Legal Committee (Legal)

MUNUC 33

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CHAIR LETTER

Dear Delegates,

Welcome to the Legal Committee at MUNUC 33! My name is Andy Roselund, and I will be your chair for LEGAL this year. I was born in New York City, but moved to New Jersey after a few years; as of writing this letter, I am now living in Hyde Park, where I hope to be for a while. I am a second year in the College studying law and political science (very fitting for LEGAL). Outside of MUNUC, I spend my free time doing research for a law firm back in New Jersey, practicing cello, running (although my high school cross country days are well behind me), and exploring Chicago with my friends. I led my high school's Model UN team for two years and served as an Assistant Chair last year at MUNUC 32, and I am psyched to have a wonderful time chairing all of you at MUNUC 33.

I anticipate that you all are looking forward to debating, drafting, and passing resolutions in LEGAL this year. In my opinion, although the two issues we will be discussing are unorthodox for a traditional General Assembly committee, their meteoric rise to international relevancy in the past few years and potential impact on global society are astonishing, and thus gives us reason for debate. The first topic, Legality and Ethics of Genetic Engineering, will require a thorough analysis of recent breakthroughs in the field of genetics and account for their possible effects on societal and economic norms in the years to come. Delegates will need to survey existing federal policies, investigate the current behavior of both governments and non-governmental organizations, and determine the jurisdiction of the law to solve Topic B, Information Privacy and Protection.

By my design, the two topics do not have much in the way of official United Nations policy, as both have become significant issues worth debating on the international stage only recently. As a result, it will certainly be noticeable to the dais if you choose to echo past actions in your resolutions. Instead, I highly encourage all of you to use your collective creativity to solve these issues. Bounce whatever ideas you might have off of your fellow delegates, even if they might sound absurd; after all, as the saying goes, modern problems require modern solutions, and I promise that your originality and innovation will be rewarded.

I can guarantee you that conference will be much more enjoyable if you choose to do your research on your country's stance on the topics before arriving at conference. Conference moves quickly, and being informed will allow you to jump right into debate without needing to catch up. Also, even if it is your first time at MUNUC (or at any Model UN conference, for that matter), I urge you to participate in the debate and resolution writing processes. Doing so will allow you to make the most of your time at MUNUC 33, and you will meet some amazing people from a multitude of backgrounds and viewpoints along the way.

Lastly, I'd be remiss if I failed to mention the highly volatile and unpredictable circumstances facing our communities today. Regardless of the form of MUNUC 33 you'll be attending, whether it be in-person or virtual, I am truly excited to meet all of you and hear your ideas on the topics. Please reach out to me via usg.ga@munuc.org or see our website (munuc.org) with any questions you might have. See you soon!

Please stay safe,

Andy Roselund

HISTORY OF THE COMMITTEE

Members of the United Nations General Assembly Sixth Committee, also known as the Legal Committee, debate on a wide variety of global matters from the perspective of their legitimacy in light of national sovereignty, established international law, and human rights. Throughout the years, the Legal Committee has passed resolutions on topics ranging from extremist terrorism and corruption to maritime trade and the rightful place of technology in armed combat. Delegates representing 51 countries gathered at the first meeting of the Legal Committee in 1948; now, all 193 member states of the United Nations are invited to its meetings, all possessing equal voting power. Like the other bodies of the General Assembly (besides the Security Council), the Legal committee has the ability to draft guidelines and regulations, but it cannot enforce them itself; rather, it relies on individual governments to cooperate by adopting said guidelines and regulations themselves. Nevertheless, the Legal Committee, along with the other bodies of the General Assembly, remains a highly influential actor on the world stage today.

TOPIC A: LEGALITY AND ETHICS OF GENETIC ENGINEERING

Statement of the Problem

What is genetic engineering?

Genetic engineering is one of the more brilliant and thrilling biological advancements to emerge on the scientific stage in recent times. Using engineering technology, scientists are beginning to explore the modification of characteristics within almost every species of life to a degree that was unimaginable just ten or twenty years ago. Although it is a relatively new concept, scientists are largely in agreement that the potential effects of genetic engineering possess the ability to completely reshape numerous longstanding facets of modern society, perhaps even in ways yet unknown to the greater public. However, scientific advancements with the capacity to cause such change are generally extremely controversial in nature; because of both its implications on the agricultural industry and potential to completely transform the human genome, genetic engineering has become one of the most hotly debated topics in many scientific and political spheres, including the United Nations, today.

Genetic engineering is defined by the National Human Genome Research Institute, a subsidiary of the U.S. National Institutes of Health, as "the process of using recombinant DNA (rDNA) technology to alter the genetic makeup of an organism. [...] Genetic engineering involves the direct manipulation of one or more genes. Most often, a gene from another species is added to an organism's genome to give it a desired phenotype."[1] Genetic engineering technology has most commonly been used and can most commonly be seen in the manipulation of the genomes of various crops, mainly in order to increase their shelf life, make them less susceptible to environmental damage, etc.[2] Although genetically modified seeds themselves are more expensive for farmers to purchase than those of conventional crops, their resistance to factors that inhibit the

[1] Bodine, David M. "Genetic Engineering." National Human Genome Research Institute, n.d. https://www.genome.gov/genetics-glossary/Genetic-Engineering.
[2] Yang, Shujun, Barbara Vanderbeld, Jangxin Wan, and Yafan Huang. "Narrowing Down the Targets: Towards Successful Genetic Engineering of Drought-Tolerant Crops." *Molecular Plant* 3, no. 3 (May 2010): 469–90.

growth of conventional crops usually mean they are more profitable for the farmer.[3] They have thus become widespread across the globe; modified crops account for around 180 million hectares (~10% of worldwide farmland) across 28 countries, as of 2017.[4] Aside from the agriculture industry, scientists are also currently surveying how genetic engineering can be utilized to benefit human beings. Theoretically, the process provides answers to numerous health questions unanswerable via conventional means, such as preventing genetic disorders before birth and relieving patients of chronic pain, for example. Right now, it seems as though there are endless possibilities, but also many difficult questions, for how genetic engineering could be used to better our species and society.

Why is genetic engineering important?

A notable characteristic of genetic engineering, and one that may be considered either a blessing or a curse, is its extremely rapid development. The first transgenic animal, defined as an animal that has had its genome modified through the introduction of DNA from another species,[5] was a mouse developed in 1974 by Rudolf Jaenisch, a biology professor at Massachusetts Institute of Technology (MIT).[6] Fast forward only 44 years to 2018, where He Jiankui, a scientist in Shenzhen, China, successfully utilized genetic engineering technology to modify the genomes of two human fetuses, significantly decreasing the likelihood that they would contract HIV over the course of their lifetimes.[7] In the next ten to twenty years, using genetic engineering technology to eradicate previously incurable diseases (e.g. cancer!) from the human race or to create 'designer babies' could become our new reality.[8] Regardless of what the future holds, the speed at which the field of genetic

[3] Barrows, Geoffrey, Steven Sexton, and David Zilberman. "Agricultural Biotechnology: The Promise and Prospects of Genetically Modified Crops." *The Journal of Economic Perspectives* 28, no. 1 (Winter 2014): 99–119.
[4] Conrow, Joan. "Developing Nations Lead Growth of GMO Crops." Cornell Alliance for Science, June 29, 2018. https://allianceforscience.cornell.edu/blog/2018/06/developing-nations-lead-growth-gmo-crops/.
[5] LibreTexts Biology. "Transgenic Organisms," June 18, 2020. https://bio.libretexts.org/Bookshelves/Genetics/Book%3A_Online_Open_Genetics_(Nickle_and_Barrette-Ng)/08%3A_Techniques_of_Molecular_Genetics/8.7%3A__Transgenic_organisms
[6] Jaenisch, R., and B. Mintz. "Simian Virus 40 DNA Sequences in DNA of Healthy Adult Mice Derived from Preimplantation Blastocysts Injected with Viral DNA." *Proceedings of the National Academy of Sciences* 71, no. 4 (April 1, 1974): 1250–54. https://doi.org/10.1073/pnas.71.4.1250.
[7] New York Times Editorial Board. "Should Scientists Toy With the Secret to Life?" New York Times, January 28, 2019. https://www.nytimes.com/2019/01/28/opinion/crispr-genes-babies.html.
[8] Galvan, Bryan. "The Future of Gene Editing: Ending Disease or Creating Super-Soldiers or a Master Race? Why Rules Are Needed." South China Morning Post, December 30, 2018. https://www.scmp.com/lifestyle/health-wellness/article/2179853/future-gene-editing-ending-disease-or-creating-super.

engineering has developed within the last fifty years is astonishing. Evolving from alteration of mice to human beings is certainly no small feat. In contrast, there was a 138-year span between the discovery of the atom (1800) and the discovery of nuclear fission (1938), the process that allows technologies such as nuclear weaponry and nuclear power plants to function.[9]

The rapid speed at which genetic engineering has progressed means that there is a lack of substantive regulation on its use on the international scale. There are some policies in place to regulate genetically modified crops. The United Nations Convention on Biological Diversity, for example, seeks to protect the Earth's astounding biodiversity from entities that would wish to reduce or destroy it.[10] It was signed in December 1993 and currently has 196 agreeing parties. More importantly, it contains a supplement meant to address the potential dangers of genetic engineering, called the Cartagena Protocol on Biosafety. Ratified in September 2003 and signed by 172 member parties, the Protocol includes a swath of recommendations for the growth, harvest,

[9] Tretkoff, Ernie. "This Month in Physics History, December 1938: Discovery of Nuclear Fission." *APS News* 16, no. 11 (December 2007). https://www.aps.org/publications/apsnews/200712/physicshistory.cfm.
[10] Convention on Biological Diversity. "Text of the Convention," May 13, 2016. https://www.cbd.int/convention/text/.

transportation, and sale of genetically modified crops.[11] However, the Protocol also encourages each member state to create their own modified crop regulations, which has created issues of their legality across borders. In particular, while the United States has implemented loose restrictions on domestic growth and international distribution of modified crops by merely holding them to practically the same standards as conventional crops,[12] the European Union has taken a much stronger stance against modified crops by heavily regulating their growth within member countries and largely preventing their importation from allies like the United States.[13] Activist organizations against genetically modified crops argue that the process of genetic engineering fundamentally tampers with the crop in a way that is detrimental to the health of the consumer. It seems that these sentiments, though unproven by science, have become grounded in national policy.[14] Without international agreement, modified crop exporters, many of which are developing nations, will continue to have difficulty exporting their goods, which could prove to be a detriment to their economies.[15] Additionally, states with differing opinions on distribution of modified crops will encounter complications in creating trade agreements with one another. For example, a known obstacle of the proposed Transatlantic Trade and Investment Partnership between the United States and the European Union is the E.U.'s harsh restrictions on the importation of modified crops.[16] Therefore, regulations implemented by LEGAL on the use of genetically engineered crops would make international commerce much less challenging.

