# 1AC

## 1AC — Plan

#### Plan text: The United States ought to recognize an unconditional right to strike for agricultural laborers by amending the National Labor Relations Act to extend the definition of ‘employee’ to include agricultural laborers.

#### Squo NLRA fails to protect farmer’s rights to strike – plan amends the NLRA to collectively bargain

**Reilly, 11**, Penn State Law, “Agricultural Laborers: Their Inability to Unionize Under the National Labor Relations Act”, Penn State: Masters of Science, JD Law, URL: <https://pennstatelaw.psu.edu/_file/aglaw/Publications_Library/Agricultural_Laborers.pdf>, 2011 + since most recent citation is from then, KR

**The NLRA gives workers “freedom of association, self-organization, and designation of representatives of their own choosing” in order to equalize the bargaining power** between employers and employees in the hopes of limiting the interruptions to the free flow of commerce.10 **The statute covers a large number of workers based on the broad definition of “employee,”11 but excludes from coverage all agricultural laborers**.12 The NLRA does not define who these agricultural laborers are that are excluded from the right to organize, but rather Congress has instructed the National Labor Relations Boards (NLRB)13 in the annual Appropriations Act that in determining who is an agricultural laborer excluded from the NLRA, to rely on the definition of “agriculture” **found in the Fair Labor Standards Act (FLSA).14 Agriculture in the FLSA is defined as “farming in all its branches ... and any practices ...** performed by a farmer or on a farm as an incident to or in conjunction with such farming operations...”15 The definition also lists specific activities to further define what would specifically be considered agricultural work.16 Therefore, workers whose responsibilities are contained in the FLSA’s definition of “agriculture” are excluded from the right to organize and form unions under the NLRA.

The reasoning behind this exclusion is somewhat vague, especially considering that the bill originally proposed in the Senate did not exclude agricultural laborers from the definition of “employee.”17 There is not much mentioned about the agricultural exclusion because of the statute’s primary focus on addressing problems in the industrial sector. There is, however, a debate from in the House addressing the agricultural laborer exemption,18 where an argument was made that **agricultural laborers should be included because they needed the same protections as industrial** workers. Agricultural labor issues were brought to light in 1935 after governmental investigations into child labor issues and the lack of clean water provided for such workers.19

In response, **two possible reasons were briefly mentioned that may explain why agricultural laborers were excluded: first, in regions like the Midwest, farms are mostly family farms and should not be within the scope of the NLRA,** and second there was a concern that Congress did not have jurisdiction over agricultural workers because it was questionable whether such workers were engaged in interstate commerce.20 Many commentators believe that it was the former argument that led to the exclusion of agricultural workers from protection under the NLRA. Another possible reason for this exclusion as presented by some commentators is that the larger farms lobbied to have their workers excluded from the NLRA.21 While not expressly stated, the most likely explanation is that Congress wanted to protect the family farmer from having to pay higher wages that unions would inevitably demand of the employers.22 Realizing that agriculture was important to the entire nation, Congress wanted to shield this industry from unionization, and wanted to protect the family farmer from having to pay what they could not afford. Congress did not think it necessary to equate the family farmer with big business.

The broad definition of “agriculture” under the FLSA would seem to exclude from the NLRA any worker who is employed by any agricultural entity. This is not the case, however, because **the Supreme Court has adopted a two-part test to determine if an employee is in fact an agricultural laborer excluded from the NLR**A.23 An agricultural employee will be excluded from the right to organize if he or she is engaged in either primary or secondary farming. The Supreme Court has taken the FLSA definition of agriculture and essentially limited its application based on a strict application of the statutory language. Primary farming are those tasks specifically referred to in the statutory definition of “agriculture” such as “cultivation and tillage of the soil [and] dairying.”24 The rest of the definition is considered secondary farming, and therefore a worker is an agricultural laborer if the work performed is of the type that would be performed “by a farmer or on a farm as an incident to or in conjunction with such farming operations.”25

In one of the more recent cases to address the question of who is considered an agricultural employee, the Supreme Court in Holly Farms Corp. v. N.L.R.B. upheld the determination made by the NLRB that workers on live-haul chicken crews do not engage in agricultural labor and therefore are not subject to the agricultural exception from the NLRA.26 The responsibility of the live-haul crew is to enter the farms of independent contractors who raise chickens supplied by Holly Farms; the chickens are then caught and caged by nine chicken catchers, moved by a forklift operator onto a truck to be transported by a truck driver to the processing plant.27 These live-haul crews were not engaged in primary farming because primary farming would have been the actual raising of the poultry, which was the responsibility of the independent contractors, not the live- haul crews.28

The court then focused on whether these live-haul crews were engaged in secondary farming. In doing so, the court immediately found that that the work performed by the live-haul crews were not of the kind “performed by a farmer” because Holly Farms gave up its farmer status as soon as the chicks were delivered to independent contractors for raising.29 As a result of this determination, the truck drivers were not considered agricultural laborers and were therefore not part of the agricultural exception to the NLRA and were able to unionize.30

The court then looked to whether the chicken catchers and forklift operators were engaged in work “on a farm as an incident to or in conjunction with” raising poultry.31 The Supreme Court found that neither the chicken catchers nor the forklift operators “worked on a farm” because the work these employees performed were part of Holly Farms’ poultry processing operations and was not of the type of work contemplated to be included in the statutory definition of “farming.”32 The Supreme Court adopted the reasoning of the NLRB in deciding that the catchers and forklift operators were not performing work “incident to or in conjunction with” the farming operations of the independent contractors.33 In doing so, the Supreme Court decided that it was more important to look at the status of the employer as a farmer rather than where the laborer carried out the responsibilities of the job he or she was hired to perform. Because, as previously determined, Holly Farms was not considered a farmer by the time the live- haul crews went in to catch the chickens, the catchers and the forklift operators were not engaged in secondary farming as defined in the FLSA.34 This meant that all the members of the live-haul crews were not agricultural laborers and therefore all had the right to organize under the NLRA.

The Supreme Court limited the applicability of the definition of “agriculture” in Holly Farms and in doing so opened up the possibility that more workers employed by large, vertically integrated employers would be able to organize.35 By taking the approach to look at the status of the employer rather than where the work is performed, the Supreme Court broadened the already broad definition of “employee” under the NLRA. More employees working for these vertically integrated employers will be able to experience the protection of the NLRA that has been open to industrial workers since the act was first passed in 1935. The impact of the Holly Farms decision is for courts to engage in an in depth analysis before deciding whether a worker is an agricultural laborer not protected by the NLRA. Switching the focus to the status of the employer rather than where the employees are performing their responsibilities will ensure greater protection for workers and a broader reach of the NLRA.

While the definition of “employee” has expanded to include some employees who are employed by agricultural employers, **there is still the exception for agricultural laborers included in the statute and therefore there are still many workers who are unable to form unions.** These may be the **workers that need the most protection because they are the field workers who are subjected to abuse, poverty and hazardous working conditions.36** Many commentators would like to see **the NLRA extended to include agricultural laborers**. The main advantage to **extending the definition of “employee” to include agricultural laborers under the NLRA is that the statute has been in existence for many years, and most of the challenges that would be brought up with respect to agricultural laborers attempting to unionize have most likely already been resolved in other employment sectors allowing the NLRB and courts to rely on precedent. This will make application of the statue to the agricultural laborers consistent with other employment sectors. Reliance on precedent would lead to predictable outcomes when labor disputes arise.** Agricultural laborers still have a ways to go before they will be able to reap the benefits of the NLRA; but, if this were to happen, **agricultural laborers would be able not only to unionize and have their association protected, but also would have the advantage of being able to rely on others with experience and knowledge of the NLRA and its intricacies**.

## 1AC — Advantages

### Advantage 1 - Yield

#### Farmer’s yield is nearing an all-time low – government support doesn’t help the most needy and isn’t a long term solution

**Farm-Aid, 20,** 9/14/20, “Understanding the Economic Crisis Family Farms are Facing”, 2Farm Aid works with local, regional and national organizations to promote fair farm policies and grassroots organizations coordinating campaigns designed to defend and bolster family farm-centered agriculture. RL: <https://www.farmaid.org/blog/fact-sheet/understanding-economic-crisis-family-farms-are-facing/>, KR

**EVEN BEFORE COVID**-19**, FARM FAMILIES HAD NEGATIVE FARM INCOME**

Things have **been bad in farm country for a while. Between 2013 and 2018, farmers experienced a nearly 50% drop in net farm income as the prices for corn, wheat, dairy, beef and other farm products crashed**. While net farm income rose by 3% in 2019, government payments accounted for all of that increase (namely, via the trade bailout program). Without it, 2019 delivered farmers their second lowest income since 2013.[13]

As for 2020, while the U.S. Department of Agriculture (USDA) is forecasting a $19 billion (or 22.7%) increase in net farm income this **year, government payments like trade bailouts and federal COVID-19 relief programs account for 36% of net farm income** — the highest share since 2001 and the eighth highest share since The Great Depression.[14] Without the $22.4 billion provided in government payments, net farm income in 2020 would be well below the sector’s average from 2000 to 2019.[15] What’s more, the vast majority of payments flowed to the very largest farms. CNBC reports that the top 5% of trade bailout recipients received nearly half of all $28 billion paid in 2018 and 2019.[16]

