

THE BOLT NEWS

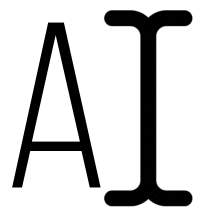
NOW HIRING: EDITORS



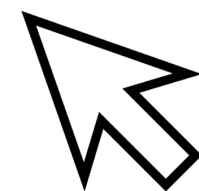
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THE BOLT NEWS

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THE BOLT NEWS IS HIRING NEW EDITORS FOR FALL 2019. SEE PAGE 11 FOR MORE INFO.

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WELFARE

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WELFARE

by Nicole Beaver

Brought to recent controversy regarding cases of people who apparently don't require "handouts", the welfare state and associated social programs are seen by many as either a benefit or a drawback. Some see it as a necessity to maintain something of a stable life, while others are adamant that it's going to so-called scabs and moochers. Whatever your case may be, the truth of the matter is some people require these programs to be able to function in society. The basics of this are that these programs, many of which were introduced in the 1960s — transfer money and services to Canadians to deal with an array of needs. These needs include, but are not limited to: poverty, homelessness, unemployment, immigration, aging, illness, workplace injury, disability, and the needs of children/women/gay/lesbian/transgender people.

The case for these being a necessity begin with the indoctrination of our first modern welfare act as a country, in 1914 with the Workmen's Compensation Act of Ontario. With this act, in summary, injured workers in Ontario could claim a regular cash income as a right since they could not provide income for themselves or their families. Ontario's example was soon copied by other provinces. The next set implemented was after WWI, when Old Age Pensions and allowances for civilian widows, deserted wives and their children, as well as family allowance was requested. In 1916, Manitoba was the first province to pass the Mothers' Pensions Act to provide a small but assured income to widows and divorced or deserted wives with children to support — a group of people deemed the "worthy poor". Within five years, all provinces from Ontario west had passed similar legislation, called "public assistance".

Later programs to help the "worthy poor" included solidified Unemployment Insurance in 1940, The Med-

ical Care Act in 1971 and the Canada Pension Plan of 1965. These are also the major and well-known of the national programs. Provincially, and fitting with this column's theme, we as Albertans have such programs like AISH - "Assisted Income for the Severely Handicapped", and PDD - "Persons with Developmental Disabilities". AISH was developed in 1979 and provides financial and health related assistance to eligible adult Albertans with a disability. AISH was the first program in the country designed for the permanently disabled. It was unique as there were no asset limits. Since AISH has more information on the proceedings and application procedures, and it also helps those who have mental health issues and mental disabilities, it will be the main focus from here on.

To better understand why individuals may require something like a welfare program, I interviewed a few people I know, one of which is on a welfare program. Of course, all are anonymous and will not be revealed for personal reasons. In conducting my interview, I learned the following details about AISH:

1. The application process for AISH is extremely long and very tedious. The paperwork for the application is almost fifteen pages long and requires an immense amount of information from numerous sources, both medical and financial
2. The application can take months to be reviewed and processed. The person on AISH had to wait approximately eight months for their paperwork to come back. And they were denied.
3. They were denied because, apparently, they were not "severe" enough to qualify for their program.
4. They had to go through an appeal process, the paperwork of which was also tedious and time-sensitive. A personal letter as to why they were appealing also had to be written and submitted with the paperwork. They had to wait another two-to-three months to receive any word of whether or not they were going to be allowed an appeal.
5. After the appeal they had to wait another three weeks to hear if they had won their appeal.

statement to the couples in his study was highly technical, and rather light on details about what he was doing, it was quite explicit in stating he would have the right to use images of any successfully modified children in promotional materials. It is exactly these ethical concerns, and concerns over Dr. Jiankui's motivation, given his slick PR work, as well as issues with the actual effectiveness of the treatment, that lead to a negative reaction.

