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A utilitarian, Garrett Hardin in his Lifeboat Ethics argues that an international state should refrain from sharing resources with and providing help for other states to maximize its people's welfare. The global resources are finite and states ideally should share it equally for maximum collective interest. Yet the absence of supreme coercive authority to enforce fair sharing gives ample incentive for rule violation, as states attempt to maximize self-interest in disregard for the eventual collective ruin, which Hardin refers to as the "Tragedy of Commons." Since other states act both as sharers and opponents, a state should aggressively eradicate them to ensure its survival. In response, I argue that Hardin's solution to the "Tragedy of Commons" denotes perpetual population reduction, which inevitably entails systematic instability that diminishes people's welfare. My opponents may propose that population reduction gives rise to a Hardinian bipolar world that eventually stabilizes itself. My response to this potential counterargument has two parts: on one hand, the stability of Hardinian bipolarity is established upon the Rational Actor Model wherein theoretical utility-maximization does not guarantee stability in reality especially under the influence of contingent factors; on the other hand, even if Hardinian bipolarity guarantees stability of societal systems, Lifeboat Ethics does not possess strong theoretical strength to give practical moral guidance. I also propose that international aid is possible with overpopulation amelioration, especially when conducted by third party and non-profit agencies.

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Abstract

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Utilitarianism is an ethical theory that determines an action's moral worth according to its tendency to produce human welfare (Mill et al. 18). In utilitarianism, an action is morally good only when it has a greater tendency to maximize overall welfare than to inflict pain. Overall human welfare alludes to the totality of an individual's welfare when only him is in context; that denotes the net welfare of all affected individuals comprising a community that is holistically considered (Mill et al. 18). Utilitarianism is widely applied in international relations, profoundly influential especially in the topic of foreign aid. A utilitarian, Garrett Hardin argues that individual welfare can only be improved through population reduction given the finite resources and global overpopulation ("Lifeboat Ethics" Hardin). A state should then refrain from providing aid for other states in need, purging its opponents and co-sharers to secure a larger

share of global resources and thereby improving the individual life quality of its people ("Commentary" Hardin). The intersection between the increase of life quality and the decrease of population represents a utility-maximizing equilibrium. However, this equilibrium is sustainable only when fair sharing can be enforced by a supreme authority[i] ("Commentary" Hardin), which does not exist in reality. The ensuing ruleless competition inevitably entails the "Tragedy of Commons," ("Lifeboat Ethics" Hardin 40)[1] a collective sharing problem wherein every individual participant acts purely on and attempts to maximize his self-interest, albeit acknowledging the collective debacle, ultimately depleting the common resources. Hardin's solution to the "Tragedy of Commons" is to perpetuate population reduction even after the equilibrium is reached ("Lifeboat Ethics" Hardin). In this paper, however, I shall argue against Hardin that perpetual population reduction entails significant population insufficiency that undermines the stability of social systems, and is therefore an inadequate solution to the "Tragedy of Commons."

"Tragedy of Commons" and Lifeboat Ethics

Hardin uses the pasture example to illustrate the "Tragedy of Commons." The total resource is compared to a pasture and a state to a herdsman who attempts to get more grass for his cattle ("Commentary" Hardin 562). Given the pasture's finite capability of revegetation, the total number of animals admitted should be limited. Too many animals will "overload" and ruin the pasture — the "Tragedy of Commons" happens ("Commentary" Hardin 562). To prevent grass depletion, every herdsman has to enact voluntary restraint to help control the total number of admitted animals. By enacting voluntary restraint, the herdsmen group can adjust itself to the ideal utility-maximizing equilibrium where the largest number of animals can have the greater fair share of the grass. On the other hand, unanimous voluntary restraint is utterly important for the stability of a private property system, for it requires nothing but one deviator to trigger a Domino collapse[1] that upset the equilibrium and bring forth ruleless competition. In short, only complete voluntary restraint can prevent the "Tragedy of Commons."

However, tempted by the absence of a supreme referee that enforces individual voluntary restraint, some herdsmen would violate the rules to have a greater share ("Commentary" Hardin 562). In reality, this supreme authority superficially exists as the United Nations, "a toothless tiger" ("Commentary" Hardin 561) with inadequate executive power to impose sanctions. The absence of efficacious punishment thus leads to increasing rule violations and ultimately international anarchy, for the maximization of self-interest can override the deterrence of collective ruin ("Commentary" Hardin 562). Under such circumstance, other states are both sharers and adversaries; voluntary restraint consequently not only harms a state's self-interest

[1] As illustrated by the positive/negative feedback system (George and Lauren 220-222).

but also threatens its security, as it signals vulnerabilities for potential exploitation and eradication. On the contrary, a state can have a greater share of common resources if it unscrupulously eradicates other states—the fewer opponents, the easier to secure a greater share. Therefore, Hardin's solution to the "Tragedy of Commons" indicates that states should actively aggress to eradicate other states.

