

98-252  
Wordplay: Fundamentals of Scrabble Strategy  
Lecture Notes

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# 1 Introduction

## 1.1 Purpose

This document is a collection of notes corresponding to the lectures given by Jemmin Chang in the Student College course “Wordplay: Fundamentals of Scrabble Strategy” (98-252) at Carnegie Mellon University. The course covers Scrabble strategy under NASPA tournament rules — as of this writing — assuming the OWL2 lexicon, **not** the newly-released OWL3 (TWL2014) lexicon which is not yet publicly available in electronic form. Please report any errors or suggestions to the author at the email address above.

These notes are intended solely as a study aid for students in 98-252.

## 1.2 Notation

In this course, we maintain a standard notation for racks and plays to facilitate clear communication.

### 1.2.1 Racks

A rack is listed in alphabetical order, with a blank listed as “?” at the end of the rack. Sometimes, the tile values will be subscripted after each tile for a reminder.

### 1.2.2 Plays

The notation for a play has 3 parts. To generate these parts, we must first identify the **main word** of the play. For a play that uses 2 or more tiles, the main word is the word formed by the line of tiles that includes all of the placed tiles. For a play that uses only 1 tile, the main word is the horizontal

word formed with the placed tile, if one exists; otherwise, the main word is the vertical word formed with the placed tile. The three parts of a notated play are:

1. Starting square: the square at which the main word begins. If the main word is horizontal, it is listed [row number][column letter]. If the main word is vertical, it is listed [column letter][row number]. The column letter is always capitalized.
2. The main word. All non-blank tiles are capitalized, but blanks are notated as the letter they represent in **lowercase**. Parts of the main word that were already on the board before the play are enclosed in parentheses.
3. Score for the whole play (**not** just the main word!).

To notate a play, these three parts are listed in the order above, each separated by a space. For example, the below two plays are notated as 8F START 10 and G4 pROC(T)ORS 63.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
2	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
3	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
4	█	█	█	█	█	█	p	█	█	█	█	█	█	█	█
5	█	█	█	█	█	R	█	█	█	█	█	█	█	█	█
6	█	█	█	█	█	O	█	█	█	█	█	█	█	█	█
7	█	█	█	█	█	C	█	█	█	█	█	█	█	█	█
8	█	█	█	█	S	T	A	R	T	█	█	█	█	█	█
9	█	█	█	█	█	O	█	█	█	█	█	█	█	█	█
10	█	█	█	█	█	R	█	█	█	█	█	█	█	█	█
11	█	█	█	█	█	S	█	█	█	█	█	█	█	█	█
12	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
13	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
14	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
15	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

Exchanges are notated “Exch. ABCDEFG” where ABCDEFG are the letters being exchanged listed in alphabetical order. Passes are notated “Pass”.

## 2 Playing board-first Scrabble

One of the simplest to learn, yet most powerful paradigms one must adopt to play Scrabble well is to play **board-first**. By contrast, most **parlor players** play **tiles-first**, i.e., their process for finding a play goes something like:

1. **Anagram** the tiles on the rack to find the longest or highest-scoring word possible.
2. Look on the board for a tile contained in the word found.
3. Make a **simple play** of the word through this tile.

More advanced parlor players may combine the first two steps, looking for words in their rack that utilize and can be played through an existing tile on the board. Regardless of such improvements, **tiles-first playing** is generally characterized by primary focus on anagramming the tiles on the rack, mostly simple plays, and placement as a secondary consideration.

**Board-first playing**, on the other hand, places primary focus on the **shape** of the board and the available **bonus squares**. Playing board-first, the process for finding a play looks more like:

1. Identify **hot spots** — areas of the board that are likely spots for high-point plays.
2. Anagram the rack (as well as existing tiles in hot spots) to find plays which maximize the yield from these hot spots.
3. Make the best play among the candidates.

The paradigm is so named because a player employing it *first* focuses his attention on the *board*, rather than the tiles. Board-first playing allows a player to find high-scoring and strategically powerful plays much more efficiently than tiles-first playing.

### 2.1 Identifying hot spots

There are two main sources of points in Scrabble: bonus squares and **bingos**. Thus, disregarding bingos for now, hot spots revolve around bonus squares. A hot spot can be a single square, a column or row or portion thereof, or a cluster of adjacent squares; the precise definition is not important. Put simply, hot spots are spots where bonus squares can be put to good use.

## 2.2 Utilizing hot spots

Maximizing the bonus points from hot spots is the key tenet of playing board-first Scrabble. Anyone playing Scrabble for the first time quickly realizes that placing high value tiles on letter bonuses and within words placed on word bonuses is the way to win the game. Two techniques exist for maximizing this reward:

1. **Parallelizing.** When a **hook** or **parallel play** is made such that a tile placed on a bonus square is part of multiple new words formed, the bonus applies for all words that include the tile. This enables bonus squares to be applied “twice,” yielding great points.
2. **Compounding.** When multiple bonus squares are covered by a play, letter bonuses apply first, and word bonuses are multiplied together (compounded). This allows for powerful bonus square combinations such as the **triple-double**, **double-triple**, **double-double**, and widely-feared **triple-triple**.

