

# The Interim PLUS

## Curriculum Supplement For Schools

*The Interim Plus* is a periodical dedicated to educational matters and specifically designed to assist teachers in integrating relevant life issues in their lesson planning.

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In this edition of *The Interim Plus* we present material on three themes: electoral reform in Canada (suitable for courses on politics, Canadian history, civics, law); artificial intelligence and technological progress that is accelerating at breathtaking speed (science in society, religion, philosophy, sociology, communications, and the whole range of sciences from physics and chemistry to biology); and Easter, the greatest feast in the Christian liturgical calendar. Each theme connects to our contemplation on the meaning of life, why we need to cherish and respect it in all its diversity, and consider peaceful ways to stop the senseless, brutal killing of innocent human life in the womb and at other vulnerable stages of its development.



any details how this would be accomplished. Have students view this interview in which Trudeau explains why the topic interests him, how he frames the discussion and what his motives may be.

<http://www.canada.com/news/national/andrew+coyne+what+problem+electoral+reform+supposed+solve+here+couple+start/11630378/story.html>

Journalists who take a keen interest in this matter have written widely about the benefits and the potential pitfalls of adopting one model as opposed to another. Some political pundits advise that the best solution is to leave things as they are. Here is an article, plus supplementary material, that you may give your students as reading and viewing assignments, with questions to guide them.

## Article 1 The Interim, February, 2016 (P. 5)

### Why is electoral reform suddenly an issue?

During the 2015 federal election campaign, Liberal leader Justin Trudeau vowed it would be the last election under the first-past-the-post (FPP) system, the system that Canada has used since Confederation. Critics say that the winner-take-all nature of FPP is unfair and even undemocratic. The candidate with the most votes in the riding is elected MP and the party that wins the most ridings forms government. Critics argue that results under FPP are unrepresentative of the vote counts and that votes for losing candidates are meaningless. The section on electoral reform in the Liberal platform, Real Change, is called "Make Every Vote Count," but did not state what would replace FPP, only that "As part of a national engagement process, we will ensure that electoral reform measures – such as ranked ballots, proportional representation, mandatory voting, and online voting – are fully and fairly studied and considered. This will be carried out by a special all-party parliamentary committee, which will bring recommendations to Parliament on the way forward, to allow for action before the succeeding federal election. Within 18 months of forming government, we will bring forward legislation to enact electoral reform." Notice the platform does not give any indication, if any, that Trudeau favoured. The Prime Minister later said he favoured the alternative voting system (the political sci-

## Part A Electoral Reform

There are many reasons why societies undergo political changes in their self-governing apparatus. Even in strong representative parliamentary democracies like Canada, there are periodic demands for reform. The reasons may range from the decline of electoral participation to the rising cost of elections to a perceived unfairness of the voting system. Recently, several political parties and activist reform

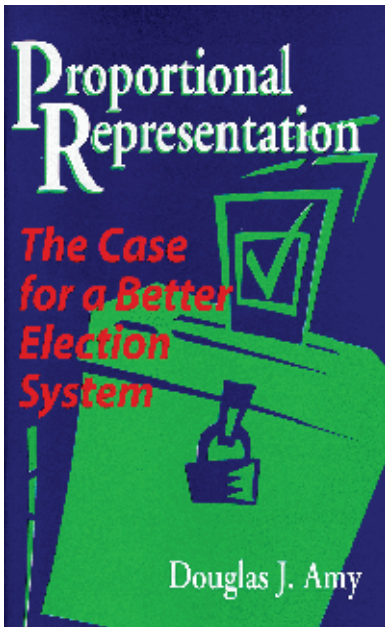


groups have expressed a growing dissatisfaction with the existing first past the post (FPP) system for determining the winner in the individual ridings during a general federal election.

During the 2015 October election, Justin Trudeau, as part of his campaign stated that the current method for conducting elections would be changed if his Liberal Party formed the government. He did not spell out in

ence term for the ranked ballot). Ranked ballots can be used in a FPP or PR system.

### What is the difference between proportional representation and ranked ballots?



Proportional representation – or PR – would assign MPs to Parliament based on the proportion of votes each party received. There are two forms of PR, mixed member proportional representation (MMPR) and pure PR. Under MMPR, some MPs would be elected under the FPP system and a second set of MPs would be allocated by the percentage of the vote each party receives in the general election (which may be allocated nationally or by province or region). In New Zealand and Ger-

many, voters cast ballots for their local MP and for party preference nationally. Under pure PR, there would be no need for ridings and voters would lose “their” MP. Ranked ballots or the alternative vote allows voters to rank the candidates. If no candidate receives 50 per cent of the vote, the candidate with the least votes is disregarded in the next count and the second choices on those ballots are reassigned to other parties, and so on until the winning candidate gets 50 per cent.

### How would the Canadian election results have been different in 2015 under pure PR?

In fact, this is impossible to answer because as Andrew Coyne of the *National Post* says, change the system and change everything about politics from how the parties run campaigns to the decisions voters ultimately make on election day. Assuming people’s votes did not change, the Liberals would not have won a majority because they took 184 of 338 seats with just 40 per cent of the vote. They would have ended up with 133, the Conservative would have had nine more seats (108), the NDP 68 (instead of 44) and the Bloc and NDP would both have significantly increased their representation. As the *National Post* reported following the election, “there would be no Liberal landslide with proportional representation.” Some people see the election results as unfair because they are unrepresentative, but defenders of FPP say winning a majority requires broad, national support and wooing a broad swathe of voters. Exaggerating the results could be seen as a feature, not bug, of the system by lending greater legitimacy to the winning party.

### Are there problems with PR?

Many critics will point to the unstable nature of governments in systems that use PR (Italy and Israel are common examples) because it is difficult to win a majority and small parties hold the balance of power.