Perhaps more troubling is USDA’s pre-pandemic data. In February, **USDA forecast** 2020 median farm household income at -$1,840 — **meaning that farm households would lose money from the farm.[17] More recent USDA data suggests a slightly better median income level,[18] presumably from high levels of government payments. But even these sector-wide income numbers likely mask severe distress in many parts of farm country, as many farmers who have been squeezed by years of low income did not benefit from federal payments**. Most farmers rely on off-farm jobs to feed their families, secure health insurance, and keep their farms afloat. Given the pandemic’s broader economic impacts, which arrived after farmers have had to dig into their savings for the better part of the last decade, **droves of farms are at risk of going under in the next year.**

FARM CREDIT CONDITIONS WEAKEN

Farmers rely heavily on credit to buy the seeds, fertilizer, machinery, livestock and other inputs that keep their farms running. Because most farmers require operating loans at the start of each season, a critical aspect of a farm’s financial health relates to its ability to make loan payments on time. Economists utilize various solvency measures to measure this, including the debt-to-asset ratio, debt-to-equity ratio and equity-to-asset ratio. All of these measured weakened for the eighth consecutive year in 2020. **As farm debt continues to rise, the sector’s risk of insolvency in 2020 is at its highest level since 2002**.[19] The following trends reveal weakening credit conditions for farmers and ranchers in today’s strained economy:

**Farmers struggle to make loan payments. Farm loan delinquency rates are rising.** The Federal Reserve Bank of Kansas City, which covers Colorado, Kansas, Missouri, Nebraska, New Mexico, Oklahoma and Wyoming, reports that the volume of delinquent farm real estate and operating loans increased by about 17% and 13%, respectively, over the past year.[20] Meanwhile, the Federal Reserve Bank of Chicago, covering Illinois, Indiana, Iowa, Michigan and Wisconsin, reports the share of farm loans with “major” or “severe” repayment problems is now at 8.3% — a level not seen since 1988.[21]

The 1980s all over again? Pre-COVID-19, total farm debt was estimated to hit a record $425 billion, just shy of the 1981 peak of $440 billion.[22] Since 2014, real estate debt has been rising to historic levels, potentially indicating not just rising land values, but farmers refinancing higher-interest loans or other debt into farm real estate. **In a time of persistently low farm income where farmers are defaulting on loans, this trend places a lot of farmland at risk of liquidation.[23]**

Growing demand for credit: **If farmers can’t secure affordable and timely credit, they face an economic uncertainty that threatens the survival of their farms. Several bankers are reporting growing demand for loans**, yet significant decreases in both the number and the size of agricultural loans in their portfolios.[24]

While economists and lenders note that federal relief has helped farmers navigate these conditions, many remain concerned that **without more intervention, a wave of foreclosures will strike farm country. These conditions are challenging for all farmers, but beginning farmers, smaller and midsized farmers, as well as other disadvantaged farmers in particular continue to struggle.**

#### The aff is key to increase incentives to farm: it increases wages, sets safe living conditions, AND helps farmers expand products

**Reilly, 11**, Penn State Law, “Agricultural Laborers: Their Inability to Unionize Under the National Labor Relations Act”, Penn State: Masters of Science, JD Law, URL: <https://pennstatelaw.psu.edu/_file/aglaw/Publications_Library/Agricultural_Laborers.pdf>, 2011 + since most recent citation is from then, KR

**The rate of pay agricultural laborers earn in return for their work would increase if these workers were able to organize and engage in collective bargaining with their employers.** **Agricultural workers in 2008 made between $8.64 per hour and $13.02 per hou**r.50 The hourly wage is relatively low, especially when **compared to other occupations with the ability to unionize that require similar training and working conditions**. For example**, construction laborers in 2008 earned between $10.80 and $14.95 per hour51 and textile, apparel and furnishing workers earned between $9.14 and $18.15 per hour**.52 While there is a wide range of earnings for anyone entering these three professions, **the two professions that are able to unionize earn more per hour on a national level than the agricultural workers who are exempted form organizing under the NLRA**. The low earnings of agricultural laborers as compared to other laborers supports a finding **that the NLRA would benefit agricultural laborers and are the type of workers that were meant to be extended the right to organize. If agricultural laborers were afforded protection under the NLRA to engage in collective bargaining, the likely result would be that bargaining representatives would be able to negotiate with agricultural employers for higher wages** that would lead to less of an earnings gap between agricultural laborers and laborers in other industries.

There is one major similarity between the construction industry and the agriculture industry that would seem to tip the scales in favor of affording agricultural laborers the right to unionize under the NLRA. **That is that both industries hire seasonally.**53 The seasonal nature of agricultural work is often cited as a reason against unionization, but with the similarity in the construction industry and the ability of those workers to unionize, the seasonal nature of agricultural work should be a factor in considering whether or not to include these workers under the NLRA, but is not itself conclusive. If seasonal workers in other industries are able to unionize, the seasonal nature of agricultural work should not be a major point of opposition to allowing agricultural laborers the right to collectively bargain.

**Agricultural laborers are also subject to harsh conditions because of the work that they perform and should be able to organize under the NLRA in order to bargain with their employers for better working conditions**. Agricultural laborers are **not always provided with access to clean drinking water nor are there typically adequate restroom facilitie**s for these workers to use.**55 Unions can help workers to gain access to sanitary facilities and clean drinking water by bargaining for these necessities with the employers.**56 By making these issues part of **a collective bargaining agreement, unions will be able to hold employers contractually liable to follow such conditions** and will thereby improve the conditions of employment for agricultural laborers who would otherwise be subject to sub-standard facilities.

Another hazardous working condition that arises for agricultural laborers **is the exposure to pesticides.** Agricultural laborers may be exposed to pesticides that are carcinogens or other pesticides that affect the endocrine and/or hormone systems.57 Agricultural laborers, especially those who apply pesticides, are at a greater risk of acute pesticide poisoning which many times is more prevalent than it needs to be because agricultural employers do not take the kinds of precautions necessary to prevent pesticide poisoning.58 **Unions again can aid agricultural laborers by limiting such exposure through a collective bargaining agreement because unions would be able to bargain for certain safety precautions to be taken** before workers are able to spray pesticides and can also ensure that safety gear is provided before spraying commences. Inadequate facilities and pesticides are two examples of the hazardous conditions that agricultural laborers are exposed to that could be cured through the right to unionize and collectively bargain with employers. Unions would be able to protect workers from such sub-standard conditions which in turn would lead to less illness and disease that agricultural laborers would be subjected to and would increase productivity on farms because field workers will not be slowed by sickness and would be able to work more as a result.

Further, “farmers, planters, ranchmen, dairymen, nut or fruit growers” are able to form associations for the mutual benefit of all members.59 These **associations allow their members to work collectively in preparing their products for market**.60 These producers are also able to form cooperatives to market their products and **maintain the “bargaining position of individual farmers” in order to prevent adverse consequences of overcrowding the market**.61 These agricultural producers are free to engage in concerted activity for the mutual protection of the association’s members, but agricultural laborers are exempt from asserting these same rights.62 **Agricultural producers are therefore able to become even stronger entities, further widening the differences in the bargaining positions between producers and agricultural laborers**. The unionization of agricultural laborers would better equalize the bargaining position on each side affording laborers the protections they need against agricultural employers as they become more powerful through associations.

#### 2 Distinct links:

#### 1] Productivity – Wages don’t destroy consumer spending AND create economic value

**Jayachandran, 20**, 6/18/2020, New York Times, “How a Raise for Workers Can Be a Win for Everybody”, Seema Jayachandran is an economics professor at Northwestern University, URL:<https://www.nytimes.com/2020/06/18/business/coronavirus-minimum-wage-increase.html>, KR

**Two new studies show that giving pay raises to low-wage workers is good for consumers, too**. That finding could add momentum to efforts to help grocery store clerks, nursing home workers and delivery drivers who are being paid a minimum wage despite their efforts being so essential during the current pandemic. The new research shows that **raising the minimum wage improves workers’ productivity, which translates into businesses offering higher-quality service. Because many customers are willing to pay more when quality improves, a company can raise its prices without losing sales volume. That means that profits need not suffer even though employee salaries increase.**

Moreover, **because companies are getting better performance from workers in return for paying them more, a higher minimum wage does not necessarily lead to fewer jobs. With a more productive work force, more economic value is being created and there is more money to go around**, so a higher paycheck for one person does not imply another person’s loss.

The federal minimum wage of $7.25 an hour has not increased since 2009, though Democrats in the House of Representatives have tried to raise it. State and local governments can set their own minimum wage, provided that it is above the federal rate. For example, Ohio’s minimum wage is $8.70 an hour and New York state’s is $11.80. San Francisco’s is $15.59 an hour.

The two new studies, one focused on nursing homes and the other on department stores, looked at the effects of minimum wage changes made at various levels of government. While they are both still working papers and have not appeared in scholarly journals, they were conducted rigorously, by my estimation, and the evidence they offer deserves consideration in the debate on the minimum wage, particularly during our current health and economic crises.