## 2.3 Examples

The harder part of playing board-first is finding the hot spots. Once you’ve identified hot spots, the rest is simply plugging in words that fit them and finding the best play. While many hot spots are obvious, such as an open TWS lane, others require more honed **board vision** to see. This ability can only be developed through extensive practice.

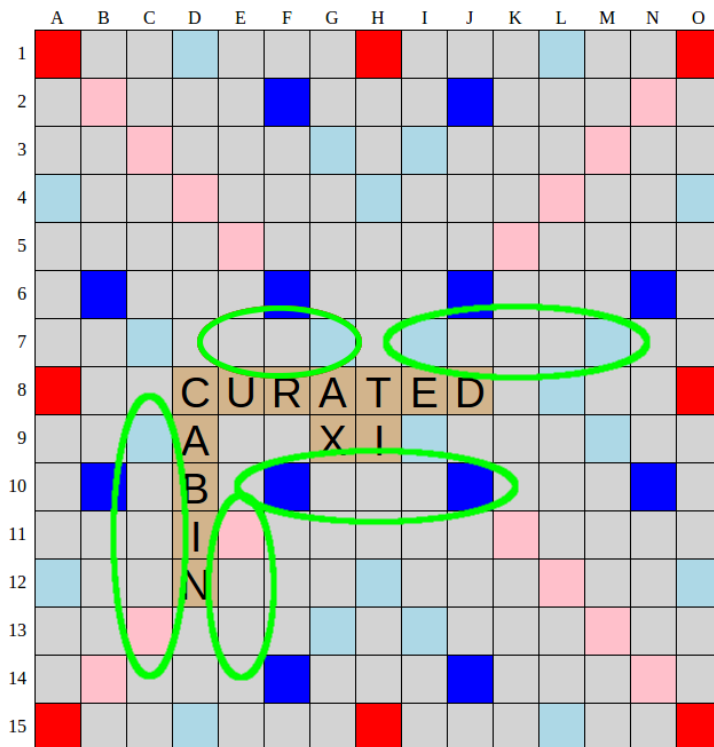
Consider the example below. What hot spots do you see?

### 2.3.1 Example A: an early, **open** board

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Red			Light Blue				Red				Light Blue			Red
2		Pink				Blue				Blue				Pink	
3			Pink				Light Blue		Light Blue				Pink		
4	Light Blue			Pink				Light Blue				Pink			Light Blue
5					Pink						Pink				
6		Blue				Blue				Blue				Blue	
7			Light Blue				Light Blue		Light Blue				Light Blue		
8	Red			C	U	R	A	T	E	D		Light Blue			Red
9			Light Blue	A			X	I	Light Blue			Light Blue			
10		Blue		B		Blue				Blue				Blue	
11				I	Pink						Pink				
12	Light Blue			N				Light Blue				Pink			Light Blue
13			Pink				Light Blue		Light Blue				Pink		
14		Pink				Blue				Blue				Pink	
15	Red			Light Blue				Red				Light Blue			Red

No huge openings, but there are several nice spots. Placing a consonant and parallelizing on 7G or 7I could yield good points. Unfortunately, TI has no **front hooks**, so we can't take advantage of both DLS with one play. Underneath the same set of words in row 10, there are two TLS that we could potentially hit with one play. The hot spots in both these rows benefit from the "free" X points from extending AX.

Another good parallel spot is the E column alongside CABIN, particularly the DWS on E11. We should keep in mind that, with the right tiles, we might even be able to find a play that extends from E5 to E11, garnering a 4x word bonus. Another opportunity for compounding (and parallelizing) is on the other side of CABIN in the C column, where we could compound the DLS at C9 with the DWS at C13.



Note that we performed this hot spot analysis without any idea about our rack yet. This is central to the board-first paradigm: focusing first on hot spots, then fitting in the tiles for the best possible play. Naturally, a more experienced player will interleave these two steps, keeping her available tiles in mind to quickly estimate the value of hot spots as she searches the board. Now that we've identified spots with good scoring potential, let's consider how we might choose our play with a particular rack.

**Rack:** E H R S S T U

With this rack, we can quickly eliminate a few options. Our only heavy consonant is H, which doesn't fit at 7G, so that spot is unlikely to be helpful. The same goes for the F11 spot (which actually is not a great spot most of the time, since only D or F can fit for a parallel play and yield decent points there). Since only A goes in front of B, parallel from the DLS at C9 is not an option, though we can still use the DWS at C13.