Another problem is in how MPs are selected. Under FPP the voter is represented by an MP, and there is a connection between those privileged to hold office and the citizens they represent, whether or not an individual marked the ballot for the eventual winner. Under PR, the MPs are taken from a party list, breaking the direct connection between electors and the elected. This lack of personal connection between voters and MPs may lessen the accountability of MPs. Relatedly, there is a concern that MPs will be (more) beholden to the political parties and their leaders and not voters. Under the MMPR there is also the possibility of creating two classes of MPs, with one set elected at the riding level and another taken from party lists.



### Are there problems with ranked ballots?

It is more difficult to make the case against ranked ballots. Pundits believe that ranked ballots benefit parties in the political middle because it is more difficult for parties on the right or left to win 50 per



cent of the vote in a majority of ridings. This might explain why the Liberal government are pushing electoral reform: to ensure their dominance in Canadian politics and marginalize the NDP and Conservatives. If this is true, electoral reform would be politically unfair. However, it is difficult to argue that ranked ballots are undemocratic. Supporters of ranked ballots argue they could have the advantage of making politics more civil by incentivizing campaigns that pull in more voters than merely the party’s base because candidates would need the support of other party supporters to get past 50 per cent.

### Why are opponents of electoral reform calling for a referendum?

The Conservative Party and some advocates of change (like the Canadian Taxpayers Federation) say that while the Liberals had the plank about electoral reform in their platform, they did not campaign on it and the media ignored the issue. Voters did not know what they were getting into voting for reform because Trudeau did not indicate which new form of electing a government his Liberals were likely to push. They also say that voters should have the ultimate say in how they elect their governments.



### Haven't voters rejected electoral reform before?

There have been electoral reform referenda in British Columbia in 2005 and 2009, Prince Edward Island in 2005, and Ontario in 2007. Each time voters rejected changing the electoral system. Advocates of electoral reform say it is because voters did not understand what they were voting on, but it is more than likely that many voters are content with how the composition of legislatures are chosen.

### Can the federal government unilaterally impose electoral reform?

#### Is a constitutional amendment necessary?



The constitution may require amending depending on the sort of reform proposed. Many legal experts think that a ranked ballot does not fundamentally change the electoral system, but that PR does. Lawyers Yaakov M. Roth and Jonathan E. Roth wrote in the *Toronto Star* that the 2014 Supreme Court reference case on senate reform requires that fundamental reform “can proceed

only with broad provincial consensus” and thus unilateral change might be “legally futile” and face a constitutional challenge. They observe that Canada has “no single comprehensive constitutional text” but rather “a far-flung collection of imperial and Canadian statutes, conventions, and unwritten principles,” and that a single parliament cannot alter these. The Supreme Court in the senate reference case, *Roth and Roth* argue, explained that democracy and the rule of law, as parts of the our “constitutional architecture” cannot be overridden by “simple majority rule” and require broad national consensus. The Conservative Party of Canada and possibly one or more province, is likely to challenge the constitutionality of electoral reform. If the Trudeau government does not plan to hear back from their consultative process for 18 months and it takes time to debate and vote on the change in Parliament, a court challenge could prevent the next election from being carried out under the new electoral rules.

#### How does electoral reform affect pro-lifers?

Parties such as the Christian Heritage Party and New Reform Party of Ontario (formerly the Family Coalition Party) at the provincial level, could theoretically benefit from electoral reform and both parties favour shaking up the system. A note of caution, however, is that many PR systems require a minimum level of support (usually five per cent) that these parties are not garnering at this point in time. At the CHP annual general meeting in 2014, Irme de Vries gave a presentation in favour of the ranked ballot, and she correctly argued that one cannot assume that voting patterns would stay the same under a new electoral system

as citizens might vote differently with incentives to make their ballot choices meaningful. This is possible. Campaign Life Coalition argues that while pro-lifers could make some gains in legislatures with smaller parties winning a handful of seats, it is likely that the influence pro-life voters have in the mainstream parties will be lessened as party elites control the MP list and the connection between MPs and voters is broken. On balance, we think the harm incumbent in the loss of democratic connection between voters and MPs and the loss of influence within parties outweighs the benefits to be gained by electing a handful of pro-life MPs in these parties.

### Questions

1. What precisely is the FPP system of voting?
2. What are some of the criticisms of this system?
3. What is proportional representation? How would this work?
4. How does the “ranked ballot” system work?
5. What is apparent from the 2015 general election if the PR method had been in place? Was that in any way fairer? Could there ever be a majority government in place in this election system?
6. What are two important criticism of PR? Can these be overcome?
7. How would the ranked ballot be an improvement over the current system? Why not have run-off elections to ensure that each riding is won by a candidate with an absolute plurality?
8. How should electoral reform be introduced? By a vote of parliament? By a referendum of the whole people? Who might favour each of these approaches?
9. Could a constitutional crisis of sorts be created over this issue of electoral reform? Why and how?
10. Why might small parties and fringe parties favour a PR system of elections?
11. Would PR spawn a whole new set of political parties devoted to single issues?
12. Would political stability suffer if FPP were to be replaced by PR or the ranked ballot system?
13. Are there better ways of effecting electoral reforms that respect the FPP tradition but allow for much greater participation of the citizenry in the process and the actual voting? For example, allowing people to vote online?
14. A growing criticism of any electoral reform

points out that all the different schemes by and large diminish the contact and accountability of the individual Member of Parliament to his/her constituents. What is the nature of this particular problem? Is it not a legitimate reason for not proceeding with any system that reduces the capacity of individuals to influence the outcome of elections in their own riding?

