

Material Value - Intermediate

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Please view “Material Value - Beginner” before reading this lesson, as concepts build off of the beginner lesson and are more nuanced.



OR



Recall that both a knight and bishop are worth 3 material. It turns out that is not 100% true. A bishop is actually worth around 3.15 - 3.25. Bobby Fischer valued it at 3.25, and Garry Kasparov valued it at 3.15.* This is due to three primary reasons.

1. Range/Mobility
2. Space and Endgames
3. Bishop advantage and bishop pair

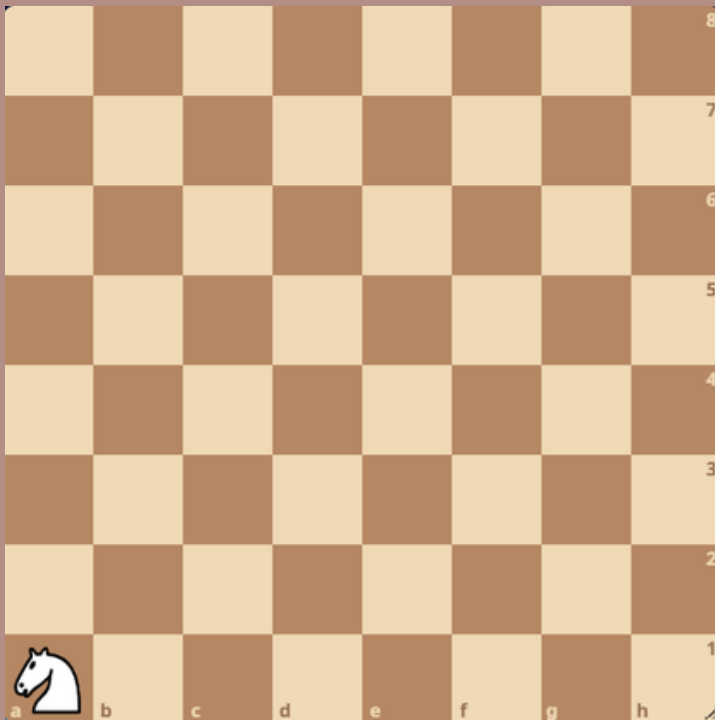
Avoid confusion: Capturing a bishop on platforms like chess.com shows a +3 material gain during a game. But this is only a display value. Behind the scenes, the engine evaluates bishops slightly higher than knights, even though the interface rounds both pieces to 3 for simplicity.

*Source = <https://www.chess.com/blog/clevelandtribe/whats-the-true-value-of-a-bishop>

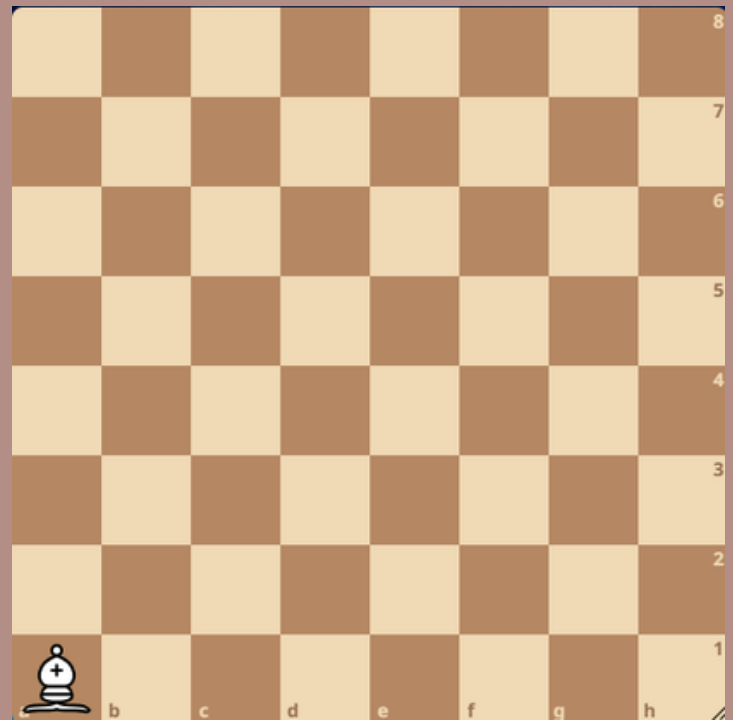
Let's break down the three primary reasons.