Let's try putting H on 7I and playing parallel there. A simple play like



HER yields 22 points — that’s the power of parallelizing bonus squares. Another option is placing the H on the TLS and getting those free X points with a play like 10F HEST 28. Both are good examples of the scoring power of parallel plays.

We can’t always just stick to the few hot spots we’ve identified, though, especially when we did so without looking at our rack. To play Scrabble well, our play-generating thought process should be a fluid combination of eliminating those spots that don’t work with our particular tiles and adding those that do. For instance, it turns out that with this rack the double-double mentioned earlier is possible: E5 SUT(U)RES 38. Even better, this rack allows us to play a bingo: 12A SHU(N)TERS 63, which is probably the best play here. As we’ll discuss in the next lecture, for racks like this (i.e. those that lend themselves well to bingos) we alter our board-first approach slightly, since bingos are often better than even the best hot spot plays.

Now let’s look at a position later on in the same game. The board has developed to be much more **closed**.

### 2.3.2 Example B: a later, closed board

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Red			Light Blue				Red				Light Blue			Red
2		Pink				Blue				Blue				Pink	
3			Pink				Light Blue		Light Blue				Pink		
4	Light Blue			Pink				Light Blue				Pink	R		Light Blue
5					Pink						Pink		A		
6		W	A	N	T	Blue	V	A	R	Y			T	Blue	
7			Light Blue		H		Light Blue		Y	O	N		I		
8	G			C	U	R	A	T	E	D		F	O	L	D
9	I		Z	A	G		X	I	Light Blue				N		
10	V	Blue	A	B		J				Q	a	T	s	Blue	
11	E			I	Pink	E		I	L	I	A				
12	S	H	U	N	T	E	R	S				Pink			Light Blue
13		E	M				Light Blue	M	A	L	I	C	E		
14		Pink				Blue				Blue				Pink	
15	Red			Light Blue				Red				Light Blue			Red

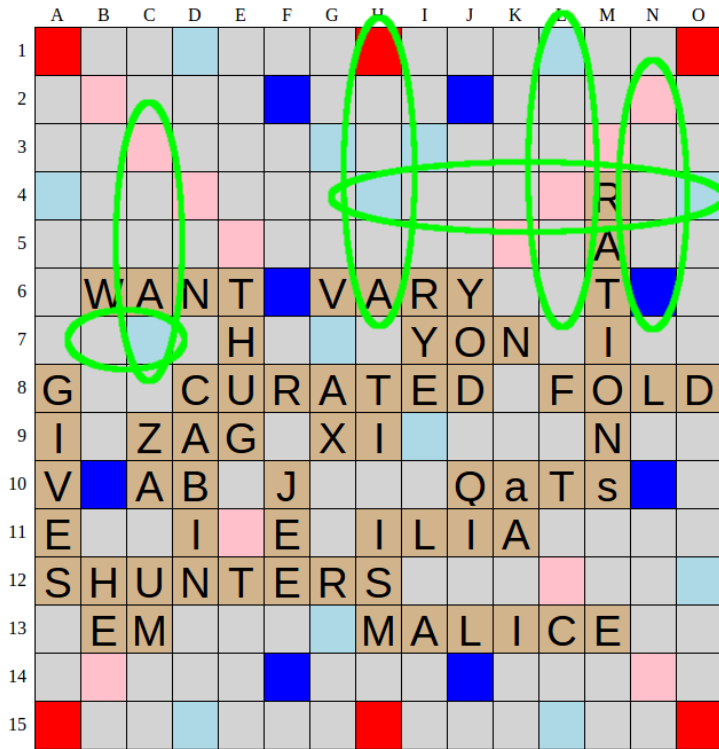
This time, let's keep our rack in mind as we search for hot spots.

**Rack:** E E K N P S T

The bottom half of the board is pretty filled up, but there are still some opportunities for parallel plays and compounded bonuses near the top. In particular, we'd like to place our K on a bonus square that gets parallelized or compounded. At first glance, row 7 under **WANT** looks like a nice place for a short parallel play, but neither our K nor P can fit under the **A**. This leaves us with several vertical spots: C3-C7, column H (the TWS), and columns L and N alongside **RATIONs**. Row 4 through the **DWS** adjacent to **R** and hitting one of the **DLS** is also an option, though it's harder to get and would open up a TWS. Hitting the TWS in column H would probably be best, but a quick glance at our tiles suggests that it's impossible.

Let's try putting the K on C7 and extending up to hit the **DWS**. For this word to make sense, we probably have to put an E at C5. What can we play

ending in —EAK? C3 SPE(A)K 32 maximizes the points in this spot and is probably our best play.



Hopefully these examples have adequately illustrated the power and importance of playing Scrabble board-first. Practice this paradigm on every Scrabble turn you take and you will see rapid improvement in your scoring ability.

