

# *On ultimate: dumps and retaining possession*

James Reynolds

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DEFENCE WINS GAMES; OFFENCE LOSES THEM. In ultimate the scoring team pulls to start the next point, except (sometimes) after half. Hence, the difference in the number times possession is lost (i.e. a turnover) by each team is related to the difference in the scores<sup>1</sup>.

A team that (somehow) never loses possession across an entire game will defeat a team that loses possession only once or twice<sup>2</sup>. Hence, being able to retain possession is important<sup>3</sup>, especially on points when your team receives the pull.

WHAT IS A DUMP AND WHY IS IT IMPORTANT? A backwards pass? A short pass? A pass to a handler? It might be one or all of these. Typically a dump is used to reset the stall count, retain possession, and/or improve the position of the disc. Being able to complete dump throws is important because this impacts, and to an extent dictates, whether your team can play low-risk, high-completion offense. With an effective dump-set your team can retain possession and wait for good opportunities. Without a reliable dump-set, you'll likely need to play higher-risk offence<sup>4</sup>.

The probability of losing possession is a function of the number of passes made and the completion rate of each of those passes<sup>5</sup>. Reality is more complex, with completion rates varying by thrower, throw and situation. Plus potential SECOND-ORDER FACTORS, where someone takes riskier options because the average completion rate for the whole team is low enough that a turnover is likely soon anyway. But, in general, if the average completion rate goes up, everyone will get to take less risky options<sup>6</sup>.

However, even though the team on offence typically has the advantage in ultimate (as they choose where the disc goes next), the agenda is typically set by the team on defence, because they get to choose what defensive formation to use. Having possession of the disc, entails reacting to what the defenders do and, typically, taking what they give you. So dumping might vary if playing....

...AGAINST ZONE DEFENCES, which typically involve defenders covering space, rather than specific individuals. Dumping is especially important if you are not a handler so as have enough receivers downfield to throw to. Zones come in many different variations, but can typically be beaten by going AROUND, going OVER or THROUGH.

<sup>1</sup> Let A be the score of the team with the highest score, and B be the score of the other team; and let C and D be the number times possession is lost by the team with the highest score and the other team, again respectively. Then, during the first half, at the end of a point when A + B is odd or even, respectively, Equations 1 or 2 apply. After half, mirroring makes it all too confusing to both with formal equations, as the same principles apply.

$$A - C = 1 - B - D \quad (1)$$

$$A - C = B - D \quad (2)$$

<sup>2</sup> Again, there are edge cases related to winning the toss and mirror at half, and very windy days.

<sup>3</sup> More important than getting a big layout block on defence? Possibly, because at that point the job is only half done - your team still needs to convert the block into a goal!

<sup>4</sup> Huck-and-zone anyone? Not that there is anything wrong with huck-and-zone if it is working. Just that it will probably not work against teams who don't turn the disc over much. Having an effective dump-set means your team probably gets to choose whether to play a high- or low-risk style of offence. If you can't reliably make dumps, then your strategic options are more limited.

<sup>5</sup> For example, if it takes 5 throws to score and each has a 85% chance of being completed the overall chance of scoring is only 44%. Compared to this, a 50-50 huck to the endzone straight off the pull isn't looking too bad.

<sup>6</sup> Again, if the completion rate goes up to 95%, we are a 77% chance of scoring if it takes 5 passes ... and suddenly that 50-50 huck isn't looking too good anymore. Another way of looking at this is: (1) ultimate is usually stacked towards the offence (unless it is excessively windy) because (1a) it is non-contact and (1b) there is typically somewhere to throw the disc to such that a defender can't get to it without running through the receiver; and (2) all defences will eventually break down as it is impossible to cover everything for ever. Hence, (3) if your team can just hold onto possession long enough low-risk opportunities to advance and/or score will come.

In Figure 1 (left) O6 throws AROUND to O5 or O7, while in Figure 1 (right) O7 throws AROUND to O6, or THROUGH or OVER to O5. Receivers might help the thrower by standing still<sup>7</sup>, as they are not being marked and so there is no one to run away from! Choose your location by balancing the need to limit turnover risk for the dump throw itself, versus maximising opportunities for the next throws<sup>8</sup>.