15. Why should pro-life political lobbying groups be concerned about these electoral reform proposals? Are any of them acceptable in principle? Are there any that might be totally unacceptable from a democratic point of view?
16. If the existing major parties were all to adopt a pro-abortion platform would pro-life people demand/support the creation of a new political party that reflected their values?

## Article 2



Andrew Coyne of the *National Post* has written several columns on the topic of electoral reform since the election in October. According to Coyne the traditional first past the post system (FPP) has serious drawbacks for among other things it:

discriminates among voters by giving more weight to the votes cast by Canadians in different parts of the country. As he points out, discrepancies in size persist between different ridings, from fewer than 20,000 electors in some ridings in Atlantic Canada to nearly 100,000 in some ridings in Ontario, Alberta and British Columbia. This translates into gross inequality. If one looks at the popular vote attained by each of the parties last October one can see that it took roughly 38,000 votes to elect each Liberal MP, 57,000 votes to elect each Conservative, 79,000 to elect each New Democrat, 82,000 to elect each member of the Bloc Québécois, and nearly 603,000 to elect the one Green Party member of parliament. Coyne also maintains that FPP rewards regionally divisive parties like the Bloc (or the Reform Party earlier on) and thus can act as obstacles to the strengthening of national unity. Moreover, according to Coyne, the present structure contributes to a declining participatory rate among voters and affects the election process in multiple ways from skewing the results to campaign strategies, campaign financing, voter response, (whether expressed in

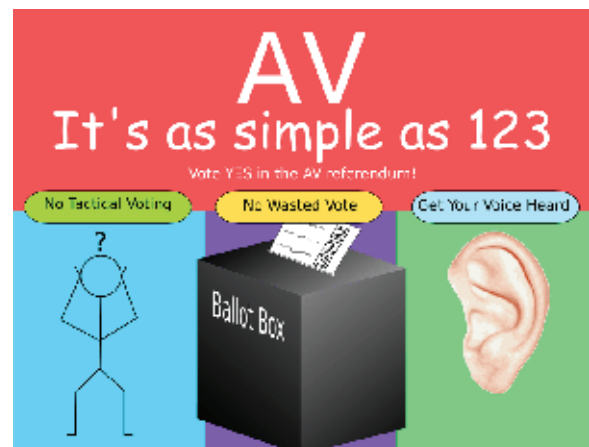
spoiler votes, perception of wasted votes, safe seats through gerrymandering tactics, or debasing negative attack ads).

As Coyne puts it: *the nature of winner-take-all systems... is that they are highly leveraged: A comparatively small shift in the popular vote often results in hugely disproportionate swings in the number of seats a party wins. Politicians are by nature risk averse. Consequently there is little incentive for parties to take chances aimed at expanding their support, for example by staking out new or distinctive policy positions.* On the other hand, electoral reforms that would bring in some form of Proportional Representation are viewed as being positive in their potential impact. One website in the U.K claims that *"As a rule, PR voting systems provide more accurate representation of parties, better representation for political and racial minorities, fewer wasted votes, higher levels of voter turnout, better representation of women, greater likelihood of majority rule, and little opportunity for gerrymandering."* It is vital to have a clear understanding of the purpose of any form of government, but especially those types that are designed to express and allow for individual freedoms and respect for the human rights of all its members including the right to life, regardless of age, sex, race, or stage of development, in the womb or on their death bed. Is there greater likelihood of these values being promoted and respected in a PR system or in a FPP system, or is there no difference? These considerations ought to be kept in mind when discussing the ideas of electoral reforms. Coyne delved further into the pros and cons of changing the electoral system in the following article *Andrew Coyne: Electoral reform wouldn't end majority governments — only the phoney ones* that appeared in the *National Post* on January 15, 2016.

<http://news.nationalpost.com/full-comment/andrew-coyne-electoral-reform-wouldnt-end-majority-governments-only-the-phoney-ones>

Another useful article on the same topic appeared also in the *National Post* in January, 2016. Kady O'Malley took a slightly different tact from that of Coyne. She was not committed definitely to changing the existing system, but felt that there was room for improvement.

<http://news.nationalpost.com/news/canada/a-few-words-of-warning-from-kady-omalley-before-the-great-electoral-reform-debate>





In a video on the public affairs show, Power and Politics, the show's host Rosemary Barton conducted an interview on this topic:

(<http://www.cbc.ca/news/politics/guy-giorno-proportional-representation-1.3463105>).

Guy Giorno, former national Campaign Manager for the Conservative Party and the Chief of Staff for Prime Minister Stephen Harper argued in favour of electoral reform believing it would make elections more fair, more democratic and more truly representative.

All in all there is plenty of controversy over this issue, both pros and cons. Much deliberation is needed before any changes are to be made to a system that many argue has made Canada (and other nations that have adopted the British parliamentary tradition) a successful representative democracy.

### Good websites to consult

<https://www.mtholyoke.edu/acad/polit/damy/BeginnningReading/PRsystems.htm> explain various Proportional Representation systems and the nations which practice it

<http://www.democracy-building.info/voting-systems.html> looks at FPP and PR's pros and cons. Seems to favour PR

<http://www.fairvote.ca> one of the principal promoters of electoral reform

<http://www.sfu.ca/~aheard/elections/reform.html> good, clear explanation of voting methods and effect on results in elections.

here are 4 videos explaining various methods of voting and electing a government

<https://www.youtube.com/watch?v=s7tWHJfhiyo> explains problem of FPP

[https://www.youtube.com/watch?v=3Y3jE3B8HsE&index=3&list=PLqs5ohhass\\_TF9mg-mqLie7FqQ1-Fz0Qc&feature=iv&src\\_vid=s7tWHJfhiyo&annotation\\_id=annotation\\_746237](https://www.youtube.com/watch?v=3Y3jE3B8HsE&index=3&list=PLqs5ohhass_TF9mg-mqLie7FqQ1-Fz0Qc&feature=iv&src_vid=s7tWHJfhiyo&annotation_id=annotation_746237)

Alternative Vote or Ranked Ballot Explained

<https://www.youtube.com/watch?v=QT0I-sdoSXU> Mixed Member PR explained

<https://www.youtube.com/watch?v=Mky11UJb9AY> Gerrymandering

### Questions

1. If Canada's electoral system changes, what is the likelihood of more parties being created?
2. Would electoral reform improve voter turnout? What other changes might appeal more to youth and engage them more in the whole process?
3. Are there really any drawbacks to having a voter



turnout of less than 70% of the qualified electors? Are not people free to vote or not to vote? Should Canada adopt the compulsory voting law as in Australia, where the citizen is fined if she does not vote?