### 3 Finding good words

You may have been puzzled by some of the plays which I declared “the best play” in the previous lecture; with a bit of searching, you could have found other options which scored more. When we started out as parlor players, most of us were taught that the object of Scrabble is to score the most points — naturally, we extended that idea to each individual play during the game. But the somewhat unintuitive truth is that **the best play isn’t always the highest-scoring play**. There are several reasons why, the foremost of which is the important principle of rack management.

#### 3.1 Rack management

Most Scrabble experts agree that **rack management** is the single most important strategic notion that distinguishes serious Scrabble players from parlor players. Put simply, rack management is caring about the tiles you leave on your rack after your play — aptly called the **leave** — as much as how many points your play scores. “Bad luck” is the favorite scapegoat for a weak rack even among seasoned players, but you don’t draw those 7 tiles out of a random void.<sup>1</sup> Most of the time, 2 or 3 or even 6 of the tiles on your rack for your next play are those you chose *not* to play this turn. By carefully choosing what to leave on your rack, you have partial control over your next rack; in other words, you can *manage* your rack.

How much difference does your leave really make, you ask? Quantifying the value of a particular leave is, indeed, the central challenge of good rack management. But the short answer is that the quality of your leave makes a huge difference — enough for Scrabble pros to frequently give up 10, 20, even 30 or more points for a better leave. For a bit of intuition, let’s perform an experiment on two reasonably common rack leaves: **AEIL** and **AERST**. Using the board in 2.3.1, we’ll draw 5 racks from each leave and record the highest score we can achieve with each.

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<sup>1</sup>Except in the case of bingos.

<b>Drawing from AEIL</b>		<b>Avg=22.8</b>
Draw	Highest score	
OTV	10F VETO 28	
AGW	7F AW 28	
AAS	10D (B)ALES 22	
ALW	C10 ALINE 18	
OOT	10D (B)ALE 18	
<b>Drawing from AERST</b>		<b>Avg=46.6</b>
Draw	Best play	
LD	J3 STRAD(D)LE 64	
DZ	C9 ZAS 49	
DY	10F RESAY 31	
LR	11A TRA(I)LERS 66	
LO	C9 LATER 23	

On average, we scored about 24 more points with the **AERST** leave than we did with the **AEIL** leave.<sup>2</sup> It follows that we should be willing to make a play that yields the **AERST** leave for up to 24 fewer points than a play that yields the **AEIL** leave.<sup>3</sup> In other words, the **true value** of a play is the number of points it scores plus its **leave value**, an estimate of the future value of the leave it yields. Naturally, this begs the question: how do we compute the leave value of a play?

### 3.1.1 Evaluating rack leaves

The method we used in the previous example was a simplified version of the simulation technique used in all high-level artificial intelligence Scrabble programs. Of course, this method isn't feasible for real games against other humans, so how do human players evaluate leaves? In general, there are several factors to consider in evaluating a leave:

- **Consonant-vowel balance.** You need a good mix of consonants and vowels to form words, especially bingos. The bag contains 56

<sup>2</sup>Computer analysis estimates the value of the **AEIL** leave at -0.6 and the **AERST** leave at 31.2, a difference of 31.8. Our more modest results are probably a result of my limited vocabulary — a computer would probably find more bingos and better plays than I did — but despite that limitation, both results confirm the large value difference between the two leaves.

<sup>3</sup>Actually, this is not *quite* right. As we now know, we have to consider not only how many points each leave made, but also the value of the leaves *they* yielded!

consonants, 42 vowels, and 2 blanks to start. Since slightly consonant-heavy racks are less troublesome and more bingo-able than vowel-heavy racks, generally the ideal CV ratio is 60:40.

- **Weight.** The most common consonants are worth only 1 point for a reason: they're easy to use. They're often necessary to place heavier consonants, so you should strive to keep the total weight of your leaves low. A rack of only 1-point tiles can occasionally be a nuisance, but these are also the most common source of bingos.
- **Synergy.** This term refers to how well groups of tiles “go together,” or how many different words can be formed from them. For example, EST has good synergy while AOWV has pretty bad synergy.
- **Duplicates.** Having duplicates of a tile severely limits the number of words you can make. Granted, some letters are frequently duplicated in words (e.g. L, S, T), and these are not as bad to duplicate. Generally, though, we want to avoid keeping duplicates in our leaves — even for those common letters, since they also appear most frequently in the bag. While two T's is reasonable, three is not.

All of these quantities can be more-or-less measured objectively. Some players actually memorize a set of values for each tile (as well as duplication “penalties”), and simply add them up to measure the value of a leave, the same way AI programs do it. Most, however, use a more subjective, intuitive process — guesstimating. With a little practice, human intuition becomes quite good at quickly estimating leave values.