There is also no international regulation, or much national regulation for that matter, on using genetic engineering technology to modify the human genome. The United Nations Convention on Biological Diversity makes no mention of the human genome and the Cartagena Protocol on

[11] International Service for the Acquisition of Agri-biotech Applications (ISAAA). "Pocket K No. 8: Cartagena Protocol on Biosafety," July 2004. https://www.isaaa.org/resources/publications/pocketk/8/default.asp.
[12] United States Food and Drug Administration. "How GMOs Are Regulated for Food and Plant Safety in the United States," April 22, 2020. https://www.fda.gov/food/agricultural-biotechnology/how-gmos-are-regulated-food-and-plant-safety-united-states.
[13] Papademetriou, Theresa. "Restrictions on Genetically Modified Organisms: European Union." Library of Congress, March 2014. https://www.loc.gov/law/help/restrictions-on-gmos/eu.php.
[14] Blancke, Stefaan. "Why People Oppose GMOs Even Though Science Says They Are Safe." Scientific American, August 18, 2015. https://www.scientificamerican.com/article/why-people-oppose-gmos-even-though-science-says-they-are-safe/.
[15] Herrera-Estrella, Luis, and Ariel Alvarez-Morales. "Genetically Modified Crops: Hope for Developing Countries?: The Current GM Debate Widely Ignores the Specific Problems of Farmers and Consumers in the Developing World." *EMBO Reports* 2, no. 4 (April 2001): 256–58. https://doi.org/10.1093/embo-reports/kve075.
[16] Ujj, Orsolya. "European and American Views on Genetically Modified Foods." *The New Atlantis*, no. 49 (Spring/Summer 2016): 77–92.

Biosafety simply details that any genetic modification must not harm the greater entity of "human health".[17] It is also important to remember that the Protocol was ratified in 2003. Policymakers then had no way of knowing just how far the field of genetic engineering would evolve with respect to both agriculture and human modification. However, prolonging the delay on regulation of genetic engineering technology, particularly in regards to its cheap cost and easy accessibility (an individual can download the necessary software to create an RNA template for just $65[18]), makes it more likely that events such as the underground modification of the two fetuses in China will continue to occur, just at a faster rate. Something else to consider is that while certainly dangerous, these events have a tendency to force the hand of government, as they demonstrate the true ability of the science at hand. For example, in response to the modification of the fetuses, the Chinese government drafted regulations dictating that manipulators of the human genome would be responsible for any potential adverse outcome.[19] It also punished the scientist involved with the modification with a three year jail sentence and a hefty fine.[20]

Additionally, it is simply a matter of time before governments begin to experiment with using human genetic editing for their own benefit, whether that be in the form of a profitable designer baby industry[21] or superhuman fighting machines.[22] While these concepts seem impossible in the present day, the rapid development of genetic engineering in the past indicates that they could be a reality in a matter of years. Whether current scientific predictions of the future capability of genetic engineering are accurate or not, an advisory response from the legal perspective of human genetic engineering on behalf of the LEGAL committee is sorely needed to prevent future abuses of the technology and promote ethical and beneficial uses instead.

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[17] International Service for the Acquisition of Agri-biotech Applications (ISAAA). "Pocket K No. 8: Cartagena Protocol on Biosafety," July 2004. https://www.isaaa.org/resources/publications/pocketk/8/default.asp.
[18] Shwartz, Mark. "Target, Delete, Repair: CRISPR Is a Revolutionary Gene-Editing Tool, but It's Not without Risk." *Stanford Medicine*, Winter 2018. https://stanmed.stanford.edu/2018winter/CRISPR-for-gene-editing-is-revolutionary-but-it-comes-with-risks.html#.
[19] Cyranoski, David. "China Set to Introduce Gene-Editing Regulation Following CRISPR-Baby Furore." Nature, May 20, 2019. https://www.nature.com/articles/d41586-019-01580-1.
[20] Xinnhuanet. "He Jiankui Jailed for Illegal Human Embryo Gene-Editing," December 30, 2019. http://www.xinhuanet.com/english/2019-12/30/c_138666754.htm.
[21] Hercher, Laura. "Designer Babies Aren't Futuristic. They're Already Here." MIT Technology Review, October 22, 2018. https://www.technologyreview.com/2018/10/22/139478/are-we-designing-inequality-into-our-genes/.
[22] Gardner, Heidi. "Real-Life X-Men: How CRISPR Could Give You Superpowers in the Future." Synthego, September 14, 2018. https://www.synthego.com/blog/could-crispr-make-x-men-a-realistic-possibility.

Potential resolutions

Potential resolutions to the issue of genetic engineering should first answer the question of whether or not the genetic modification of organisms is ethical and to what degree genetic engineering should be restricted by government. Seeing as the last major U.N. resolution on the topic of genetically modified crops was ratified in the early 2000s, a resolution should work to revise current regulations or outline new regulations for the distribution of modified crops. A strong resolution might also find a middle ground for trade between governments with restrictive and loose policies towards these crops. Additionally, a resolution should definitely include a comprehensive set of regulations on the use of genetic engineering technology on the human genome. These regulations should answer questions regarding who can procure the technology, for what ends should the technology be used, what institutions will be implemented to oversee use of the technology, etc.

History of the Problem

Origins of Genetic Engineering and Manipulation

Though the term "genetic engineering" certainly seems modern in nature, the human race has actually been involved in genetic engineering practices for centuries. Thousands of years ago, humans utilized the process of artificial selection, in which individual organisms possessing desirable traits are bred with each other to produce offspring also possessing the desirable trait, to domesticate a number of wild animals, including dogs, cats, sheep, cows, etc.[23] Humans in antiquity also applied the same practice to plants, producing edible crops still consumed today such as flax, wheat, barley, peas, and lentils.[24] Ultimately, rudimentary forms of genetic engineering used by our ancestors enabled the creation of a number of species that are commonplace in today's world. However, it would not be until the 19th century AD when the science behind genetic engineering and artificial selection was initially understood and harnessed.

The beginning of our understanding of genetic inheritance comes from Gregor Mendel (1822-1884), a scientist from a region of Europe that is now a part of the Czech Republic.[25] Mendel famously experimented with green and yellow pea plants in 1865: after breeding them together, he discovered predictive patterns in the colors, shapes, and heights of the offspring peas depending on the traits possessed by the parent plants. From these discoveries, he created the laws of Mendelian inheritance, which have been upheld by hundreds of scientific studies since and still hold true today.[26] His findings paved the way for the discovery of particle controlling the appearance of specific traits (the gene) in 1889, the discovery of DNA by Oswald Avery, Colin MacLeod, and Maclyn

[23] Zeder, M. A. "Domestication and Early Agriculture in the Mediterranean Basin: Origins, Diffusion, and Impact." *Proceedings of the National Academy of Sciences* 105, no. 33 (August 19, 2008): 11597–604. https://doi.org/10.1073/pnas.0801317105.
[24] Colledge, Sue, James Conolly, and University College, London, eds. *The Origins and Spread of Domestic Plants in Southwest Asia and Europe*. Publications of the Institute of Archaeology, University College London. Walnut Creek, CA : [London]: Left Coast Press ; University College London Institute of Archaeology Publications, 2007.
[25] Miko, Ilona. "Gregor Mendel and the Principles of Inheritance." Scitable by Nature Education, 2008. https://www.nature.com/scitable/topicpage/gregor-mendel-and-the-principles-of-inheritance-593/.
[26] Collins, Francis S. "Mendelian Inheritance." National Human Genome Research Institute, n.d. https://www.genome.gov/genetics-glossary/Mendelian-Inheritance#:~:text=Mendelian%20inheritance%20refers%20to%20patterns,middle%20of%20the%2019th%20century.

McCarty in 1944, and the discovery of the double helix structure of DNA by James Watson and Francis Crick in 1953.[27]

First Genetically Engineered Organisms Emerge

A major breakthrough in the field of genetic engineering occurred in 1972, when Paul Berg, a biochemist at Stanford University, successfully combined two strands of DNA from separate species of virus.[28] Never before had DNA from two different species been combined into an operational strand. Berg's work opened the door for scientists to experiment with different strands of DNA and on different test subjects. In 1973, Herbert Boyer and Stanley Cohen, also working at Stanford University, were able to successfully remove a strand of DNA from a bacterium, modify it, and place it back into the original organism, creating the first ever transgenic organism, or organism possessing DNA from a separate species.[29]

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[27] Kenyon College Department of Biology. "History of Genetics," n.d. http://biology.kenyon.edu/courses/biol114/Chap01/history_genetics.html.

[28] Jackson, D. A., R. H. Symons, and P. Berg. "Biochemical Method for Inserting New Genetic Information into DNA of Simian Virus 40: Circular SV40 DNA Molecules Containing Lambda Phage Genes and the Galactose Operon of Escherichia Coli." *Proceedings of the National Academy of Sciences* 69, no. 10 (October 1, 1972): 2904–9. https://doi.org/10.1073/pnas.69.10.2904.

[29] Genome News Network. "1973: Herbert Boyer (1936-) and Stanley N. Cohen (1935-) Develop Recombinant DNA Technology, Showing That Genetically Engineered DNA Molecules May Be Cloned in Foreign Cells," n.d. http://www.genomenewsnetwork.org/resources/timeline/1973_Boyer.php.

The 1970s and early 1980s saw a number of DNA transfer tests performed on living mice, a far cry away from the bacteria and viruses experimented on previously. The primary goal of these tests was to somehow successfully inject foreign DNA into a mouse and have the mouse pass down the foreign DNA to its offspring. A fair number of the tests were unsuccessful in this regard, but a collaboration in 1981 between three laboratories produced successful results.[30] This result implied that, if utilized on a large scale, genetic engineering technology has the capacity to permanently alter the genome of a species.