Concerns about the ethics of gene editing are well-founded. While gene editing of somatic cells, ones that are not involved in reproduction, continues at a rapid pace, the pace of editing of germ line cells, associated with eggs and sperm, and the editing of embryos, faces ethical challenges. For one, without proper guidelines, the technology could be used in socially disruptive ways. Inequality could be reinforced as the wealthy pay to have their children "edited" to remove negative traits, as well as add potentially positive traits related to physical appearance or other socially desirable traits. Naturally, this is only one view of this debate, with some claiming that there should be no children born with any diseases we could theoretically "edit out", and others suggesting that there should be no human developmental gene editing at all, as an embryo cannot offer informed consent. The whole notion of pre-birth consent also leads to highly contentious debates about when exactly "life" begins. These views, of course, assume gene editing works correctly in the first place. Given the complexity of the human genome and our incomplete understanding of our own biology, the potential exists to inadvertently affect other biological processes. In Dr. Jiankui's case, the genes he edited code for a protein called CCR5, which, when modified to reduce the risk of HIV infection, also increases the risk of West Nile infection, should the relevant mosquitos appear. In light of these challenges, the path forward for gene-editing of germ line cells, which Dr. Jiankui did, seems more complex than for other body cells. Additionally, there are concerns that Dr. Jiankui did not fully educate his research subjects on the nature of his work until it

was well advanced, and that offering IVF to couples, as well as paying for some of his own research, violated ethical norms about scientific research consent and funding. Academics are not supposed to become so deeply engrossed in their work, going so far as to put their own resources towards it, as it may lead to the tweaking of experimental results or poor research methods. Additionally, it's nearly impossible to see if Dr. Jiankui's work actually did any good, as testing it would require attempting to infect the twin girls with HIV, something that should lead to universal condemnation.

While the future for gene-editing is no doubt bright, there remain issues associated with editing human germ line cells, which go beyond the scientific field. The history of Science is filled with pioneers who defied conventional thinking and made great discoveries, names such as Curie, and Watson & Cricks come to mind, but it is also filled with cautionary tales of experimentation gone wrong, such as the shameful case of the Tuskegee Syphilis Experiment. Science can tell us what works and doesn't work for gene editing, and improvements can be expected over time, but it cannot answer the philosophical questions surrounding the ethics of editing the very blueprints of life.



MIRACLE CURE OR ETHICAL QUANDRY?

by Donavan Makus

In late November, while many of us were distracted by end of term work, a bombshell announcement appeared that created quite a stir. Located halfway around the world, in Shenzhen, China, an academic researcher, Dr. He Jiankui, who is affiliated with the Southern University of Science and Technology, claimed to have successfully edited the genomes of twin baby girls to confer AIDs resistance upon them. While Dr. Jiankui's intention may have been to create a positive reaction, the actual result was quite different. Researchers and groups around the world condemned him, and his university is currently investigating his research. To understand why a good thing, the introduction of AIDs resistance, can lead to such a strong negative reaction, it's useful to consider the importance of good research design and ethical guidelines.

In the fight against disease, few technologies show as much promise as gene editing. Some diseases are passed on through "faulty" genetic code, examples include Cystic Fibrosis, a disease which impairs breathing, and hemophilia, a disorder which leads to difficulty in clotting blood. If scientists could repair the changes from the typical genes that cause these diseases, then the end result would be vastly superior to a lifetime of doctor's visits, medications, and temporary treatments. For those suffering from these diseases, a potential gene editing solution offers a panacea that would save them a lifetime of medical interventions. Many researchers are already examining the use of gene editing; thousands of trials are either underway or have been completed. In fact, the use of

gene editing to experiment with managing HIV/AIDs is not a new area, a search of a major scientific database using the search terms "CRISPR HIV", CRISPR being a major method of editing genomes, reveals several hundred research articles. Evidently, the reason for the ruckus caused by Dr. Jiankui isn't attempting to find a gene-editing solution for AIDs. No, the reason that he received a great deal of criticism comes down to his lack of research ethics oversight and the dubious nature of his experimental design.

To understand the issues with Dr. Jiankui's work it's useful to examine it in detail. His project involved a group of 8 couples, all consisting of an HIV+ male, and HIV- female, of which 5 chose to go ahead with his research. Dr. Jiankui used eggs and sperm from each couple to create an embryo, or two, and then proceeded to edit their genomes, using the common CRISPR, to edit genes responsible for the CCR5 protein, in a way to make the embryos resistant to HIV, although this is not a complete fix, and HIV could still infect someone with an "immune" CCR5 protein. Additionally, his editing method did not lead to a complete swap of the genes, in fact, both edited embryos still retain some original CCR5 proteins. Currently, he is formally on a leave of absence, to pursue research, from his home institution. However, in the past, Dr. Jiankui received funding from his university, as well as the Chinese government and a local hospital, as well as reportedly using some of his own funds. While he states he is currently in the process of formally publishing his results, Dr. Jiankui's decision to announce to the world the successful birth of twin girls, Nana and Luna, with the edited gene infuriated many of his fellow researchers, and funding agencies, who have strict ethical restrictions about human gene editing. Some of his colleagues went so far as to pen an editorial in Nature, the prestigious scientific journal, denouncing his work and stating he broke numerous ethical guidelines. It didn't help matters when he announced that these were only the first two edited babies to be born; another pregnancy was also underway. In fact, while Dr. Jiankui's informed consent

- When they were thankfully accepted, they had to go to their nearest AISH office and within 30 days, do yet another few pieces of paperwork. They now must contact their case worker every time they do something such as move out of the city for the summer, or get a job, or develop a new health concern. Failure to do so results in suspension or expulsion.

