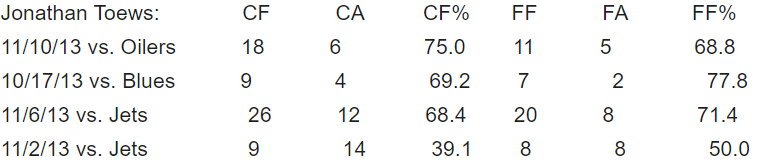
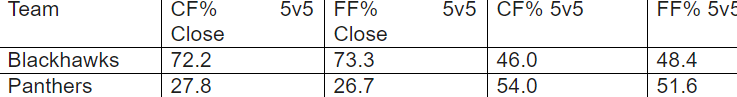
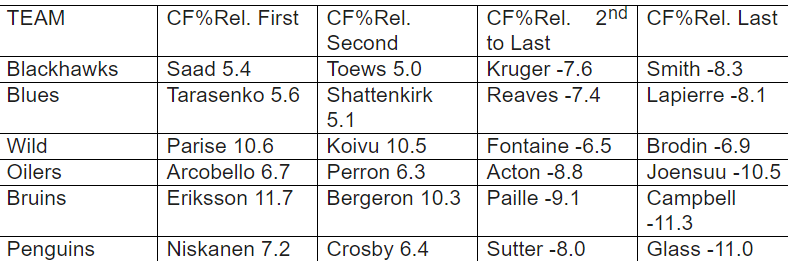
## Stats Made Simple Part 1: Corsi & Fenwick