First Policy Meeting

The creation of the first transgenic organism by Boyer and Cohen in 1975 set off alarm bells in scientific and political communities alike. Professionals in the field of biochemistry decided it would be best to hold a referendum with the goal of creating preliminary regulations regarding the use of genetic engineering technology. At what is now called the Asilomar Meeting of 1975 (because it was held in Asilomar, California), a team of scientists led by Paul Berg successfully drafted a voluntary regulatory structure.[31] It included containment strategies and contingency plans dependent on the perceived danger of the experiment in question, safety standards for experiments using genetic engineering technology (isolated laboratories, protective gear, training of experimenters, etc.), and restrictions on materials that could yield bioweapons or cause mass harm if accidentally released into the environment.[32] Although the structure was indeed voluntary, government institutions took the advice of the professionals seriously, as evidenced by the creation of numerous advisory committees and regulatory bodies in agencies such as the United States National Institute of Health, Department of Agriculture, and Environmental Protection Agency, amongst others.[33]

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[30] Costantini, Franklin, and Elizabeth Lacy. "Introduction of a Rabbit β-Globin Gene into the Mouse Germ Line." *Nature* 294, no. 5836 (November 1981): 92–94. https://doi.org/10.1038/294092a0.
[31] Berg, Paul. "Asilomar 1975: DNA Modification Secured." *Nature* 455, no. 7211 (September 2008): 290–91. https://doi.org/10.1038/455290a.
[32] Berg, P., D. Baltimore, S. Brenner, R. O. Roblin, and M. F. Singer. "Summary Statement of the Asilomar Conference on Recombinant DNA Molecules." *Proceedings of the National Academy of Sciences* 72, no. 6 (June 1, 1975): 1981–84. https://doi.org/10.1073/pnas.72.6.1981.
[33] McHughen, Alan, and Stuart Smyth. "US Regulatory System for Genetically Modified [Genetically Modified Organism (GMO), RDNA or Transgenic] Crop Cultivars." *Plant Biotechnology Journal* 0, no. 0 (October 23, 2007): 071024233955001-??? https://doi.org/10.1111/j.1467-7652.2007.00300.x.

Commercialization of Genetically Modified Crops

Working under restrictions established by the Asilomar meeting, scientists continued experimenting with the genomes of common crops in an effort to increase their shelf lives and make them more resistant to environmental damage. Eventually, in 1982, scientists created the first genetically modified crop: a tobacco plant resistant to antibiotics.[34] Advancements in the genetic engineering of crops continued into the 1990s, when they began to be commercialized, mainly in the People's Republic of China, the European Union, and the United States. By 1996, six countries plus the European Union were approved to produce and distribute eight distinct genetically modified crops; these numbers have expanded since.[35] Some notable GMO commodities of the 1990s include the Flavr Savr (a long-lasting tomato variant), Bt corn, and a potato resistant to pesticides.[36]

Release of the First Genetically Modified Organism and Resultant Controversy

In 1987, after numerous tests, an American company called Advanced Genetic Sciences (AGS) released a bacterium engineered to help protect crops from frost damage over a number of crop fields in California.[37] This marked the first time a genetically modified organism had ever been released into the environment, and the event sparked major controversy. The release had already been delayed for four years because activist groups challenged AGS in court (unsuccessfully). Additionally, in the evening and night of the day before the tests were set to occur, anti-GMO activists launched an (ineffective) attack on the crop fields.[38] Although the activists were ultimately unable to prevent the test from occurring, this incident showed the world that the use of genetically modified organisms in agriculture would not continue without tense backlash and controversy.

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[34] Fraley, R. T., S. G. Rogers, R. B. Horsch, P. R. Sanders, J. S. Flick, S. P. Adams, M. L. Bittner, et al. "Expression of Bacterial Genes in Plant Cells." *Proceedings of the National Academy of Sciences* 80, no. 15 (August 1, 1983): 4803–7. https://doi.org/10.1073/pnas.80.15.4803.

[35] James, Clive, and Anatole F. Krattiger. "Global Review of the Field Testing and Commercialization of Transgenic Plants: 1986 to 1995." The International Service for the Acquisition of Agri-biotech Applications (ISAAA), 1996.

[36] Bruening, G., and J.M. Lyons. "The Case of the FLAVR SAVR Tomato." *California Agriculture* 54, no. 4 (July 2000): 6–7. https://doi.org/10.3733/ca.v054n04p6.

[37] BBC News: World Edition. "GM Crops: A Bitter Harvest?," June 14, 2002. http://news.bbc.co.uk/2/hi/science/nature/2045286.stm.

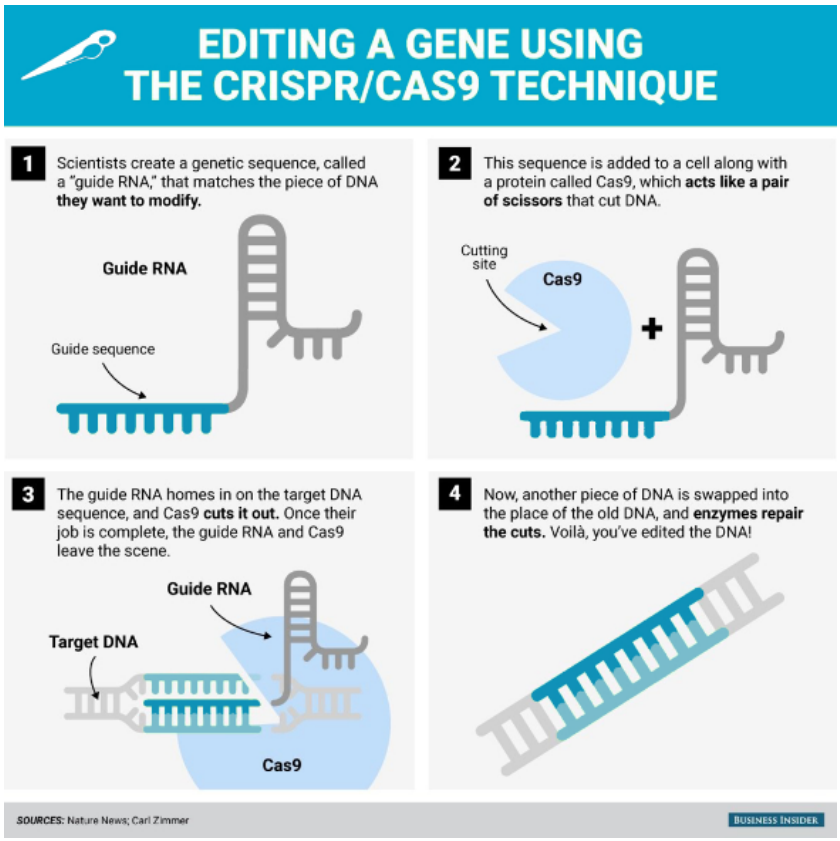
[38] Jukes, Thomas H. "Frost Resistance and Pseudomonas." *Nature* 319, no. 6055 (February 1986): 617–617. https://doi.org/10.1038/319617a0.

Genetic Engineering in the Modern Day

Nowadays, genetically modified crops have become commonplace in our grocery stores and marketplaces. GMO crop companies such as Monsanto have been able to withstand numerous scandals and continuing activist opposition, and GMO crops are becoming the norm: for example, genetically engineered corn makes up 92% of all corn production in the United States.[39] One issue facing the GMO agriculture market today is a difference in regulation across country borders: the United States possesses relatively relaxed policies towards the production and distribution of GMOs, while the European Union heavily restricts GMO activity. It remains to be seen when and how this conflict will be resolved.[40]

Scientists have since shifted their genetic engineering focuses to other forms of life. For example, in 2010, scientists associated with the J. Craig Venter Institute based in Maryland created the first artificial bacterial genome and, subsequently, the first synthetic life form.[41] A major step forward in the field occurred in 2012, when scientists Jennifer Doudna and Emmanuelle Charpantier collaborated to create the CRISPR/Cas9 system, which allows the user to modify the DNA and genome of almost any organism in existence, including those of humans.

[39] Center for Food Safety. "About Genetically Engineered Foods," n.d. https://www.centerforfoodsafety.org/issues/311/ge-foods/about-ge-foods#:~:text=The%20genetic%20engineering%20of%20plants,often%20used%20in%20food%20products).
[40] Lau, Jessica. "Same Science, Different Policies: Regulating Genetically Modified Foods in the U.S. and Europe." Science in the News by Harvard University, August 9, 2015. http://sitn.hms.harvard.edu/flash/2015/same-science-different-policies/#:~:text=The%20outcomes%20of%20the%20U.S.,has%20approved%20fewer%20than%20forty.
[41] Sample, Ian. "Craig Venter Creates Synthetic Life Form." The Guardian, May 20, 2010. https://www.theguardian.com/science/2010/may/20/craig-venter-synthetic-life-form.



The technology was first used to actually edit genes in 2013.[42] The potential ramifications of this technology are enormous; scientists could one day phase genetic disorders out of the human genome, for example. However, it has also sparked controversy, particularly in regard to its accessibility and ethical implications. As previously discussed, the technology was thrust into the spotlight in 2018, when a Chinese scientist named He Jiankui used it to reduce the likelihood of HIV contraction in twin human fetuses.[43] Activist groups were outraged by this event, calling the scientist reckless, and the Chinese government sentenced him to three years in prison for his actions. Nevertheless, the incident demonstrated the full capabilities of genetic engineering to the world. Scientists and politicians alike will have to decide if and how to use genetic engineering technology for the benefit of society.

[42] Broad Institute. "Crispr Timeline," n.d. https://www.broadinstitute.org/what-broad/areas-focus/project-spotlight/crispr-timeline.
[43] Normile, Dennis. "Chinese Scientist Who Produced Genetically Altered Babies Sentenced to 3 Years in Jail." Science, December 30, 2019. https://www.sciencemag.org/news/2019/12/chinese-scientist-who-produced-genetically-altered-babies-sentenced-3-years-jail.

Past Actions

Introduction

As mentioned previously in this background guide, there is a significant lack of both international policy and common consensus on the regulation and utilization of genetic engineering applications. Whereas one can find countless United Nations resolutions and agreements on long-debated topics such as nuclear non-proliferation or human trafficking, there is little material meant to address the safe use of genetic engineering technology. This can predominantly be attributed to the novelty of the issue on the global stage. Because modern engineering technologies have emerged only within the last twenty or so years, there has simply not been enough time to discuss and produce legislation aimed at controlling its use.[44] Therefore, individual countries have largely been left to their own devices in terms of regulating the various technologies and their byproducts within their own borders. This section will focus on what international policies and regulations *have* been drafted by the United Nations and other organizational bodies, while a later section will focus on policies and regulations pertaining to individual countries/regions.

Asilomar Meeting of 1975

As summarized previously, a collection of biochemists led by genetic engineering pioneer Paul Berg drafted a regulatory framework to ensure safe use of genetic engineering technology.[45] The framework was by no means required to be adopted by any country, but a number of government agencies (especially in the United States) began to closely monitor individual uses of engineering technology after the meeting was adjourned.[46] More on the content of the framework and the impact of the meeting can be found in the History of the Problem section.

