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Numberlines: The Evil Triplets

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Synopsis

The purpose of this article is to further the recent introduction of numberlines. Number lines, still, yes, are a pictorial abstraction of the real numbers; numberlines, however, are hockey line nicknames based on jersey numbers. A discussion of numberlines, the recent playoff woes of the Tampa Bay Lightning, and the binary expansions of the jersey numbers worn by “The Triplets” (who play for The Bolts) culminates with a new nickname more befitting such a transcendent trio.

Keywords: Evil Numbers; Hockey; Natural Numbers; Numberlines; Nicknames; Lightning.

Hockey, like any sport, is filled with heroes, but, unlike the three other established members of the “Big Four” in North American professional sports (football, baseball, and basketball), hockey teams are divided into sets of lines, that can, if successful, remain essentially unaltered during the course

of a season. This structure means that triads of players have the potential to transcend individuality and cement themselves as an all-for-one package, demanding collective respect of the fans, fear of the opponents, and, naturally, a suitable nickname.

Chernoff [6, 7] recently introduced the notion of *numberlines*, that is, “hockey line nicknames based on jersey numbers” [6, page 11]. For example, “That ’70s Line” was considered a numberline because the nickname is based on the jersey numbers of Tanner Pearson (No. 77), Jeff Carter (No. 70) and Tyler Toffoli (No. 73). That’s to say, each of them have a jersey number in the seventies (70, 73 and 77). Worthy of note, the nickname is also an homage to the former Fox sitcom *That ’70s Show* (which is where we were all introduced to Ashton Kutcher). Interestingly, surprisingly perhaps, there are only a few numberlines in the history of hockey line nicknames (The Deuces Wild Line, The Crazy Eights Line, The Lucky 7s Line, The 7-8-9 Line). With so many possible number combinations coupled with many interesting names for different types of natural or counting numbers (for example, Frobenius, Frugal, McNugget, Narcissistic, and many, many others), we think focusing on jersey numbers to coin hockey line nicknames may blow this new category of hockey line nicknames wide open.

Let’s look at an example. We both like and also dislike the hockey line nickname given to Ondrej Palat, Tyler Johnson and Nikita Kucharov of the (National Hockey League’s) Tampa Bay Lightning: “The Triplets”. We’ll explain.

First off, we like that a line that has been together for as long as they have (more and more of a rare occurrence in the NHL these days), has been given a nickname; and, it stuck. Second, we like that the nickname captures the line’s seemingly innate ability to know where each other are on the ice at all times, which, of course, is based on the notion that twins (e.g. the twin daughters of Tampa Bay head coach Jon Cooper) and multiples are born with a sense of ESP or telepathy (e.g. the Sedin twins over in Vancouver), which may or may not be true. In addition, third, if you will, Ken Campbell (writing in *The Hockey News*) recently reported that all three of them actually lived in the same condo complex for a period of time, like to hang out together off the ice, enjoy sushi for lunch, and watch game tape together [5]. How could these guys, this line, *not* be called “The Triplets”?!

We dislike the nickname because, to us, it screams boy band. For those of you not in the know, a *boy band* is a group of singers, typically male, who, usually, are in their late teens or their twenties (now they can even be in their thirties and forties) and are stupid-famous with their fans. Famous boy bands include: New Kids on the Block (now known as NKOTB, we think), Menudo, Backstreet Boys, NSYNC (read: in-sync), One Direction, and many, many others. Now, we hate to lump “The Triplets” in with these boy bands (especially One Direction), but if the shoe fits. . . Focusing less on popular culture and more on hockey culture, unfortunately, does not sway our dislike for the nickname.

Consider the following two groups of hockey line nicknames.¹

Group 1: The Bulldog Line; The Firing Line; The Legion of Doom; The MVP Line; The Production Line.

Group 2: The Bread Line; The Banana Line; The EGG Line; The Huey, Dewey and Louie Line; The Pony Line; The Scooter Line.

Those of you who can already tell where we are going with this line of reasoning know that “The Triplets” does not belong in Group 1, but, rather, in Group 2. The nicknames in Group 1, we argue, have a gravitas, one that bespeaks a quiet hockey dignity, to them. The nicknames in Group 2 have a whatever-the-appropriate-antonym-for-gravitas-is, a lack of quiet hockey dignity to them. In essence, “The Triplets”, unfortunately for “The Triplets”, makes a great boy band name, which is not what you’re looking for in an appropriate nickname for the sport that is known as professional hockey.

