In This Issue...

**Theme: Sports and Media Literacy**
This issue of Connections looks at how technology and new data are changing the narrative around sports and media, and how that changes our experience as consumers and participants.

**Research Highlights**
Sports provide an excellent opportunity to not only learn people skills and health information, but they offer excellent arenas for math and science and algorithmic thinking – and of course, media literacy. And this includes sports cars, too. We have an interview with Wil Cashen, Tesla Foundation.

**CML News**
Opportunities to get involved in media literacy – GAPMIL meeting announced, NAMLE meeting pre-registration is now open, and state legislation has been introduced in California.

**Media Literacy Resources**
We offer a list of Sports and Media Literacy-related resources.

**Med!aLit Moments**
In this Med!aLit Moments activity students compare and contrast their experiences with highly mediated sporting events.
Sports and Media Literacy

Sports and Media Literacy: A New Data Driven Era

It is refreshing to receive an invitation for an event that takes us to a different realm, and such was the case with attending *Intersections*, an event sponsored on March 30 by The Economist Group and Porsche, at the recently-introduced Porsche Experience Center in Carson, CA.

What are the connections with media literacy? Many, as it turns out... Daniel Franklin, The Economist’s Executive Editor, Jonathan Abrams, an award-winning basketball writer, and sports data expert Steve Byrd held a fascinating discussion that explored how indeed, the media is the message, as Marshall McLuhan told us many years ago.

For sports car enthusiasts, we have an interview with Wil Cashen of Tesla. If you think a car is just a car, read this to discover how cars are driving big data and vice versa!

This issue of *Connections* looks at how technology and new data are changing the narrative around sports and media, and our experience as consumers and participants. We also include resources for further reading on the sports and media connections. Our MediaLit Moments activity, *Sports Extravaganza*, compares and contrasts the mediated sports experience of home viewing to the experience of actually being in the stadium.
Research Highlights

Using Data to Maximize Performance

Michael Lewis’ *Moneyball: The Art of Winning an Unfair Game*, recounts the story of how the Oakland Athletics baseball team used data and metrics to construct a competitive roster despite considerable financial constraints. Their success in the 2002 and 2003 seasons started a revolution: teams and franchises across all sports began adopting similar approaches to analyzing data and metrics to measuring and enhancing performance, disrupting traditional ways of playing, and driving success. The term “moneyball” is now a part of the sporting lexicon.

The technology to track, measure and analyze almost every facet of human performance and activity has evolved well beyond what was at the Athletics’ disposal in the early part of this century. Backroom staff, which now regularly consists of data analysts alongside coaches, trainers and physiotherapists, use big data, algorithms, machine learning, the Internet of Things (IoT) devices and artificial intelligence platforms to track how players move, the energy they generate from what they eat and drink, how much they sleep and how their skills are best put to use on the court.

Few sports have used technology as effectively as basketball. Platforms such as SportVU, a camera-based tracking platform that follows the ball and players to provide in-depth, real-time statistics, have changed the way the sport is played, improving training regimes, in-game strategies and overall performances. The Golden State Warriors were among the first National Basketball Association (NBA) teams to invest considerably in technology. Many experts feel this has been key to recent successes – playoff champions in 2015 and all-time record for most wins (73) during the 2015-16 season.

What does this mean for us, as consumers and participants?

Changing Narrative. For one thing, the sports narrative is changing as the data usage drives the way and represented to us. For example, some tennis match coverage now offers Hawk-Eye, a complex computer system used officially in numerous sports such as cricket, tennis, Gaelic football, badminton, hurling, Rugby Union, association football and volleyball, to visually track the trajectory of the ball and display a record of its statistically most-likely path as a moving image. With such highly sophisticated analysis instantly available, the way that the sports stories are told – and received – is bending toward the data.

Furthermore, changing access to technology changes how a story may be told. If fans are using mobile devices to tune into games, they may not be interested in a whole game – instead, they may only tune into highlights for shorter periods of time. The advertisers and sponsors of the teams must account for this new way of experiencing a sport. Football fans are certainly familiar with the “pause” in action that can occur when commercials are being
played during a televised game; now, to present the advertised products and services, new ways must be found to keep the audience’ attention.