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[44] Chen, Angela. "If Someone Wants to Create Gene-Edited Babies, Who Would Stop Them?" The Verge, November 26, 2018. https://www.theverge.com/2018/11/26/18112970/crispr-china-babies-embryos-genetic-engineering-bioethics-policy.
[45] Berg, Paul. "Asilomar 1975: DNA Modification Secured." *Nature* 455, no. 7211 (September 2008): 290–91. https://doi.org/10.1038/455290a.
[46] McHughen, Alan, and Stuart Smyth. "US Regulatory System for Genetically Modified [Genetically Modified Organism (GMO), RDNA or Transgenic] Crop Cultivars." *Plant Biotechnology Journal* 0, no. 0 (October 23, 2007): 071024233955001-??? https://doi.org/10.1111/j.1467-7652.2007.00300.x.

United Nations Convention on Biological Diversity

This multilateral treaty was drafted on May 22, 1992 in Nairobi, Kenya, and became open to signatures at the Rio Earth Summit in Rio de Janeiro, Brazil on June 5, 1992.[47] Though it does not specifically address the topic of genetic engineering, it does make clear that maintenance of the Earth's biological diversity will "strengthen friendly relations among States and contribute to peace for humankind."[48] Such maintenance is therefore a stated priority of the United Nations and the 193 signatory bodies of the convention. The three missions of the convention are conservation of global biodiversity, ecological use of the components of biodiversity, and the sharing of various benefits stemming from genetic assets (e.g. germplasm). This will be an important piece of legislation to draw back to when drafting a resolution. There is a debate on whether or not engineering technology currently affects the Earth's biological diversity in a negative manner or not. For example, scientists believe that some genetically engineered species (plants especially) could have the capacity to dominate and drive out preexisting species.[49] One way or another, delegates will have to take a stand on this facet of the topic to create a convincing resolution.

Cartagena Protocol on Biosafety to the United Nations Convention on Biological Diversity

An official supplement to the Convention of Biological Diversity established in 1993, the Cartagena Protocol on Biosafety is geared towards protecting biodiversity from the potential hazards created by genetic engineering and genetically modified organisms.[50] It currently has 172 member parties, including 168 United Nations member states, and became effective on September 11, 2003. The Protocol is mainly aimed at tackling the issue of genetically modified crops and their distribution. It creates the definition of a Living Modified Organism (LMO): an organism possessing genetic code

[47] European Commission. "The Convention on Biological Diversity," n.d. https://ec.europa.eu/environment/nature/biodiversity/international/cbd/index_en.htm.
[48] Convention on Biological Diversity. "Convention Text," February 8, 2007. https://www.cbd.int/convention/articles/?a=cbd-00.
[49] Ministry of Education, Culture, and Science. "Consequences of GMOs for Biodiversity." Government of the Netherlands, n.d. https://www.government.nl/topics/biotechnology/consequences-of-gmos-for-biodiversity#:~:text=Genetic%20modification%20produces%20genetically%20modified,considered%20during%20the%20licensing%20procedure.
[50] Convention on Biological Diversity. "About the Protocol," May 29, 2012. https://bch.cbd.int/protocol/background/.

outside of its original genome (e.g. modified by genetic engineering technology).[51] Similarly, Living Modified Organism Products are commercial goods that originated from an LMO-based material. For example, a shirt made from genetically modified cotton would classify as a Living Modified Organism Product. The Protocol is primarily focused on the distribution and use of LMOs, specifically across state borders.[52] Signatories of the Protocol must ensure that LMOs are transported and distributed under prescribed safety procedures. Also, LMOs must be transported with documentation distinctly identifying the goods as LMOs. Ultimately, the Protocol gives signatory countries to deal with LMOs as they see fit. Signatories are allowed to and encouraged to draft their own regulations regarding the distribution of genetically modified organisms. It is important to note that the Protocol makes little to no mention of alteration of the human genome; any experiment or procedure involving genetic engineering technology simply must not endanger "human health." Overall, the open-ended nature of the Protocol has led individual countries and regions to implement their own measures of dealing with genetically engineered organisms, especially crops.

Universal Declaration on the Human Genome and Human Rights

The Universal Declaration on the Human Genome and Human Rights is a resolution published by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 1997. The Declaration calls for the protection of the human genome, particularly from genetic engineering technologies that have the capacity to significantly alter it.[53] More specifically, the Declaration clearly prioritizes humanity over scientific advancement: "No research or research application concerning the human genome, in particular in the fields of biology, genetics, and medicine, should prevail over respect for the human rights, fundamental freedoms, and human dignity of individuals or, where applicable, of groups of people."[54] The Declaration also promotes sharing of advancements beneficial to greater society between countries and denounces "practices which are

[51] GMO-free Europe. "Glossary," n.d. https://www.gmo-free-regions.org/glossary.html.
[52] Convention on Biological Diversity. "Text of the Cartagena Protocol on Biosafety," July 16, 2013. https://bch.cbd.int/protocol/text/.
[53] UNESCO. "Universal Declaration on the Human Genome and Human Rights," n.d. https://en.unesco.org/themes/ethics-science-and-technology/human-genome-and-human-rights.
[54] UNESCO. "Universal Declaration on the Human Genome and Human Rights," November 11, 1997. http://portal.unesco.org/en/ev.php-URL_ID=13177&URL_DO=DO_TOPIC&URL_SECTION=201.html.

contrary to human dignity" such as cloning and alteration of the human genome for non-medical or therapeutic purposes. Ultimately, however, the Declaration lacks any real regulatory policies, and once again puts responsibility for such regulation in the hands of individual states.

Possible Solutions

Potential resolutions to the issue of genetic engineering should first answer the question of whether or not the genetic modification of organisms is ethical and to what degree genetic engineering should be restricted by governments. Also, importantly, a resolution should decide which individual or governing body in particular has the authority to decide ethicality and legality of the various uses of genetic engineering. If delegates decide that some applications of genetic engineering are indeed ethical, how and to what extent will states be instructed to oversee these applications? If delegates decide that genetic engineering is not ethical at all, how will states go about preventing its use within their borders? Seeing as the last major United Nations resolution on the topic of genetically modified crops was ratified in the early 2000s, a resolution should work to revise current regulations or outline new regulations for the distribution of modified crops. A strong resolution might also find a middle ground for trade between governments with restrictive and loose policies towards these crops. Additionally, a resolution should definitely include a comprehensive set of regulations on the use of genetic engineering technology on the human genome. These regulations should answer questions regarding who can procure the technology, for what ends should the technology be used, what institutions will be implemented to oversee use of the technology, etc.

Bloc Positions

Introduction

As mentioned previously, numerous countries have their own rules and regulations regarding use of genetic engineering technology and their products. Some of the differences in these regulations, specifically in regard to GMO crops, have created conflicts that have continued to inhibit the potential of world commerce, among other things.

Africa

The vast majority of countries within Africa have adopted an anti-GMO stance. Currently, only 4 African nations have approved the growing of GMO crops within their borders. Because Africa is so connected to Europe through trade channels, Africa has mostly followed Europe's example on GMO policy.[55] This accounts for its harsh regulation. Delegates representing African states should be prepared to decide whether to continue preventing the growth and distribution of GMO crops and products within their borders, or to adopt GMO growing practices for the sake of their economies.

Americas

The Americas produce more genetically modified crops than any other region in the world. In South America, farmers plant genetically modified crops as significantly cheaper alternatives to conventional crops, whose seeds are generally much more expensive.[56] Subsequently, Brazil and Argentina, two prominent South American countries, have become the 2nd and 3rd largest producers of genetically modified crops, respectively.[57] The United States itself is the world's largest individual

[55] The Editors. "Why African Countries Maintain Tight Restrictions on Genetically Modified Food." World Politics Review, May 28, 2019. https://www.worldpoliticsreview.com/trend-lines/27892/why-african-countries-maintain-tight-restrictions-on-genetically-modified-food.
[56] Herrera-Estrella, Luis, and Ariel Alvarez-Morales. "Genetically Modified Crops: Hope for Developing Countries?: The Current GM Debate Widely Ignores the Specific Problems of Farmers and Consumers in the Developing World." *EMBO Reports* 2, no. 4 (April 2001): 256–58. https://doi.org/10.1093/embo-reports/kve075.
[57] International Service for the Acquisition of Agri-biotech Applications (ISAAA). "ISAAA Brief 42-2010: Slides & Tables," 2010. http://www.isaaa.org/resources/publications/briefs/42/pptslides/default.asp.

producer of genetically modified crops.[58] There is very loose regulation on the production and distribution of genetically modified crops in the region: for example, genetically modified foods are not required to be labeled in the U.S., Canada, and Mexico.[59] These relaxed regulations have led to the emergence of the Americas as the leader in GMO production and distribution. Clearly, it is in the best interest of the countries within the Americas to continue to maintain and grow the market for genetically modified crops and goods.

Asia/Oceania

Genetically modified crops are becoming commonplace in Asian countries such as China, India, Bangladesh, Vietnam, and others. In fact, China was the first country to commercialize GMO crops when it began to distribute modified tobacco in 1988.[60] However, there are disagreements over the degree to which modified crops should be regulated: countries such as South Korea, Japan, and Australia are in favor of stricter regulations that include labeling practices, while China and other less developed Asian nations favor more relaxed policies.[61] It remains to be seen how these differences will affect agriculture commerce, but one can expect a situation similar to that of the European Union in the near future.

Europe

Many leaders within the European Union believe genetically modified crops are unethical and pose health dangers to the consumer.[62] Therefore, and in stark contrast to the countries within the Americas, the European Union has implemented harsh regulations on the production and distribution

[58] International Service for the Acquisition of Agri-biotech Applications (ISAAA). "ISAAA Brief 41-2009: Executive Summary," 2009. http://www.isaaa.org/resources/publications/briefs/41/executivesummary/default.asp.
[59] Lamb, Stephen. "Why We Need Mandatory Labeling of GMO Products." Stat News, February 19, 2020. https://www.statnews.com/2020/02/19/why-we-need-mandatory-labeling-of-gmo-products/.
[60] Zhang, Tao, and Shudong Zhou. "The Economic and Social Impact of GMOs in China." China Perspectives, November 10, 2006. https://journals.openedition.org/chinaperspectives/359.
[61] Institute for Agriculture and Trade Policy. "Factbox - GMO Food Regulations in Asia," September 8, 1999. https://www.iatp.org/news/factbox-gmo-food-regulations-in-asia.
[62] Bonny, Sylvie. "Why Are Most Europeans Opposed to GMOs? Factors Explaining Rejection in France and Europe." *Electronic Journal of Biotechnology*, 2003. https://scielo.conicyt.cl/fbpe/img/ejb/v6n1/a04/bip/.

of genetically modified crops. Food products including GMO crops must be labeled, for example.[63] GMO crops must also be traceable to its origin, as many within the European Union fret over the existence of both genetically modified and conventional crops.[64] The only GMO crop currently grown within the European Union is maize, predominantly in Spain.[65] Even so, the GMO maize only makes up about 20% of Spain's total maize production, underscoring the lessened importance of GMO crops in the European Union as opposed to the United States. The E.U.'s high standards for the trade of GMO crops has made it difficult for trade partnerships to be signed with countries possessing comparatively relaxed measures. For example, the difference in policy is currently preventing the proposed Transatlantic Trade and Investment Partnership, a major trade agreement between the United States and European Union, from being signed by both parties.[66] Delegates representing countries within Europe will have to reconcile the E.U.'s anti-GMO stance with a world economy that is gradually becoming more accepting of modified crops and food products.