As we have presented and (hopefully) established, we both like and dislike the nickname for “The Triplets”. To be honest though, we dislike the nickname much more than we like the nickname. “The Triplets”, when operating at their pinnacle during the run of the Tampa Bay Lightning during the 2015 Stanley Cup playoffs, were the most dangerous lines on the ice. Save, perhaps, the argument to be made for the line of Jonathan Toews (#19), Patrick Kane (#88), and Brandon Saad (#20) of the eventual Stanley Cup

¹ The two groups were picked from Wikipedia’s “List of ice hockey line nicknames” page: https://en.wikipedia.org/wiki/List_of_ice_hockey_line_nicknames.

champion Chicago Blackhawks. Given the impact of “The Triplets” on the game while playing together, that resulted in a combined 71 points in the Lightning’s 26 playoff games, their current nickname does not accurately reflect the fear they instilled in their opponents. This is why we are proposing, here, a slight evolution to their current nickname.

Substantiating our call for a re-brand in identity was the historically disappointing performance of the trio, along with the rest of the Tampa Bay Lightning, in the 2019 Stanley Cup playoffs. After securing the President’s Trophy for most points during the regular season, and becoming the near-consensus pick to waltz through the playoffs with little-to-no interference, “The Triplets,” or at least the shadow remaining of their former playoff selves, tallied a measly four combined points in Tampa Bay’s four playoffs games as the Lightning became the first President’s Trophy winner in the history of the National Hockey League to be swept (i.e., lose a seven-game series in four consecutive games) in the opening round of the Stanley Cup playoffs. In the midst of this historic collapse, and only adding insult to injury, the (boy) band was broken up, so to speak, when Kucherov was suspended for game three of the series. The humiliation of this recent collapse renders “The Triplets” in desperate need of an image overhaul more than ever before, lest they fade into obscurity like the countless boy bands that came before.

In response to this established need for a rebrand, we propose that “The Triplets” line of Left Wing Ondrej Palat (No. 18), Center Tyler Johnson (No. 9) and Right Wing Nikita Kucherov (No. 86) of the Tampa Bay Lightning be known as “The Evil Triplets”. Before you get ahead of yourself, no, we are not about to delve into some Gonzo Journalism where we report how we saw one of “The *Evil* Triplets” kicking a puppy when the rest of the world wasn’t looking through their cell phone cameras. They are not evil, to the best of our knowledge, but the evil moniker, as we’ll show, still applies to their line.

The hockey line nickname “The Triplets” is not, by (our) definition, a numberline. Yes, a triplet is a set of three items, but it is still not a numberline. “The Triplets” is what Chernoff [7] calls a quasi-numberline. *Quasi-numberlines* are hockey line nicknames based on numbers *associated* with the players. In other words, the numbers that are used are not based on the players’ jersey numbers; instead, the numbers that the nicknames are

based on are numbers associated with certain attributes of the players. For example, The Clydesdales Line for the Chicago Blackhawks (1984–1987), consisting of Curt Fraser, Troy Murray, and Ed Olczyk has their nickname based on the notion that each of the players weighed in at over 200 pounds. Similarly, “The Triplets” fall into this category. It should be pointed out, quasi-numberlines are not immune from taking players’ jersey numbers into consideration. Case in point, let’s look at our current proposal to change the nickname of “The Triplets” to “The Evil Triplets”.

“The Evil Triplets”, as a nickname, not only pays homage to the line’s current (soon to be former) nickname, but also to their jersey numbers, which are, in fact, all evil. To be a tad more precise, the jersey numbers worn by Palat (No. 18), Johnson (No. 9) and Kucharov (No. 86) are known as evil numbers. Simply put—but perhaps not simply understood for those who have never worked in bases other than 10—evil numbers are (non-negative) integers that have an even number of 1s in their binary expansions [8]. To get a better handle on this, let us take a look at the binary expansions of the jersey numbers worn by “The Triplets”.

For those of you interested in the binary expansions, they are provided for you in the next paragraph. For those of you not interested in delving into the mathematical conversions between the (conventionally used, for humans) base-10 number system and the (conventionally-used, for machines) base-2 binary number system, a list of the evil numbers under 100 is provided below, and you may proceed to skip the next paragraph: 0, 3, 5, 6, 9 [Johnson’s jersey number], 10, 12, 15, 17, 18 [Palat’s jersey number], 20, 23, 24, 27, 29, 30, 33, 34, 36, 39, 40, 43, 45, 46, 48, 51, 53, 54, 57, 58, 60, 63, 65, 66, 68, 71, 72, 75, 77, 78, 80, 83, 85, 86 [Kucharov’s jersey number], 89, 90, 92, 95, 96, 99.

Numbers, as we know typically know and represent them, can all be converted to an equivalent, binary representation using only 0s and 1s, which are the only two digits that computers use. For example, Palat’s jersey number, 18, converted to computer speak is 10010, which, as you can see, has an even number of 1s (two of them) — it’s evil. Johnson’s jersey number, 9, converted to computer speak becomes 1001, which, as you can see, also has an even number of 1s (two of them)—it’s evil. Similarly, Kucharov’s jersey number, 86, converted to computer speak is 1010110, which, as you can see, has an even number of 1s (four of them)—it is evil.