Range/Mobility

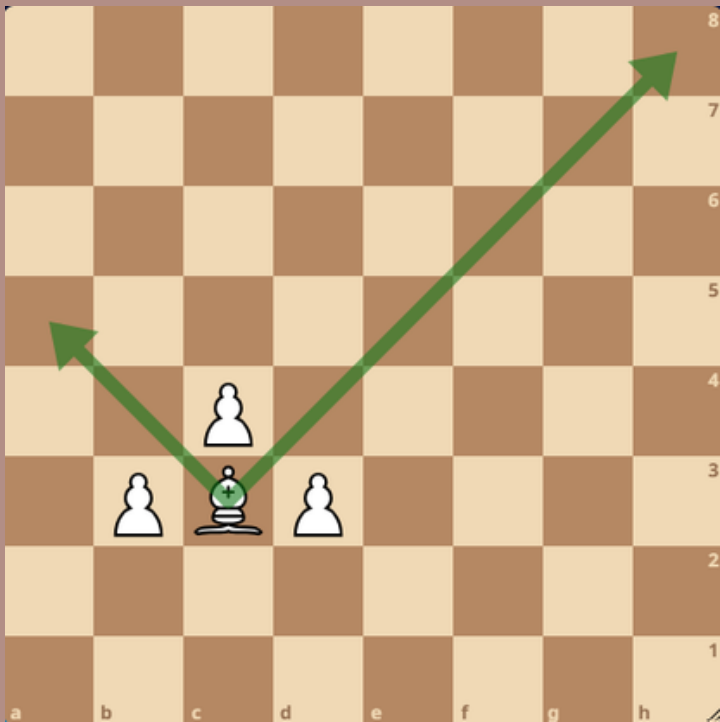
Bishops have an increased range compared to knights, and can travel across the board in seconds. Their range not only allows them to travel, but to exert pressure on the other side of the board while safely tucked away in its base. Often, bishops can be the once piece that makes an attack possible.



It takes four moves to get to g7, the other side of the board!

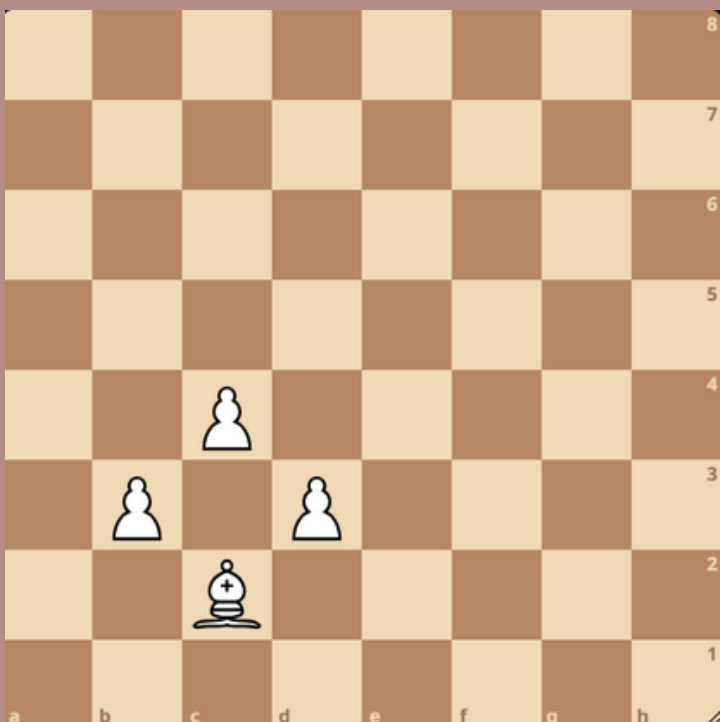


It only takes one move to get to g7.



Look how white's bishop can influence the other side of the board while being tucked behind pawns!