[63] Davison, John. "GM Plants: Science, Politics and EC Regulations." *Plant Science* 178, no. 2 (February 2010): 94–98. https://doi.org/10.1016/j.plantsci.2009.12.005.
[64] EUR-Lex. "Genetically Modified Organisms — Traceability and Labelling," April 18, 2016. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:l21170.
[65] European Green Capital. "Several European Countries Move to Rule out GMOs," (N/D). https://ec.europa.eu/environment/europeangreencapital/countriesruleoutgmos/.
[66] Ujj, Orsolya. "European and American Views on Genetically Modified Foods." *The New Atlantis*, no. 49 (Spring/Summer 2016): 77–92.

Glossary

Artificial selection: the identification by humans of desirable traits in plants and animals, and the steps taken to enhance and perpetuate those traits in future generations. (National Geographic)

Biological weapon (bioweapon): a harmful biological agent (such as a pathogenic microorganism or a neurotoxin) used as a weapon to cause death or disease usually on a large scale. (Merriam Webster)

Breeding: the application of genetic principles in animal husbandry, agriculture, and horticulture to improve desirable qualities. (Britannica)

CRISPR/Cas-9: a unique technology that enables geneticists and medical researchers to edit part of the genome by removing, adding, or altering sections of the DNA sequence. (yourgenome)

Designer baby: a baby whose genetic makeup has been selected in order to eradicate a particular defect, or to ensure that a particular gene is present. (Oxford Languages)

DNA: short for deoxyribonucleic acid, a self-replicating material which is present in nearly all living organisms as the main constituent of chromosomes. It is the carrier of genetic information. (Oxford Languages)

Gene: a unit of heredity which is transferred from a parent to offspring and is held to determine some characteristic of the offspring. (Oxford Languages)

Genetic editing (gene editing): a group of technologies that give scientists the ability to change an organism's DNA. These technologies allow genetic material to be added, removed, or altered at particular locations in the genome. (Genetics Home Reference)

Genetic engineering/modification: the process of using recombinant DNA (rDNA) technology to alter the genetic makeup of an organism. (National Human Genome Research Institute)

Genetically engineered/modified organism (GMO): an organism produced through genetic engineering/modification (USDA Agricultural Biotechnology Glossary)

Genetically engineered/modified crop: crops derived from organisms whose genetic material (DNA) has been modified in a way that does not occur naturally, e.g. through the introduction of a gene from a different organism. (World Health Organization)

Genetic engineering technology: see **Genetic editing (gene editing)**.

Genome: an organism's complete set of DNA, including all of its genes. Each genome contains all of the information needed to build and maintain that organism. (Genetics Home Reference)

Transgenic: relating to or denoting an organism that contains genetic material into which DNA from an unrelated organism has been artificially introduced. (Oxford Languages)

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TOPIC B: INFORMATION PRIVACY AND PROTECTION

Statement of the Problem

Introduction to the Problem

The topic of information privacy and protection is extremely complex, not only because of the oftentimes vast differences in regulation between organizations (e.g. states, corporations, etc.), but also because the term "information" covers so much ground. From healthcare and finances to internet usage and political affiliation, there seems to be a limitless amount of personal information that (most) individuals want to keep private from the eyes of governments and organizations alike. However, monumental advancements in information gathering technologies and methods, coupled with a rise in the value of personal information itself, means that the protection of said information in the modern day has become expensive and difficult.[67] Resultantly, data breaches and leaks, where organized hackers steal private information from a collection entity on behalf of a government or with the intent to sell to the highest bidder, have become commonplace. There are also a number of legal questions associated with information privacy, especially in regard to the responsibilities of governments and corporations to protect private information and to the extent that governments and corporations should be permitted to seek out and obtain private information for their own benefit.

The Basics of Information Privacy

Information privacy (alternatively known as data privacy) concerns the proper handling of personal data granted to an organization by an individual.[68] As mentioned above, "data" encompasses all sorts of intimate information, ranging from the less sensitive – a birthday, a preferred gender, a personal address, etc. – to the extremely sensitive – an annual finance report, a healthcare form

[67] Delgado, Rick. "Why Is Big Data Security so Difficult?" Jaxenter, July 6, 2017. https://jaxenter.com/big-data-security-difficult-134920.html#:~:text=Big%20data%20comes%20from%20a,more%20work%20to%20protect%20it.
[68] Petters, Jeff. "Data Privacy Guide: Definitions, Explanations and Legislation." Varonis, June 17, 2020. https://www.varonis.com/blog/data-privacy/.

detailing underlying health conditions, a social security number, etc. Normally, a legal contract of sorts is acknowledged every time an individual gives a piece of personal information to an organization; the individual agrees to give up the information in order to receive a service from the organization and, in turn, the organization agrees to both use the information to grant the service to the individual *and* protect the information from entities that would use the given information for purposes outside of the individual's intentions. As an example, say I input my personal address into a delivery service website in order to have a package delivered to me. It is understood that the delivery service will use my address for the purpose of successful delivery only. Additionally, the delivery service will protect my address within their databases, and will not distribute my address to, say, a political mailing campaign in exchange for compensation.

In an ideal world, the organizations entrusted by individual citizens to keep their private information safe would do just that. However, it is important to understand that in both small and large quantities, private information can be wielded to obtain a number of beneficial ends for the organization – these include gathering attention and appeal, streamlining regularly sluggish processes, protecting against risks, or even increasing profits.[69] For example, a health insurance company might seek out private information related to an individual's underlying health conditions or other needs to determine whether or not the individual should be granted insurance in the first place. An individual with a number of conditions would be deemed high risk and would therefore be denied insurance.[70] Though this process, a form of healthcare discrimination, is highly illegal, it nevertheless helps to protect the insurance company from excess damages that could stem from serving a high-risk individual. Because private information has the ability to give organizations such distinct and concrete advantages, its value to said organizations has skyrocketed in recent years; it has been deemed by many economists to be a commodity currently more valuable than crude oil.[71]

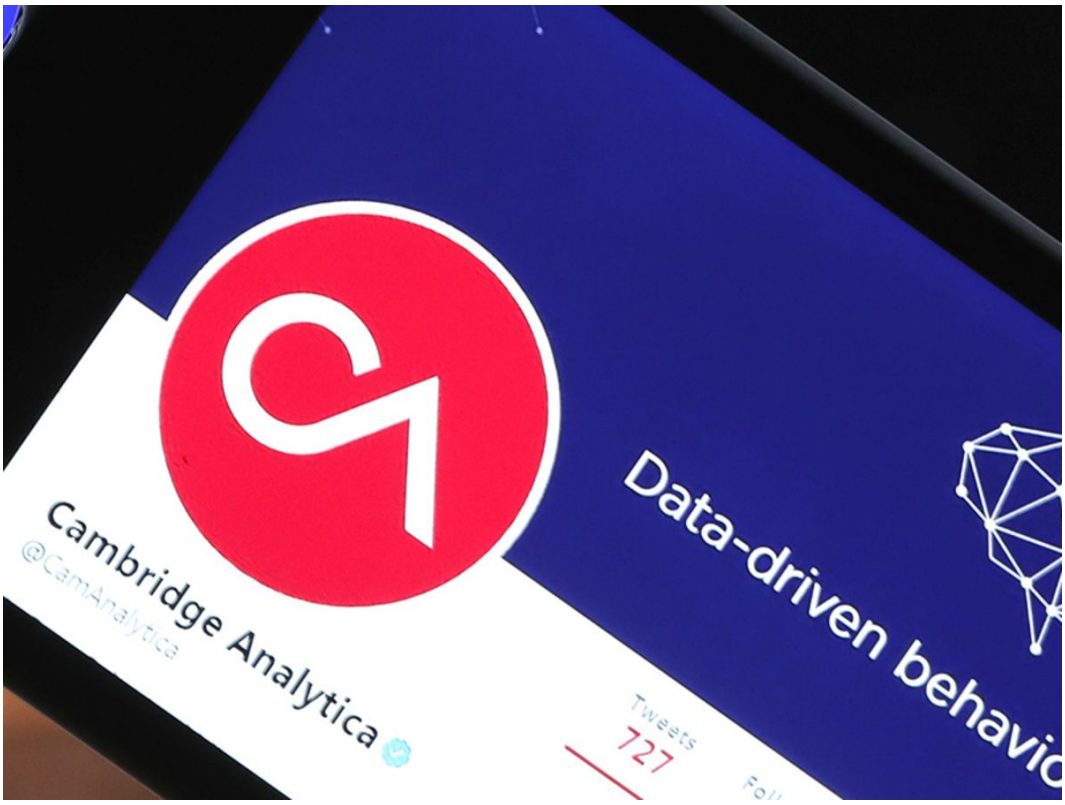
[69] Medium. "Personal Data: The World's Most Valuable Resource," September 22, 2019. https://medium.com/@StrongWriters/personal-data-the-worlds-most-valuable-resource-e5a6bf7d4bbf.
[70] Harrod, Jordan. "Health Data Privacy: Updating HIPAA to Match Today's Technology Challenges." Science in the News by Harvard University, May 15, 2019. http://sitn.hms.harvard.edu/flash/2019/health-data-privacy/.
[71] The Economist. "The World's Most Valuable Resource Is No Longer Oil, but Data," May 6, 2017. https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data.

Methods of private information collection

The market for private information has rapidly inflated as a result of demand on behalf of corporations and governments alike. Therefore, it has given rise to a new type of organization whose sole purpose is to gather and sell as much private information as possible. These organizations are called information brokers.[72] For these brokers, private information is not just one's address, gender, or race. They strive to collect data on impactful life events – such as a marriage or death in the family, specific hobbies, salary information, internet usage histories, DMV information, social media presence, etc. As of June 2014, information brokers had collected the personal information of approximately 500 million people worldwide to sell to interested buyers; that approximation is assumed to be much larger in 2020.[73] It is important to note that these companies operate publicly and within the constraints of privacy laws currently established by national governments.