### 3.1.2 Exchanging

For some reason, many parlor players see exchanging as a pitiful, last-ditch effort to be taken only after three turns of 2-point plays when their rack is, *amazingly*,<sup>4</sup> still **mostly vowels**. We must expunge this attitude from our Scrabble mindset to understand that exchanges are a valid, often essential option that is no different than an ordinary play. An exchange is a play that scores 0 points and uses any number of tiles you choose (except that they go in the bag instead of on the board). Since a play's true value is the points it scores plus its leave value, then, the value of an exchange is exactly the value of the tiles you choose to keep. Surprisingly often, this value exceeds the true value of the best other play available.

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<sup>4</sup>(sarcasm)

Consider every Scrabble player’s worst nightmare: a rack of 7 vowels. If you’re lucky, you might be able to play off 2 of them for 10 or so points. Your remaining 5 vowels, depending on the combination, are evaluated at -25 to -30 points,<sup>5</sup> meaning the true value of your play is around -15 to -20 points. And that’s the best case scenario with such a rack! In this situation, it’s clear that exchanging (probably 6 or 7, depending on the bag) is the best option, since its true value is zero (slightly more if you keep an E).

Most of the time, it won’t be quite so obvious when an exchange is the best play. (We’ll discuss other factors that make exchanging more or less favorable in the lecture about board control.) But it’s important to give exchanging its fair consideration by evaluating its true value the same way you evaluate other plays’ true values: points + leave value.

### 3.2 Bingos

Bingos are the other type of special play greatly overblown by parlor players. While they’re not the game-ending “ultimate weapon” they’re often thought of, 50 extra points can come in handy. When you manage your rack well, you’ll find that they’re also a lot more common than you might be used to — top experts average almost 2 bingos a game. In fact, bingos are one of the *main reasons* that rack management is so important.

Because of the 50 point bonus, playing a bingo is often the best choice even if it doesn’t utilize bonus squares that well. With this in mind, we have to modify our play-finding process slightly from the purely board-first paradigm: after drawing new tiles, we first take a quick look at our rack to gauge how “bingo-y” — how likely to yield a bingo — it is. If our rack looks promising, we should take a moment to anagram for bingos, keeping in mind the conditions of the board: if the board is completely closed with no **bingo lanes**, there’s no point in looking for bingos; if there’s only one particular hook spot where a bingo could fit, we only need to consider possibilities that can hook there. Don’t make the mistake of staring only at the letters on the rack: the majority of bingos played by professionals are eight letters, playing through 1 of the tiles already on the board. Indeed, when we have a bingo-y rack, we’re not abandoning our focus on hot spots so much as expanding our definition to include *anywhere a bingo could fit*

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<sup>5</sup>I used Quackle, the leading Scrabble analysis and AI program, to calculate the numerical leave values cited in this chapter.

as a hot spot.

It's crucial to remember that, like exchanges, bingos are just another type of play. There's nothing inherently magical about them, and you must learn to control your excitement and *think* before you put down a bingo play. Oftentimes the first bingo you spot isn't the best, and there's a better bingo elsewhere. Sometimes the best play isn't a bingo at all, even if you *can* play one. Though it's hard to resist showing off to your opponent your brilliant anagramming skills, you must always remember that your goal is to win the game and make the play which ensures the best probability of doing so.

### 3.2.1 Anagramming bingos

So how do expert players go about playing 3 or 4 bingos in one game? Part of it is luck and incredibly vast word knowledge, two factors that we don't concern ourselves with in this class. But the other big factors are excellent rack management, as we've just discussed, and diligently-trained anagramming skills. Importantly, the first is prerequisite to the usefulness of the second — rack management is to nutrition as anagramming skill is to exercise. If you're trying to lose weight, no amount of exercise can make up for eating poorly. Similarly, if you don't manage your rack well, you'll never get the bingo-y racks to put your anagramming skills to use.

Anagramming is one of those skills that's learned by simply practicing a lot. But there are a couple of tricks that can help you find bingos faster and more reliably:

1. Look for common beginnings and endings. If your tiles have decent synergy, chances are you can form common beginnings and endings that will quickly lead to bingos, e.g. RE-, UN-, OUT-, -ERS, -IER, -EST, -ING, -ION, -OUS, and tons more. Once you've set aside just two or three tiles, it becomes exponentially easier to anagram the remaining ones into a stem that fits with your common affix.
2. Group consonants. Certain sets of consonants frequently go together in groups, e.g. SH-, SCR-, THR-, -NCH, -TCH, -GHT, and others. Put these groups together, and see what you can do with the remaining tiles. This is particularly useful when searching for low-vowel bingos (i.e. only 1 or 2 vowels in the word).
3. Alphabetize your rack. This is a habit commonly preached and practiced by Scrabble experts. It's a memory trick: by arranging your



tiles in the same way each turn, you'll more easily remember the racks you've seen before. You'd be amazed how many of the exact same (or very similar) racks you see after playing just a few dozen games! Of course you can start moving the tiles after you've alphabetized them (e.g. to use the above two techniques), but some experts even go so far as to never move the tiles out of the alphabetical arrangement. With consistent practice, it doesn't take long to master this technique of visualizing and anagramming "in your head," and it has the benefit of further allowing the alphabetical arrangement (called an **alphagram**) and its corresponding anagrams to ingrain themselves in your memory.