* Advanced stats/metrics/analytics = initial stages of a movement to bring hockey analysis into modern era.
* Antiquated measures hockey has relied upon since Dark Ages (Plus/Minus (+/-)) = outdated + coming under heavy fire via a realization that there’s a lot more to hockey than simply being on the ice when a goal is scored.
* Better name = “**expanded metrics**” b/c most data being used has been available for a long time.
* \*\**The way* data (like shots + time on ice (TOI) are employed = where growth/expansion comes in\*\*\*
* So, while @ face value, expanded metrics may seem intimidating/too complicated, ***they really are not***
* Don’t have to be an expert in “fancy stats” to grasp their meaning, as many are as simple as BA or OBP in baseball, but b/c they’re relatively new, fans just need a little education.
* Many sports fans = familiar w/ football + at least some elementary stats used to keep track of a team’s performance.
* Time of possession (TOP) = 1 more commonly used simple metric = how long team’s offense controlled ball during a game.
* Obviously, team has a better chance of scoring if controlling the ball.
* In football, rigid structure of the game w/ offense on the field vs. opponent’s defense makes this stat easy to track.
* **In hockey, this is not so easy to do ==** more fluid w/ offensive + defensive players on the ice @ the same time, **but like football, a team = more likely to score when they have the puck (possession) than when stuck in the defensive zone.**
* Apart from teams of people watching skaters w/ timers to determine how long each has the puck, a way to track TOP in hockey = **Corsi** and **Fenwick**.
* **\*\*\*Corsi = shots on goal + missed shots + blocked shots\*\*\***
* basically uses every shot toward the goal throughout the game
* **\*\*\*Fenwick = shots on goal + missed shots\*\*\***
* measures the same thing as Corsi *but excludes blocked shots*.
* Essentially, in order **to shoot the puck**, you **must possess the puck**.
* Since we do not have the tech or another practical way to measure TOP in hockey, must employ a proxy.
* Expanding stats we use to understand a player’s/team’s performance in the past, present, + future opens doors to analyzing the game in all new ways.
* If we can ID trends in #’s, we can predict w/ *some degree of confidence* what’ll happen in the future
* We can determine progress made by teams/players in different areas of the game, figure out if a team’s early season success is built to last for duration of a season or just riding coattails of some hot goal tending.
* **Possibilities = as many + varied as the user wants them to be**.
* Metrics != first + last line of analyzing hockey 🡺 cannot stop watching games + rely solely upon stats
* *but they do enhance our hockey experience.*
* Both Corsi + Fenwick = counted as *“For” or “Against”.*
* “For” = a shot or event that happens while player is on the ice that is *on behalf of his team*
* “Against” = same but for opposing team.
* Both can be applied *team-wide* or *by player*.
* In general, **Fenwick = usually regarded as better indicator over a longer period of time vs. Corsi = better indicator over a shorter period of time.**
* Example: Patrick Kane is on ice for 10 shots on behalf of his team + opposing team takes 3 shots while Kane is on the ice during the game.
* **Corsi For (CF) = 10 Corsi Against (CA) = 3 Kane = a +7 Corsi (10 – 3 = 7) on the night.**
* Let’s say of the 10 shots Kane was on the ice for, *2 were blocked* by players on opposing team.
* Opposing team had 3 shots while Kane was on the ice but *1 was blocked.*
* B/c *Fenwick excludes blocked shots*, Kane’s numbers would look like this:
* **Fenwick For (FF) = 8 Fenwick Against (FA) = 2 Kane = +6 Fenwick (8 – 2 = 6) on the night**
* To make this data easier to use, statisticians express a player or team’s #’s as a %.
* **CF% (Corsi For Percentage) + FF% (Fenwick For Percentage)** can be easily compared among players, teams, + games.
* Example:([www.extraskater.com](http://www.extraskater.com))
* Remembering **Corsi event = any shot toward the goal** (SOG – Shots on Goal, Missed Shots, Blocked Shots), we see Toews’ Corsi For (CF) varies greatly over these games, as does his Corsi Against (CA)
* **Focusing on these #’s *alone* could be misleading for sake of comparing his performance w/ other players throughout the league, teammates, or even own play from game to game.**
* **\*\*\*Using Corsi For Percentage (CF%) allows us to see how the #’s work together + remove game-to-game variables that would otherwise be misleading or confusing.\*\*\***
* Performance against the Blues (10/17/13) + Jets (11/2/13) = both a CF = 9, but when CA is factored in + translated into a %, see just how different those performances really were.
* **Posted very good #’s (i.e. had a good possession game) @ 69.2% against Blues but had a disappointing 39.1% against Jets.**
* When we remove blocked shots, Fenwick #’s take over.
* Toews’ best Corsi game = 3rd in Fenwick.
* Even the “bad game” in Corsi terms (Jets 11/2/13) was a decent showing @ 50.0% when viewed from perspective of FF%.
* CA = 14 becomes FA = 8 due to Blackhawks blocking 6 shots while Toews was on the ice.
* Using Corsi and Fenwick, particularly CF% and FF%, is just the beginning of the expanded metrics possibilities available to us
* Many fans like to see #’s just to confirm what was observed of a certain player/line during a game, others dive deep for more detailed analysis.
* However you choose to use them, if expanded stats enhance experience as a fan of the game, it sounds like a positive outcome/
* Hockey fans = going through a learning process b/c expanded metrics = relatively new to the game.