4. Which party is regarded as best placed to pick up second choices from voters to the right and the left and thus gaining the most from a ranked system? Do you agree with that interpretation?
5. Would Proportional Representation encourage or oblige political parties to co-operate more with each other?
6. What are coalition governments? Are they strong and effective or just getting minimal legislation passed?
7. Some political observers argue that a change to some ranked ballot system would prevent the Conservatives from ever forming government in the future. What is their reasoning based on? Do you agree or disagree? Why or why not?
8. Does Coyne's arguments convince you as to the need and desirability of electoral reforms in order to strengthen democracy in Canada?
9. Assign each of the videos listed in the box above to a different group of students. Let them view it and report to the class on the content of the video, taking care to define the political terms clearly and analyzing the thesis being presented in their respective video. Each group lists the theoretical advantages and practical disadvantages of each argument presented in the video. They report their assessment of the video and its content to the rest of the class.
10. Another activity/assignment would be to have students in groups do a study of 4 different nations where PR in different formats are used, with what

effectiveness in giving strong stable government to those nations (e.g. Austria, Denmark, Finland, Belgium, Switzerland, etc).

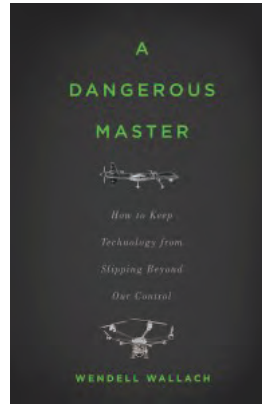
11. Should a national referendum be the logical and fair way to adopt any of these electoral proposals? Why or why not?
12. Given the history of Canada, its tradition of common law, British parliamentary practice, the size of the country, its multiculturalism, far-flung geographical features, regional economic traits, and linguistic factors, is the best reform for Canada no reform? Why or why not?

## PART B Technology and Artificial Intelligence



With each passing day we see and experience progress in technologies of all sorts. It is said that computing power doubles every 18 months. Some fear that the pace of technological progress and production of information may exceed the ability of human beings to truly control their unforeseen consequences. These developments include possibilities like radical life extension through cryonics, new devices and drugs that enhance human capabilities, production of designer babies, creation of new energy production like synthetic algae producing oil, GMO food sources, application of nanotechnology to medicine, geo-engineering and efforts to control climate or arrest climate change, mass introduction of driverless cars, the proliferation of drones, deployment of killer robots, and other breakthroughs. Taken together these innovations have the capacity to dramatically alter human life and the earthly habitat itself. They could trigger mass technological unemployment, a new arms race to produce autonomous robotic weapons, and perhaps inadvertently programming the human species out of existence.

In his book, *(A Dangerous Master: How to Keep Technology from Slipping Beyond Our Control)* Wendell Wallach, an ethicist in the field of technology and artificial intelligence, presents a thoughtful overview of the challenges involved.



Wallach notes that today a machine (robot or drone) can target, shoot, and kill without the physical involvement of a human being; 3D printers can print guns in private homes; supercomputers can conduct thousands of financial trades in milliseconds. As one book review stated : *"Wallach's nuanced study offers both stark warnings and hope, navigating the middle ground between speculative fears about a dystopian future and the hype surrounding technological innovations."*

*An engaging, accessible, and masterful analysis of the forces we must manage in our quest to survive as a species, A Dangerous Master forces us to confront the practical—and moral—purposes of our creations."*

Indeed, in the face of these astounding and seemingly unpreventable inventions and techniques, many questions of an ethical nature come to mind. It is important to reflect on these explosive developments. What do we make of them? What is their impact on humanity? Do all these breakthroughs mean freedom from boring work, freedom from disease, freedom to enjoy the pleasures of life? Can we look with optimism to the elimination of war as a means to settle human conflicts? Or do they move us inevitably into a "brave new world"?

Would society stay whole or fragment? What happens to the family? How is technology affecting parenting? Is there the genuine danger that family relationships could be destroyed as time spent together (between spouses and between parents and children) diminishes?

What of human nature itself? Would it evolve into something different, enhanced by machines and artificial intelligence? What new skills would be valued greatly?

Would we see the end of work per se? See this video from Boston Dynamics:

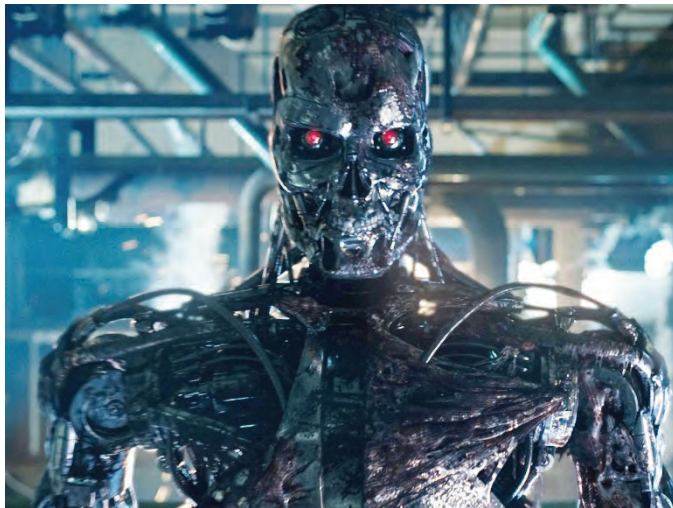
<http://paleofuture.gizmodo.com/the-new-atlas-robot-is-incredible-and-its-definitely-go-1760908062>

and the progress being made in robotics.