**A Sharable Event.** Social media allows fans to share, and share they do – data, videos, comments, stories – all are ways to share about all aspects of the games. Teams are highly aware of this important aspect of their marketing and their paths to popularity with fans.

Technology companies, too, are attracted to this aspect of sports – SAP, IBM, Cisco – all like the association with sports because sports can help make for excitement with fans, making a dull story sizzle.

**A Mediated Experience.** Many sports, such as basketball or soccer, are global, with global audiences. Today, the game and the pageantry that goes with it are designed for viewers who live far beyond the home town of the team – there is often an expectation on the part of the team owners and managers that few viewers will ever see a “live” game, and so experiencing sports is increasingly a mediated experience, with powerful images, words, data and sounds dominating – all a media entertainment experience that is chosen and edited for us.

Also, gadgets like “wearables” or embedded chips or cameras can bring an immediacy to telling a story that wasn’t possible before. These wearables can give a sensation of being right on the field. New technologies like virtual reality are being used to bring an immersive media experience to a game, and these types of technologies are improving dramatically. For example, some basketball teams are providing fans with a 3D device to watch one game per week, and undoubtedly, these kinds of opportunities will increase as the technology advances.

Big screens with surround sound at home – with the play by play calls and data screens -- may make the decision to actually attend a game a tradeoff, where the at-home game may be more interesting for viewers than a stadium. The mediated experience may be more dramatic, with more of a compelling narrative, than an in-person experience.

The drama or attraction of providing data goes well beyond tables, these days – the data needs to be presented in visual ways that are sharable and that quickly tell a story.

**A Glossy Façade.** The images and the action are a façade for what’s really shaping the behaviors and the games behind the scenes. Like Facebook or Twitter, the user interface – the content -- is only the surface of what is actually occurring on the playing arena. It’s the data and the database that provides intimate and detailed knowledge of what is truly happening, and how the action can be measured and monetized.

To really understand what’s going on, you need to understand the interplay of the data with the team members and the coaches. The stakes are high – big bucks! – and the data is being utilized to maximize performance in every way possible.

In every case, media is being used and used constantly. In baseball and golf, radar is used.
In the NBA, video and data platforms are common for analysis. Players can monitor – and be monitored – on what they eat, how often they eat, how much they sleep, how much they exercise, how much they score or run during a game, what type of plays are most effective in terms of winning. Blood, sweat and tears provide biometric data that can be utilized, without the emotional or social costs.

Although the enormous amount of data now available is highly useful for the team managers and owners and players, it also presents new challenges. What are players’ privacy rights? How should players be compensated? In an era when a chip can be embedded in NFL shoulderpads, or conveniently worn in a better version of a Fitbit, there are no data too small to track. And when a player’s body is the commodity that gets results, no cells are off-limits.

Data is Instantaneous and Impactful. Coaches (and fans) can get data instantly, to inform how they are experiencing the game and in the coaches’ case, how they advise, utilize and place players on the court. The more one understands the data and the implications of the data on the game, the more sophisticated is one’s understanding of how the game will be played, and the strategies associated with a winning formula for the team. For example, in basketball, data has shown that 3-point plays tend to make for a winning formula, and as a result, more 3-point plays are employed, and players who are able to execute 3-point plays are utilized more often and valued more highly, while centers are not as important as they traditionally were.

Branding and Celebrity. Like Hollywood, sports franchises are sophisticated branding operations that must balance the image of the film or the team with the image of the star or player. While the narrative of sports provides all the human drama that a fan could ask for, brands must still be carefully managed and are valuable in their own right. Remember the naming controversies over Native American names a few years ago? It's interesting to note which teams changed their name and who didn’t, and why…On an individual basis, sports stars, from an accounting standpoint, are highly valuable assets, while generally, human resources are accounted for as costs. The transactional nature of accounting for relationships amongst teams and players becomes more readily apparent in an industry that is totally dependent upon human talent in such a visible way. The athlete’s time is certainly a valuable asset, and here again, technology is playing a role, as Tinder is reported to be a popular app amongst athletes who are on the go yet want to connect.

Yet being human, sports teams, like Hollywood executives, have challenges minding the image of their stars. The recent controversies over Colin Kaepernick’s kneeling rather than standing during the national anthem, the repercussions of scientific studies showing the damage done from concussions in the NFL, or domestic violence incidents on the part of players can all be highly damaging to the brand and to the bottom line.