## Stats Made Simple Part 2: Score Close & Score Effects

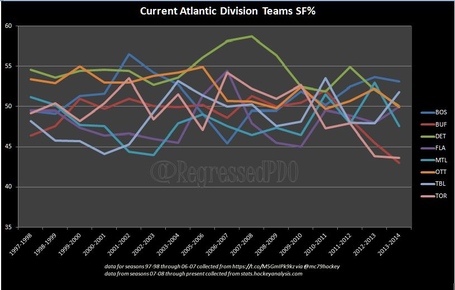
* Game = normally played w/ 5 skaters + 1 goalie == **5v5** or some other similar variation.
* When team takes a penalty + goes on Penalty Kill (PK) may see **4v5**/**Shorthanded** + occasionally **3v5**
* When opponent takes a penalty, team who drew the penalty = awarded a **Power Play (PP)** = **5v4, Man Advantage,** etc.
* **Even strength = any situation when both teams have the same number of players on the ice.**
* **\*\*\*For purposes of advanced stats, best of the above situations to use is 5v5\*\*\***
* **\*\*\*PK, PP, 4v4 = *NOT* considered to be truly representative of a team’s strengths/weaknesses over time\*\*\***
* Point of these metrics = judge a team’s/player’s performance over time + get an idea of what to expect in the future.
* Cannot happen w/out being able to filter out noise + focus on game situations that give clearest results
* To filter out **Score Effects**, statisticians focus on 5v5 performance when score is close.
* **Score Close** = defined as a score that’s tied (*including 0-0*) or w/in 1 goal in the 1st or 2nd period.
* \*\*\*In the 3rd period, score is only considered close when tied\*\*\*
* For those familiar w/ science/research, consider **5v5 Close** (**5 on 5 Score Close**) to be the "control" in this study
* All other situations that arise during the game (PK, PP, etc.) should be considered **experimental variants**.
* In any statistical discussion, \*\*\*sample size is always a concern\*\*\*, so why make the already limited (5v5) pool of data even smaller? 🡺 b/c "**Score Effects**".
* **Score Effects** take over when a team has a lead > 1 goal, *particularly late in the game*.
* Often, team w/ the sizeable lead goes into defensive mode instead of continuing to press offensive attack (think "prevent" defense)
* *Defensively-minded style of play often allows trailing team to make a push offensively = leads to more shots + thus higher possession + offensive zone time for attacking (trailing) team.*
* Further, teams trailing as game gets closer to end tend to throw caution to the wind in efforts to score, **contributing further to disparity in shot attempts** (like to onside kicks, trick plays, Hail Mary)
* *When Score Effects are @ work, tend to see leading team taking defensive zone penalties*.
* Ex: 3rd period of Blackhawks game vs. Stars on December 10, 2013
* Blackhawks had a 5 – 0 lead in the 2nd period, Stars scored + suddenly shot attempts quickly escalated until end of period, bringing 5v5 possession #’s up dramatically.
* In the 3rd, Stars spent a substantial amount of time in the offensive zone = led to 3 penalties taken by Blackhawks forwards, including 1 delay of game penalty (puck over glass) + 2 hooking penalties.
* Stars then enjoyed 3 PP in the 3rd alone, *furthering driving up shot attempts.*
* Practical example of Score Effects: Blackhawks vs. Panthers on December 8, 2013.
* Blackhawks dominated play early in 1st, leading to 2 goals.
* Early goal for Blackhawks in 2nd led to Panthers playing more aggressive offensively
* Panthers scored 2 in the 2nd, **bringing** **the score back to being “close”**.
* Blackhawks scored again [4-2] for remainder of the 2nd
* In the 3rd, Blackhawks scored a PP goal early, making the score 5-2.
* Following that goal, Panthers had 31 shot attempts to Blackhawks 8, + 11 Panthers shots came on 2 PP’s from penalties against the Blackhawks (interference + holding).
* Still leaves 20 shot attempts @ 5v5 = far more than the leading team attempted, a standard example of Score Effects.



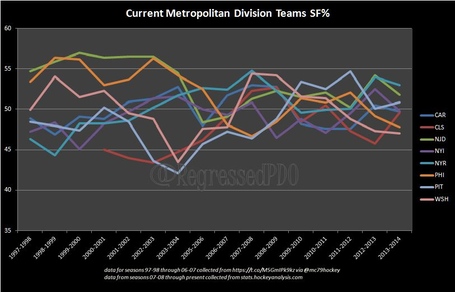
* As you can see from the table above, when score was close (*sans Score Effects*) Blackhawks dominated possession.
* W/ the score filter removed, the Panthers had better possession #’s than the Blackhawks, thus demonstrating the effect of Score Effects on shot attempts + style of play.
* **Once variants are removed, Corsi + Fenwick = much more reliable over time as analytical tools.**
* **CF% + FF% = useful in comparing teams + players across the league, + even game by game.**
* Many fans get an idea from watching the game as to which forward line or defensive pairing had the best performance of the night.
* Comparing players + line combos on a team = aided by adjusting CF% + FF% values to make them **Relative**
* \*\*\***CF% Relative and FF% Relative**\*\*\* allow us to see how a player stacks up against teammates.
* **Relative values** tell us how a team performs when a player is on the ice.
* If positive, team performed better (more shot attempts/higher possession #’s) w/ player on the ice than off.
* If negative, team performed better when player was off ice
* **Relative *Percentages*** do NOT mean certain players are good + others are not good.
* many factors affect these #’s, such as **Quality of Competition** + **Zone Starts**
* What we’re really looking = **strength of performance** 🡪 use this info to determine where strengths + weaknesses of a team are located.
* If team’s checking line consistently has better Relative #’s than the offensively gifted 2nd line, perhaps the usage + deployment of the line needs to be revisited.
* *Further, large disparities between a team’s lines may indicate a team w/ less forward depth or heavily front loaded lines.*
* Some teams in terms of CF% Rel (5v5):
* Distribution such as that seen from the Blackhawks + Blues = representative of many teams, in that Relative #’s = fairly evenly spread out
* Bruins = much wider distribution, as do the Penguins, + Wild = similar to these 2 as well.
* Distribution of a team's Relative possession #’s = heavily dependent upon *not only depth of talent* but *also* ***Usage*** *+* ***Deployment*** *of players*.
* \*All statistical data gathered via [www.extraskater.com](http://www.extraskater.com)