However, just like a sniper's line of sight must be clear, so must a bishop's. Whereas knights can jump over everything, a bishop is vulnerable to being blocked by numerous things, including its teammates! A happy bishop is a bishop whose range is preserved, or whose range is only blocked short-term.



Sad bishop.

Due to the bishop's nature of needing space to operate, this leads us cleanly into point 2.

Space and Endgames

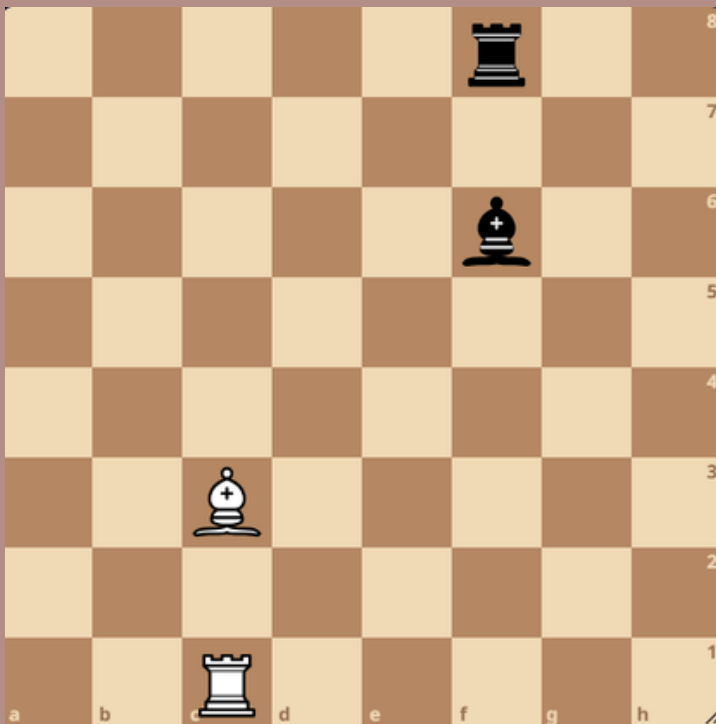
This point uses concepts introduced in point 1, but expands them specifically to the endgame. The endgame is a part of most chess games, thus this point must be addressed. By definition, the endgame has the least amount of pieces on the board compared to the opening or middlegame. With less pieces comes more space for each piece, and with more space comes happier bishops. The bishop's strength tends to increase in endgames, whereas the knight's tends to decrease, due to both the value of the knight's ability to jump decreasing and its lack of range becoming more prominent.

To summarize all of that text:

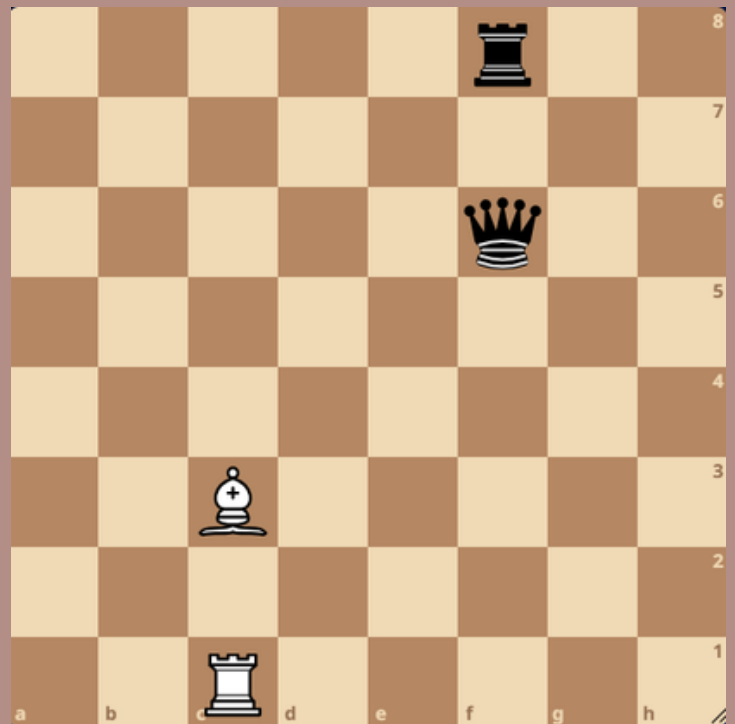
- 1. Bishops usually perform better with increased space.**
- 2. Endgames usually offer increased space.**
- 3. Endgames are a part of most chess games.**