As shown 18 is an evil number, 9 is an evil number and 86 is an evil number. Taking the Triplet's jersey numbers into consideration for their nickname, more precisely their numberline, we have, of course, evil triplets.

For those of you that skipped the previous paragraph, we established *that* the jersey numbers worn by Palat, Johnson, and Kucharov are all evil; and, as such, an appropriate evolution of their current quasi-numberline to a numberline is, clearly, "The Evil Triplets". On a related note, the term evil numbers is a relatively new one that stems from combinatorial game theory [4]. Essentially, "the words *odious* and *evil* were chosen because they begin respectively like *odd* and *even* [1]. Coupled with the established lore that" mathematicians probably do not like numbers, since for them numbers are necessarily either evil or they are odd!" [1], number culture is found at the root of the use of the term *evil* (see, for example, [2, 3] for further discussion on evil numbers).

It should be pointed out that the evil moniker is not restricted to just "The Evil Triplets". With 50 evil numbers under 100, there are $(50 \times 49 \times 48)/6 = 19600$ possible line combinations composed entirely of evil numbers. Well, not exactly, 19600 is more of an upper bound, if you will. Some of the evil numbers found in the list above can't be used. Clearly, No. 99 can't be used because Gretzky's number has been retired across the entire NHL, making it evil in the sense that it is banned by league rules. While other restrictions also apply (for example, goalies typically wear jerseys in the 30s and more recently the 40s, smaller numbers are typically still worn by defensemen, teams with rich histories have retired subsections of the evil numbers, and others), there are no hard and fast rules in terms of jersey number restrictions. In other words, there are a lot, a lot of lines that could, potentially, be denoted as evil. Case in point, when Hawerchuk (No. 10) centered Lemieux (No. 66) and Gretzky (No. 99), that line, with a few minutes to go in the 1987 Canada Cup, from a numberline perspective, was an evil line (evil, also, from the Russian's perspective of Hawerchuk's hook).

Using jersey numbers to help coin hockey line nicknames opens up numerous possibilities. Consider, if you will, the recent emergence of "The Perfection Line" of Patrice Bergeron (#37), David Pastrnak (#88), and Brad Marchand (#63) of the Boston Bruins. In mathematics, a perfect number is one that is exactly equal to the sum of all its integral divisors less than itself. For example, six is considered perfect because $1+2+3$ is equal to 6, and 1, 2, and

3 are the only integers that divide six equally. Upon inspection, none of the three jersey numbers worn by “The Perfection Line” suffice the conditions to be considered, at least mathematically, a perfect number, casting ample doubt on the validity of the nickname. (In the interest of full disclosure, two of the three authors cheer for the Toronto Maple Leafs.) The notion of numberlines carries potential to reinvigorate nicknames of hockey lines from the past and present, many of which could be denoted evil. With that said, only one line will, hopefully, one day, be known as “The Evil Triplets”: Ondrej Palat (No. 18), Tyler Johnson (No. 9) and Nikita Kucharov (No. 86) of the NHL’s Tampa Bay Lightning.

References

- [1] Allouche, J-P., Cloitre, B., & Shevelev, V. (2014). Beyond odious and evil. Retrieved from <http://arxiv.org/pdf/1405.6214.pdf>
- [2] Berlekamp, E., Conway, J., & Guy, R. (1982). *Winning Ways for Your Mathematical Plays*, Vol. 1 & 2. Academic Press.
- [3] Berlekamp, E., Conway, J., & Guy, R. (2003). *Winning Ways for Your Mathematical Plays*, Vol. 3, Second Edition. A. K. Peters. Bernhardt, C. (2009). Evil twins alternate with odious twins. *Mathematics Magazine*, 82(1), 57-62.
- [4] Bernhardt, C. (2009). “Evil twins alternate odious twins.” *Mathematics Magazine*, 82(1), 57-62.
- [5] Campbell, K. (2015, November 23). Electric youth: Tampa’s terrific trio looks to catch lightning in a bottle again after shocking the league a season ago. *The Hockey News*, 69(07), 25-29.
- [6] Chernoff, E. J. (2015, October 26th). Lines You Can Count On [The Jersey Issue]. *The Hockey News*, 69(05), 11.
- [7] Chernoff, E. J. (2017). Numberlines: Hockey Line Nicknames Based on Jersey Numbers. *The Mathematics Enthusiast*, 14(1-3), 371-386.
- [8] Hudson, M. & Weisstein, E. W. (n.d.) Evil Number. Retrieved from <http://mathworld.wolfram.com/EvilNumber.html>