The nursing home study, by the economist Krista Ruffini, a visiting scholar at the Minnesota Federal Reserve, has direct implications in the current pandemic. The improvements in quality it found may be a very a big deal: They imply fewer medical complications and, perhaps, a longer life for patients.

Ms. Ruffini analyzed hundreds of increases in the minimum wage across the United States from 1990 to 2017. In each case, she compared employment in neighboring counties that suddenly had different minimum wage levels.

Her method expands on a landmark study by David Card, an economist at the University of California, Berkeley, and Alan Krueger, the former presidential adviser and Princeton economist, who found no drop in fast-food employment when New Jersey raised its minimum wage in 1992 above the level paid across the state line in Pennsylvania.

Similarly, Ms. Ruffini found little change in employment levels in nursing homes. Many employees were paid the minimum wage or somewhat more than that. Even in cases of the workers — nursing assistants — who had been paid more than the minimum wage, an increase in that base wage rippled through the labor market and still raised their salaries.

Rivian edges closer to an I.P.O., seeking a valuation above $50 billion.

PG&E says it faces a federal inquiry and $1.15 billion in losses over the Dixie fire.

The Biden administration will publish vaccine mandate rules ‘in the coming days.’

Ms. Ruffini’s most startling finding was that higher minimum wages reduced mortality significantly among nursing home residents. Her research suggests that if every county increased its minimum wage by 10 percent, there could be 15,000 fewer deaths in nursing homes each year, or about a 3 percent reduction.

How did pay increases translate into better patient health and longer lives? It appears that with better pay, jobs in nursing homes became more attractive, so employee turnover decreased. Patients benefited from more continuity in their care.

In addition, **the better paid employees may have simply worked harder, perhaps because they cared more about holding onto their jobs. Economists say they have been paid an “efficiency wage”: Employees become more productive when their wages are higher.**

The higher wage may also have **attracted more skilled or industrious people to the job,** but this seems to account for at most a small portion of the improvements in patient health.

#### Prefer the only empirical study from a country

**Katovich, Maia, 18**, 1-4/2018, “The relation between labor productivity and wages in Brazil:”, Scielo Brazil, University of Wisconsin-Madison, Madison, Wisconsin, Universidade de Campinas, Campinas, São Paulo. URL: <https://www.scielo.br/j/neco/a/QR5hfyMfL9c3gwQSGGcRyHD/?lang=en>, KR

**In Brazil, real wages grew significantly more than did labor productivity between 1996 and 2014**. However, this general trend disguises significant sectoral variations, which can be grouped into four conceptual trends. **Firstly, in the agriculture and commerce sectors, large gains in labor productivity were accompanied by real wage increases and improvements in the quality of employment.** This dynamic was likely due to **a positive interplay between productivity-enhancing market developments (incorporation of new technologies, high levels of investment, exploitation of new consumer markets/agricultural frontiers) and income-enhancing institutional developments** (formalization and minimum wage valorization). In conjunction, these forces resulted in productivity gains that outpaced wage growth, leading to declining relative wages in agriculture and commerce (see Appendix A for data on relative wages).

In a second sectoral trend, the construction and real estate and other services sectors enjoyed real wage gains over the 1996-2014 period, despite stagnation in labor productivity. Both sectors offer little natural room for drastic productivity growth through the incorporation of new technologies, investments, or practices. And both were major beneficiaries of institutional interventions such as formalization and valorization of the minimum wage.14 Together, these forces resulted in a sharp rise in relative wage for construction and real estate and other services.

In a third variation of the productivity-wage relationship, both labor productivity and real wages largely stagnated or declined slightly in the industry and transportation sectors. In the case of industry, international competition likely held down wages, while productivity suffered from ongoing processes of deindustrialization. By its nature, the transportation sector offers little room for major productivity gains, while the average wage may have fallen as a result of changing forms of employment relations (i.e., increasing levels of self-employment) and increasing relative costs of transport (Chahad; Cacciamali, 2005). These dynamics explain the moderate decline in relative wages for industry and transportation.

In a fourth and final trend, the financial and information services and public services sectors saw stable or declining levels of labor productivity, accompanied by increasing or stable real wages. Productivity declines in financial and information services were due largely to changes in the Brazilian banking system over the 1998-2004 period. Earnings increases in both sectors may have resulted from persistently high returns to education, growing demand for qualified workers, and high levels of labor organization. As a result, the relative wage rose sharply for these sectors between 1996 and 2014.

It is important to note that all analyses above should be interpreted with caution, due to the difficulty inherent in estimating absolute values of labor productivity for some sectors, particularly public services and real estate. Nevertheless, the values serve to elucidate temporal dynamics of labor productivity within (if not necessarily across) sectors, revealing essential patterns in the productivity-wage relationship.

Estimation of hierarchical wage models using pooled data assessed the main structural and individual determinants of real wages over the sample period. Growth in sector- and state- level labor productivity was significantly positively associated with growth in real wages for all economic sectors from 1996 to 2012. Elasticity between labor productivity and real wages was greatest for sectors where workers’ earnings are often based directly on productivity (real estate, commerce), or where firms can easily measure employees’ productivity (industry). Elasticities appear smaller in sectors where productivity is more difficult for firms to measure, or where there are high levels of minimum wage employment (agriculture, construction) or labor organization (financial and information services).

**In general, productivity’s impact on wages was comparable to the impacts of institutional factors**, particularly worker formalization and minimum wage. Formalization, which primarily impacts labor markets through the enforcement of a minimum wage-floor, exhibited the largest impacts on sectors with high proportions of minimum wage employment. Labor organization had varied effects on wage levels. In sectors with high levels of organization, increases in union-participation exhibited a significantly positive association with wages. In contrast, increases in union-participation in less-organized sectors were negatively associated with wages, perhaps because union activity served to draw earnings away from the larger share of non-unionized workers. Nonetheless, unionization changed little over the sample period and exerted a relatively small impact on hourly wages.

**Wage growth in line with the first sectoral trend (observed in the agriculture and commerce sectors) may be the most sustainable in the long term, in the sense that increased earnings over the 1996 to 2014 period accompanied real gains in labor productivity.** In contrast, rising relative wages in the financial and information services and public services sectors highlight the capacity of labor organization, institutional protections, and skill-biased job polarization to decouple wages from productivity levels. In sum, institutional mechanisms display the capacity to substantially reallocate factor incomes toward workers, but these mechanisms face natural limitations if not accompanied by growth in labor productivity. **Thus, sustainable future wage growth in Brazil will likely depend on positive interplays between market-driven productivity gains and continued institutional interventions.**

#### That drives economic confidence – Increased productivity drives farm growth which creates a chain of investment.

**Wang et. al, 19**, “How Farmers Make Investment Decisions: Evidence from a Farmer Survey in China”, Sustainability, Shuangjin Wang 1, Yuan Tian 2,\*ORCID, Xiaowei Liu 3 and Maggie Foley 4, 1: School of Management, Tianjin University of Commerce, Tianjin 300134, China, 2: School of Economics and Management, Beijing Jiaotong University, Beijing 100044, China, 3: College of Business, St. Ambrose University, Davenport, IA 52803, USA, 4: Davis Business School, Jacksonville University, Jacksonville, FL 32211, USA, URL: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwii17vKue7zAhVdJjQIHUr3D7YQFnoECAUQAQ&url=https%3A%2F%2Fwww.mdpi.com%2F2071-1050%2F12%2F1%2F247%2Fpdf&usg=AOvVaw1RMvM-hGadn_uoetBxebDi>, KR

**A variety of research methods were used in previous research to study farmers’ investment adjustment behavior from different perspectives**. For example, Factor Analysis [3,7], Multinomial Logit Model [8,10,11], Deterministic Discrete Event Model [9], Mixed Logit Model with Flexible Mixing Distribution [12], Tobit Model [13,14], Probit Model [15–17], and Structural Equation Modeling [18,19].

It is widely accepted **that farmers’ investment adjustment behavior is affected by** many factors, but different literature has different opinions on key influencing factors that affect farmers’ investment behavior. Adimassu et al. [20] have found that farmers’ investments are limited by their capabilities. Okello et al. [21] have revealed that **economic benefits, such as higher yields and income, can affect farmers’ investment in seed selection.** Also, the cropped area, scale of the farmland, and agricultural income significantly influence farmers’ willingness to invest [10]. **The government’s support and favorable policies can positively promote the agriculture investment of farmers** [22,23]. Adimassu et al. [2] finds that farmers’ investment behavior is affected by five major factors: households’ resource endowments, knowledge, and experience of farming, access to information, social capital, and availability of family labor.