However, organizations also employ methods of data collection that are outside the limitations of the law. These methods generally involve misleading the individual. The most famous example of this is the Cambridge Analytica scandal of 2018.[74] In 2014, Facebook, the multi-billion-dollar social media giant, allowed Cambridge Analytica, a consulting firm, to run a political survey advertised as purely for research purposes on its various platforms. Unbeknownst to survey participants, Cambridge Analytica sold the private information gathered in the survey (submitted by millions of Facebook users) to a number of American politicians. The plot was exposed by a whistleblower in 2018, and since then, information privacy has been a high priority within the technology industry.[75] Ultimately, both high- and low-profile corporations use illegal practices in conjunction with legal practices to obtain as much private information as possible for their own benefit.

[72] Beckett, Lois. "Yes, Companies Are Harvesting – and Selling – Your Facebook Profile." ProPublica, November 9, 2012. https://www.propublica.org/article/yes-companies-are-harvesting-and-selling-your-social-media-profiles.
[73] Beckett, Lois. "Everything We Know About What Data Brokers Know About You." ProPublica, June 13, 2014. https://www.propublica.org/article/everything-we-know-about-what-data-brokers-know-about-you.
[74] Confessore, Nicholas. "Cambridge Analytica and Facebook: The Scandal and the Fallout So Far." New York Times, April 4, 2018. https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html.
[75] Lapowsky, Issie. "How Cambridge Analytica Sparked the Great Privacy Awakening." Wired, March 17, 2019. https://www.wired.com/story/cambridge-analytica-facebook-privacy-awakening/.



Involvement of government in information privacy

Government involvement in information privacy and protection has always been and remains a controversial topic. In the United States, there exists a number of laws and regulations to prohibit extreme and illegal cases of personal data collection. These laws include the Health Insurance Portability and Accountability Act, which protects patient health information and works to prevent healthcare discrimination,[76] and the Children's Online Privacy Protection Act, which protects the information of citizens under age 13.[77] In spite of these laws, however, it seems that the United States government itself is not innocent when it comes to illegally collecting personal information. In 2013, a Central Intelligence Agency contractor named Edward Snowden leaked information detailing an intense and widespread spying network established and maintained by the National Security

[76] Centers for Disease Control and Prevention. "Health Insurance Portability and Accountability Act of 1996 (HIPAA)," September 14, 2018. https://www.cdc.gov/phlp/publications/topic/hipaa.html.
[77] Federal Trade Commission. "Children's Online Privacy Protection Rule ('COPPA')," n.d. https://www.ftc.gov/enforcement/rules/rulemaking-regulatory-reform-proceedings/childrens-online-privacy-protection-rule.

Agency and targeting both foreign powers and American citizens alike.[78] The leaks received international attention and backlash and Snowden himself has fled to Russia to avoid persecution. Overall, the scandal demonstrated that even governments are guilty of personal data collection and must themselves be regulated to ensure mass spying cannot continue.

As is often the case, countries across the globe possess differing opinions on the topic of information privacy. While governments in the traditionally 'Western bloc' generally believe in and enforce the individual right to privacy, governments of other nations, such as China, Malaysia, and Russia, are distinctly lacking in privacy enforcement and oftentimes are notorious for surveillance on their own citizens.[79] [80] There are widespread movements in these countries to expand privacy regulation and prohibit government spying, but it remains to be seen whether or not these movements will create substantial change.[81]

Why is information privacy and protection important?

Article 12 of the United Nations Universal Declaration of Human Rights states, "No one shall be subjected to arbitrary interference with his privacy, family, home, or correspondence, nor to attacks upon his honour and reputation…"[82] Clearly, then, the right to privacy is an ideal the bodies of the United Nations should work to uphold. However, the continued use of private information collection practices by both corporations and governments alike across the globe means that now more than ever a unified regulatory framework from behalf of LEGAL is necessary. Unbounded, organizations will continue to violate the fundamental human right of privacy for their own gain and, with the

[78] Szoldra, Paul. "This Is Everything Edward Snowden Revealed in One Year of Unprecedented Top-Secret Leaks." Business Insider, September 16, 2016. https://www.businessinsider.com/snowden-leaks-timeline-2016-9.
[79] Mitchell, Anna, and Larry Diamond. "China's Surveillance State Should Scare Everyone." The Atlantic, February 2, 2018. https://www.theatlantic.com/international/archive/2018/02/china-surveillance/552203/.
[80] Roth, Andrew. "'Cybergulag': Russia Looks to Surveillance Technology to Enforce Lockdown." The Guardian, April 2, 2020. https://www.theguardian.com/world/2020/apr/02/cybergulag-russia-looks-to-surveillance-technology-to-enforce-lockdown.
[81] Feng, Emily. "In China, A New Call To Protect Data Privacy." NPR, January 5, 2020. https://www.npr.org/2020/01/05/793014617/in-china-a-new-call-to-protect-data-privacy.
[82] United Nations. "Universal Declaration of Human Rights," n.d. https://www.un.org/en/universal-declaration-human-rights/#:~:text=No%20one%20shall%20be%20subjected%20to%20arbitrary%20interference%20with%20his,against%20such%20interference%20or%20attacks.

emergence of new technology making data collection easier, this process will only expand in the coming years.

History of the Problem

~1800-1900: Privacy Issues Begin to Emerge

The desire for and pursuit of individual privacy has been a priority of all people since the emergence of modern civilization. It is remarkably common for individuals to have pieces of information, either pertaining to themselves or to others that they want to keep secret from their government and their neighbors. Before the emergence of modern technologies, keeping one's secrets was pretty simple. The only way to communicate and ascertain new information about another person was through face-to-face contact or via (very rudimentary) mail networks. Resultantly, private information was kept relatively secure.

This sense of absolute security began to falter in the late 18th and early 19th centuries, when several societal changes began to occur. Firstly, the telegraph machine, used to transfer messages across long distances, emerged as a viable communication option in 1844.[83] However, telegraph lines could be easily tapped and, oftentimes, telegraph operators could be bribed into giving up sensitive communications. In the United States, policy had to be implemented to prevent the government from freely accessing private telegraph communications after mass outcries on behalf of the general public.[84] Censuses were another societal change to privacy norms as they oftentimes requested sensitive pieces of information relating to one's disease, finances, etc. There was a resultant push for heavier regulation of the census process; in the United States, for example, workers who released confidential census information were given jail time.[85] Overall, private information became more vulnerable with the emergence of new technologies and societal constructs, forcing governments to search for innovative means of protection.

[83] McMullan, Thomas. "The World's First Hack: The Telegraph and the Invention of Privacy." The Guardian, July 15, 2015. https://www.theguardian.com/technology/2015/jul/15/first-hack-telegraph-invention-privacy-gchq-nsa.
[84] Mathews, Kristen J., Proskauer Rose LLP, and Practising Law Institute, eds. *Proskauer on Privacy: A Guide to Privacy and Data Security Law in the Information Age*. Second edition. Business, Corporate & Securities Law. New York City: Practising Law Institute, 2016.
[85] Hedrick, Shelly. "Census Protections Evolve Continuously to Address Emerging Threats." United States Census Bureau, February 3, 2020. https://www.census.gov/library/stories/2020/02/through-the-decades-how-the-census-bureau-protects-your-privacy.html.

1900-1970: Security of Private Information Continues to Erode with New Advancements

Continued advancements in communications technologies coupled with a rise in spying capabilities resulted in information privacy reaching a new low in the early- and mid-20th century. Most notably, the invention of the telephone in 1876 made long-distance communication seamless,[86] but governments began to use telephone conversations to their advantage by wiretapping telephone lines. This practice was utilized especially heavily by nations in conflict before and during World War II (~1930-1945), and during the Cold War (1947-1991).[87] By listening in to private conversations between higher-ups in rival countries politicians could plot new strategies to gain advantages against their adversaries. In addition, governments surveilling their own people became a common practice in the 1950s and beyond. Organizations within the United States government, particularly the Federal Bureau of Investigation, used the public fear experienced during the height of the Cold War to greatly expand domestic surveillance under the guise of searching for invasive communists.[88] Ultimately, from 1900-1970 numerous governments utilized surveillance technology at an increasingly alarming rate to breach the personal privacy of millions of individuals and gain political advantages.

1970s-1990s: Emergence of Computer Systems and First Data Privacy Laws in Europe

The early 1970s saw computers become commonplace in government administrations across the globe.[89] Although fairly rudimentary, computers were used for a wide variety of purposes, from data storage to simple data processing and analytics. In Sweden, concern arose amongst the populace regarding the government's use of computers to store sensitive census information. Subsequently,

[86] Morris, Jason. "History of the Telephone." Independent Telecommunications Pioneer Association, n.d. https://www.nationalitpa.com/history-of-telephone.
[87] Berger, Meyer. "Tapping the Wires." The New Yorker, June 11, 1938. https://www.newyorker.com/magazine/1938/06/18/tapping-the-wires.
[88] Mathews, Kristen J., Proskauer Rose LLP, and Practising Law Institute, eds. *Proskauer on Privacy: A Guide to Privacy and Data Security Law in the Information Age*. Second edition. Business, Corporate & Securities Law. New York City: Practising Law Institute, 2016.

[89] González Fuster, Gloria. *The Emergence of Personal Data Protection as a Fundamental Right of the EU*. Law, Governance and Technology Series 16. Cham: Springer, 2014.

the legislative body of Sweden passed the Data Act in 1973[90]; the Data Act was the world's first national data privacy law. It included policies such as guaranteed individual access to private records, proper licensing from the government for handlers of private information, and criminalization of mishandling private information.

Many nations across the globe followed Sweden's example by implementing their own rudimentary information privacy laws. In Europe, this movement culminated into the Data Protection Directive of 1995, which mandated strict measures for businesses and other handlers of private information.[91] Compliance with the Data Protection Directive involved properly informing individuals when data was being collected, obtaining consent of the individual before collecting data, permitting individuals to access collected data and correct errors, keeping collected data secure, and providing a means to accountability should data be released. Though the Data Protection Directive was not an official regulation, it nevertheless provided guidelines and boundaries that allowed each member of the EU to construct their own data privacy frameworks. It should be noted that Europe's aggressive stance on data protection regulation was, and still is, advanced in comparison to the rest of the world. The United States, for example, still possesses no overarching data protection framework.

2000-2010: No Significant Data Privacy Advancements

Interestingly enough, there were no significant improvements to existing information privacy policies in the first decade or so of the new century. This is remarkable because many powerful corporations and organizations commonplace today, namely Google and Facebook, began to gain traction and become successful during this time period.[92] Despite this and major advancements in computing and data processing power, the field of information privacy somewhat exited the international spotlight. This would all change in 2013, however.