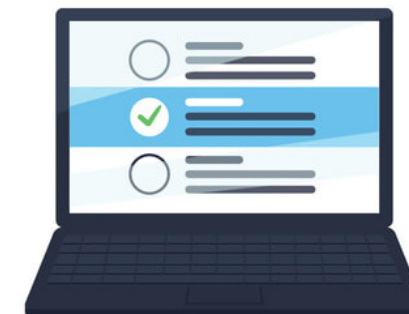
Please note that this case is not and will not be similar to those who also are undergoing the application process. Another person I spoke to, who has AISH already said that the response time was within 5 months and they were accepted immediately. So while many may question the validity of those who are on welfare programs, just by listening to their stories it becomes apparent that getting into the programs is not as easy as some may think. Also, the extensive background checks in programs like AISH leave little room for some to lie about their current situation or condition. For criticism however, is whether or not something like drug addiction counts as a disability.

The answer to this is absolutely not clear cut. However, recently and controversially the National Ben-

efit Authority (NBA) of Canada has stated, "[some] qualify for disability benefits through the Canadian government to offset your treatment expenses."

However, also stated on the NBA's site is the following additional statement: "claiming your disability tax credit won't be easy; not only would you need to re-search your condition thoroughly, but you also need to determine whether you qualify for the Canadian Disability Tax Credit or similar disability benefits". So despite this allowance, it can still be quite hard for someone with that affliction to receive benefits.

In closing, why someone may be on welfare, or what for, is really no one's business. If they are on something such as AISH for example, and act "fine" it is not anyone's place to judge. As what will be discussed in the future, invisible illnesses/disabilities exist that affect everyday lives. If you are in need of a program such as one of the ones listed, I will tell you that it looks intimidating. But, it doesn't mean you shouldn't try. It could benefit you ultimately, if your days are rougher due to hardships both physical and financial. There is no shame in needing help, ultimately. That's what welfare is there for.



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tive things to say about their experience. Though a bit cramped compared to the standard airliner at the time, the food was exceptional and the champagne complimentary.

So, what went wrong? Why did the Concorde flights stop running when they had an almost flawless run? On July 25, 2000, a fatal incident occurred on Air France Flight 4590. The runway hadn't been cleared from the previous take-off, and a titanium strip that dislodged from that plane sat right in the path of the Concorde. Upon contact, it burst a tire, and that tire's debris flew upwards at a high velocity, sending a shockwave through the left wing and rupturing a full fuel tank. As the Concorde took off, the wing burst into flames as the fuel came into contact with loose wiring, but it was moving too fast by that point to abort the flight. In the air, all control was lost as the wing disintegrated, causing the plane to veer off course and crash straight into the nearby Hotelissimo building. This hotel was reduced to rubble as well, but thankfully, there were only 4 staff casualties among everyone in the hotel at the time. The same can't be said for the 109 people onboard the plane though, none survived the crash.

While everyone tried to figure out what went wrong, all Concorde services were shut down for over a year. Turns out having thin landing tires on an aircraft is not a good idea, and nobody saw this as a problem until it was too late. If the timing of the incident were different, perhaps the Concorde could've recovered its reputation, but right when services were set to resume in late 2001, a certain terrorist incident took place on September 11. Not many people were keen to fly for obvious reasons, and many seats went unfilled. The upkeep costs just weren't worth it anymore, and all Concorde operations ceased by October 2003, bringing an end to commercial supersonic flight.

Ever since then, supersonic flight has mostly been restricted to specially-trained pilots, government officials, and billionaires who can afford their own

planes. However, we may soon be seeing the return of commercial supersonic flight; a ban on breaking the sound barrier over US soil was recently lifted, and several aerospace companies are interested in bringing it back to the public. Boeing even wants to go so far as to make hypersonic transportation practical with a conceptual Mach 5 passenger plane, over twice as fast as the Concorde. Assuming there are no issues, it should be ready to put into service by the late 2030s.