A Confluence of Disciplines. The boundaries of various disciplines affecting sports are breaking down, with more and more sophistication and more and more interdisciplinary aspects, such as biometrics, medicine, and technology. These confluences have effects on
the economics of the games, as well. For example, coaches today have learned that “resting” their players in a more thoughtful way can pay dividends on the players’ performance – but, since this may result in a player being sidelined in an important game or one that is being broadly disseminated through cable or other media, the players’ absence may be noted by fans and attendance and viewership may well be affected.

Levels of Participation. The experience of a game is only as sophisticated as a fan. Sports Fantasy Leagues and traditional betting have always attracted fans who can profit from more sophisticated understanding of the games, and in this case, whether you win or lose depends on your understanding of how the game is played. These days, that understanding requires a sound knowledge of statistics and data – which are often neglected in every-day discussions.

Implications for Education. Every school has a sports program – but does every school provide its students with the math and data-related know-how that distinguishes the winners from the losers today? Sports provide an excellent opportunity to not only learn people skills and health information, but they offer excellent arenas for math and science and algorithmic thinking – and of course, media literacy.

An Interview with Wil Cashen, Tesla Foundation

Wilhelm (Wil) Cashen is a true serial entrepreneur and innovator, with expertise in the auto industry and robotics. His lifelong passion for invention and innovation was the inspiration for the co-founding of the Tesla Foundation Group. He is committed to the success of building an American system to aid all people young or old, to seize upon their ideas and innovations, create new products and services to help build and protect American jobs and grow American companies. The legacy of this work, the Tesla Foundation Group, is now Mr. Cashen’s life passion.

Tessa Jolls: Wil, why is it that when we look at a car today, we’re not just looking at a car – we’re looking at a data collection machine. What is the car companies’ interest in this data from the consumer?

Wil Cashen: First, we have to understand the types of data that are being collected. The data itself falls into varying categories, and what you’re going to find in the future is the banking of data. Our data has value. If data wasn't valued, Google wouldn't be in business. Data is extremely valuable for Facebook or any of those companies, and they’re using data from individuals. In the future we’ll be using more and more data that is derivative data, that is secured through various and sundry data acquisition processes, where the sensor array or some other type of controller composite system delivers specific information, based on positioning of a piece of equipment, or whatever the collection point might be. That data will be used for any number of things.

As a society we are moving slowly into that “data crazy” stuff because as we move forward -- more and more everyone keeps saying we’re moving now into the world of autonomy, which is
true -- but the world right after the world of autonomy is the world of data. Now on the way there, we're going to capture a lot of data but it will take an army of analysts to take the data and use the derivative data in different ways. Let me explain to you what I mean.

The specific functional data that the car company needs is information such as the car is going this fast, the wheels are going around like this, turn right, turn left, stop real quick, do this, did that, the fuel system is this, the exhaust gas is this, the Intake temperature is this. There are several hundreds and even thousands of data acquisition points on a car now, and those are only going to grow as the car becomes more sophisticated. It enters the world of a complete closed loop environment -- and a closed loop environment means that there's control and communications within the car, communicating all times for all points inside the car. Whether it be the cockpit environment, whether it be the engine compartment environment, or the battery environment -- or whatever. It's looking at all those different functions and all those different systems continuously, for either maintenance issues or for data issues to keep the vehicle going.

**TJ:** So, when I see a car at the Porsche Experience in LA -- I see a car but it's not just a car any more. It is a data machine. Don't consumers need to understand more about what these products really are? We're not just buying the car as a product, but we and our data are the product, too. There are new types of interactions, transactions and relationships going on between the car consumer and the car manufacturer. What benefits does this new relationship have, and will the relationship be monetized in different ways?

**WC:** The way it gets monetized is through derivative product entries or derivative product assessment. Let's just say the car company takes the information and delivers that information back to telematics, back to a service garage, a service location on one of the cars, and then the car pulls in or there's a message sent to the dashboard: “Tell the driver that you need to bring your car in. The right front wheel bearing is getting warm. It needs to be looked at and replaced.” The driver goes back, goes in and the thing gets fixed before it can cause enormous damage to the car.