Other than these techniques, there aren't many "shortcuts" to finding bingos. Practice frequently — anagram every word seven letters or more you see in your daily life, practice anagramming common racks, or draw random racks and anagram them. And remember to practice good rack management in your games, or well-trained anagramming skills will do you no good.

### 3.2.2 Fishing

While there are no quick and easy ways to get bingos, there is one quick and easy way to lose games in pursuit of them that many parlor players fall victim to. It starts with "If only I had this letter...", continues with several turns of exchanges or weak plays to try and obtain said letter, and usually ends with giving up on finding the bingo you're looking for. Meanwhile, your opponent has racked up a solid lead and is in great position to win the game. This bad habit is called **fishing**, and it's one of the easiest ways to lose a game when you shouldn't have. Parlor (and even sometimes experienced) players fish because they overestimate the probability of drawing the tile they want (AKA wishful thinking) as well as the value of the play they envision. They become fixated on the glory of an amazing bingo or bonus play and forget to play the game sensibly. Even if they eventually land the play, they've often spent so many turns scoring few points to get the right tiles that the opponent has scored more points than their big play!<sup>6</sup>

The great fallacy that **fishes** (players who fish) buy into is that their best chance of getting a bingo is playing away only the tile that doesn't fit until they draw the one that does. In fact, this couldn't be more false! Playing three letters (for many more points, probably) and keeping a good 4-letter

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<sup>6</sup>High-level amateurs average 25-30 points per turn, so it only takes 3 turns for this to happen!

leave often means a much higher chance of drawing a bingo than trying to draw one particular tile. When you fish, you limit yourself to the probability of drawing the exact tile you need for the exact bingo you're thinking of. When you **tailor** your rack, on the other hand, there are literally thousands of possible bingos you can make with many different draws, and you're more likely to get a draw that works, or at least allows you to make a decent play next turn. Keep in mind, too, that when you find a bingo you need to be able to place it — which is much harder if you've only got one possible word to play, as opposed to a large set of options that can adjust to the board. Additionally, it's often very obvious to your opponent when you're fishing, and they will likely make every effort to block any possible places to put down your bingo.

If you're used to fishing, this truth may be difficult to accept.<sup>7</sup> To convince yourself, try this experiment: starting with the rack BDEEILU, keep exchanging 1 tile until you get the A required to form AUDIBLE. Do this 5 times and compute the average number of turns it took you to get the bingo. Now start with the same rack and exchange tiles to leave yourself with the best possible leave after each turn (refer back to 3.1). Do this also 5 times and compute the average number of turns it took to get a bingo.<sup>8</sup> You should see that you can find a bingo much more quickly by tailoring your rack instead of fishing. Not only that, but in a real game playing multiple tiles per turn probably means you scored more points in the meantime. The conclusion follows simply: don't fish.

### 3.3 Examples

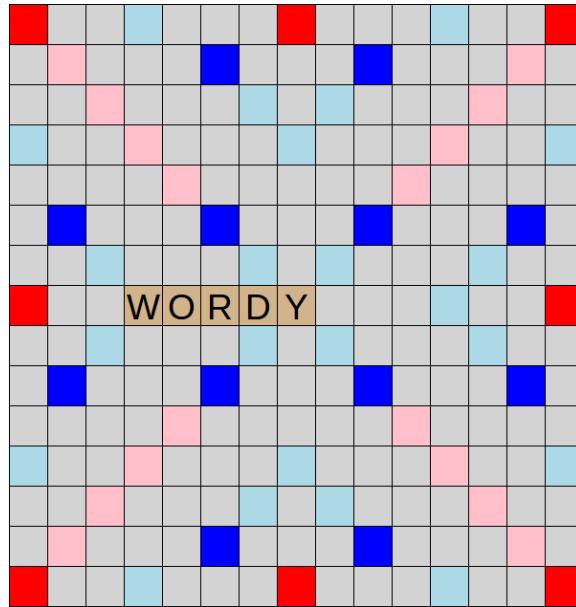
Now that we've seen just how important rack management is, let's look at a few examples of it in practice.

