# Thoughts on Drawing

By David Bergan

Capablanca hated draws. When he was the reigning world champion, he lamented the theoretical "end of chess" when he believed that expert play would always result in a draw. At that point, chess would be "played out" and no longer enjoyable—like how tic-tac-toe is only fun for children who can't calculate all the moves. Capablanca specifically created his 10x8 variant because he was afraid of this kind of "draw death" of chess.

Along the same lines, Lasker hated draws. He collaborated with Capablanca on his chess variant, and also proposed changing how draws and stalemate are scored.

Fischer hated draws for a different reason. He famously accused the Russians of colluding against him by using quick draws-by-agreement. They would draw with each other and save their mental energy for their games against him. Draws allow conspirators to play meta-games within a tournament.

In match play, once one player has won a game, he can use drawing-weapon openings for the remainder of the match to secure the overall win. (see 2000 Classical World Championship) The match isn't 20 games of hard-fought chess, where both are playing for checkmate. The leader is just trying to "not lose too much" and looking for any opportunity to force a threefold repetition or symmetrical endgame.

For spectators, draws are the worst outcome. Fans obviously hope for their player to win, but even a loss will keep them engaged. When two top players collide and draw, observers lose interest. In 2013, after months of build-up for one of the most anticipated World Championship matches, we had a billion Indians rooting for their hero, and millions of Norwegians cheering for the kid, while the rest of the world was wondering if we'd see a changing of the guard. Everyone was hyped to finally watch the first game. And then, after a mere 16 moves, the players stood up without a victor. Chess enthusiasts were disappointed. Casual onlookers changed the channel.

### Why do we have draws?

Tradition. The rules of chess could have easily been written to exclude draws (as I'll show later), but draws (including the 50-move rule) were accepted back in the days of Ruy Lopez (1561). The object is to capture the opponent's king, and certainly the board can be set up in such a way that it is impossible for either side to do so. That sounds like a draw.

Until 1867, tournament games that were drawn were replayed, and if that were the practice today, we wouldn't have the issues mentioned above. You can't "save your energy for Fischer" if you have to keep playing your comrade until there's a victor. But we would have the issue they had in 1867, namely that there were too many games to be replayed, and the tournament couldn't proceed on schedule.

The British Chess Association's "fix" was to award each player half a point for a draw, and it is that decision that leads us to our current predicament. In that era (1851–1878), only 14.07% of chess games were drawn (compared to 36.98% in Capablanca's time, 1919–1932) and they hadn't compiled any statistics on whether or not the White pieces won more frequently than Black. Given the information they had, a 0.5–0.5 result makes sense. We'll forgive them for not considering "draw death", tournament collusion, match-play degeneration, or spectator enthusiasm... because how could they have predicted that players would abuse draws to their advantage?

### Why are stalemates counted as draws?

Stalemates have their own unique history. In different times and places they used to be treated as victories, losses, "inferior victories", draws, illegal moves, or the stalemated side had to forfeit their move. The current rule became

standardized in the early 1800s when Jacob Sarratt insisted upon its use in England after traveling to continental Europe and seeing that it was played that way there.

In other capture games, like checkers, you are forced to move your final piece into jeopardy when that's your only move... you aren't considered an equal player by getting yourself into a situation where all your moves are suicide. Even in chess, you can get into other zugzwang situations where you have to move even when you don't want to.

Several Grandmasters (from T.H. Tylor in 1940 to Nigel Short in 2014) suggest that a stalemate should be counted as a win. Chess would be quite a bit different if stalemates were scored that way, mostly because a connected king + pawn can always beat a king. It would eliminate a lot of the draws. However, as GM Larry Evans noted, this is "crude proposal that ... [would] make chess boring."

GM Evans is correct. Endgames have more life because there is the challenge of scoring the checkmate instead of just a stalemate. We should have an incentive to play for the "superior win".