Moreover, some economic studies focus on specific factors that affect investment choice, such as state subsidies [24], the impact of agricultural cooperatives [25], risk preferences [26,27], the mode of communal land acquisition [28], government policies [29], and the presence of a price floor [13]. Besides, Ullah and Anad [30] examine the factors that influence the level of agricultural mechanization**: economic condition of farmers, the land tenure system, scale of farmland, cost of fuel, and the cost of renting agricultural machinery. Konrad et al. [15] have found that the scale of farm operations, environmental concerns, and innovation readiness are important for farmers’ technology investments.**

Factors such as the effect of planting structure adjustment and the output elasticity of capital can affect the investment adjustment behavior of farmers, and have been investigated by some studies. Ji et al. [31] have found that **the shortage of a labor force can be supplemented by increasing capital input**. In addition, other reasons may also lead to investment adjustment behavior such **as attitudes toward capital input [4], the amount of agricultural income [32], expected financial benefits from capital input [33], and differences in adjustment capabilities [34].**

#### 2] Working conditions - Increasing working conditions key for increased yields and output

**Billikopf, 06**, 8/11, UC Berkeley, “Managing People on the Farm”, Gregorio Billikopf worked as a Labor Management Farm Advisor with the University of California from 1981 to 2014 (and is now Emeritus). URL: <https://nature.berkeley.edu/ucce50/ag-labor/7labor/01.htm>, KR

To effectively manage a labor force, **an employer must be concerned about productivity and also about people**. **Some farmers are always looking for ways to improve production and ensure the long-term viability of the business**. Others operate deteriorated farms and seem to have little interest in increasing yield or in recycling profits into the operation. **A manager’s attitude toward farm productivity, especially toward product quality, can strongly influence worker output. Performance is often enhanced when employees believe they are contributing to a valuable product** and are part of an effective team.

The connection between employee productivity and farm profitability is direct and obvious. Not as apparent, but just as vital, **is the association between concern for worker needs and profitability**. How employees’ needs are met has a direct bearing on their performance. Focusing on productivity alone may lead to a reduction in worker output.

**A concern for worker needs means attending to their well-being, as both individuals and employees**. Courteous and consistent treatment, job security, fair pay, and safe working conditions are important to employees. **When those needs are ignored, worker dissatisfaction may impede productivity**. One disenchanted employee explained, "When I first worked here, I really exerted myself. But now I try to do as little as I can and still keep my job." Another put it this way, "I’ve learned to give my job the time it deserves, but I no longer give any more of my own time. I’ve been burnt by doing so." A third worker confided, "When I’m mad at the supervisor, I do exactly what she asks me to do ... even if I know a better way of doing something or have a good reason not to do the job her way."

Trust is another important contributor to productivity. Trust builds gradually, as managers and employees learn they can count on each other. Even after workers’ trust has been won, management must continually nurture such trust if they are to retain it. The flow of trust cannot be turned on and off like irrigation water.

Management generally expects personnel to (1) consistently produce high quality work on a timely basis; (2) take their responsibilities seriously, at times even going beyond the call of duty; (3) show concern for the welfare of the farming operation and for other employees; and (4) represent the farming enterprise well within the community.

**Employees hope, in turn, that management will (1) value their feelings and opinions; (2) provide positive feedback for work well done; (3) meet the agreed-upon terms and conditions of employment; (4) be consistent and courteous;** and (5) provide a work environment where they can develop their potential over time (in terms of skills and earnings).

Understanding Labor Management

Effective labor management demands a clear understanding of its principles and familiarity with its tools. Managers deal with a complex web of interrelated elements. For instance, the wage scale advertised may affect the quality of applicants you recruit; the qualifications of those ultimately hired will in turn determine the amount of on-the-job training needed.

People mistakes may be quite costly. A new worker on a kiwifruit plantation fertilized too close to the plants with a highly concentrated formulation that burned the foliage. Many plants died. The quality of the fruit that did grow was so poor as to be unmarketable through normal channels. Yet another worker mistakenly milked a penicillin-treated cow into the main tank. The good milk in the bulk tank was contaminated and all of it had to be discarded.

These blunders could have been avoided by selecting knowledgeable, skilled personnel, or by providing better orientation, training, management and supervision. Tapping motivation, building effective personal relationships, establishing and carrying out a constructive disciplinary process, and encouraging worker input in decision making are all part of labor management.

There are a number of options available for solving people problems. If we are comfortable using only a few management tools, we may be limited in our response to a challenge. Some, for instance, attempt to use training to solve most any adversity, such as tardiness, misuse of tools, and conflict on the job, whereas others believe that most every difficulty can be solved with pay.

There is a difference between a mistake and a purposeful error. In one vineyard the vines were planted upside down under the direction of an inexperienced supervisor. The ranch manager discovered the error the following spring, when the vines failed to bud out.1 The supervisor’s mistake hurt them not only in terms of lost vine cuttings, but also a year of valuable vineyard development. Until recently, I thought this was just a mistake. A horrible one, granted, but nevertheless human blunder. That is, until I received the following note from a grape grower who had read the above narrative:

"Years ago [when] we were planting our vineyard, the Hispanic supervisor (within the farm labor contractor crew) was imparting his wisdom about crew management. He spoke about their last job at another farming community. Apparently the owner had come out to rant and rave and suggest that the men were slow and stupid. This supervisor told me how he gave that grower the expected humble response of sí (i.e., yes) and then quietly fulfilled the angry growers expectations. At the first moment the owner's back was turned the Hispanic supervisor gained the already watchful crew's eyes; then proceeded to invert a cutting and insert it into the ground. Without a word the entire crew followed his lead and planted the rest of the vineyard with the cuttings upside down. He continued his tale: That grower would have no idea what happened until next year ... and if confronted [the Hispanic supervisor] would just explain that he didn't understand English very well and thought that the grower wanted them to plant those vines the other way ... how was he supposed to know?"2

A clear understanding of management tools includes the proper application of the same. One orchardist, after learning of a neighbor’s success with an incentive program switched his pay system. The peach grower offered crew pickers a full day’s pay—and the right to leave as soon as they finished—if they would pick an additional bin for the day. The pickers were delighted. Most were through before 11 a.m. The farmer was thrilled with the increased productivity. But after the initial excitement wore off he started to feel that the bargain was not so good. He tried to even out matters by asking for yet one more bin per day. The workers, who may have originally accepted the extra bin as a fair exchange, now instead voted for union representation. Crew workers felt the farmer had broken an oral contract.

When labor management principles are properly understood, the more likely a manager will choose the right set of tools—and apply them correctly—to deal with a given challenge. Time and effort spent on improving management competence pays off. Once the foundation is laid, new skills are easier to acquire. Also, tools developed for use in one area may serve well in others. For example, a detailed job analysis may be used during the selection process. The same analysis may yield data to establish pay differences, fix performance parameters, and help tailor a training program.

An overview of human resource management is presented in Table 1-1. The list in the left column shows external constraints that are placed on the workplace, the center column lists labor management tools and practices, and the column to the right lists potential results or outcomes.

<table cut because of weird formatting issues>

I like to think of the tools in the middle column as filters or magnifiers affecting the results column. In the absence of effective human resource management practices (the middle column), external influences may have a pronounced effect on productivity and other sought after results. For instance, an employer might choose to hire the first twenty applicants who show up for a citrus-picking job without testing their skills. By so doing she forgoes the opportunity to use a selection filter to hire more productive workers.

Let’s briefly examine the elements within these three columns before moving on to the importance of purposeful action.

External influences and constraints

Tradition represents the way things have been done in the past. Some traditions ensure stability. Others may reduce creativity.

Competitors. The techniques used by competitors can influence farm practices. Like tradition, competitors may provide a positive or negative influence.

Laws at the federal, state, province, municipality, or other local level regulate almost every aspect of labor management. When well thought out, such laws can extend important protections and benefits to a large number of workers. **Many laws have been passed without sufficient study, however, and the time spent in compliance can be onerous**. Unfortunately, some believe that simply following the law will guarantee that they are managing properly. This book is intended for an international audience, and is focused on effective human resource management practices, more than on what is legal or not. Because laws do change frequently and are so different from one nation to another, make sure to always consult with a qualified local labor attorney before implementing the suggestions found here.

The labor market generally deals with relationships between the supply and demand of workers on the one hand and with wages on the other. Generally, a shortage of workers will drive wages up.

Technology. Labor law constraints and potentially unpredictable labor markets tend to encourage mechanization. Technology may change the nature and number of jobs but is unlikely to diminish the importance of labor.

**Union contracts. Agricultural enterprise managers desire freedom to manage, while unions want to restrain possible abuses of such freedom. Furthermore, unions often fight to improve economic outcomes for employees (wages and benefits). Beside issues of economics, unions also attempt to protect worker dignity and improve working conditions. Unions may give employees a greater voice in some types of decision-making**. The opposite can also be true. Perhaps the single most important predictor of unionization is the quality (or lack of) two-way communications between management and employxsees. **One poor supervisor can have a negative effect on the whole organization.** Other factors4 that may also play a key role on whether employees will join a union include: (1) perceived costs for joining vs. expected returns (e.g., cost of union dues vs. increases in pay), (2) personal feelings towards unionization (e.g., workers who identify with management, prefer merit over seniority, and value individual initiative are less likely to want to join a union), and (3) feelings toward a particular workplace and a particular union.