## Using Shots For Percentage

* **Possession statistics** + the data that allows us to use them only reach back to the 2007-2008 season.
* Prior, total shot attempts were not tracked + cataloged into a usable format, thus making the task of taking a statistical look @ team's past performances very difficult.
* 1 method used to get a *general* idea of team's overall possession game = **Shots For Percentage (SF%)**
* **Shots for + Shots against** in a game = 100%, + a team's Shots For are then turned into a % of shots taken in a game.
* A team has to have the puck to shoot it, so w/out more expansive data prior to 2007-2008, *must make what we can of the data we have.*
* **SF% can be used to *gauge* puck possession**.
* More a team possesses puck = more chances to score + thus win.
* **SF% does NOT tell the whole story b/c obviously, a hot goaltender can steal a playoff series, but it is a useful tool**
* Recently, Tyler Dellow (@mc79hockey) publicly shared a [spreadsheet](https://docs.google.com/spreadsheet/ccc?key=0AuFrjZE8ZySpdDZpclc4TG5qX3RjczhpbUtDNHFpX1E#gid=0) w/ SF% for all NHL teams back to 1997-1998 season (further than any other info we have previously had convenient access to + thus can give some insight into history of a team's puck possession game)
* Using that data:

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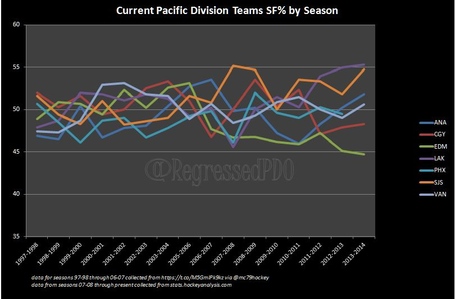
* Dominance of [Detroit Red Wings](http://www.sbnation.com/nhl/teams/detroit-red-wings) = obvious for over a decade, + *no surprise that other teams, such as* [*Blackhawks*](http://www.sbnation.com/nhl/teams/chicago-blackhawks)*, have patterned their game after this team.*
* Rather precipitous drop of possession game for the [Maple Leafs](http://www.sbnation.com/nhl/teams/toronto-maple-leafs) is astounding.
* For years, they hovered ~50%, but since 2009-2010 season, possession game indicators have dropped like a stone.
* Dramatic spike for [Tampa Bay Lightning](http://www.sbnation.com/nhl/teams/tampa-bay-lightning) coincides w/ their [Stanley Cup](http://www.sbnation.com/nhl-playoffs) winning season in 2003-2004

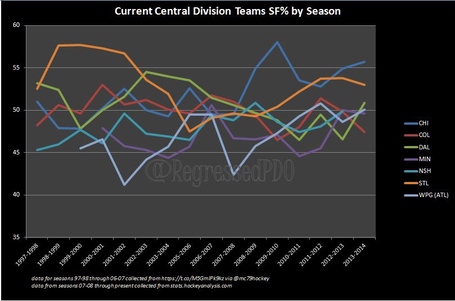
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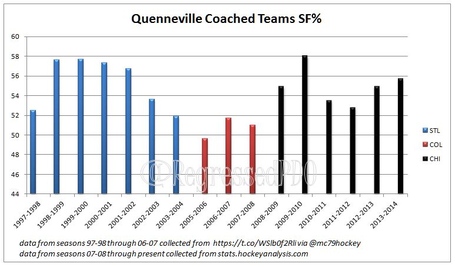
* Both [Capitals](http://www.sbnation.com/nhl/teams/washington-capitals) + [Penguins](http://www.sbnation.com/nhl/teams/pittsburgh-penguins) bottomed out in 2003-2004 + spiked up quickly thereafter = [Ovechkin](http://www.sbnation.com/nhl/players/54337/alex-ovechkin)

drafted in 2004 + [Crosby](http://www.sbnation.com/nhl/players/55428/sidney-crosby) the following season.