Interestingly, the best resolution here is the oldest one. In the 1920s Emanuel Lasker introduced the idea of a partial victory... proposing that a checkmate be scored at 10 points and a stalemate scored at 8 (with 2 points going to the loser). Like the current system, there is incentive to play for the checkmate over the stalemate, but it also adds incentive to play for the stalemate over the other forms of draw.

### What if every game of chess resulted in a win for one player or the other? What would we lose?

The best way to answer that is to analyze the situations where draws arise at the expert level. I have found five such situations:

1) Both players are dead-even in material, and neither can make headway against the other

(king) vs (king)
(king + bishop) vs (king + bishop)
same number of pawns for each king with no way to capture enemy pawns

2) One player has more material than the other, but not enough to force checkmate

(king + bishop) vs king (king + knight) vs king

3) One player has more material than the other, but not enough to force an efficient checkmate

(king + bishop + rook) vs (king + rook)
(king + knight + queen) vs (king + knight + bishop + rook)
[depending on the exact position of the pieces, naturally]

4) One player is losing, and forces a draw to avoid getting a loss

perpetual check three-fold repetition sacrifice material to force a stalemate drawing-weapon openings

5) Both players don't want to play a game of chess, and neither is willing to take a loss for it

"let's save our energy for our games against Fischer" "let's draw and split the prize money"

Of these options, only (1) strikes me as a situation where we would say that "both players played an equal game of chess". But even so, the stats show that it is harder to play "an equal game of chess" as Black than as White. Therefore, I think some consolation should be given to the Black player in compensation for the disadvantage of going 2nd.

In situations (2) and (3), it's true that neither side can capture the other's king (within 50 moves), but that doesn't mean that they played an equal game. Acquiring a bishop or knight's advantage is no small feat and I would have no qualms saying that this player won (or partially won) the contest. It would be a "win by decision" rather than a knockout, but it still seems clear that one player got the best of the other.

Situations (4) and (5) are what I consider to be the problem and think that the game would definitely be better without those options. Being in a losing position and using a 3-peat or stalemate to swindle a "draw" does not convince us that you're an equal chess player. If you were equal, why were you behind in material? If you're equal, why did you play the option that force-terminates the game in progress?

Consider Carlsen's comment after the aforementioned Game 1 of the 2013 World Championship:

"about the way the game went today, in general in these lines, play develops a little more slowly, but here there was an immediate crisis and I didn't see that any of my options were particularly promising, particularly as I missed as Vishy mentioned earlier, move 13 Qe1 and 13...Nb4 is very strong – from then on I had to pull emergency brakes, and had to go for draw." <u>Game One Press Conference</u>

Does it sound like the position was equal? Should this be scored the same as king vs king? Carlsen is verbally conceding that Anand had a stronger game but did not actually concede the game. What sense does that make? Why do our rules allow a player the "emergency brakes" option against a "very strong" move? This is a design flaw in our tournament scoring system.

As for situation (5), I don't even need to comment. Chess tournaments have recognized the silliness of this situation for decades and have been struggling to combat it.

### My Proposal: Award points in the tournament for the different kinds of game outcomes

- Checkmate/resign/run out of time = 1 point for winner (0 points for loser)
- Stalemate = 0.8 points for winner (0.2 points for loser); same as Lasker's suggestion
- 3-move repetition, insufficient checkmating material, and 50-move situations award points as follows:
  - o If both players have the same material, Black gets 0.6 points and White gets 0.4 points
  - If White has more material than Black, White gets 0.7 points and Black gets 0.3 points
  - o If Black has more material than White, Black gets 0.7 points and White gets 0.3 points
    - When determining who has more material: Q=9, R=5, B=3, N=3, P=1
- Since there aren't any "draws" anymore, there aren't any draws-by-agreement. However, players can still agree to a "fast 50" which means that they both believe that no further progress can be made and they agree to score the board as if 50<sup>th</sup> move was just completed.