#### Increasing yield prevents food shortages and nutrient deficiencies

**Tian et al 21**-- Tian, Zhixi [principal investigator, Institute of Genetics and Developmental Biology and former research geneticist at Purdue], et al. "Designing future crops: challenges and strategies for sustainable agriculture." The Plant Journal 105.5 (2021): 1165-1178. (AG DebateDrills)

The first straightforward strategy for designing future crops that meet sustainable agriculture requirements is to improve the following aspects of current well-cultivated crops. **Increasing yield. It is estimated that the yields of major crops need to increase at a rate of 2.4% per year to meet the food supply demand by 2050. However, the current growth rates of the four major crops, maize (Zea mays), rice (Oryza sativa), wheat (Triticum aestivum), and soybeans (Glycine max), are only approximately half of this anticipated rate (Ray et al., 2013).** The development of new varieties with high yield potential that can fill this gap is the foremost mission of the Future Crops Design project. **In fact, in a trial, it was reported that a super-high-yield rice variety could produce one- to threefold more grains under optimal conditions than in normal paddy fields (Liu et al., 2020a). Improving nutritional quality.** Although the amount of food supply has been significantly improved in the last half-century, changes in human lifestyle and food consumption have resulted in a phenomenon called hidden hunger (Nair et al., 2016). For instance, in sub-Saharan Africa and America, about 17–30% of children under the age of 5 years have an inadequate daily intake of Vitamin A (Harjes et al., 2008; Haskell, 2012). **It has been reported that about two billion people are suffering from a chronic deficiency of micronutrients (WHO, 2008), a new threat to human health.** Moreover, the incidence of type-2 diabetes, obesity and colon disease has markedly increased in the past decade (Zhou et al., 2016). **Hence, the second mission of the Future Crops Design project is to generate crops with higher/balanced nutritional quality or specialized metabolites using metabolic engineering and synthetic biology approaches** (Francis et al., 2017; Martin and Li, 2017; Sweetlove et al., 2017; Vasconcelos et al., 2017). **Increasing agricultural resource use efficiency. It was reported that ~17% of arable land has lost productivity since 1945 due to inappropriate agriculture management** (Oldeman, 1994). In fact, nutrient-use efficiencies of today’s crops only reach 30–50% for nitrogen fertilizer (Cassman et al., 2002) and ~45% for phosphorus fertilizer (Smil, 2000). Moreover, fresh water has become a limiting factor for agriculture in many areas in the world. It is estimated that about 2800 km3 of fresh water per year is used for agricultural irrigation, and that crop production decreases by ~20% without irrigation (Siebert and Doll, 2010). **Therefore, to reduce agricultural inputs and environmental burdens, we should aim to develop high nutrient and water-use efficiency crops without yield penalty.**

#### Food shortages cause messed up interventions that destroy biodiversity

**Tian et al 21**-- Tian, Zhixi [principal investigator, Institute of Genetics and Developmental Biology and former research geneticist at Purdue], et al. "Designing future crops: challenges and strategies for sustainable agriculture." The Plant Journal 105.5 (2021): 1165-1178. (AG DebateDrills)

From the perspective of human evolution, each period of rapid population growth, such as during the Neolithic agricultural revolution, which began at about 8000 BC, the hydro agricultural or irrigation revolutions in the Near East, which began about 3000 BC, and the medieval and modern agricultural periods, which began about 1000 AD, benefited from an advance in agriculture (Taiz, 2013; Wallace et al., 2018). The recent rapid population growth during the past 300 years, in contrast, mainly resulted from the Industrial Revolution, which began in Britain about 1760. **The Industrial Revolution greatly increased the range of human activities and accelerated farmland expansion. In 1700, it was reported that nearly 95% of Earth’s ice-free land consisted of wildlands and semi-natural anthromes; however, by 2000, ~55% of these regions were used as arable land** (Figure 1a, data from https://ourworldindata.org/). The Industrial Revolution also gave birth to new technologies and production systems in agriculture, such as the application of larger irrigation systems, and more fertilizers and pesticides. In the 1960s, semi-dwarf wheat and rice varieties were introduced. These semi-dwarf crops exhibit beneficial characteristics, such as improved response to fertilizer input, lodging resistance and enhanced light utilization (Hedden, 2003; Wallace et al., 2018). Along with the fertilizers, pesticides and irrigation systems made possible by the Industrial Revolution, semi-dwarf crops were quickly adopted and resulted in a significant increase in total grain production globally. This big leap in agriculture was known as the ‘Green Revolution’ (Khush, 2001). Indeed, statistical data have revealed that the average daily food supply per person (in terms of calories) has doubled since the middle of the 19th century (Figure 1b, data from https://ourworld indata.org/). It is estimated that the world population will rise to more than 9 billion by 2050 (Alexandratos, 1999; Cassman, 1999), and at that time we will need at least 60% more food than is consumed by humans today. Moreover, our population will continuously increase, reaching over 11 billion by 2100 (Figure 1a, data from https://ourworldindata.org/). **How to feed the increasing population is a challenge facing the whole world** (Tilman et al., 2001; Godfray et al., 2010; Foley et al., 2011; Wallace et al., 2018). **A simple solution to feed a population of 9 billion is to constantly turn wild habitats into farmland**. However, this type of expansion is unrealistic as most of the world’s icefree and non-barren land area has been exhausted, and much of the rest is unlikely to sustain high yields (Cassman, 1999). More importantly, intact forests have been known to play essential roles in protecting the environment, such as storing fresh water, decreasing flooding and regenerating fertile soils. **Clearing of forests will result in prohibitive ecological costs, such as loss of biodiversity and greenhouse gas emissions. It was reported that, due to agriculture expansion, ~30% of all plant species will become extinct** (Taiz, 2013). The destruction of tropical forests releases about 1.1 9 1012 tons of carbon per year, which accounts for 12% of total anthropogenic CO2 emissions (Friedlingstein et al., 2010).

#### Biodiversity loss causes extinction

**Torres 16** [Phil Biologist, conservationist, science advocate & educator. 2 years based in Amazon rainforest, now exploring science around the world. “[Biodiversity Loss: An Existential Risk Comparable to Climate Change](http://futureoflife.org/2016/05/20/biodiversity-loss/)” <http://futureoflife.org/2016/05/20/biodiversity-loss/>.]

According to the Bulletin of Atomic Scientists, the two greatest existential threats to human civilization stem from climate change and nuclear weapons. Both pose clear and present dangers to the perpetuation of our species, and the increasingly dire climate situation and nuclear arsenal modernizations in the United States and Russia were the most significant reasons why the Bulletin [decided](http://thebulletin.org/press-release/doomsday-clock-hands-remain-unchanged-despite-iran-deal-and-paris-talks9122) to keep the Doomsday Clock set at three minutes before midnight earlier this year.

But there is another existential threat that the Bulletin overlooked in its Doomsday Clock announcement: biodiversity loss. This phenomenon is often identified as one of the many consequences of climate change, and this is of course correct. But **biodiversity loss is also a contributing factor behind climate change**. For example, deforestation in the Amazon rainforest and elsewhere reduces the amount of carbon dioxide removed from the atmosphere by plants, a natural process that mitigates the effects of climate change. So **the causal relation between climate change and biodiversity loss is bidirectional.**

Furthermore, there are myriad phenomena that are driving biodiversity loss in addition to climate change. Other causes include ecosystem fragmentation, invasive species, pollution, oxygen depletion caused by fertilizers running off into ponds and streams, overfishing, human overpopulation, and overconsumption. All of these phenomena have a direct impact on the health of the biosphere, and all would conceivably persist even if the problem of climate change were somehow immediately solved.

Such considerations warrant decoupling biodiversity loss from climate change, because the former has been consistently subsumed by the latter as a mere effect. Biodiversity loss is a distinct environmental crisis with its own unique syndrome of causes, consequences, and solutions—such as restoring habitats, creating protected areas (“biodiversity parks”), and practicing sustainable agriculture.

Deforestation of the Amazon rainforest decreases natural mitigation of CO2 and destroys the habitats of many endangered species.

The sixth extinction.

The repercussions of biodiversity loss are potentially as severe as those anticipated from climate change, or even a nuclear conflict. For example, according to a 2015 [study](http://www.ncbi.nlm.nih.gov/pubmed/26601195) published in Science Advances, **the best available evidence reveals “an exceptionally rapid loss of biodiversity over the last few centuries, indicating that a sixth mass extinction is already under way.”** This conclusion holds, even on the most optimistic assumptions about the background rate of species losses and the current rate of vertebrate extinctions. The group classified as “vertebrates” includes mammals, birds, reptiles, fish, and all other creatures with a backbone.

The article argues that, using its conservative figures, the average loss of vertebrate species was 100 times higher in the past century relative to the background rate of extinction. (Other scientists have suggested that the current extinction rate could be as much as 10,000 times higher than normal.) As the authors write, “The evidence is incontrovertible that recent extinction rates are unprecedented in human history and highly unusual in Earth’s history.” Perhaps the term “Big Six” should enter the popular lexicon—to add the current extinction to the previous “Big Five,” the last of which wiped out the dinosaurs 66 million years ago.

But the concept of biodiversity encompasses more than just the total number of species on the planet. It also refers to the size of different populations of species. With respect to this phenomenon, multiple studies have confirmed that wild populations around the world are dwindling and disappearing at an alarming rate. For example, the 2010 [Global Biodiversity Outlook](https://www.cbd.int/gbo3) report found that the population of wild vertebrates living in the tropics dropped by 59 percent between 1970 and 2006.