* [Devils](http://www.sbnation.com/nhl/teams/new-jersey-devils) early dominance, drop, + slow resurgence in SF% is also notable here.
* This division now seems to be getting more tightly grouped on the possession spectrum (2013)

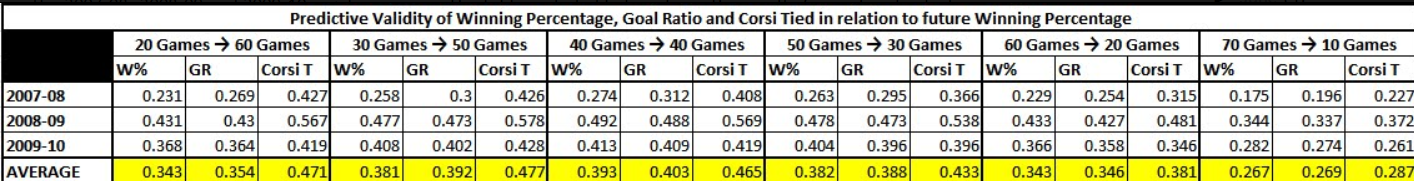
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* [Oilers](http://www.sbnation.com/nhl/teams/edmonton-oilers) continue on long road toward a rebuild of former powerhouse position.
* [Kings](http://www.sbnation.com/nhl/teams/los-angeles-kings) have really shot skyward in terms of SF% + currently lead the NHL in this metric, as well as FF%
* [Sharks](http://www.sbnation.com/nhl/teams/san-jose-sharks) are also sustaining their offensive dominance.
* Pacific teams seem to be spreading out to reveal a serious lack of parity in the division (should come as no shock to anyone)
* [](http://cdn3.vox-cdn.com/assets/4227607/central_season_sf_.JPG)
* Central = bit more spread out over time than other divisions.
* Obviously, these teams have not been playing each other as divisional foes for all of this time, but dominance of the [Blues](http://www.sbnation.com/nhl/teams/st-louis-blues) + Blackhawks for past several seasons is striking.
* This also leads to another point of interest 🡺 early years on this chart (in which Blues were dominant, middle years wherein [Avalanche](http://www.sbnation.com/nhl/teams/colorado-avalanche) were near the top, + last several years where Blackhawks dominate possession), all have 1 thing in common: ***the coach of each of those teams***

[](http://cdn3.vox-cdn.com/assets/4227623/Q_SF_.JPG)

* Joel Quenneville has coached the Blues, Avalanche, + Blackhawks
* SF% for each season of his coaching career are above.
* Only 1 team (2005-2006 Avalanche) finished season w/ < 50% SF%.
* This track record = very impressive + it’s obvious Quenneville has good grasp on coaching puck possession + using both star + depth players in such a way as to maximize effectiveness in this regard
* Links to helpful articles regarding SF% and it's uses:
* Dellow's original article on this topic: <http://www.mc79hockey.com/?p=6451>
* <http://www.extraskater.com/>
* <http://stats.hockeyanalysis.com/>
* <http://www.arcticicehockey.com/2013/10/23/4862840/the-importance-and-misconceptions-of-advance-hockey-analytics>