The reason the ban was implemented in the first place was primarily due to noise complaints. A sonic boom is produced whenever the sound barrier is broken, and that will get annoying quickly if you happen to live anywhere near the airport where it lands. In addition, it can also disorient the local wildlife and startle unsuspecting pilots. Being a comparatively newer and more experimental development, various safety and environmental concerns inevitably rise as well.

Many would argue that there's no point in having supersonic flight when subsonic flight gets you to your destination just as well without all the extra noise. However, they provide a level of luxury and speed that can't be paralleled by the conventional flight. I'm going to leave this off with a question: How do you feel about supersonic flight, and would you ever try it if given the chance?



FASTER THAN SOUND

by Tyler DeWacht

If you've ever been on an aircraft, can you recall what you felt, moving thousands of meters off the ground at over a hundred kilometers per hour? Perhaps you felt exhilarated or terrified, moving ever farther away from everything you know in such a short span of time. Now imagine you're moving even faster, twice or even three times as fast as a conventional aircraft, fast enough to break the sound barrier at Mach 2. Today, very few people have the legal means to reach those speeds. Back in the 1980s though, this wasn't merely a dream for us civilians. As long as you had the money, you could travel in style from New York to London in 3.5 hours aboard a supersonic airliner.

As far as options go, there were two plane models to choose from: the British/French joint-owned Con-

corde or the Soviet-owned Tupolev Tu-114. If we compare the two, however, there really wasn't much of a contest. The Tu-114 prototypes had numerous flaws, the most notable demonstrator of this being a complete structural collapse at the 1973 Paris Air Show which resulted in the deaths of all 6 crew members, 8 onlookers, and the destruction of 15 houses. Not surprisingly, public opinion of the Tu-114 fell greatly, and most seats went consistently unclaimed (not helped by having only 1 flight path on a 1 day per week schedule and the unreliability of said flight) upon its commercial release in 1977. After only 55 runs and another crash during a new model's test run, the commercial flight was deemed unsustainable and shut down, the planes repurposed for cargo transport and research purposes.

The Concorde didn't have nearly as many design flaws. For 27 years, there were no major incidents aside from the occasional popping of tires, so it had a pretty good reputation. In terms of cost, the ticket prices could go for over \$9,000 when adjusted for inflation. Very expensive, but for a once-in-a-lifetime opportunity like this, those who could afford it consistently had posi-

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SHOW TIME!

Here is what is playing in theaters this week:

Marry Popins Returns
G

Aquaman
PG

Bohemian Rhapsody
PG

Glass
PG

Spider-man: Into The Spider-Verse
PG

Bumblebee
PG

A Dogs Way Home
PG

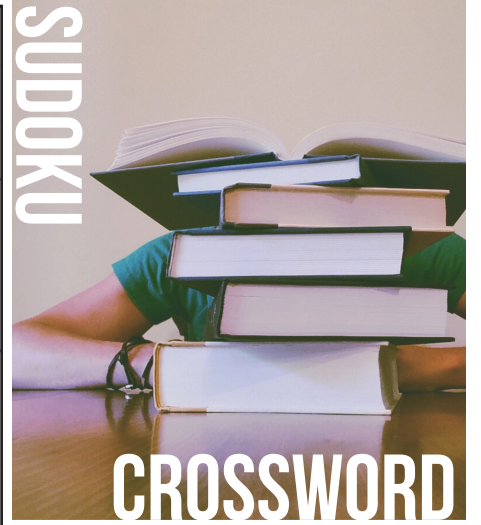
The Upside
PG

Escape Room
14A

The Mule
14A

Cineplex North

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		6			9	5
	8		1		6	9
9	3		5			8
3		9		5	2	
			4			2
		5				
						8



- Across**
1. Playbill roster
 5. Very, melodramatically
 9. White colleague
 14. Higher in the hierarchy than
 15. "Family ___" (Game Show Network rerun)
 16. Find irresistible
 17. Piece of paper currency
 18. Casino card game
 19. Showed sudden glee
 20. Start of a quip by humorist Red Green
 23. Withhold from
 24. Bird on a certain ranch
 25. Spoke stentoriously
 28. Snowshoe or March follower
 30. Molotov cocktail "fuse"
 33. Exhausted
 34. Aspirin label datum
 35. Kappa forerunner
 36. Quip: Part 2
 39. Austin Powers' nemesis Dr. ___
 40. What to do after you "read 'em"
 41. Prepare for the National Anthem
 42. "Catch on?"
 43. Siblingless
 44. Fashion designer Laura
 45. Exist en masse
 46. City near Provo
 47. Quip: Part 3
 54. Sweet 'N Low rival
 55. Chassis rod
 56. Offers as an opinion
 58. Gravy globs
 59. Fermentation sediment
 60. University founder Cornell
 61. Kindergartner's stickum
 62. Bow and stern, e.g.
 63. Appear

