6a5554546a6969a696
9669797962636326 4848968686x77878663968687799787869
687;0.2&title=Exchange%3A_twin_response>

This is a strong defence which will usually win.

Twin attack

Twin attack is when the defender after clearing the locking pieces cannot put two largest pieces next to the attacking one as in twin response, but the attacker can do it in the following turn:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646362626 8696a6a636262696a6a5554546a6969a696
96697979626363x778796638596877997879654848596978796;0.2&title=Exchange%3A_twin_attack>
This is a strong attack which will usually win.

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Exhausting material

When neither twin response or twin attack is possible, there is an exhausting exchange of material. It seems like the attacker wins if there are equal forces and the first attack ends in a knock:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646363626268696a6a636262696a6a5554546a6969a696
96697979626363264848896a6a6796a6a636262x7797a66295a
6976a8897a6548495a69748688897a6758595a697575868889
7a6r0;0.2&title=Exchange%3A_exhausting_material_knock_start>

Exhausting material with a first attack on a single largest piece without knocking seems to be a loss if the players have equal forces:

<=QSF;0.1&Quincala;KM;8696a6a64636262696a6a6362626
33445555998877774455558877779384757539485757847575
485757646363626268696a6a636262696a6a5554546a6969a696
96697979626363264848896a6a6796a6aa69686866a797996a6
796969636262696a6a868484x7797a684a6976a8897a66295a
69748688897a6548495a6975758688897a6758595a697r1;0.
2&title=Exchange%3A_exhausting_material_no_knock_start>

Conclusion on Simple Endgame

So, in an endgame with lots of potential on the board, a player is looking to find an angle from which a twin attack or a successful exhaust attack can be launched. The defender guards to by ensuring twin response in case of an attack – this is different from chess where guarding is by ensuring “knock-back”. Interestingly, as can be seen from the second exhaust exchange example, not having all pieces in full towers can be stronger!

Sometimes a player can lock the attacker but not clear the own largest piece; often that only buys time, since the attacker keeps the initiative. There will be an example of this at some point.

Successful Short Straight Dart Attack

It seems quite easy to keep ones fringe towers guarded against a successful simple attack; for instance, in the first drawn game of the 2010 tournament (*2010-09-12 Rnd 2 Brd 1 Andrew Br v Aled*),there seems to be no twin attack or positive exhaust attack possible. To win in a such a game, the strongest tactics seems to be the *short straight dart attack*, which often creates a winning advantage for the attacker, for instance from the turn 22 like this:

<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
8893848488585855333336373733555546373784545 4x37364
554636453544536484645364555535445584746455495626 45
44536695847364554r0;0.2&title=2012-08-11_8_towers_
from_turn_22_Phil_v_Ulf>

...investigating the same attack, this response invites a twin attack:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454543736 45
54x554546455445364846364 5r0;0.2&title=smal
l_dart_attack_from_turn_22_twin_attack_invite>

… this response leaves one tower vulnerable:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454543736 45
54x635344544536699695r0;0.2&title=guarded_dart_att
ack_1>

This means that a compressed tower position is stronger in some cases.

… moving away by means of White response also seem to lose, by *exhaustion*:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454543736 45
54x553344545436455444544558364554635354456947364 55
4r0;0.2&title=guarded_dart_attack_2>

...ignoring the threat, advancing on Black still looks like a White loss; this is a long but plausible line:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454543736 45
54x95a6a64536365544455464544536482637364536262664 5
444354535546435454433637262 6a67373699674637374645
463634554635454583645 54r0;0.2&title=guarded_dart_a
ttack_3>

… as defences go, this is probably the strongest, forcing Black to use two small darts to win:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454543736 45
54x554445544444484645446353544544535369969553739 59
658789695;0.2&title=guarded_dart_attack_4>

etc etc – it is possible to collect many examples of this.

Unsuccessful Short Dart Attack

There seems to be more to winning in a position with many towers than just using a short dart attack. Other tactics and how the towers are arranged play a part, for instance in this example from the same game, turn 24, the White defender responds so well that the Black attacker gets into trouble in turn 28:

<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454545888 88
547474x889796957485969595698796956374859695858587 7
896959548687896859596973 76a6878879655547484859687 9
7r1;0.2&title=short_dart_turn_24_branch_2>

….however, “going for knocking” seems to still give Black a winning advantage against this response:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454545888 88
54747488979695748596959 5x37355596858569878695858 49
4484563;0.2&title=short_dart_turn_24_branch_2.1>

this supports the above:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637373355554637378454545888 88
54747488979695748596959537355596858569878695x63748
495869595487887869584747497a68596a68796;0.2&title=
short_dart_turn_24_branch_2.1.1>

It is not yet clear what further tactics are necessary to really take advantage of the short straight dart attack, or if there is a type of position that is immune to it. As always, further analysis will hopefully penetrate deeper.

Further examples

exhaust exchange by attack on tower in a corner:
<=QSF;0.1&Quincala;KM;6463636a69696263632637a69557
484886969668696996959577888844555539484875848499 88
889384848858585533333637378475753746469 5a6a6x46443
3635344484544537573534458364544 53a6847353446947364
54453;0.2&title=exhaust_exchange_attack_on_full_tower_in_
corner_example>

successful small dart attack before all towers were built:
<=QSF;0.1&Quincala;KM;33444468696a6a4455556a482626
626363778888a6969688999986969636464696858546484864
6363263545556345545545463548463545r0;0.2&title=201
2-08-11_Phil_v_Ulf_defensive>