The report also found that the population of farmland birds in Europe has dropped by 50 percent since 1980; bird populations in the grasslands of North America declined by almost 40 percent between 1968 and 2003; and the population of birds in North American arid lands has fallen by almost 30 percent since the 1960s. Similarly, 42 percent of all amphibian species (a type of vertebrate that is sometimes called an “ecological indicator”) are undergoing population declines, and 23 percent of all plant species “are estimated to be threatened with extinction.” [Other studies](http://commondreams.org/views/2016/02/10/biodiversity-loss-and-doomsday-clock-invisible-disaster-almost-no-one-talking-about) have found that some 20 percent of all reptile species, 48 percent of the world’s primates, and 50 percent of freshwater turtles are threatened. Underwater, about 10 percent of all coral reefs are now dead, and another 60 percent are in danger of dying.

Consistent with these data, the 2014 [Living Planet Report](http://bit.ly/1ssxx5m) shows that the global population of wild vertebrates dropped by 52 percent in only four decades—from 1970 to 2010. While biologists often avoid projecting historical trends into the future because of the complexity of ecological systems, it’s tempting to extrapolate this figure to, say, the year 2050, which is four decades from 2010. As it happens, a 2006[study](http://science.sciencemag.org/content/314/5800/787) published in Science does precisely this: It projects past trends of marine biodiversity loss into the 21st century, concluding that, unless significant changes are made to patterns of human activity, there will be virtually no more wild-caught seafood by 2048.

48% of the world’s primates are threatened with extinction.

Catastrophic consequences for civilization.

**The consequences of this rapid pruning of the evolutionary tree of life extend beyond the obvious. There could be surprising effects of biodiversity loss that scientists are unable to fully anticipate in advance. For example, prior research has shown that localized ecosystems can undergo abrupt and irreversible shifts when they reach a tipping point.** According to a 2012 [paper](http://www.nature.com/nature/journal/v486/n7401/full/nature11018.html) published in Nature, there are reasons for thinking that we may be approaching a tipping point of this sort in the global ecosystem, beyond which the consequences could be catastrophic for civilization.

As the authors write, **a planetary-scale transition could precipitate** “substantial losses of ecosystem services required to sustain the human population.” An ecosystem service is any ecological process that benefits humanity, such as food production and crop pollination**. If the global ecosystem were to cross a tipping point and substantial ecosystem services were lost, the results could be “widespread social unrest, economic instability, and loss of human life.” According to Missouri Botanical Garden ecologist Adam Smith, one of the paper’s co-authors, this could occur in a matter of decades—far more quickly than most of the expected consequences of climate change, yet equally destructive.**

**Biodiversity loss is a “threat multiplier” that, by pushing societies to the brink of collapse, will exacerbate existing conflicts and introduce entirely new struggles between state and non-state actors.** Indeed, it could even fuel the rise of terrorism. (After all, climate change has been [linked](http://thebulletin.org/climate-change-and-syrian-uprising) to the emergence of ISIS in Syria, and multiple high-ranking US officials, such as former US Defense Secretary [Chuck Hagel](http://www.defense.gov/News-Article-View/Article/603441)and CIA director [John Brennan](http://www.cnsnews.com/news/article/cnsnewscom-staff/cia-director-cites-impact-climate-change-deeper-cause-global), have affirmed that climate change and terrorism are connected.)

The reality is that we are entering the sixth mass extinction in the 3.8-billion-year history of life on Earth, and the impact of this event could be felt by civilization “in as little as three human lifetimes,” as the aforementioned 2012 Nature paper notes. Furthermore, the widespread decline of biological populations could plausibly initiate a dramatic transformation of the global ecosystem on an even faster timescale: perhaps a single human lifetime.

The unavoidable conclusion is that **biodiversity loss constitutes an existential threat** in its own right. As such, it ought to be considered alongside climate change and nuclear weapons as one of the most significant contemporary risks to human prosperity and survival.

**AND Warming causes extinction – It’s linear; every decrease in rising temperatures radically mitigates the risk of existential climate change.**

**Xu and Ramanathan 17,** Yangyang Xu, Assistant Professor of Atmospheric Sciences at Texas A&M University; and Veerabhadran Ramanathan, Distinguished Professor of Atmospheric and Climate Sciences at the Scripps Institution of Oceanography, University of California, San Diego, 9/26/17, “Well below 2 °C: Mitigation strategies for avoiding dangerous to catastrophic climate changes,” Proceedings of the National Academy of Sciences of the United States of America, Vol. 114, No. 39, p. 10315-10323//recut CHS PK

We are proposing the following extension to the DAI risk categorization: warming greater than 1.5 °C as “dangerous”; warming greater than 3 °C as “catastrophic?”; and warming in excess of 5 °C as “unknown??,” with the understanding that **changes of this magnitude, not experienced in the last 20+ million years, pose existential threats to a majority of the population**. The question mark denotes the subjective nature of our deduction and the fact that **catastrophe can strike at even lower warming levels.** The justifications for the proposed extension to risk categorization are given below. From the IPCC burning embers diagram and from the language of the Paris Agreement, we infer that the DAI begins at warming greater than 1.5 °C. Our criteria for extending the risk category beyond DAI include the potential risks of climate change to the physical climate system, the ecosystem, human health, and species extinction. Let us first consider the category of catastrophic (3 to 5 °C warming). The first major concern is the issue of tipping points. **Several studies** (48, 49) **have concluded that 3 to 5 °C global warming is likely to be the threshold for tipping points such as the collapse of the western Antarctic ice sheet, shutdown of deep water circulation in the North Atlantic, dieback of Amazon rainforests as well as boreal forests, and collapse of the West African monsoon, among others.** While **natural scientists refer to these as abrupt and irreversible climate changes**, economists refer to them as **catastrophic events** (49). **Warming of such magnitudes** also **has catastrophic human health effects**. Many recent studies (50, 51) have focused on the direct influence of extreme events such as heat waves on public health by evaluating exposure to heat stress and hyperthermia. It has been estimated that the likelihood of extreme events (defined as 3-sigma events), including heat waves, has increased 10-fold in the recent decades (52). **Human beings are extremely sensitive to heat stress**. For example, the 2013 European heat wave led to about 70,000 premature mortalities (53). The major finding of a recent study (51) is that, currently, about 13.6% of land area with a population of 30.6% is exposed to deadly heat. The authors of that study defined deadly heat as exceeding a threshold of temperature as well as humidity. The thresholds were determined from numerous heat wave events and data for mortalities attributed to heat waves. According to this study, **a 2 °C warming would double the land area subject to deadly heat and expose 48% of the population. A 4 °C warming by 2100 would subject** 47% of the land area and almost **74% of the world population to deadly heat, which could pose existential risks to humans and mammals** alike unless massive adaptation measures are implemented, such as providing air conditioning to the entire population or a massive relocation of most of the population to safer climates. Climate risks can vary markedly depending on the socioeconomic status and culture of the population, and so we must take up the question of “dangerous to whom?” (54). Our discussion in this study is focused more on people and not on the ecosystem, and even with this limited scope, there are multitudes of categories of people. We will focus on the poorest 3 billion people living mostly in tropical rural areas, who are still relying on 18th-century technologies for meeting basic needs such as cooking and heating. Their contribution to CO2 pollution is roughly 5% compared with the 50% contribution by the wealthiest 1 billion (55). This bottom 3 billion population comprises mostly subsistent farmers, whose livelihood will be severely impacted, if not destroyed, with a one- to five-year megadrought, heat waves, or heavy floods; for those among the bottom 3 billion of the world’s population who are living in coastal areas, a 1- to 2-m rise in sea level (likely with a warming in excess of 3 °C) poses existential threat if they do not relocate or migrate. It has been estimated that **several hundred million people would be subject to famine with warming in excess of 4 °C** (54). However, **there has essentially been no discussion on warming beyond 5 °C**. Climate change-induced species extinction is one major concern with warming of such large magnitudes (>5 °C). The current rate of loss of species is ∼1,000-fold the historical rate, due largely to habitat destruction. At this rate, about 25% of species are in danger of extinction in the coming decades (56). Global warming of 6 °C or more (accompanied by increase in ocean acidity due to increased CO2) **can act as a major force multiplier and expose as much as 90% of species to the dangers of extinction** (57). **The bodily harms combined with climate change-forced species destruction, biodiversity loss, and threats to water and food security**, as summarized recently (58), **motivated us to categorize warming beyond 5 °C as** unknown??, implying the possibility of **existential** threats. Fig. 2 displays these three risk categorizations (vertical dashed lines).