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54						55				56		57
58						59				60		
61						62				63		

- Down**
1. Negative aspect
 2. Admit openly
 3. Green of "America's Sweethearts"
 4. Gym fixture
 5. Put one's nose out of joint
 6. Villain
 7. "Natch!"
 8. Garlic trait
 9. Biblical temptress
 10. Parisian's parting word
 11. Writes rapidly
 12. Give ___ for one's money
 13. Held onto
 21. Minuscule
 22. Moore's paramour in "10"
 25. Takes part in a Pillsbury contest
 26. Bluto's dream girl
 27. Stan's tie-twiddling pal
 28. Comfortably familiar
 29. P.D.Q. alternative
 30. "The ___ Tenenbaums" (Gene Hackman film)
 31. Observe Yom Kippur
 32. Like a chartreuse leisure suit
 34. Hamilton-Burr incident
 35. Land mass connectors
 37. Charlie Brown, to Snoopy
 38. Double-curved shapes
 43. Vague threat
 44. Marshal Dillon's portrayer
 45. Rewrite for Hollywood
 46. Silenced a hinge
 47. The Beatles' second film
 48. Soothing hue
 49. Molasses-based liquors
 50. Grimm work
 51. Yokemates
 52. Bring down
 53. Brontë belle Jane
 57. Humphrey's "The Maltese Falcon" role

DELIVERING THE FACTS

by Nick Clark

The year is 2019; it is the peak of the information age. Data can be shared, interpreted, and accessed faster than ever before by more people than ever before. It is also a greatly divided time. Differing opinions on a nearly infinite range of topics are the source of equally plentiful arguments, misinformation, and antagonism.

In short, it is a time when reliable news media are needed the most, yet, for some reason, struggle to stay afloat. Many organizations have made great strides in the process of modernizing the experience for their readers through the use of their websites and mobile applications, but there is still a significant demand for physical copies of the news. That demand is very costly. The printing process is almost entirely automated for many outlets, but there is still one aspect of the print media experience that has not been modernized since its introduction in 1833: delivery.

Newspaper carriers have existed for 186 years and the job description hasn't changed since then. Take a bundle of newspapers, bring them to people's homes along a particular route, drop off the newspapers, return home, repeat.

Over the years, the job description hasn't changed, but the job itself has grown. As budgets shrank, cuts had to be made. The average newspaper carrier didn't make a significant paycheck at any time, so it could

only be decreased so much; therefore, the only way to save money was to cut whole positions. With fewer carriers taking routes, the remaining workers had their routes lengthened, often significantly, without much--or any--increase in wages. As time marched further forward, pay didn't increase. There was simply no money for it in many cases.

Fast forward to today. It's not uncommon for a newspaper to pay its carriers based on the number of flyers being circulated. For instance, a carrier might be paid \$0.05 per flyer delivered. If there are 10 flyers in one bundle and the carrier's route contains 100 houses, they would make \$50 for that delivery. The problem associated with that pay scheme is that it relies on the uncontrollable factor of the number of companies that want to have their flyers delivered. A carrier might make \$50 one day and \$10 the next. As we continue to push technology forward and rely more on it, especially for advertising, the number of flyers being delivered will steadily decline.

The question I've started to ask is whether or not we should continue delivering newspapers. At the very least, we need to start looking at new options that don't rely on underpaid workers and unreliable sponsors. I've considered the practicality of drones, but there are several issues with that solution, as Amazon has learned with their own drone delivery program. I also thought about a community box system akin to the ones used by the postal service, but that would require either a high degree of cooperation between news agencies and the postal service or a high level of investment to install new boxes.

It's obviously a challenging problem to tackle, otherwise, someone would have solved it already, but it's still worth investigating. If you have comments or thoughts about this topic that you'd like to share, send them in to csabolt@student.concordia.ab.ca with the subject line, "Op-Ed."

Until next time.



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