That's the pure function of operation that the car companies are putting in place in order for the customer to have a better experience with the ownership of the car. Now there's other data where the customer themselves are requiring entertainment, communication, everything else inside the car, and that's the entertainment side or the infotainment side of the car. Now you're doing more things, because the car is plugged in to the Internet. You have all things Internet-related and you're using different pieces and different components and that data now becomes important to you.

Then you use another derivative line of data that's proximity data. The car's driving. Let's just say these are the steps. I'll give you all of it in a nutshell: Look at data from the standpoint of the operations, that's one thing -- the data from the standpoint of you're driving a car down the freeway. All of a sudden the information comes up on the dashboard and says, “Car needs to
see the service garage soon.” At the same time it does that, it gives you an address to the service garage. At the same time it does that, it knows that you've been on the internet looking for certain things. It gives you a location of a place to eat while the car is down because it knows you like certain foods or maybe there's a place across the street or down the street so it gives you that information. That's the derivative line of data.

Then on top of giving you that line of information, as you are pulling into the town where the service facility is, as proximity happens, flashes come up on your screen alone that says, “Solomon's market, Johnson's cleaners and then there's Topanga Pizza Kitchen.” Those are all examples of proximity-based information which is providing you with information as you call that information up through A) The Internet and through B) The car system and the satellite connectivity itself. GPS provides the proximity location.

Those are four lines of data that are being fed: into the car, into you, in the car with relationship to you and your interactivity, and into environmental things that you're interested in, which are why you're using the car.

**TJ:** Those are many data points a consumer would actively engage with. Then there's another data backend on the company side, where the company is getting data streams from the consumer, and then they're finding other uses for that data. Is that something that you can give some insights on?

**WC:** Well, the big data that the car companies will gather may or may not be capturing usable data that can be used to market things back to consumers. They may use data to facilitate relationships with car service providers like insurance companies.

**TJ:** Yes, or companies could collect data on frequent repairs, the types of design issues or engineering issues that might be based on data coming in, and how they might modify the car to respond to some of those issues.

**WC:** They have a lot of that data right now. They collect “wear and tear” items -- that takes an army of analysts. When we built assembly facilities and when we designed the control systems for robots in manufacturing, we measured temperatures and energy consumption on all of our machines to see if there was wear and tear on the vehicle itself, or on the robot itself, because we knew if that was the case, the vehicle would then fall out of its computational models for quality control.

As cars become more sophisticated and complicated, failures can happen more and more and more, and that's where these telematics come in, where the car delivers the information to the cloud and that information is then delivered to service garages, engineering centers, and design centers. There are lots of places for this data.

**TJ:** So basically, today, a car is not just a car.
WC: If you think about Moore's law, Moore extrapolated that computing would dramatically increase in power, and decrease in relative cost, at an exponential pace. As data usage becomes more prevalent and then data is managed and processed, I think Moore's Law gets thrown out the door or is multiplied by tenfold. What happens along the way is that the machines become the designers of themselves. Then there has to be a facilitator or a machine as the facilitator that's built in between human beings and the equipment itself, so that you can understand what the equipment's doing, because you can't keep up with the design. Humans can no longer fathom the design. Does that make sense?

TJ: It does. What this is saying to me is that in terms of preparing our citizens for this explosion of technology, we have to give them many more tools and understanding of that interface that goes between the machine, and the understanding of the machine and its capacity.

WC: That's right, and what happened when I was in the business, we listened to the bravado that was coming out of the car companies, “Don’t worry, all these people will not be displaced. We are just going to retrain them for new jobs.” That never happened. To answer that, there were 27 million people put out of work in the car industry and that's a component of the great recession that we just went through. Guys like me went into the industries and automated the industries because the data became available to automate at that level.