[90] Bennett, Colin J. *Regulating Privacy: Data Protection and Public Policy in Europe and the United States*. Ithaca: Cornell University Press, 1992. http://books.google.com/books?id=WL2RAAAAMAAJ.
[91] Lord, Nate. "What Is the Data Protection Directive? The Predecessor to the GDPR." Digital Guardian, September 12, 2018. https://digitalguardian.com/blog/what-data-protection-directive-predecessor-gdpr.
[92] Youens, Annabel. "The Complete Data Privacy Timeline." Appreciation Engine, n.d. https://get.theappreciationengine.com/2020/02/19/data-privacy-timeline/.

2013: Snowden Leaks Reveal Mass Spying on Behalf of the United States

Edward Snowden was an independent contractor working for the United States Central Intelligence Agency from around March to June 2013.[93] During this time, he downloaded and leaked thousands of U.S. National Security Agency files, exposing NSA spying and surveillance networks covering both American citizens and numerous foreign governments. Specifically, the agency had ordered phone providers to hand over the private phone records of tens of millions of Americans on a daily basis and had also established surveillance operations in over fifty foreign governments, including China, Germany, Japan, India, and much of Latin America.[94] The leaks demonstrated that although nations across the globe seemed to be in collective pursuit of stricter privacy regulations, major powers on the international stage were still willing to violate individual privacies for their own benefit. The United States received heavy domestic and international backlash after the leaks, with many American citizens organizing into social movements, such as Restore the Fourth,[95] in order to sue the NSA for their invasion of privacy and obvious violation of the Fourth Amendment. They also protested against the United States persecution of Edward Snowden, who was forced to flee to Russia after the leaks were made.[96] Interestingly enough, however, several international allies, many of whom were spied on themselves, came to the defense of the United States, claiming that its operations were necessary in order to potentially save countless lives.[97] Regardless, the leaks placed information privacy back into public attention by demonstrating just how widespread surveillance and data collection could become. Countries rushed to produce stricter protection measures for their citizens.

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[93] CNN Editorial Research. "Edward Snowden Fast Facts." CNN, July 27, 2020. https://www.cnn.com/2013/09/11/us/edward-snowden-fast-facts/index.html.
[94] BBC News. "Edward Snowden: Leaks That Exposed US Spy Programme," January 17, 2014. https://www.bbc.com/news/world-us-canada-23123964.
[95] Huffington Post. "Restore The Fourth: Group Organizes Nationwide Anti-NSA Spying Protests On July 4," June 28, 2013. https://www.huffpost.com/entry/restore-the-fourth_n_3519600.
[96] Greenwald, Glenn, Ewen MacAskill, and Laura Poitras. "Edward Snowden: The Whistleblower behind the NSA Surveillance Revelations." The Guardian, June 11, 2013. https://www.theguardian.com/world/2013/jun/09/edward-snowden-nsa-whistleblower-surveillance.
[97] BBC News. "Intelligence Sharing Lawful, Hague Says after US Talks," June 12, 2013. https://www.bbc.com/news/uk-politics-22883340.

2016-present: GDPR is Born, Cambridge Analytica, and Into the Future

Recognizing the need for a more advanced regulatory framework for information privacy following the Snowden leaks and a number of significant non-governmental data breaches, the European Union took the Data Protection Directive and modernized it into the General Data Protection Regulation (GDPR), announced in 2016 and fully implemented in 2018.[98] The GDPR is different from the Data Protection Directive in many ways. First, it is a EU-wide framework, not simply a guideline for individual policies. The GDPR also expands what counts as private information, adds liability for data controllers and processers, increases consent regulations to ensure individuals are giving information willingly, and forces large data controllers to employ a data protection officer, among other changes.[99] All in all, the GDPR greatly increases the security of private information for European Union residents and gives individuals power over their own data rather than allowing corporations to benefit from excessive data collection. The GDPR also has been used as inspiration for other nations constructing their own data privacy frameworks.[100]

However, in 2018, another major information privacy scandal hit the headlines, this time involving social media giant Facebook. A whistleblower alleged that Facebook had given the personal information of millions of users to political consulting company Cambridge Analytica without user consent, which then used the information for various targeted political advertising campaigns.[101] Facebook users willingly took a survey advertised as for academic purposes only, but the software mined the participants' data and data of participants' friends on the platform, giving Cambridge Analytica access to over 50 million profiles.[102] Facebook received swift and harsh backlash on behalf of various governments and the public alike for the invasion of user privacy. The government of the

[98] European Data Collection Supervisor. "The History of the General Data Protection Regulation," n.d. https://edps.europa.eu/data-protection/data-protection/legislation/history-general-data-protection-regulation_en.

[99] PrivSec Report. "The Data Protection Directive versus the GDPR: Understanding Key Changes," March 6, 2018. https://gdpr.report/news/2018/03/06/data-protection-directive-versus-gdpr-understanding-key-changes/.
[100] Van der Brande, Bart. "Data Protection Laws Inspired by GDPR Are Spreading across the World. Is New York Next?" Sirius Legal, September 12, 2019. https://siriuslegaladvocaten.be/en/gdpr-in-new-york/.
[101] Lapowsky, Issie. "How Cambridge Analytica Sparked the Great Privacy Awakening." Wired, March 17, 2019. https://www.wired.com/story/cambridge-analytica-facebook-privacy-awakening/.
[102] Meredith, Sam. "Here's Everything You Need to Know about the Cambridge Analytica Scandal." CNBC, March 21, 2018. https://www.cnbc.com/2018/03/21/facebook-cambridge-analytica-scandal-everything-you-need-to-know.html.

United Kingdom immediately fined the corporation £500,000,[103] and the United States Federal Trade Commission decided on a five billion dollar fine in July 2019.[104] Also, movements such as #DeleteFacebook became prevalent on other forms of social media soon after the scandal, and activity on the site decreased by a margin of 20%.[105] Ultimately, the scandal brought to public light the extensive abilities of major corporations to collect personal data for profit.

Moving into the present day, countries across the globe have either adopted or are planning to adopt regulatory frameworks that prioritize the protection of private information over the wishes of corporations and other organizations in order to prevent another scandal akin to Cambridge Analytica. How countries will collectively mobilize against surveillance and data mining on behalf of large-scale corporations and governments alike remains to be seen.

[103] Romm, Tony, and Elizabeth Dwoskin. "Facebook Is Slapped with First Fine for Cambridge Analytica Scandal." Washington Post, July 10, 2018. https://www.washingtonpost.com/business/economy/2018/07/10/5c63a730-848b-11e8-8f6c-46cb43e3f306_story.html?noredirect=on.
[104] Carrie Wong, Julie. "Facebook to Be Fined $5bn for Cambridge Analytica Privacy Violations – Reports." The Guardian, July 12, 2019. https://www.theguardian.com/technology/2019/jul/12/facebook-fine-ftc-privacy-violations.
[105] Hern, Alex. "Facebook Usage Falling after Privacy Scandals, Data Suggests." The Guardian, June 20, 2019. https://www.theguardian.com/technology/2019/jun/20/facebook-usage-collapsed-since-scandal-data-shows.

Past Actions

Introduction

Although the right to privacy is listed as a fundamental human right in the United Nations Universal Declaration of Human Rights,[106] the United Nations itself has not enacted much policy to ensure every member nation and powerful non-governmental organization upholds the right to privacy. This lack of regulation could be due to a number of factors: the emergence of private information as a valuable commodity has only recently occurred (within the last ten years or so), organizations that collect private information have only recently become tremendously influential on the world stage, member states within the United Nations have wildly differing opinions on the topic, etc. Regardless, as technology quickly advances and data collection becomes easier and easier, it is clear that substantial and effective regulation of private information usage practices on behalf of governments and non-governmental organizations alike is now extremely necessary. That is not to say, however, that the United Nations has done absolutely nothing to promote universally adequate information privacy standards. As was the case for Topic A, this section will analyze the actions of the United Nations on the topic of information privacy, while the Bloc Positions section will review the stances of individual countries and regions on the matter.

The Right to Privacy in the Digital Age (collection of UNGA resolutions)

Immediately following the revealing document leaks made by Edward Snowden in 2013, the 68th session of the United Nations General Assembly published Resolution 68/167 on December 18th, 2013, entitled "The right to privacy in the digital age".[107] This short resolution reaffirmed the UN's dedication to the fundamental right to privacy and acknowledged that rapidly advancing technologies such as the Internet and spyware makes the right to privacy difficult to uphold. It also encourages member states to pursue data protection regulations within their own borders.

[106] United Nations. "Universal Declaration of Human Rights," December 10, 1948. https://www.un.org/en/universal-declaration-human-rights/.
[107] UNDocs. "Resolution Adopted by the General Assembly on 18 December 2013," January 21, 2014. https://undocs.org/A/RES/68/167.

Resolution 68/167 has since been followed up by three similar resolutions (2014, 2016, 2018), all likewise entitled "The right to privacy in the digital age."[108] [109] [110] The later resolutions, especially the one published in 2018, highlight not only state governments, but also business organizations and other non-governmental entities as responsible for maintaining fair privacy standards and upholding the fundamental right to privacy (e.g. using private information only with explicit consent of the user, directly informing the user when private information is being collected, not using private information for purposes outside whatever the user gave consent for, etc.). The resolution promotes transparency with the consumer and safeguards against illegal use of private information as methods these organizations can employ to prevent violations of the right to privacy. The inclusion of business entities in these resolutions is significant because it implies businesses must take extra action to prevent human rights violations connected to information privacy in addition to the general precautions outlined by the UN Framework on Business and Human Rights.[111]

The Right to Privacy in the Digital Age (HRC resolutions)

In addition to the four General Assembly resolutions addressing modern data privacy concerns, the United Nations Human Rights Council issued two resolutions of their own, also entitled "The right to privacy in the digital age", in 2015 and 2017.[112] [113] These resolutions presented many of the same concepts, warnings, and suggestions as the General Assembly resolutions. However, one notable inclusion, introduced in the 2015 resolution and upheld in the 2017 resolution, is the mandate for a Special Rapporteur on the Right to Privacy. This individual is assigned to study developments in the field of information privacy, analyze how certain states regulate private information, promote

[108] UNDocs. "Resolution Adopted by the General Assembly on 18 December 2014," February 10, 2015. https://undocs.org/A/RES/69/166.
[109] UNDocs. "Resolution Adopted by the General Assembly on 19 December 2016," January 25, 2017. https://undocs.org/A/RES/71/199.
[110] UNDocs. "Resolution Adopted by the General Assembly on 17 December 2018," January 21, 2019. https://undocs.org/en/A/RES/73/179.
[111] Kinfe, Michael Yilma. "The United Nations' Evolving Privacy Discourse and Corporate Human Rights Obligations." American Society of International Law, May 17, 2019. https://www.asil.org/insights/volume/23/issue/4/united-nations-evolving-privacy-discourse-and-corporate-human-rights#_ednref1.
[112] United Nations Human Rights. "Resolution Adopted by the Human Rights Council. 28/16. The Right to Privacy in the Digital Age," April 1, 2015. https://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/RES/28/16.
[113] United Nations Human Rights. "Resolution Adopted by the Human Rights Council on 23 March 2017. 34/7. The Right to Privacy in the Digital Age," April 7, 2017. https://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/RES/34/7.

effective and ethical uses of private information, and raise awareness on the importance of protecting private information.[114] Findings from Professor Joseph Cannataci, the first Special Rapporteur on the Right to Privacy, helped the UNGA and HRC publish subsequent resolutions on the "Right to privacy in the digital age".