## Loose Ends - Part I: Predicting Future Success

* Various shot metrics (all calculated @ even strength w/ tied score) can predict future success @ the team level
* How well do these shot metrics predict future success when compared to more conventional measures of team strength (winning % + goal ratio?
* **Split-half reliability of goal ratio** (0.417) was lower than predictive validity coefficients for both Corsi Tied (0.444) + Fenwick Tied (0.429).
* Implication = 2 latter variables are better able to predict goal ratio from ½ of the schedule to the other than goal ratio is itself.
* ***If shot metrics like Fenwick + Corsi fail to predict future success better than conventional measures, that would render them considerably less useful.***
* Method employed = developed and first used by Vic Ferrari
* B/c of relative complexity of the process, including a step-by-step description may be helpful.
* 1) Randomly selected a certain # of games from each team's schedule, w/ each team having an equal # of home + road games selected.
* 2) Calculate how each team performed over those games w/ respect to certain variables = **even strength Corsi w/ the score tied**, **overall goal ratio** (empty net + shootout goals excluded), + **winning %** (defined as WINS/(WINS+LOSSES))
* Games that ended in a shootout = considered ties + therefore not included in calculation.
* 3) Random selected a 2nd, *independent* group of games
* if a game was included in 1st grouping, it was NOT eligible for selection in the 2nd
* Again, equal # of home + road games were selected for each team.
* 4) Determine how each team did in terms of winning % over 2nd group of games + looked @ how each of the 3 variables calculated in relation to 1st group correlated w/ winning % in the 2nd
* Relationship between the size of the 2 groups can be expressed as **y=(80-x),** where x = # of games in 1st group + y = # of games in 2nd group.
* Ex: 20 games selected for 1st group, 2nd group would consist of 60 games.
* Ultimately, x values used = {20, 30, 40, 50, 60. 70}
* Raw data used = from 2007-08, 2008-09, + 2009-10 regular seasons.
* Table below shows results for each individual season, as well as average results, + values represent the average correlation over 1000 calculations
* **Corsi Tied = best predictor of** how a team will perform over remainder of its schedule, regardless of the point in the schedule @ which calculation occurs.
* **Corsi Tied** = only ***marginally* more predictive of future success than goal ratio or winning %** *when looking at samples of 60+ games or more*.
* In other words, as sample size increases 🡺 diminishing returns w/ respect to predictive advantage of Corsi
* **By end of season, all 3 variables seem to predict future success equally well**
* Above fact has implications in terms of determining playoff probabilities @ team level, w/ results suggesting **a composite metric would work best**
* Aggregate values for Goal Ratio + Winning % are remarkably similar w/ implication = once shootout results are controlled for, winning % = as good of a measure of a team as goal ratio