Some companies and investors are working hard at extending human life to the point that people can become virtually immortal. Are they trying to build the Kingdom of God on earth, trying to eliminate the consequences of original sin? Should man be exploring these possibilities? Is that what the tree of the knowledge of good and evil represented? Are we building a technological Tower of Babel? Would a minority or some elite group gain ultimate control? Who would that be - scientists, politicians, oligarchs, experts? Who could be trusted?

Would we see the growth of guerilla groups, freedom fighters battling to prevent the onset of these controversial and perhaps extremely dangerous tools and techniques? Are we morally obliged to resist such developments for the sake of our own ultimate good? Technologies may pose public health, environmental and societal challenges unforeseen or not even considered by the promoters of a new technology.





If a new technology poses risks who should decide on the acceptability of the risks - government, scientists, business investors, ordinary citizens? What measures would be in place to assess potential risks?

Wallach refers to the fast, accumulative outpouring of groundbreaking discoveries and tools as a *techstorm* (P8)

He also asks a sobering question: *have scientific possibilities and technological imperatives become the primary determinants of humanity's future?* (P.17) Are we technology's servant or its master? Is the computer addictive? Seemingly, there is no area of human activity today that can any longer function without the computer.

The pace of change is a huge problem. Even many of those who are leading the technological charge are conscious of this and they are conscious of the fact that "the accelerating speed of technological change makes anticipatory governance increasingly difficult" (Wallach, p. 199)

Some warn that the pace of technological invention and implementation cannot be sustained and the whole thing will collapse, that we are reaching a crisis point or "singularity". Vernor Vinge mentioned that the pace of change and the exponential increase in machine intelligence will surpass human beings' capacity to control it. Other thinkers like Ray Kurzweil welcome the changes. See the Wikipedia article on accelerating technological change

[https://en.wikipedia.org/wiki/Accelerating\\_change](https://en.wikipedia.org/wiki/Accelerating_change).

The article provides a good backdrop to the whole concept of technological changes and developments in history, from the ideas of Buckminster Fuller to Hans Moravec, James Burke to Gerald Hawkins and John Smart.

This excerpt from Ray Kurzweil's essay on "The Law of Accelerating Returns" gives an indication of his expectations with respect to technological progress: *An analysis of the history of technology shows that technological change is exponential, contrary to the common-sense 'intuitive linear' view. So we won't experience 100 years of progress in the 21st century—it will be more like 20,000 years of progress*

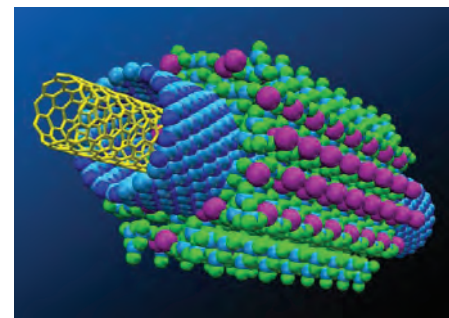
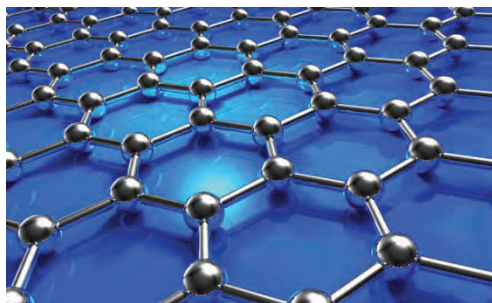
(at today's rate). The 'returns,' such as chip speed and cost-effectiveness, also increase exponentially. There's even exponential growth in the rate of exponential growth. Within a few decades, machine intelligence will surpass human intelligence, leading to the Singularity—technological change so rapid and profound it represents a rupture in the fabric of human history. The implications include the merger of biological and nonbiological intelligence, immortal software-based humans, and ultra-high levels of intelligence that expand outward in the universe at the speed of light.

Economic dislocation is going to accompany the accelerated progress in computers and robotics. The rate at which new forms of work are created already lags behind the loss of jobs due to accumulative impact of emerging technologies (Wallach, p. 154). He points out that what happens is that productivity and total GDP grows, but the job losses continue, and wages have not been rising as before along with the growth of GDP. In fact, there seems to be technological unemployment, labour is economised but the pace of replacement jobs is not keeping up.

The labour situation is further complicated if longer life and better health have people taking retirement after 70 years of age. What does that do for the young people, who are well-educated but then confront almost permanent unemployment. There are European nations like Spain and Greece with youth unemployment rates reaching and staying stubbornly in the 25%-35% range. Many are over-educated for available jobs. In the United States there is a different problem where students go into great debt obtaining degrees that get them nowhere and render them welfare and state-dependent.

What about family formation under these circumstances? Will people wait until 35, 40, 50 to get married? Will they ever get married? Will they bother to reproduce? Are the young going to put up with this? Are they ready for revolution? Might they insist on a government that promises a guaranteed annual minimum income, with free tuition, free transportation, paid and extended vacations, free health care? It may be a necessity for the stability of society to actually expand social services in order to thwart rebellion and social unrest. A conservative point of view (smaller government, lower taxes, free enterprise, let the market rule) may not fit this scenario at all. The unequal distribution of wealth may be inevitable and thus leading to class warfare, the really rich, technocratic, elite minority versus the large unsophisticated, intellectually deprived poor majority.