Now what's happening is that we're moving beyond four walls and we are automating the externals of buildings. That's one of the things we're working on with the Tesla Foundation -- aerial robotics. Drones can do a lot of functions that men can’t do or don't do now or that men may ever do. As a man you're very manual and you may collect very little data, but when you put a drone out there, it's collecting a tremendous amount of data, it's providing a tremendous amount of functionality that man can or cannot do. But what we have to do is, we have to build an interface between this equipment and man, so we keep up with this blended relationship. Nicholas Negroponte, the Dean of the Information School at MIT, identified this relationship in his book, Going Digital. His book describes what I saw happen to people. We went into a building and we were involved with making a turbocharger manufacturing center in Japan in Sagami. There were 1700 people employed. We took employment from 1700 to 22, so that was a total annihilation of the work force -- and all the things that we get excited about as engineers are numbers. That's how I lived my life. I was excited by how cool the technology was, and that every time we touched something, we got to do more. The harder the project, the more interesting it was to solve and we just looked at it as engineers, and good engineers put themselves out of business because they solve the problems.

Later in my career, I realized that I've put thousands of people out of work and it wasn't just me, it was a whole lot of companies. Our company was definitely one of the offenders, and so my philosophy now centers around Education Workforce Development through the Tesla Foundation. The Foundation is focused 100% on education and workforce development. That's what we care about, that's what we do and that's where we are going to be for now and
forever in the future. We look at system, whether it be in the “smart city” or whether it be in cars.

We look at those things and we say, “Okay what happens if this breaks and that breaks? How do you replace it? How do you fix it? What do you do about this? What do you do about that data? How can that data help improve someone's life?” Then we try to blend people into that whole succession of activity.

**TJ:** Can you give some examples of projects that you've done with your Foundation?

**WC:** Well, right now all the stuff that we're doing is so new. In 1979 when we started Standard Solutions we entered into the third stage of the industrial revolution, which was through data automation -- and that's different than automation. Automation means human beings are automating it. Data automation means that you put data in a machine and the machine is automating it. Data automation is a big difference. Big, big change. When you do that you've reduce the number of people who are involved with the entire process.

Now, we're in the fourth stage of the industrial revolution, and the Internet has allowed that to happen. Data acquisition is through the Internet. Well, let's just say the communication through the Internet for data acquisition happens from sensors and other types of devices -- whether they be video devices or magnetic devices -- and that feeds a string of data into the cloud and then that data is consumed by analysts who then take that data and turn it into a for-profit monetized product. That's going to happen more and more and more and more and more.

Let's take the example of farms. Let's just say that we take 20 farms in Southern California -- maybe they were orange crops or avocados or nuts or wine grapes on the side of a mountain. We went with video and we filmed the mountains, we measured the soil points to see what the soil makeup was. In the past, that was why we were out in the fields with machines, to help the farmer or the agriculturist decide what they needed to do to treat the grounds and to give food to the crops in order to grow the best crops and have the highest yield.

Well, the derivative data from that activity is enormous. The derivative data also gives you the typology of everywhere it just viewed, so it can tell you the highs and lows of the grounds. It can show you water flow passages, and lots of other things.

In California alone, if government and farmers would have had the information from derivative data from thousands of drones flying and collecting data on agriculture, it would have paid off for cities, for counties, for the state -- for everyone to be able to use that information to keep the groundwater levels in good shape. As a race, we've always been subjected to what Mother Nature throws at us, and we are a responsive race. This marks the first time that humans can be more proactive with using data, since we are able to apply that data, and we will be less subjected to responsiveness and more involved with recognition of what's going to happen.
**TJ:** We're at the beginning of this data revolution. Data use is very advanced but at the same time, it's early.

**WC:** Data banks will evolve -- and don't think of data banks like a data bank that you store a bunch of data in -- it's a monetizing system that becomes extremely valuable, and data banks become locations where people build economies based on how big their data banking system is within their country. That information is very important and can be very deliberate for specific functions of business, of life, of the social environment. Data banks may have various and sundry levels of monetization or value.

Let's say you're just a person who provides one of the output data, you are there to measure this mountain and that's what the city pays you for, and the state pays you to go over and map the mountain and tell how much of it's been washed away during the rain of 2016. Well, there's that information, but there's also a tremendous amount of derivative data that was gained. That derivative data then goes into your account along with the data from performing a service for the state. That derivative data becomes a second line of data that adds more value to your account as the data bank then sends it to the brokerage who then puts it on the Internet brokerage system. People come and bid on that data because they need that data for a specific function or specific information that improves this path or the service that they are providing.