### Comparison

The advantage my proposal has is that no game ends with giving both White and Black the same number of points in the tournament. Therefore, even if they agree to a "fast 50" on move three, White is conceding 0.2 of a point toward the prize money. The current FIDE system is much less nuanced and basically assumes that there is no way to evaluate the skills of the players involved except by checkmate. Consider the following graphs:



On five different game outcomes, FIDE scores both players the same. On my proposal, none of them have the same score, so there's always a victor of some measure. 0.5 isn't a possibility for either side.



### Conclusion

Fischer and Capablanca created chess variants to avoid "draw death". While both are great games, they aren't necessary to solve the problem. It was one chess association's decision to score all non-checkmate-endings as 0.5–0.5 that lead us into this mess... revisiting that decision with 150 years of new information is all that's required to lead us out.

My proposal incentivizes both players to play for a checkmate. And if checkmate isn't possible, they're incentivized to play for a stalemate. And even if stalemate's not an option, they just need to secure a point of material to come out ahead.

My proposal also removes the "emergency brakes" design flaw. It takes away the gimmick whereby a player who played a worse game (is down in material) could get an equal result by forcing the game to end. And it requires that if any two players want to "save energy" for later rounds, one has to hurt his record to do so.

## Application: Carlsen–Caruana 2018



	Game 1		Cumu	lative
	Caruana (W)	Carlsen (B)	Carlsen	Caruana
FIDE	0.5	0.5	0.5	0.5
My Proposal	0.3	0.7	0.7	0.3



	Game 2		Cumulative	
	Carlsen (W)	Caruana (B)	Carlsen	Caruana
FIDE	0.5	0.5	1	1
My Proposal	0.3	0.7	1	1



	Game 3		Cumulative	
	Caruana (W)	Carlsen (B)	Carlsen Caruana	
FIDE	0.5	0.5	1.5	1.5
My Proposal	0.3	0.7	1.7 1.3	



	Game 4		Cumulative	
	Carlsen (W)	Caruana (B)	Carlsen	Caruana
FIDE	0.5	0.5	2	2
My Proposal	0.4	0.6	2.1	1.9



	Game 5		Cumulative	
	Caruana (W)	Carlsen (B)	Carlsen	Caruana
FIDE	0.5	0.5	2.5	2.5
My Proposal	0.4	0.6	2.7	2.3



	Game 6		Cumu	ulative	
	Carlsen (W) Caruana (B)		Carlsen	Caruana	
FIDE	0.5	0.5	3	3	
My Proposal	0.3	0.7	3 3		



	Game 7		Cumulative		
	Carlsen (W)	Caruana (B)	Carlsen	Caruana	
FIDE	0.5	0.5	3.5	3.5	
My Proposal	0.4	0.6	3.4	3.6	



		Game 8		Cumulative	
7		Caruana (W)	Carlsen (B)	Carlsen	Caruana
	FIDE	0.5	0.5	4	4
6	My Proposal	0.4	0.6	4	4



	Game 9		Cumu	lative
	Carlsen (W)	Caruana (B)	Carlsen Caruana	
FIDE	0.5	0.5	4.5	4.5
My Proposal	0.4	0.6	4.4 4.6	



		Gam	Game 10		Cumulative		
7		Caruana (W)	Carlsen (B)		Carlsen	Caruana	
	FIDE	0.5	0.5		5	5	
6	My Proposal	0.7	0.3		4.7	5.3	



		Game 11		Cumu	lative
7		Carlsen (W)	Caruana (B)	Carlsen	Caruana
	FIDE	0.5	0.5	5.5	5.5
6	My Proposal	0.7	0.3	5.4	5.6



	Game 12		Cumu	lative
	Caruana (W)	Carlsen (B)	Carlsen	Caruana
FIDE	0.5	0.5	6	6
My Proposal	0.4	0.6	6	6



0.5

Carlsen Caruana

0.4

0.7

0.8

0.9

1

0.6

In either system, it's been an exceptionally close match. But which scoreboard is more interesting?

Game 2 Game 1

0

0.1

0.2

0.3