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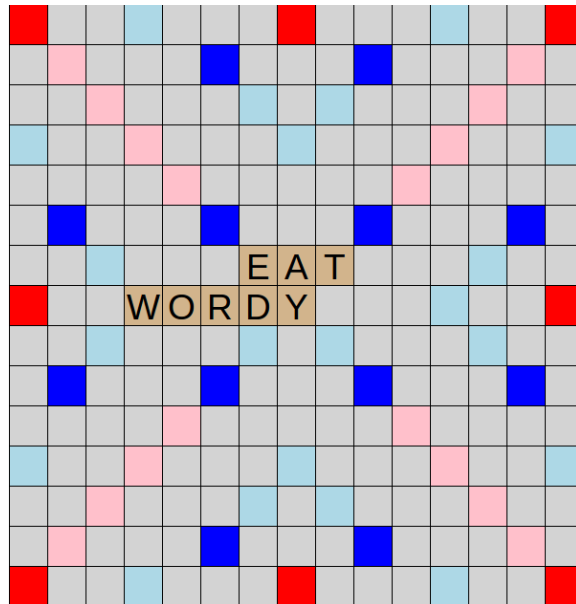
<sup>7</sup>Remember that our psychological tendency is to remember extreme outcomes most, so you may remember the times you've "succeeded" in fishing for a bingo more than the times you've failed.

<sup>8</sup>The effectiveness of this demonstration hinges a lot on your ability to anagram effectively for bingos. Try using a computer anagrammer to really prove the point.

### 3.3.1 Example A: Vowelitis



Given this board and the rack AEEINTU, what should we play? We present two options: first, we try to parallelize to maximize points.



Next, consider this play which uses 4 of our vowels and no consonants.



Which is better? Remember, we now evaluate the true value of a play by its score plus its leave value. Using leave values from Quackle, we have:

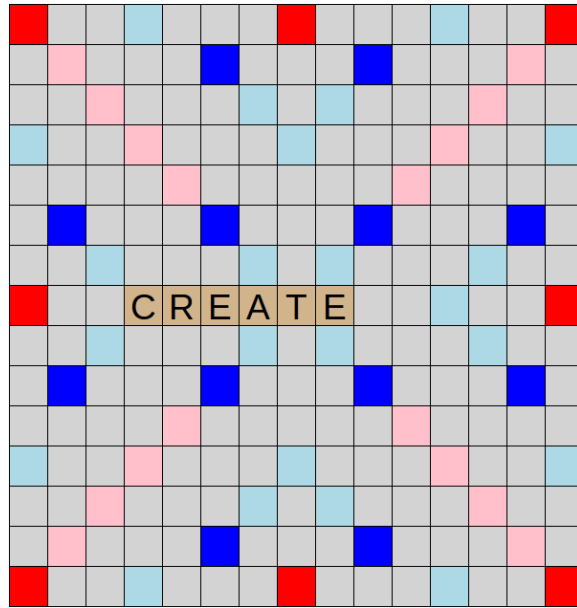
True value of 7G EAT 14 leaving EINU:  $14 + -7.7 = 6.3$

True value of G7 A(D)IEU 8 leaving ENT:  $8 + 5.5 = 13.5$

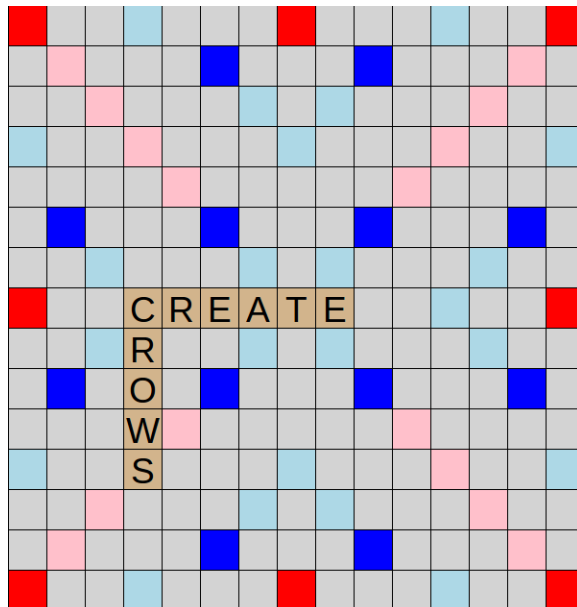
Even though the second play scores 6 fewer points, it's in fact 7 points better than the first — the difference in leave values was 13.2 points!

### 3.3.2 Example B: Clunky consonants

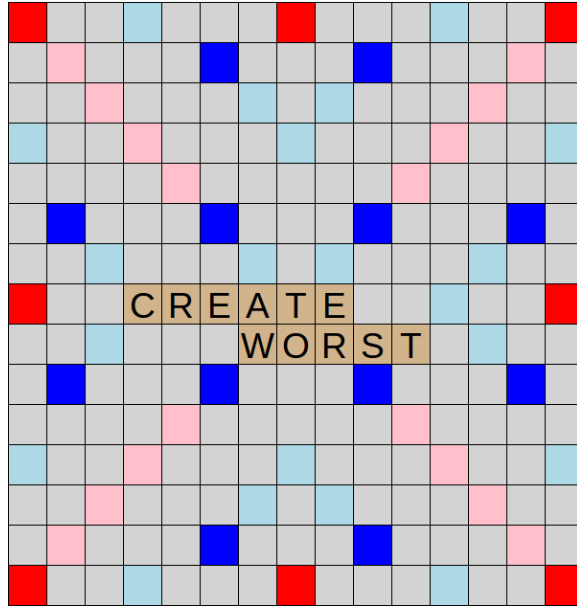
Consider another example:



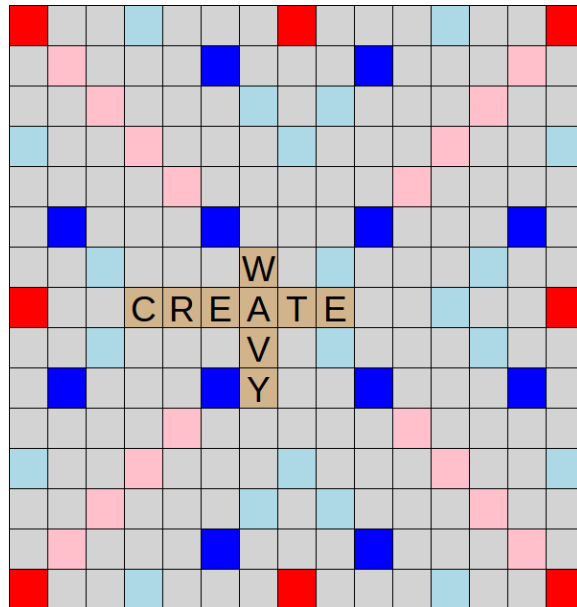
Given this board and the rack ORSTVWY, what's the best play? This time we examine three options: first, we try hitting the DWS.



Next we try a parallel play.



The parallel play yields 7 more points, so it looks like a clear winner. But let's consider an option which saves our vowel and gets rid of our heavy consonants.



While this play barely scores more than the first, calculating the true value with Quackle leave evaluations is revelatory.

True value of D8 (C)ROWS 20 leaving TVY:  $20 + -8.1 = 11.9$

True value of 9G WORST 27 leaving VY:  $27 + -6.1 = 20.9$

True value of G7 W(A)VY 21 leaving ORST:  $21 + 15.3 = 36.3$

While the second play was indeed better than the first, the third play blows both out of the water — its leave is worth 21.4 and 23.4 more points than the others! This analysis makes clear that, especially with the troublesome racks in these examples, a better leave is worth sacrificing many points for.

## 4 What's in the bag?

Coming soon!

## 5 Board control

Coming soon!

## 6 Phonies

Coming soon!

## 7 Glossary

**Anagram (vt.)** To determine what words can be formed from a set of tiles

**(Consonant-vowel) Balance** The ratio between consonants and vowels in a rack or leave; also abbreviated CV balance

**Bingo** A play which uses all 7 tiles from a player's rack, yielding a 50 point bonus on top of the play's normal score

**Bingo lane** A stretch of open squares on the board suitable for playing a bingo

**Board vision** The ability to find and evaluate hot spots quickly

**Bonus squares** The squares on a Scrabble board which yield an extra point bonus, i.e., the double-letter, triple-letter, double-word, and triple-word squares; also called **premium squares**

**Closed (board)** A board which offers few opportunities for high-scoring plays

**Double-double** A play which covers two DWS, yielding a 4x word score bonus

**Double-triple** A play which covers a DLS and a TWS, yielding 6x letter bonus on the tile placed on the DLS

**Extension** A play which adds tiles to the front and/or back of an existing word

**Fishing** The practice of making small plays or exchanging for many turns in an effort to draw a particular letter to make a particular play

**Front hook** A hook play that adds a tile to the front of an existing word

**Hook** A play which adds a single tile to the front or back of an existing word and continues perpendicular to it

**Open (board)** A board which offers many opportunities for high-scoring plays

**Parallel play** A play which places a word alongside and parallel to an existing word, forming multiple words

**Parlor player** A player who does not play Scrabble extensively or regularly, has not had any study or instruction in how to play Scrabble beyond the rules, and has not participated in Scrabble tournaments; also called a **casual player** or **kitchen table player**

**Shape (of a/the board)** The arrangement of the existing tiles on a Scrabble board

**Simple play** A play which forms only one word

**Synergy** The subjective quantity of how well a group of tiles “goes together”; i.e. how easily words can be formed with it

**Tailor (one’s rack)** To make a play that yields a good leave, ensuring a playable rack and possibly a bingo on the next turn

**Triple-double** A play which covers a TLS and a DWS, yielding 6x letter bonus on the tile placed on the TLS



**Triple-triple** A play which covers two TWS, yielding a 9x word score bonus

**Vowel dump** A play which uses many vowels

**Vowelitis** The Scrabble player's name for too many vowels — easily cured with a clever vowel dump or exchange

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