Because of all these possible ramifications for society and humanity itself



Wallach argues that research and implementation ought to proceed with great caution and *“it all begins with questioning the assumptions and values that drive the tech-storm forward at an increasing pace”* and the idea that *“many different strategies must be employed to effectively manage the impact of emerging technology”* (p. 209). Wallach is clearheaded about the potential benefits of technological changes; but he also shares considerable disquiet regarding specific emerging technologies and calls for better oversight of this whole field.

## Classroom Assignment

One way by which the teachers may want to approach these questions in the classroom is to assign 15-20 research topics to different groups of two or three students each. These topics could also assigned to individual students. They choose a different topic for research and then report on it in a written summary mode or by oral presentation accompanied by a one-page written summary.

A suggested report template appears below and might include the ethics involved, scientific progress/imperative, costs to society or the environment, impact on employment, advantages to society, disadvantages to society, difficulty of putting into operation, The template could be utilized for other technologies like GMOs (genetically modified organisms), stem cells, geo-engineering, nano-technology, superintelligent computers, drones, medical implants, cyborgs, super drugs, medical-diagnosis tools, driverless cars, lab-grown and artificial organs, curing cell senescence, mindcloning, mind upload, etc. etc.). Just in the field of robotics great progress is being made, some dreaming of robots helping to care for the elderly, “augmenting rather than replacing the work of human caregivers, helping to ward off one of the greatest hazards of old age - loneliness and isolation.” (Markoff)



## Robotics

|   |  |
|---|--|
| Concept of human exceptionalism   |  |
| Motivation behind the change or invention                               |  |
| Impact on Employment  |  |
| Leisure time  |  |
| Ethical dimension   |  |
| Distribution of material wealth   |  |
| Political freedom   |  |
| Social care and solidarity  |  |
| Scientific progress   |  |
| Risk/danger factor  |  |
| Religious beliefs   |  |
| Should controls be placed on such research?<br>How, what kind, by whom? |  |



## Other Resources

There have been a number of films produced in the past decades that have dealt with these topics. Teachers may wish to show one of these films in class or assign a film for personal viewing. The films may contain violence and/or other mature content and the teacher should be aware of this before recommending/assigning any film for student viewing. Here is a short list of films whose plot and content dramatize one or other of these technological problems and the caution that society should take in embarking on any of these tech adventures.



### ***The Island***

(cloning, harvesting of human organs)

### ***Transcendence***

(uploading of the mind)

### ***Frankenstein***

(creation of monster)

***Ex Machina*** (can android be human)

***Inception*** (multiple levels of dream and reality)



***Star Wars*** (laser warfare and robot warriors)

### ***The Matrix***

(man against the machines)

### ***Bladerunner***

(implications of technology on the environment

and society}

***Star Wars*** (interstellar travel, laser warfare, robots, diverse life forms)

***Back to the Future*** (time travel, gadgetry,)

## More Resources

These themes are also explored in short youtube videos, worthwhile viewing. Here are a few of them with the theme associated with it. Students may be directed to view these for better understanding of their particular topic and becoming aware of its current promoters or skeptics.

[https://www.sciencedaily.com/videos/computers\\_math/artificial\\_intelligence/](https://www.sciencedaily.com/videos/computers_math/artificial_intelligence/)  
<http://www.sciencechannel.com/tv-shows/brink/videos/brink-artificial-intelligence-arrives/>  
<http://www.sciencechannel.com/tv-shows/brink/videos/brink-nano-water/>  
<https://ca.search.yahoo.com/search?fr=mcafee&type=A210CA662&p=VIDEOS+ON+ARTIFICIAL+INTELLIGENCE>  
<https://ca.search.yahoo.com/search?fr=mcafee&type=A210CA662&p=VIDEOS+ON+ARTIFICIAL+INTELLIGENCE>  
<https://ca.search.yahoo.com/search?fr=mcafee&type=A210CA662&p=VIDEOS+ON+ARTIFICIAL+INTELLIGENCE>  
<https://ca.search.yahoo.com/>

<https://www.sciencedaily.com/videos/d82daf7d76b7d6d0c95ed62056365645.htm>  
<https://www.2025ad.com/in-the-news/blog/ethics-and-self-driving-cars/?type=0%3Ftype%3D7777>

## AUTOMATED DRIVING: ARE WE APPROACHING A MORAL CROSSROADS?



*In the following article Wendell Wallach who chairs the Technology and Ethics Study Group at Yale University raises some ethical questions relating to autonomous driving. Wallach notes that we may be living with and having to cope with this new technology en masse within 15-20 years and what appears to be a wholly desirable technological development may be an extremely complicated new player on the societal landscape in many ways.*

If, as their developers contend, self-driving cars radically reduce traffic accidents and fatalities, then their adoption is morally acceptable and truly beneficial. However, autonomous vehicles also pose innumerable ethical challenges and will have societal impacts that diminish, but will certainly not offset all the benefits. The greatest of these challenges will arise when and if self-driving cars prove to be successful.

### **A Moral Obligation?**

According to research performed by the U.S. government's National Traffic Safety Board from 2005-2007, human error is a factor in 93% of automobile accidents. Inattention, distraction, or fatigue commonly cause or exacerbate errors. This alone suggests that the single-minded attention of a car's computer on the road will dramatically reduce accidents. Furthermore, the time it takes a driver to recognize and react to a dangerous situation can be anywhere from a quarter of a second to much longer. An automated car with sufficient sensors and well-designed software can hit the brakes in a matter of milliseconds (thousandth of a second), presuming that the car recognizes the dangerous situation as well as an attentive human would. By a simple utilitarian calculation, this means the benefits of AVs far outweigh any costs, and that there is a moral obligation to ease the way for a speedy adoption of autonomous vehicles (AVs).