...AGAINST PERSON-MATCH DEFENCES, which typically involve each defender covering a single offensive player. Figure 2 shows four variations (L, M, N and O). In L1 D12 has decided to poach off O5, so O5 can move as close to the sideline as possible, receive a pass from O6, and then (in L2) use the time it takes D12 to get across to throw it to virtually anywhere on the field at all! M1 shows the situation where D14 has poached off O7. However, because O7 set up at a 45 degree angle behind O6 a direct pass (in M1) can be passed back to them or across to O5 (in M2). D13 is on the wrong side of O6 to be able contest the O7-to-O6 throw and D14 is lost at sea.

N and O show variations where the defenders are 'being honest' and actually covering their player. In N O7, again set up at the 45, has opportunities to cut to A or B<sup>9</sup>. If that doesn't work out, then O7 can double back to B2 for an easier flat throw from O6. Likewise, doubling back to A2 provides an out if A doesn't work out<sup>10</sup>. O instead shows O7 trapped on the slide line trying to dump to O6. Again, there are many options: A relatively easy pass to A; a more challenging pass up the line to B<sup>11</sup>; as somewhat difficult outside-in (right handed) backhand to C<sup>12</sup>; a sneaky outside-in (right handed) forehand to D<sup>13</sup>; a very difficult inside-out throw to B2 if B doesn't work out; a huck to O6 cutting to B3<sup>14</sup>; and the "Spanish Inquisition" play to D2<sup>15</sup>. Starting N and O can be a challenge. Some people signal to the dump that they want a cut, such as by making a ridiculous fake to no one. Personally I just turn and face the dump, and then use the Feldrunner approach. I look to see what their defender is looking at: if it is me, I'll just wait for the dump to move to A, B or one of the other spots; if they are looking at the dump, I'll just throw it into space in a manner that advantages the receiver, in the knowledge that their defender will not be able to react in time.

WHEN TO DUMP might depend on your role. If you are a cutter, probably dump and run ASAP. Why not? Running and catching is your job! Otherwise, let the stall count guide you: 1-3, maybe look downfield; by 4-5 look at the dump; for 5-8 wait for and/or throw the dump; by 9 give up, and throw it as far downfield as possible; still holding it at 10...whoops, STALL OUT<sup>16</sup>. Most importantly, dumping takes time. Looking away on 5, 6 or 7 is too soon. If you don't look at the dump until 8 or 9 then handler union rules may prevent service.

<sup>7</sup> Thereby allowing a no-look, or otherwise direct and quick, pass

<sup>8</sup> For example in Figure 1 (right) the further upfield O6 stands the longer the throw will need to be from O7, but the more likely it will be to make the next throw (thin line) to O5 before D12 arrives.

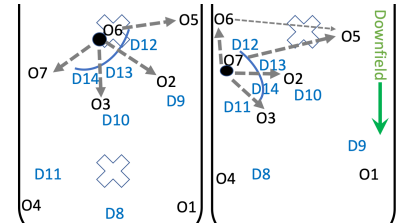


Figure 1: Dumping vs zones

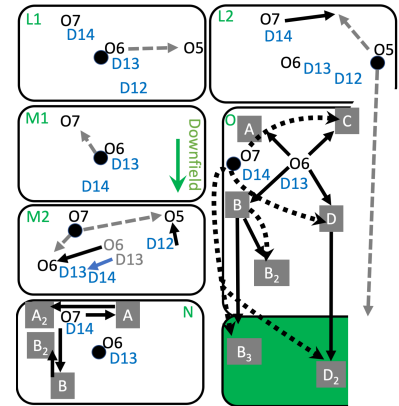


Figure 2: Dumping vs person-match

<sup>9</sup> B is probably a hard throw for O6, requiring a short inside-out (probably forehand) throw with touch and in a tight spot.

<sup>10</sup> Hey O6! if you are throwing to A make sure to watch out that you don't get hand-blocked by D13 sneaking around behind you!

<sup>11</sup> which D13 will probably be highly motivated to prevent

<sup>12</sup> which will likely be difficult for D13 to make a play on as they will be on the wrong side of O6

<sup>13</sup> which is probably going to be difficult to make happen given that there will likely be traffic from the stack over that way, but if it works puts O6 in a great spot to bust the point wide open

<sup>14</sup> that will probably result in a poacher getting involved

<sup>15</sup> Because no one would ever expect the dump (O6) to actually cut deep! Lots of opportunity for poachers to get involved and your mileage may vary, but this is spectacular if it works

<sup>16</sup> Don't bother contesting it. You should have thrown it or said "Fast Count" at least a second ago!