# Intro To Advanced Statistics – PDO

* **PDO (SPSV%) = On-Ice Shooting % + On-Ice Save % +** can be measured for individuals or teams
* = very telling way of exploring a team's "**puck luck**" = which way bounces have been going, *though skill does heavily influence the result.*
* Named after regular Oiler Fans commenter PDO, originally devised by statistical guru **Vic Ferrari.**
* PDO = On-Ice SV% + On-Ice SH%. typically quoted as **10X the actual %**
* **PDO = 10\*(On-Ice SV% + On-Ice SH%)**
* Usually look @ **Even Strength PDO** b/c vast majority of ice time is spent in this game state
* Usually it regresses towards NHL average = 1000 over course of a season, though for some teams their sustainable PDO = higher due to excellent goaltending or consistently good shooters.
* Ex: 2011 Leafs shot 8.6% @ 5v5, ranking 10th, + 5v5 SV% = .906, which ranked 27th.
* Combined PDO score = 10\*(90.6 + 8.6) = **992** = 26th in NHL in ‘11
* Thus, can be argued “bounces went against them”, though Leaf’s atrocious goaltending obviously contributed to such a result.
* Boston + Vancouver consistently (as of 20120) outperform PDO as a result of excellent team goaltending + shooting
* Canucks = top team from a PDO perspective over the past 5 years (2007-2012), w/ Boston = 2nd
* Median SH% over past 5 years in NHL = 8.3% at 5v5, while SV% = .917, which makes median PDO exactly = 1000
* **Teams consistently above/below this level = proving that their results = likely *more than just luck,* particularly if they outperform by a wide margin.**
* Meanwhile, Toronto + Islanders = worst *under*-performers over 2007-2012, w/ Toronto's problems almost solely result from horrid goaltending 🡪 .906 5v5 SV% over 2007-2012 ranks only slightly ahead of Tampa Bay's .905 SV%.
* NYI on the other hand = below average goaltending *AND* shooting for 2007-2012
* **At team level, PDO allows us to quickly spot teams unlikely to sustain performance mid-season.**
* Minnesota = near dead-on-average team over 2007-2012, producing average PDO = 1001.4, largely due to excellent team defense + goaltending combined w/ mediocre offensive results.
* Early 2011, this stretched to extremes 🡺 led NHL through 1st 40 games despite having absurdly low **Team Fenwick = of 44.2**.
* Wild had a team PDO = 1007*, thanks to a very favorable .938 SV%,* due to **regress**.
* By end of season, it went pretty far the other way (as expected given atrocious team Fenwick %), + Wild finished season w/ a team PDO = 989.
* Compared to Kings 🡺 1st 37 games = out of playoffs despite favorable Fenwick % = 51.5.
* After 37 games, Kings had team PDO = 981 🡺 unsustainably low for a team dominating possession as they were.
* Despite having a solid team SV% = .923, *virtually no luck* went their way @ offensive end, as the team was firing home only 5.8% of Even Strength shots.
* As year progressed, goaltending improved even further to .927 SV% + shooting bounced back to a poor, but more respectable 6.0%.
* Thus, Kings closed out season w/ a PDO = 987
* Still less lucky than Minnesota, but trending in right direction + more reflective of quality of play.
* In playoffs, Kings had a dominating PDO = 1038
* Lowest playoff PDO in 20120 = Red Wings = paltry 904, who despite playing reasonably well, got no bounces @ either end of the ice
* Actually, *outshot* playoff opposition by an average of 10 shots/game @ Even Strength, but were *outscored* by almost 2 goals/game at Even Strength.
* In a similar fashion, can explore PDO scores of *individual players* during course of season + reads for who is benefiting from fortuitous bounces while on the ice.
* Perhaps guy padding the score sheet regularly has been seeing benefits of sieve-like goaltending from opposition, or maybe he who looks like worst player ever seen = actually being victimized by atrocious PDO as a result of *teammates* not scoring + *goalie* not doing their job
* Again, can make excellent use of the data provided by TimeOnIce.com to examine "luck" seen by players over a stretch of games.
* Conversely, can also pull data from BehindTheNet.ca
* Leaf-related examples: Darryl Boyce + Philippe Dupuis.
* Following the end of 2011, Boyce looked like lock to be a checking forward for Leaf’s entering the 2011-12 season.
* Then Leaf’s signed Dupuis to a 1-year contract + a battle ensued in training camp that saw Dupuis get the nod for the opening night roster.
* What people remember about Boyce = production in limited opportunity (5 goals + 13 points in only 524 minutes of ice time + ended the season a +8 player despite facing tough competition, usually starting shifts in own zone + not being a flashy offensive player)
* *So why should we have been cautious about his results?*
* Well - here are the Leafs Even-Strength Corsi, Fenwick, and Shooting and Save Percentages from the 2010-11 season. You can see that Boyce posted a Fenwick % of .438, a Corsi % of .430, and yet somehow... against all odds, Boyce enjoyed .923 goaltending, and the team shot 14.2% with him on the ice.
* The goaltending isn't alarmingly good... at Even Strength, .923 goaltending is pretty close to NHL average, and in fact 19 Leafs had better ES SV% while they were on the ice... so his impact on the defense wasn't the reason for his stellar +/- numbers. But 14.2% On-Ice shooting? Was Boyce really responsible for that type of offensive production from his line mates? In a word - NO. He wasn't.