However, most people believe that specific moral consid-

erations often trump merely weighing benefits against costs and risks. For example, the obligation to care for and not harm children in the eyes of many takes precedence over all other concerns. People also place particular importance on the freedom and autonomy of the individual, or concern that equality and justice for the needy is not sacrificed on the altar of maximizing what is good for the majority. Furthermore, the availability of AVs is likely to increase the number of private cars on the road and therefore have environmental impacts (more cars = higher net emissions and require more raw materials to build), while combating climate change is a priority for some.

### Programming Ethical Decisions

Therefore, the moral challenges self-driving vehicles pose go far beyond the much-publicized, updated iteration of the classic “trolley” problems, where the car must decide whether to take an action that kills the driver rather than a number of children or pedestrians. And yet such unusual situations, put forward by Gary Marcus and Patrick Lin, underscore the fact that autonomous vehicles (AVs) will confront difficult choices, may kill different people than a human driver would, and pose serious questions as to how they should be programmed. Would you, for example, buy a car that was programmed to drive off a cliff rather than injure a number of civilians?

The importance of such unusual situations is that they illustrate that driving is not a bounded moral context. In a bounded context it is sufficient to program the AV to follow straightforward traffic rules such as stop at a stop sign, or look for a child and prepare to brake if you spot a ball on or near the road. Driving poses many open-ended situations where understanding social customs and adaptive behavior is required. For example, drivers must accurately interpret the subtle gestures, including nods and winks, when they encounter a police officer directing traffic. Or consider how a self-driving vehicle should handle an intersection with other drivers at a four-way stop. Usually a complex social ritual ensues where drivers look at each other, nudge their vehicles forward, and engage in other behavior to determine who enters the intersection first. Understanding these forms of behavior is very difficult to program into a car, particularly when some drivers might even be inclined to trick the AV into an accident.

### Uncharted Moral Territory

In my opinion machines making explicit real-time decisions about the life and death of humans is a form of evil. It is evil because computers lack true discrimination and cannot be held responsible for their actions. Whether self-driving cars, however, are actually making a decision or merely delegated to act upon a decision made by an agent (either individual or corporate), who is morally responsible and potentially culpable for harm, is a more difficult problem. That problem is presently being debated by the United Nations in a different context, whether to ban lethal autonomous weapons.

Whether a self-driving vehicle should sacrifice a driver and passengers to protect others is a new, if not entirely unprecedented challenge. Furthermore, what to do will vary from

situation to situation depending, for example, on the number and ages of those in the automobile or about to be hit by the vehicle, and whether the computer even has this information. Drivers or AVs lack all the information they need, have inaccurate information, and cannot determine all the consequences of the various actions they might take. Therefore we have the languages of ethics to help navigate our uncertainties. In the case of AVs there will be a need for a societal conversation as to what the vehicle should do when confronted with unusual situations, and those conversations should continue until new norms that have the support of a consensus of citizens emerges.



### Relenting Driving Privileges

AVs will force adjustments in the expectations of human drivers, driving habits, and laws. But let us imagine that large numbers of driverless vehicles have been deployed on highways and city streets, and the accidents they are involved in, and fatalities they cause, are significantly below those human drivers cause. There will be proposals for additional technologies, such as communication standards so that AVs can increase safety or lower traffic congestion by coordinating their activities. More importantly, safety-conscious citizens will demand that humans give up the privilege of driving. The debate over whether to fully implement this final stage in the deployment of AVs is likely to be much more disruptive than the introduction of fully autonomous cars. That debate will pit people with different values, or who prioritize values differently, against each other. The proposal that drivers give up the privilege of driving in the interest of the majority will create a full-scale societal and ethical conflict.

### Questions

1. What are some ostensible benefits of driverless cars (AV, autonomous vehicles)?
2. What are some of the moral or ethical drawbacks of these type of personal transportation?
3. What about the even more radical flying cars?
4. What are some other considerations that should be considered in weighing the benefits versus the costs or risks of this technology?
5. What might be a difficulty in programming ethical decisions in the AV?



6. What does Wallach mean by “uncharted moral territory”?
7. How and why would the question of drivers being forced to give the privilege of driving (in the interest of the majority) create a full-scale societal and ethical conflict?
8. “In the grandest irony of all, the greatest benefit of an everyday, utilitarian AI will not be increased productivity or an economics of abundance or a new way of doing science—although all those will happen. The greatest benefit of the arrival of artificial intelligence is that AIs will help define humanity. We need AIs to tell us who we are.” Does this claim make sense? Agree or disagree? Why?
9. Why are some people so optimistic about Artificial Intelligence?
10. Why is Google such an important player in this AI field?

## Part C Easter



**E**aster is the greatest mystery of the Christian faith. In this section are presented two short readings/reflections on the beauty, truth and ultimate meaning of Easter plus a brief video on the same theme.

*Christ Crucified is all of the hidden, private, tragic pain of history made public and given over to God. Christ Resurrected is all of that private, ungrieved, unnoted suffering received, loved, and transformed by an All-Caring God. How else could we believe in God at all? How else could we have any kind of cosmic hope? How else would we not die of sadness for what humanity has done to itself and to one another? Jesus is the blueprint, the plan, the pattern revealed in one body and moment of history to reveal the meaning of all of history and each of our lives. The cross is the banner of what we do to one another and to God. The*

*resurrection is the banner of what God does to us in return. Easter is the announcement of God's perfect and final victory.*

Fr. Richard Rohr

<http://www.tikkun.org/nextgen/christian-reflections-on-easter>

### STORY: THE BUTTERFLY, THE PASCHAL MYSTERY AND US

A beautiful analogy is made by Father Mark Davis as he delivers a wonderful uplifting message about the nature of pain, suffering and death as a path to eternal life and glorious transformation.