## 1AC — FW

### FW

#### The standard is maximizing expected wellbeing.

#### Prefer it:

#### ] Actor specificity:

#### A] Aggregation – every policy benefits some and harms others, which also means side constraints freeze action.

#### B] No act-omission distinction – choosing to omit is an act itself – governments decide not to act which means being presented with the aff creates a choice between two actions, neither of which is an omission

#### C] No intent-foresight distinction – If we foresee a consequence, then it becomes part of our deliberation which makes it intrinsic to our action since we intend it to happen

o/w

#### ] Lexical pre-requisite: threats to bodily security preclude the ability for moral actors to effectively act upon other moral theories since they are in a constant state of crisis that inhibits the ideal moral conditions which other theories presuppose

#### ] Strength of obligation – they can’t explain differences in obligations and IF they do it devolves to consequences

**Sinnott-Armstrong, 09**, “How strong is this obligation? An argument for consequentialism from concomitant variation”, Oxford University Press, Walter Sinnott-Armstrong is Chauncey Stillman Professor of Practical Ethics in the Department of Philosophy and the Kenan Institute for Ethics at Duke University He has received fellowships from the Harvard Program in Ethics and the Professions, the Princeton Center for Human Values, the Oxford Uehiro Centre for Practical Ethics, the Center for Applied Philosophy and Public Ethics at the Australian National University, and the Sage Center for the Study of the Mind at the University of California, Santa Barbar. He earned his bachelor’s degree from Amherst College and his doctorate from Yale University. He has published widely on ethics (theoretical and applied as well as meta-ethics), empirical moral psychology and neuroscience, philosophy of law, epistemology, philosophy of religion, and informal logic, URL: <https://www.jstor.org/stable/40607654>, KR

Now simply apply John Stuart Mill’s method of concomitant variation. If lung cancer rates go up and down when smoking rates go up and down, but lung cancer rates do not change when atmospheric humidity goes up or down, then these data support the hypothesis that smoking rather than humidity causes lung cancer, at least if we can rule out the alternatives that cancer causes smoking, that some third factor causes both smoking and cancer, and that the correlation is accidental. Analogously, since the strength of a moral obligation goes up and down as the harms in violating it go up and down, this correlation supports the hypothesis that the harms of violating it are what make the moral obligation as strong as it is. This argu- ment assumes that (i) the strength of the moral obligation does not explain the degree of harm (it cannot explain, for example, why it is so bad to miss this flight), (ii) no third factor explains the strength, the harm, and their correlation (what would that third factor be?), and (iii) the correlation is not accidental (because consequences are at least part of what matters in morality). Thus, Mill’s method of concomitant variation supports a conse- quentialist account of the strength of moral obligations to keep promises.

This conclusion extends as well to the existence of such moral obligations. There are two main options: we can say either (i) consequences determine both the existence and the strength of the moral obligation not the strength of the moral obligation is, instead, the consequences of breaking (or keeping) the promise. Option (i) is clearly simpler and more coherent. Why would one factor determine whether any moral obligation at all exists, while a completely separate factor (in the future rather than the past) deter- mines how strong that moral obligation is? That would be like postulating that the force of a golf club hitting a golf ball is what causes the ball to move but a different factor determines how fast or far the ball moves. Of course, dense air or a tree might explain why the ball did not go as fast or far as otherwise expected. However, in the absence of any such additional force, it would be implausible to postulate separate causes for the existence and degree of the ball’s motion. Analogously, we should reject the moral theory that one factor determines the existence of a moral obligation and a separate factor determines its strength. There might be conflicting moral reasons of all sorts (analogous to the dense air and tree), but they do not explain the existence or the strength of the original moral obligation itself. Thus, the better alternative is the consequentialist theory that one factor – the harm caused by violating the obligation – explains both the existence and the strength of the moral obligation not to break promises.

Critics might object that I have a moral obligation not to break my promise even if breaking it will not cause any harm at all. Imagine that you will have a better time at lunch with your other friends without me rather than with me. Still, I seem to have some (weak) moral obligation to keep my promise to meet you and them for lunch. However, consequentialists can explain that weak moral obligation by weak side-consequences. If I break my pro- mise, you will lose trust in me, which will complicate or even prevent later mutual arrangements and will create a risk of undermining our friendship. The risk of such side effects also explains why I need to apologize if I break my promise, since apologies reduce some harmful side effects. Even in the case of a proverbial deathbed promise, breaking it will not harm the promis- see (who is dead), but will create risks of harm to my character and of more harmful promise breaking in the future. In the very odd cases where even these effects are ruled out (such as when I will die right after breaking my promise to a dying person), then I doubt that I really do have any moral obligation to keep my promise. Why not? Because nobody at all is harmed if I break this promise in these circumstances. Besides, I am about to die, so give me a break! In any case, we should not trust our moral intuitions in such odd cases, because they did not evolve to fit such weird circumstances.

For these reasons, the best explanation of both the existence and the strength of the moral obligation to keep promises is consequentialist. Moreover, this argument applies as well to other apparently non-consequen- tialist obligations.

Consider the obligation not to lie. Some lies (such as telling a friend that you like his or her new haircut) are white lies, because they harm nobody, at least directly. As a result, they violate little or no moral obligation. Other lies (such as Bill Clinton’s lie about Monika Lewinsky) have very bad conse- quences, so they violate a very strong moral obligation. The strength of the obligation not to lie varies with the harms caused by lying. Thus, again, Mill’s method of concomitant variation suggests that the ground of the moral obligation not to lie is harmful consequences of lying.

Next consider the moral obligation to obey the law. There is a strong moral obligation not to drive on the left side of a crowded two-way road in the USA, even if the violated law happened to be passed by a very slim majority, and even if I never benefited in the past from the law requiring right-side driving rather than left-side driving. In contrast, even if I have some moral obligation not to pass a stop sign without coming to a complete stop in the middle of the night on a clearly deserted road, that moral obligation is very weak, because violating it causes no harm or risk of harm to others, even if the law that I violated was passed unanimously and even if I benefited in the past from other people stopping at that stop sign (at least during the day). Thus, as with promises and lies, the strength of the moral obligation not to break the law varies with the harms caused by breaking that law, so Mill’s method of concomitant variation again suggests that the ground of the moral obligation to obey the law is harmful consequences of breaking the law.

All of this suggests a new question and a new method in moral philosophy. Most moral philosophers and common folk have focused on the dichoto- mous questions of whether or not an act is right or wrong and whether or not someone has a moral obligation to act or not to act in a certain way. Those are important questions, but they are not the only ones worth asking. A moral theory also needs to answer the question of how strong a moral obligation is. When we ask this question, we find correlations between the strength of moral obligations and various factors that, together with Mill’s method of concomitant variation, reveal the ground of those moral obliga- tions. This brief note has tried to suggest both that this method is fruitful and also that, when we apply it, consequentialism comes out on top.

To respond, deontologists need to explain why some moral obligations are stronger than others without invoking the harmful consequences of violating those moral obligations. I would like to see them try.

#### ] Substitutability—only consequentialism explains necessary enablers.

**Sinnott-Armstrong 92** [Walter, professor of practical ethics. “An Argument for Consequentialism” Dartmouth College Philosophical Perspectives. 1992.]

**A moral reason to do an act is consequential if and only if the reason depends only on the consequences of either doing the act or not doing the act.** For example, a moral reason not to hit someone is that this will hurt her or him. A moral reason to turn your car to the left might be that, if you do not do so, you will run over and kill someone. A moral reason to feed a starving child is that the child will lose important mental or physical abilities if you do not feed it. All such reasons are consequential reasons. All other moral reasons are non-consequential. Thus, **a moral reason** to do an act **is non-consequential if** and only if **the reason depends even partly on some property that the act has independently of its consequences. For example, an act can be a lie regardless of what happens as a result of the lie** (since some lies are not believed), and some moral theories claim that that property of being a lie provides amoral reason not to tell a lie regardless of the consequences of this lie. Similarly, the fact that an act fulfills a promise is often seen as a moral reason to do the act, even though the act has that property of fulfilling a promise independently ofits consequences. All such moral reasons are non-consequential. In order to avoid so many negations, I will also call them 'deontological'. This distinction would not make sense if we did not restrict the notion of consequences. If I promise to mow the lawn, then one consequence of my mowing might seem to be that my promise is fulfilled. One way to avoid this problem is to specify that the consequences of an act must be distinct from the act itself. My act of fulfilling my promise and my act of mowing are not distinct, because they are done by the same bodily movements.10 Thus, my fulfilling my promise is not a consequence of my mowing. A consequence of an act need not be later in time than the act, since causation can be simultaneous, but the consequence must at least be different from the act. Even with this clarification, it is still hard to classify some moral reasons as consequential or deontological,11 but I will stick to examples that are clear. In accordance with this distinction between kinds of moral reasons, I can now distinguish different kinds of moral theories. I will say that **a moral theory is consequentialist if and only if it implies that all basic moral reasons are consequential. A moral theory is then non-consequentialist or deontological if it includes any basic moral reasons which are not consequential**. 5. Against Deontology So defined, the class of deontological moral theories is very large and diverse. This makes it hard to say anything in general about it. Nonetheless, I will argue that no deontological moral theory can explain why moral substitutability holds. My argument applies to all deontological theories because it depends only on what is common to them all, namely, the claim that some basic moral reasons are not consequential. Some deontological theories allow very many weighty moral reasons that are consequential, and these theories might be able to explain why moral substitutability holds for some of their moral reasons: the consequential ones. But even these theories cannot explain why moral substitutability holds for all moral reasons, including the non-consequential reasons that make the theory deontological. The failure of deontological moral theories to explain moral substitutability in the very cases that make them deontological is a reason to reject all deontological moral theories. I cannot discuss every deontological moral theory, so I will discuss only a few paradigm examples and show why they cannot explain moral substitutability. After this, I will argue that similar problems are bound to arise for all other deontological theories by their very nature. The simplest deontological theory is the pluralistic intuitionism of Prichard and Ross. Ross writes that, when someone promises to do something, 'This we consider obligatory in its own nature, just because it is a fulfillment of a promise, and not because of its consequences.'12 Such deontologists claim in effect that, **if I promise to mow the grass, there is a moral reason for me to mow the grass, and this moral reason is constituted by the fact that mowing the grass fulfills my promise.** This reason exists regardless of the consequences of mowing the grass, even though it might be overridden by certain bad consequences. **However**, if this is why I have a moral reason to mow the grass, then, even **if I cannot mow the grass without starting my mower, and starting the mower would enable me to mow the grass, it still would not follow that I have any moral reason to start my mower, since I did not promise to start my mower**, and starting my mower does not fulfill my promise. Thus, **a moral theory cannot explain** moral **substitutability if it claims that properties** like this **provide moral reasons.**

