On ultimate: dumps and retaining possession

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Defence wins games, offence loses them. This is because, in ultimate, the difference in the number times possession is lost (i.e. a turnover) by each team is related to the difference in the scores[1,2]. A team that (somehow) never loses possession across an entire game will defeat a team that loses possession only once or twice[3].

Hence, being able to retain possession is important[4], especially on points when your team receives the pull. A 'dump' throw, or 'dumping it' back to one of the handlers, usually refers to a short throw, often backwards, made to reset the stall count and retain possession of the disc. Being able to throw a dump is therefore a key skill for almost any ultimate player. If you're a handler being able to set up for and then receive a dump is vital too[5].

This document is a two-pager about throwing or receiving a dump pass[6]. It first discusses what a dump is and why it is important. Positioning for the dump is discussed, followed by how to engage with 'the dump' and complete a dump pass. Finally, using dumps to generate offensive opportunities is discussed.

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, but typically a dump is about reseting the stall count, retaining possession, and/or improving 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[7].

Unfortunately, it's time for some more maths. The probability of losing possession is a function of the number of passes made and the completion rate of each of those passes. 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%

In comparison a 50-50 huck to the endzone straight off the pull isn't looking too bad. Reality is more complex, with different players on your team having different completion rates for different throws and situations. Then there are the SECOND-ORDER FACTORS, were in someone who could play a low-risk, high-completion style of ultimate is instead taking riskier options because the average completion

$$A - C = 1 - B - D \tag{1}$$

$$A - C = B - D \tag{2}$$

[1] 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.

[2] Yes, it gets more complicated during the second half, based on which team pulled first and which team scored the last point before half. Let's not get into that here.

[3] Again, there are edge cases, such as if no one can score upwind at all.

[4] 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!

[5] With the rare exception of if you are on the defence team and the team's strategy is to score as soon as possible after getting a turnover and/or to accept higher risks (e.g. run and gun, Huck and D, etc.).

[6] This is part of a series, available at `https://github.com/James-Reynolds/Ultimate-strategy-and-tactics` There are many approaches and thoughts about ultimate strategy and tactics. Many may disagree with what is written here. These are just my thoughts. Please feel free to fork or send pull requests.

[7] Huck-and-zone anyone? Not that there is anything wrong with huck-and-zone if it is working. Just that it will not work against teams who don't turn the disc over much.

$$0.85^5 = 0.44 \tag{3}$$

rate is ow enough that they might as well take some high-risk shots to score quickly, as there is likely to be a turnover soon anyway. But, in general, if the average completion rate of your entire team goes up, it will make sense for everyone to take less risky options[8], which may further increase the completion rate and chance of scoring instead of (eventually) losing possession.

Another way of looking at this is: (1) ultimate is usually stacked towards the offence[9] 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 receive; 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 a low-risk opportunity to advance the disc and/or score a goal is likely to become available.

However, even though the team on offence typically has the advantage in ultimate[10], the agenda is typically set by the team on defence. Having possession of the disc, therefore, entails reacting to what the defenders do and, typically, taking what they give you. So dumping might vary if playing....

...Against zone defences

Zones involve defenders covering space, rather than specific individuals. Dumping is especially important for maintaining enough receivers downfield of the disc to whom to throw to so as to advance the disc[11]. Dumping to someone (preferably a handler) upfield of the disc, immediately adds at least one potential receiver downfield of the disc - the person who just threw it!

Zones come in many different variations, but can typically be beaten by going AROUND, going OVER or THROUGH whatever formation is between the disc and the endzone. 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. Those receiving the dump throws might help the thrower by standing still[12], as they are not being marked, in locations that balance the need to limit the risk of a turnover for the dump throw with maximising opportunity to move the disc downfield on subsequent throws[13]

[8] Again, returning to the one high-risk versus five lower-risk throws example, if the completion rate goes up to 95%, we are now looking at:

$$0.95^5 = 0.77 \tag{4}$$

...and suddenly that 50-50% huck isn't looking too good anymore.

[9] Unless the weather is excessively windy.

[10] As they decide where to throw the disc to next!

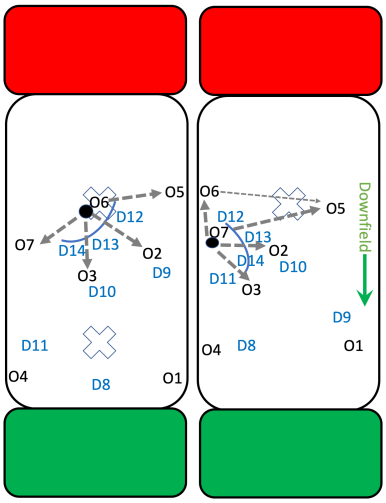

Figure 1: Dumping vs zones

[11] If there are more defenders than receivers downfield of the disc, then there is an opportunity for the defence to double- or triple-team each receiver

[12] Thereby allowing no-look, or otherwise direct and quicker, passes

[13] For example