Bishop advantage and Bishop pair

The bishop plays a unique roll in chess that no other piece can fulfill. Notice that while a rook can play the exact same moves as another rook, the same is not necessarily true for bishops, due to the fact that one bishop influences the white squares, and the other influences the dark ones. There is no other piece that can move diagonally except the queen, and the queen cannot fight the bishop head-on since the queen is much more valuable than the bishop. See the below examples.

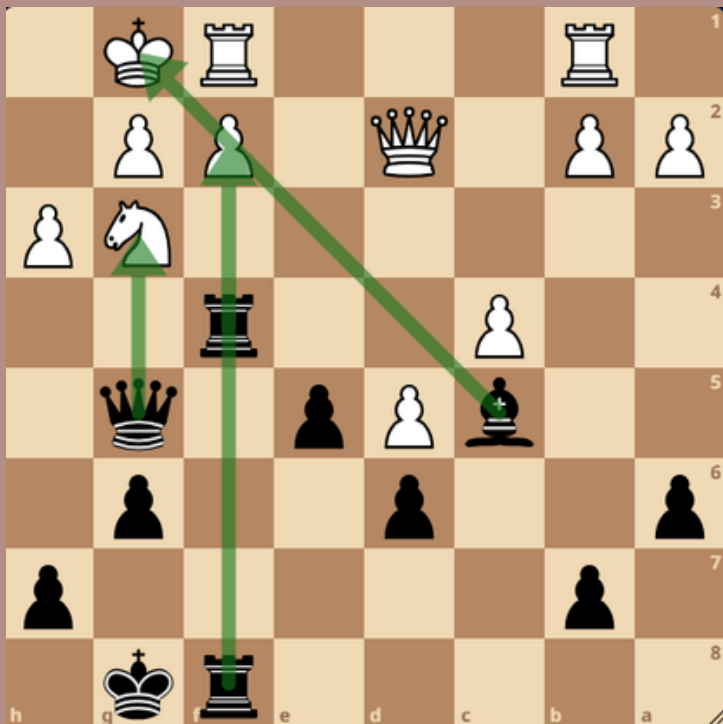


The white and black bishops are fighting over control of the dark squares.



The black queen simply cannot take the role of the black bishop.

Now that the uniqueness of each bishop has been established, the concept of the bishop advantage can be introduced. The bishop advantage refers to the scenario where one side has a bishop color that the other doesn't, resulting in a huge advantage over those color squares.



Look how much pressure black's uncontested bishop is putting on white! Even though white has an extra pawn in this position, the chess engine says it is a draw.

If an opportunity to trade an enemy bishop with your knight arises, consider it! You could have a monopoly over, or take away your opponent's monopoly, over the white/black squares.

Lastly, there is one more idea in this third point. Bishops work better together than knights do. This is called the bishop pair. Consider the following example.



This is a very pleasant position for white. The bishops exert huge pressure across the board onto black's king.

Regardless of whether black's king is on the light or dark squares, it will not be able to escape from one of white's bishops. The bishops together can exert influence over the whole board, thus empowering each other. Each fills the shortcomings of the other.

One way to think about it is like a video game, or perhaps a card game. If object A and object B are paired, they gain a small bonus. The same is true in chess. Bishops have synergy together in a way that knights simply don't.

For all of these reasons, bishops are worth slightly more than a knight. Knights certainly have their strengths, but fall slightly short of a bishop's.

Importantly, just like the beginner lesson about material value, remember that there are exceptions to nearly every principle in chess. Sometimes, knights are far superior to bishops. During a chess game, it is your job to distinguish the positions where a bishop is better and where a knight is better. Understanding the content of this lesson instead of just reading it will greatly serve this purpose.