* In fact, Boyce's On-Ice SH% was the highest in the NHL amongst forwards to play 30 games in 2010-11... by a margin over 2%!! His PDO of 1069 that resulted from the combination of the average SV% and ridiculously high SH% ranked him 2nd in the NHL. So let's just say, either he's one of the most skilled forwards in the NHL - or his PDO number from 2010-11 was unsustainably high, and he wasn't going to repeat.
* After losing his job to Dupuis, Boyce was placed on waivers and picked up by Columbus... how did he fare there? Well his On-Ice SV% was .923 again... so that again wasn't really something he was ruining. But his On-Ice SH%? Yeah it dropped to 5.08%, and his PDO fell to 974. Indicating he's pretty far from stellar at the offensive end of the ice. Luck can make a big difference.
* So who was the other guy? Oh right - Dupuis. Well in Colorado during the 2010-11 season, Dupuis worked a lot on the PK, and in 674 minutes of ice time produced 6 goals and 17 points. He looked like a comparable defensive player, but an offensive upgrade on Boyce - particularly when you factor in the likely drop off in Boyce's luck entering 2011-12. For the sake of discussion, Dupuis had a below average PDO of 984 in his last year with the Avalanche, mainly stemming from seeing .900 goaltending behind him at Even Strength. His On-Ice SH% of 8.4 is just under NHL average, so that implied he should be fine at helping put the puck in the net.
* Logically we'd expect at least a slight improvement in the On-Ice SV% Dupuis would play in front of, and if he could replicate his On-Ice SH% then we might get at least a comparable 4th line C out of the exchange. Unfortunately for Dupuis that isn't quite how things worked out. His On-Ice SV% was fine... stellar in fact. At Even-Strength, the Leafs goaltenders posted a .966 SV% with Dupuis on the ice. He probably wasn't the driving force behind the stellar netminding, but he wasn't ruining the Leafs with defensive miscues apparently either. So... what was the problem? Offense - or a lack thereof. Dupuis' On-Ice SH% in 30 gp... was 0.00%... as in NO goals were scored with him on the ice.
* Only 2 NHL players in the 2011-12 season played 30+ games and posted an On-Ice SH% of 0.00%. Dupuis and Eric Boulton of the NJ Devils. They are in fact the only NHL forwards to play 30 or more games in an NHL season in the past 5 years who were not on the ice for a goal for. So if you want to talk bad luck? I'd say Dupuis has a legitimate claim on it. Typically the guys with numbers that low are cement fisted enforcers, and checkers who see virtually no offensive zone time. This would be a case where Dupuis' bad luck prevented him from playing in the NHL.
* So unsustainably bad or unsustainably good... there are often guys on every roster who are unlikely to repeat their stellar or horrid numbers from the year before. Then there are players who consistently outperform or underperform expectations. As I just mentioned, enforcers often have horribly low PDO scores, largely due to a complete lack of offensive contribution. Comparably, extremely skilled players often have above average PDO scores thanks to their positive influence on shooting., while top end goalies can sustain high PDO scores for their entire team thanks to high Even Strength SV% values. The following chart should effectively illustrate what I am referring to as the skill factor of PDO for skaters:
* Player Season On-Ice SH% On-Ice SV% PDO
* Datsyuk 2011-12 9.17 0.922 1014
* 2010-11 10.19 0.911 1013
* 2009-10 8.19 0.923 1005
* 2008-09 11.52 0.909 1024
* 2007-08 10.78 0.915 1023
* Selanne 2011-12 10.28 0.910 1013
* 2010-11 10.39 0.920 1024
* 2009-10 8.31 0.935 1018
* 2008-09 8.23 0.911 993
* 2007-08 10.14 0.949 1050
* Obviously though, goaltending seems to vary wildly for both players, and it should be noted that it's extremely difficult for a forward to influence On-Ice SV% (which is completely logical). So when we examine PDO for players, it is not assumed that the PDO score should regress towards 1000 as is often suggested. What we should expect does depend on the context in which the player is used (usage metrics are a topic we'll get to later on in these postings), who they are playing with, and their own natural talent.
* As Tom Awad of Hockey Prospectus lays out in this discussion of the results of the Columbus Blue Jackets, PDO is not JUST a measurement of luck.
* "That's right, even after over 200 games, almost half of your shooting percentage and save percentage is luck...at the team level, slightly over half of team talent exhibits itself as puck possession, and slightly under half exhibits itself as finishing (and preventing finishing). It just so happens that the possession talent is much, much easier to measure." [emphasis added]
* - Tom Awad, Jan 12th, 2002.
* Similarly, David Johnson of HockeyAnalysis.com discusses the fact that luck is not the sole component of PDO here. To put it simply, we need to look at players long term patterns before assessing what's likely to happen in the future. At the individual level, a player's quality of team-mates, and offensive opportunities will likely influence their PDO one way or another, so when looking for future trends be sure to take this into consideration.
* If you have any further questions regarding PDO, ask away. Similarly, if you're looking for any specific Adv. Stat insights, let me know in the comments, as this series is sort of open ended at this point and I'm filling time during August.