[114] United Nations Human Rights. "Special Rapporteur on the Right to Privacy," n.d. https://www.ohchr.org/en/issues/privacy/sr/pages/srprivacyindex.aspx.

Possible Solutions

In drafting potential resolutions to the issue of data privacy and protection, delegates should first have a strong understanding and opinion on the legal versus illegal uses of private information, on behalf of governments and non-governmental organizations alike. There is certainly a fine line between using private information for the benefit of society and using private information for personal/organizational gain, but this is a distinction that must be made in order to create effective regulation. A delegation could decide, for example, that strict regulation strongly favoring the rights of the individual user (akin to the EU's GDPR) is necessary to fully protect private information, or instead take a more relaxed approach by giving more leeway to corporations and other collectors of private information (the United States' viewpoint). Drafted regulations themselves should detail permitted use of private information and various methods to ensure legality and alignment with previous United Nations resolutions (e.g. transparency measures, situational agreements with the individual, etc.) It should also include checks and consequences for powerful organizations and governments that attempt to abuse private information for personal advantage. Overall, a strong resolution answers the following fundamental questions: What uses of private information, on behalf of both governments and non-governmental organizations, are legal/illegal? What structures and checks will be implemented and maintained to ensure governments and other organizations do not use private information for illegal uses/are held accountable when private information is used illegally? Going even further into the topic, a particularly strong resolution could include United Nations-backed contingency plans for large-scale data leaks and establish preventative bodies working to spread awareness on the topic of information privacy or to fight against hackers and other organizations seeking to use private information for malicious purposes.

Bloc Positions

Introduction

Similar to the topic of genetic engineering, there are vast differences in opinion on the role of government in promoting information privacy across the globe. While a majority of nations believe in government oversight of public and private entities involved in collection of private information, some nations take a more passive approach to the issue. In this section, we will analyze regional opinions and policies on the topic of information privacy.

Africa

Africa is well-known for being a testing ground for new technologies, including advancements in the field of data collection. However, many African countries lack the infrastructure to adequately protect their citizens from malicious data collecting entities operating abroad, creating a potential disaster for African residents' individual privacy. However, since the Cambridge Analytica scandal in 2016, there has been a push for enhanced data protection measures within Africa; so far, 24 of the 53 countries in Africa have adopted strict information privacy frameworks.[115] Some African nations, such as Zimbabwe, Côte d'Ivoire, and Ghana, have also begun introducing biometric voting systems to protect voter information and protect against voter fraud.[116] Overall, individuals in Africa are clearly concerned about the security of their private information, and the push towards adequate private information regulation in the continent is just getting started.

The Americas

Aside from the United States, the countries within North America are known for their strict data protection laws. Canada and Mexico both possess in-depth policies (e.g. Canada's Privacy Act and

[115] Privacy International. "2020 Is a Crucial Year to Fight for Data Protection in Africa," March 3, 2020. https://privacyinternational.org/long-read/3390/2020-crucial-year-fight-data-protection-africa.
[116] Thales. "Biometric Voter Registration: Trends and Best Practices (a 2020 Report)," May 15, 2020. https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/identity/enrolment/biometric-voter-registration.

PIPEDA and Mexico's Federal Law on the Protection of Personal Data held by Private Properties) that include accountability for organizations and transparency for the consumer.[117] [118] The United States, however, is remarkably lacking an overarching data protection framework. Moreover, the Snowden leaks in 2013 and Cambridge Analytica scandal in 2016 revealed that the United States government and powerful organizations within the country were actively breaching United States policy and infringing on citizens' right to privacy. These events sparked a worldwide movement to enhance data security measures, which continues to this day.

Many countries in Central and South America possessed their own data protection regulations before the 2010s. However, after data privacy was thrust into the spotlight because of the Snowden leaks and Cambridge Analytica scandal, a number of Latin American nations, led chiefly by Brazil, overhauled and tightened their frameworks, mirroring changes occurring simultaneously in Europe.[119] However, a few Latin American nations, including Guatemala, do not provide protections for their citizens' private information at all.

Asia/Oceania

A number of countries in Asia/Oceania already possess strict data protection laws; these include Japan, Australia, and New Zealand, amongst others.[120] Additionally, many nations in the region, including Thailand and Singapore, have recently taken or are planning to take additional measures to beef up their existing regulations in the wake of the Cambridge Analytica scandal.

[117] Recio, Miguel. "GDPR Matchup: Mexico's Federal Data Protection Law Held by Private Parties and Its Regulations." International Association of Privacy Professionals, June 8, 2017. https://iapp.org/news/a/gdpr-matchup-mexicos-federal-data-protection-law-held-by-private-parties-and-its-regulations/.
[118] Coos, Andrada. "Data Protection in Canada: All You Need to Know about PIPEDA." Endpoint Protector, January 17, 2019. https://www.endpointprotector.com/blog/data-protection-in-canada-pipeda/.
[119] Martinez, Alonso. "Latin American Data Privacy In 2020: What Should Employers Consider When Requesting Background Checks?" Forbes, January 2, 2020. https://www.forbes.com/sites/alonzomartinez/2020/01/02/latin-american-data-privacy-in-2020--what-should-employers-consider-when-requesting-background-checks/#30e9f3b29c8d.
[120] Blackmore, Nicholas. "Moving towards Europe: Recent Trends in Asia-Pacific Data Protection Law." Kennedys, July 10, 2019. https://www.kennedyslaw.com/thought-leadership/article/moving-towards-europe-recent-trends-in-asia-pacific-data-protection-law.

However, data protection is controversial in a number of Asian countries. India, which possesses 17.5% of the world's population, does not currently have a data privacy law in place, although there has been one proposed.[121] In China, there exists a strong regulatory framework,[122] but the country also possesses a reputation of heavy surveillance.[123] It remains to be seen whether these countries will update their policies and practices to reflect the global movement towards enhanced data privacy or remain as they are.

Europe

Countries within the European Union possess the strongest data protection laws in the world. The European Union passed the General Data Protection Regulation (GDPR) into effect in May 2016 in the wake of the Snowden leaks. The GDPR provides strict guidelines for organizations doing business in the European Union and heavily favors the rights of the individual over the interests of powerful businesses.[124] Since its passing, the contents of the GDPR have been used as inspiration for countless other countries crafting their own data privacy regulations. It is clear that the European Union prioritizes the universal right to privacy over the wishes and whims of businesses within their borders.

Surprisingly, more conservative countries in the eastern regions of Europe also possess strict data protection regulations. In Turkey, for example, data transfers and processing may only occur with the explicit consent of the individual.[125] Russia, another conservative country in Europe, possesses a similarly strict framework; organizations who mishandle private information within Russian borders

[121] Burman, Anirudh. "Will India's Proposed Data Protection Law Protect Privacy and Promote Growth?" Carnegie India, March 9, 2020. https://carnegieindia.org/2020/03/09/will-india-s-proposed-data-protection-law-protect-privacy-and-promote-growth-pub-81217.
[122] Sheng, Wei. "One Year after GDPR, China Strengthens Personal Data Regulations, Welcoming Dedicated Law." Technode, June 19, 2019. https://technode.com/2019/06/19/china-data-protections-law/.
[123] Mozur, Paul, and Aaron Krolik. "A Surveillance Net Blankets China's Cities, Giving Police Vast Powers." New York Times, December 17, 2019. https://www.nytimes.com/2019/12/17/technology/china-surveillance.html.
[124] European Commission. "Data Protection in the EU," n.d. https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en.
[125] Mansur Ozer, Yusuf. "GDPR Matchup: Turkey's Data Protection Law." International Association of Privacy Professionals, August 10, 2017. https://iapp.org/news/a/gdpr-matchup-turkeys-data-protection-law/.

are fined heavily by the government.[126] However, similar to the situation in China and other nations, the Russian government is notorious for heavily surveilling its populace, creating a huge contradiction with official policy.[127]

[126] Gratchner, Amanda. "The New Russian Data Protection Law: Five Important Things To Know." Risk and Compliance Matters, September 30, 2015. https://www.navexglobal.com/blog/article/new-russian-data-protection-law-five-important-things-know/.
[127] Habersetzer, Nicole. "Moscow Silently Expands Surveillance of Citizens." Human Rights Watch, March 25, 2020. https://www.hrw.org/news/2020/03/25/moscow-silently-expands-surveillance-citizens.

Glossary

Biometrics: physical or behavioral human characteristics that can be used to digitally identify a person to grant access to systems, devices, or data. (CSO)

Cambridge Analytica scandal: see **History of the Problem** section.

Data breach/leak: a security incident in which information is accessed without authorization. (Norton)

GDPR: abbreviation for General Data Protection Regulation, see **History of the Problem** section for more information.

Hacker: a person who illegally gains access to and sometimes tampers with information in a computer system. (Merriam Webster)

Information/data broker: a company that collects and sells personal information about individuals. (PCMag)

Mass spying/surveillance: intricate surveillance of an entire or a substantial fraction of a population in order to monitor that group of citizens. (Privacy International)

Privacy law/regulation: any international, national, federal, provincial, state, or local law, code, rule or regulation that regulates the processing of Personal Information in any way. (Law Insider)

Private information/data: information that identifies, relates to, describes, is reasonably capable of being associated with, or could reasonably be linked, directly or indirectly, with a particular consumer or household. (Lexology.com)

Snowden leaks: see **History of the Problem** section.

Special Rapporteur: an independent expert appointed by the Human Rights Council to examine and report back on a country situation or specific human rights theme. (United Nations Human Rights)

Spyware: technology that enables a user to obtain covert information about another's computer activities by transmitting data covertly from their hard drive. (Oxford Languages)

Whistleblower: a person who informs on a person or organization engaged in an illicit activity. (Oxford Languages)

Wiretapping: the practice of connecting a listening device to a telephone line to secretly monitor a conversation. (Oxford Languages)

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