#### ] Governments must aggregate because their policies benefit some and harm others so the only non-arbitrary way to prioritize is by helping the most amount of people. o/w since different agents have different ethical obligations

**Mack 4** [(Peter, MBBS, FRCS(Ed), FRCS (Glasg), PhD, MBA, MHlthEcon) “Utilitarian Ethics in Healthcare.” International Journal of the Computer, the Internet, and Management Vol. 12, No.3. 2004. Department of Surgery. Singapore General Hospital.] SJDI

Medicine is a costly science, but of greater concern to the health economist is that it is also a limitless art. Every medical advance created new needs that did not exist until the means of meeting them came into existence. Physicians are reputed to have an infinite capacity to do ever more things, and perform ever more expensive interventions for their patients so long as any of their patients’ health needs remain unfulfilled. **The traditional stance** of the physician **is that each patient is an isolated universe.** When confronted with a situation in which his duty involves a competition for scarce medications or treatments, he would plead the patient’s cause by all methods, short of deceit. However, **when the** physician’s **decision involves more than just his own patient**, or has some commitment to public health, **other issues have to be considered.** He then has to recognise that the **unbridled advocacy of the patient may not square with** what the economist perceives to be **the most advantageous policy to society as a whole.** Medical professionals characteristically deplore scarcities. Many of them are simply not prepared to modify their intransigent principle of unwavering duty to their patients’ individual interest. However, **in decisions involving multiple patients**, making available **more** medication, labour or **expenses for one** patient **will mean** leaving **less for another. The physician is** then **compelled** by his competing loyalties **to enter into a decision mode of one versus many, where the underlying constraint is** one of **finiteness of the commodities.** Although the medical treatment may be simple and inexpensive in many instances, there are situations such as in renal dialysis, where prioritisation of treatment poses a moral dilemma because some patients will be denied the treatment and perish. Ethics and economics share areas of overlap. They both deal with how people should behave, what policies the state should pursue and what obligations citizens owe to their governments. The centrality of the human person in both normative economics and normative ethics is pertinent to this discussion. Economics is the study of human action in the marketplace whereas ethics deals with the “rightness” or “wrongness” of human action in general. Both disciplines are rooted in human reason and human nature and the two disciplines intersect at the human person and the analysis of human action. From the economist’s perspective, **ethics is identified with the investigation of rationally justifiable bases for resolving conflict among persons with divergent aims** and who share a common world. **Because of the scarcity of resources, one’s success is another person’s failure. Therefore ethics search for rationally justifiable standards for the resolution of interpersonal conflict.** **While the realities of human life have given rise to the concepts of property, justice and scarcity, the management of scarcity requires the exercise of choice**, since having more of some goods means having less of others. **Exercising choice in turn involves** comparisons, and **comparisons** are **based on principles.** As ethicists, **the meaning of these principles must be sought in the moral basis that implementing them would require.** For instance, if the implementation of distributive justice in healthcare is founded on the basis of welfare-based principles, as opposed to say resource-based principles, it means that the health system is motivated by the idea that what is of primary moral importance is the level of welfare of the people. This means that **all distributive questions should be settled according to which distribution maximises welfare.** Utilitarianism is fundamentally welfarist in its philosophy. Application of the principle to healthcare requires a prior understanding of the welfarist theory as expounded by the economist. Conceptually, welfarist theory is built on four tenets: utility maximisation, consumer sovereignty, consequentialism and welfarism. Utility maximisation embodies the behavioural proposition that individuals choose rationally, but it does not address the morality of rational choice. Consumer sovereignty is the maxim that individuals are the best judge of their own welfare. Consequentialism holds that any action or choice must be judged exclusively in terms of outcomes. Welfarism is the proposition that the “goodness” of the resource allocation be judged solely on the welfare or utility levels in that situation. Taken together **these** four **tenets require that a policy be judged solely in terms of the resulting utilities achieved by individuals as assessed by the individuals themselves. Issues of who receives the utility, the source of the utility and any non-utility aspects of the situation are ignored.**

#### ] Phenomenal introspection --- it’s the most epistemically reliable --- historical moral disagreement over internal conceptions of morality such as questions of race, gender, class, religion, etc prove the fallibility of non-observational based ethics --- introspection means we value happiness because we can determine that we each value it --- just as I can observe a lemon’s yellowness, we can make those judgements about happiness.

#### Ep mod

#### ] Reject calc indicts and util triggers permissibility arguments:

#### A] Empirically denied—both individuals and policymakers carry out effective cost-benefit analysis which means even if decisions aren’t always perfect it’s still better than not acting at all

#### B] Theory—they’re functionally NIBs that everyone knows are silly but skew the aff and move the debate away from the topic and actual philosophical debate, killing valuable education

#### ] Bindingness- only pursuing pleasure and avoiding pain can motivate action consistently- no external system of ethics has anything intrinsic that dictate it be followed.

#### ] Intuitions: If something happens 100 times we know it will happen again because of probability and mathematical analysis – only empirical processes can allow us to accurately make deductive predictions

#### Extinction first:

**1] Moral uncertainty means preventing extinction should be our highest priority.  
Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
These reflections on **moral uncertainty suggest** an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate.¶ **Our present understanding of axiology might** well **be confused. We may not** nowknow — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet **be able to imagine the best ends** of our journey. **If we are** indeedprofoundly **uncertain** about our ultimate aims,then we should recognize that **there is a great** option **value in preserving** — and ideally improving — **our ability to recognize value and** to **steer the future accordingly. Ensuring** that **there will be a future** version of **humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain** a lot of **value.** To do this, we must prevent any existential catastrophe.

### AFC

#### Interpretation: the neg must not contest the aff framework, read arguments that contest the ethical validity of the aff standard, or read an alternative framework provided that: (A) the aff standard is act utilitarianism and (B) the aff has been disclosed open source

#### 1] Clash – AFC is key to force substantive engagement – util doesn’t exclude impacts and forces debaters to do advocacy comparison and engage in meaningful rebuttal clash. The disclosure plank means no prep skew and that you should be ready to debate the aff which is key to topic clash

#### 2] Strat skew – neg is reactive and can up-layer the aff on moral frameworks, procedurals, and discursive arguments – AFC levels the playing field by forcing the neg to commit to the aff on substance, which ensures the AC matters

#### 3] My offense turns phil ed

**Nebel et al ’13** .Teaching Philosophy 36:3, September 2013 271 Teaching Philosophy through Lincoln-Douglas Debate JACOB NEBEL Wolfson College, Oxford University RYAN W. DAVIS Harvard University PETER VAN ELSWYK Rutgers University BEN HOLGUIN New York University

**Another cause of** poorly justifiedrelativism and **skepticism in LD debate comes from judge expectations**. Judges are advised not to intervene—that is, not to use their prior opinions about the resolution when deciding who won any given debate. That would be unfair, say some debaters and coaches, since it would advantage one debater over her opponent.9 Yet judges of LD debate today often take an even stronger view than this one. Instead of abstaining from intervention about the resolution**, judges try to abandon all of their prior opinions about everything**. While this ideal is impossible to achieve, its proponents believe that judges should try to reduce the influence of their own views as much as possible. They argue that judges should let debaters defend whatever they wish, which is often defended on the grounds that there are no right answers to moral questions, or that the answers depend on the students’ own beliefs. LD debaters tend to welcome this opposition to intervention because it gives them greater freedom to choose strategies that increase their odds of winning. They also tend to accept every view supporting this idea without much thought or criticism, including views like moral relativism and skepticism. **Debaters** sometimes **like arguments because of** their **conclusions**—after all, they work hard to find the ones they need—**not** because of their quality and evidential **support.** The problem, then, is that **debaters are inclined to accept a** controversial philosophical **view about morality for the wrong reasons.**

#### No RVI on 1ac theory that has a pre-emptive violation--they would have 7 minutes to answer a minute-long shell and the debate would end right there--the entire 1ac cant be the shell because then they could just choose not to violate it