<https://www.youtube.com/watch?v=eR6-QmuUy5E>

## What Is Resurrection? An Easter Reflection

by Christopher O'Donnell, O.Carm



*Why are eggs associated with Easter? Why are they such a powerful symbol of resurrection? The word needs some care. It is not resuscitation, as if Jesus were simply brought back to life, like Lazarus or the widow's son at Naim (see John 9 and Luke 7:11-15). Resurrection is transformation. The symbols of resurrection are many. So then, why eggs and Easter? An egg is totally changed. What is yellow and white liquid becomes alive with feathers and a chirp. If you look at the liquid of eggs alone, you would never tell what they would become. A liquid goo becomes a chicken – a sea gull, crow or magpie. Another Easter symbol is the seed, or acorn. You can look at a seed and never imagine what colour it may turn out to have. Similarly with a caterpillar and butterfly. These are resurrection symbols because they become something else, totally unforeseen and beautiful. And yet there is continuity: the egg becomes a chicken; an acorn becomes an oak-tree; a caterpillar becomes a butterfly.*

*There are also human resurrection symbols: persons recovering from drug addiction or alcoholism become what they have despaired of happening. They are the same persons, but now transformed; they have new life, new hopes, and new possibilities. Another resurrection symbol might be a teenager becoming an adult: he or she is the same, but dif-*

ferent with the new beauties of maturity.



*The resurrection is an invitation to look around to see transformation, to see what is evil being changed, what is immature becoming adult; what appears inert like an egg or seed sprouting life.*

*But for the Christian the resurrection has a still richer meaning. St. Paul, clearly repeating a catechetical formula that he had learned, says to the Corinthians:*

*I handed on to you as of first importance what I in turn had received: that Christ died for our sins in accordance with the scriptures and that he was buried, and that he was raised on the third day according to the scriptures (1Corinthians 15:3-4).*

*We can tease out this text by looking at accounts of the resurrection. They are quite subtle. The first thing we can see is that Jesus "was raised on the third day." Who raised him? The Father by the power of the Holy Spirit (see Romans 1:3-4; 8:11). When we look at the resurrection appearances we notice that Jesus is not at first recognised by those who loved him and who were his close associates or disciples. The exception seems to be the Beloved Disciple who had special insight (see John 20:8; 21:7). The others come to faith; indeed faith was necessary to identify Jesus. The Risen Jesus is then the same but different. This can be put in another way by saying that Jesus is not resuscitated, but is resurrected.*

*Christ is risen, and has promised to take us with him. This life is not the end; we too will be transformed in endless life and beauty. Human life is good, but it will end. The resurrection gives hope and meaning to our existence here. In our weakness we will after death be raised in glory. Again there is continuity: it is I (not just my body) that I hope will be raised. As Paul writes:*

*So it is with the resurrection of the dead. What is sown is perishable, what is raised is imperishable. It is sown in dishonour, it is raised in glory. It is sown in weakness, it is raised in power. It is sown a physical body, it is raised a spiritual body (1Corinthians 15:42-44).*

<http://www.ocarm.org/en/content/ocarm/what-resurrection-easter-reflection>

Assign the readings/reflections to the class and ask

them to apply its meaning to what they have experienced in every day life themselves – the cycle of change, transformation. Of particular note is the 5 minute video in which Father Mark Davis explains the mystery of the resurrection.

## Questions

1. Who raised Jesus from the dead?
2. Who sought Him at the tomb? Who spoke to her?
3. Why did she not recognize Jesus?
4. Why did the others not recognize Him likewise when he first appeared to them?
5. Why is the Resurrection of Jesus the basis of the Christian faith?



## An Easter prayer:

Living God, the risen Christ is on the move among us, but often we don't recognize him. Like Mary Magdalene, we weep by the tomb, interpreting events in their worst possible light, until we hear the risen one call our name. Like the men walking to Emmaus, we think the bad guys have one, until we see Jesus alive in the breaking of the bread. Like the disciples on the beach, we go back to our old lives of fishing, while the risen Christ is on the beach making a fire for a breakfast we're about to catch. Like Saul of Tarsus, we blindly surge forward doing our religious duty – even when it includes religious violence – until an unrecognized voice arrests us on the road, and when we ask, "Who are you, Lord?" we hear the answer: "Jesus, the one you are persecuting." So now, where we face disappointment, discouragement, lack of faith or hope, or lack of conscience ... we open ourselves this Easter morning to discover that you are already here, unrecognized. Today, may we once again hear our name, recognize Christ in the breaking of bread, cast our nets again, and know the good news that the Lord is risen indeed. Alleluia!"

Rev. Brian McLaren



And on the theme of resurrection and eternal life, we can do our little part to continue the story of salvation by standing up for the precious gift of life, the very life that our Lord gave up willingly on the Cross to save us from sin. On May 12, there is the National March for Life in Ottawa. Electoral reform, artificial intelligence, technology, give all these their true context, they are part of human history. We have been created with freedom and responsibility. Let us accept the burden and fight for truth and justice, for all human life whether unborn or in its stage of decline. The theme of the March for Life is very simple, direct and poignant – End The Killing. We have a role to play in ending the killing of innocent people. Make a special effort to organize a school or church based outing and march to end the killing.

**Campaign Life**  
Coalition

1.800.730.5358 • 613.729.0379

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NOON!**

**MarchForLife.ca**