**TJ:** So what we're looking at is data as a national resource?

**WS:** Yes, data as an economy. It's an economy unto itself, and it certainly has a national aspect to it, because the success of a nation or a business or the individual level will depend a lot on management of data. The accumulation of data, the monetizing of data are key, and that actually brings along some really interesting legal issues from the standpoint of intellectual property and data ownership -- who owns it, who gets paid for it, how does that happen etc.

We're way at the beginning of that. We haven't declared the data economy yet; it will be much different than declaring the four stages of the industrial revolution as an economy. The data stage of the industrial revolution is a stage that will then move us into a data phase economy. Data is no different than finding gold or finding diamonds. We've turned ourselves into a gold standard. Before, gold itself was so valuable -- now, gold will be the third or the fifth, or a hundred tiers down as valuable. Classifications of data will become more valuable than any of those other things and if you’re the holder of that very, very rare data you will be a pretty wealthy person.

**TJ:** At this stage, most people have no idea of the value of their data. They think they're getting Facebook for free, that they're getting Instagram or Twitter for free -- and there's just nothing free in this world, especially with data.

**WC:** Yes. And governments are making decisions now based on mathematical assumptive
recommendations -- but not necessarily completely assumptive. There's data behind the recommendations, but data has not been accepted as a general rule of knowledge like video is accepted as a general rule of knowledge. If you break into a bank and you are caught on a video camera, you are the guy who robbed the bank. No one questions that data. Now if you say the world is warming up, people immediately question all that data, but we're moving to a place where when data says it is what it is, humans will no longer question it on any level. The data will be collected and processed in a way that's irrefutable.

When that happens data will be a standard knowledge. What's important is for us to reach that standard knowledge. There is a disconnect between what the public knows and where the science is taking us, and that disconnect can be dangerous because decisions can be made on the basis of fear rather than knowledge.

“The Day the Earth Stood Still” or “War of the Worlds” are good examples of media shows that caused hysteria – some people attempted suicide at the time of the War of the Worlds radio presentation because they thought the end of the world was coming. If that happened today, because of our sophisticated society, if news reports showed a flying saucer or extra-terrestrial machine land in Washington DC, there would still be people who would do crazy things, but for the most part people would accept it as just another race coming from somewhere else that we need to communicate with. We’ve gone to that standard now.

**TJ:** So in that sense, we don’t know what we don’t know about data, right? At least we’ve come that far.

**WC:** This reminds me of a time when I was fortunate to sit next to Steve Ballmer (former CEO of Microsoft) at an event, and I said to him, "Steve when Microsoft came up with the Word program, what the heck did you guys think you had on your hands?" And he said, "We looked at each other and said, ‘It’s a wonderful program and we have no idea of the multidimensional and terrific stories and information that will be used on it.’” And that really hit me. When we talk about data now, it's that same world. We don’t know…

**TJ:** So these days, a car is not a car…and we as consumers don’t really understand what it is. And maybe some day, only the car will know!
CML News

California Media Literacy Legislation
CML went to Sacramento in support of two California bills advocating for media literacy education in K-12 schools. Stay up to date on what’s happening with SB135 and SB203 and express your support to Senators Dodd and Jackson, respectively.

GAPMIL & NAMLE Meetings June 26-28, Chicago, IL
The North American Sub-Chapter of the Global Alliance for Partnerships in Media and Information Literacy (GAPMIL), a project of UNESCO, will have its second meeting in Chicago from 1-5 PM on Monday, June 26 during the pre-conference session of NAMLE, which will hold its Annual Conference on June 26-28.

The GAPMIL meeting is open to all and attendance is free, thanks to the generous support of NAMLE, which is a GAPMIL member, along with leading Canadian organizations such as MediaSmarts. For more information and to RSVP, please contact Tessa Jolls, TJolls@medialit.com. Register for NAMLE here.

About Us...
The Consortium for Media Literacy addresses the role of global media through the advocacy, research and design of media literacy education for youth, educators and parents.

The Consortium focuses on K-12 grade youth and their parents and communities. The research efforts include nutrition and health education, body image/sexuality, safety and responsibility in media by consumers and creators of products. The Consortium is building a body of research, interventions and communication that demonstrate scientifically that media literacy is an effective intervention strategy in addressing critical issues for youth.

http://www.consortiumformedialiteracy.org
Resources for Media Literacy

Sports and Media Literacy Resources
To understand the representation of the world today, it’s important to understand technology and the trends that underlie it:

_MegaChange: The World in 2050_ (published in 2012), and _MegaTech: Technology in 2050_ (published in 2017), by Daniel Franklin. Franklin is Executive Editor of _The Economist_, and his books explore future visions based on his interviews with leading thinkers. At the _Intersections_ event, he cited two major trends that his research revealed: 1) Speed. The pace of technological change continues to increase, with profound effects. For example, in physics, one scientist noted that researchers already know a great deal about how our planet operates from a physics perspective, meaning that the science is moving from experimentation to calculation. 2) Borders. Borders – or silos as they are often referred to – between various disciplines are breaking down, and big data is leading the charge. It is now possible to extrapolate data across disciplines and also to eliminate overlap, so that research can be conducted more easily.

_Boys Among Men: How the Prep to Pro Generation Redefined the NBA_ (published in 2016), by Jonathan Abrams. Jonathan Abrams has held posts with ESPN, the _New York Times_ and the _LA Times_. His book focuses on the evolution of the game, with particular focus on how younger players such as Kobe Bryant and Kevin Garnett changed the way the sport is played. He is well-versed on the impact of technology and media on sports.

And then for the Contrarians, with low-tech approaches, this recent article from the _Wall Street Journal_ explores “The Indians’ Brain Trust: Baseball Writers.”


_Sportradar_ is a data analytics company that has just sealed a $250m deal with the NBA in collaboration with Second Spectrum, ousting the incumbent STATS (who were the key provider of all data for the NBA since 2009/10). Given the impact of analytics and rising opportunities related to analytics and media (even websites today are facades that are driven by analytics and data) – teachers and school counselors need to emphasize the role that these STEM skills play in the media world, for both consumers and producers.

_If You’re Looking for Great Literature, You May Be in the Ballpark_  

_Porsche Experience Center/Los Angeles_. It’s not necessarily a media literacy experience, but there’s nothing like the wind in your hair and the thrill of high speeds on the racing track in the front seat of a beautiful Porsche.

[https://www.porschedriving.com/porsche-experience-center-los-angeles](https://www.porschedriving.com/porsche-experience-center-los-angeles)
Sports Extravaganza

Sporting events have become media extravaganzas providing a mediated experience to home viewers. What we see on TV is a highly choreographed block of time in which a game is played. There are commercial breaks, game-play graphics, close-ups and audio of coaches and players, with running commentary about every aspect of the game. What we experience via TV is vastly different from the experience of the fans in the stadium. Fans in the stadium are also treated to a media extravaganza with kiss-cams and music videos but it’s a different “show.” Stadium fans see live half-time shows and hear the crowd roar, but they also patiently wait for action to resume after commercial breaks, and they pay large sums of money for seats that sometimes require binoculars to see the action on the field.

Ask students to compare and contrast their experiences as sports fans.

AHA! Watching my favorite team on TV is way different than going to the game.

Grade Level: 7-9

Key Question #2: What creative techniques are used to attract my attention?
Core Concept #2: Media messages are constructed using a creative language with its own rules.
Key Question #5: Why is this message being sent?
Core Concept #5: Most media messages are organized to gain profit and/or power.

Materials: Access to article below

Activity: Ask your students if they saw any of the “big” games this year for baseball, football, basketball...Did they attend in person or watch on TV? What do they like about being in the stadium at the event? What do they like about watching on TV? Do they like or dislike the commercial breaks and running commentary? Do they like or dislike the camera coverage and replays available for home viewers? Why are coaches and team owners willing to stop play for commercial breaks? Why are sporting events scheduled to meet the needs of the TV audience?

Hint: Approx. 100 million people watched the Super Bowl in 2017 and saw the commercials. This exposure is worth millions of dollars to advertisers.

Ask your students to read the WSJ article My $170 NCAA Championship Nosebleed. This is an entertaining viewpoint about sitting in the last rows of the stadium and needing binoculars to see the field. Is just being at the event with the energy of the crowd worth it regardless of the seat? Or do your students prefer the media event via TV viewing?

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