Aggressive eradication and perpetual population reduction construct the foundation of Hardin's Lifeboat ethics theory. In this theory, the affluent states are people on the lifeboat and the poorer states are people in the water ("Lifeboat Ethics" Hardin). If people onboard provide unlimited admission, the boat would be overloaded and sink ("Commentary" Hardin 562). On the other hand, limited admission nevertheless fills up the vacancy, which serves as a safety factor without which the boat would still sink in a disaster ("Commentary" Hardin 562). Likewise, a country's people will suffer and die if it does not anticipate disasters and maintain emergency measures like food depositories. Only one option remains: do not provide aid at all ("Commentary" Hardin 562). In conclusion, perpetual population reduction and aggressive eradication of other states is the only way to survive the inevitable "Tragedy of Commons."

Perpetual Population Reduction Entails Systematic Instability

It is worth emphasizing that Hardin *still* argues for population reduction even after overpopulation is relieved and the equilibrium is achieved. However, the nature of perpetual population reduction is dilemmatic: either population loss entails economic dysfunction, or the compensation for population loss induces systematic instability, both of which have greater tendency to diminish welfare. This dilemma addresses the fallacies of Lifeboat Ethics in domestic affairs since the Hardinian model is also applicable under such circumstances.

In a Hardinian world, the population reduction starts from the demise of the unaided underdeveloped countries, followed by all-out wars between the remaining affluent nations. Only the most powerful country would survive this brutal competition. However, it may be prone to economic dysfunction. A sufficient example is this: a barren country will never have timber anymore if it had been completely dependent on timber import from its verdurous opponents whom it has previously eradicated. Furthermore, even if it has forests and lumbering equipment, it does not have adequate labor force to fell the trees due to perpetual population reduction. Timber thus becomes disproportionately scarce, upsetting its supply-demand balance while its price skyrockets (Mankiw et al.). Should such fiscal malady spread to other sectors as well, the country's economic system becomes dysfunctional. Therefore, perpetual population reduction entails widespread disruption of the supply-demand balance that weakens the state's economy.

On the other hand, the second part of the dilemma illustrates that systematic stability is nevertheless undermined despite technological compensation for insufficient productivity[2]. Even if a high-tech chainsaw boosts a worker's productivity, he should use it not to fell the trees but rather to massacre other workers. In other words, the collective need for economic stability is outbalanced by the individual interest to exterminate other sharers. Widespread hostile refusals to cooperate and address the collective interest thus lead to the system's institutional failures and infrastructural corruptions, which manifest as robbery, murder and even civil war. In short, the nature of Hardinian solution suggests that the incentive to eradicate internal opponents overrides the system's institutional need to maintain order, eventually undermining society stability.

Two countries from different historical periods support my view: Northern Sung dynasty of imperial China and modern Japan. Instead of governmental population control and contraception, population increase of Northern Sung was constrained[ii] by frequent[3] natural disasters (Ye and Xu). Northern Sung also had a powerful supreme authority that was powerful enough to enforce fair sharing and suppress disturbance. However, its supreme government in some cases poorly executed emergency measures, leaving the people desperate[iii] and providing fertile soil for domestic unrest.[iv] Compounded by impossibility of foreign aid and hindrance to agricultural development,[4] the government's neglect of consensual discontentment also exacerbated the turmoil.[v] The Northern Sung example therefore suggests that the existence of supreme authority indeed provides opportunity for enforcing fair sharing, but it does not constitute the promotion of people's welfare.

Unlike Northern Sung, modern Japan achieves negative population growth in a peaceful fashion, but the problems are nevertheless present. The ensuing labor force shortage increase the number of working females (Dolan, Worden, Federal Research Division 88) who are then more unwilling to have children[vi], creating a vicious cycle (Haworth). Moreover, given the capitalistic nature of Japanese economy, less populace as consumers could cause fiscal decay. On the other hand, low fertility trends[5] and longer life expectancies[6] aggravates population aging, inflicting distress on the elderly[vii] and "severely straining" (Dolan, Worden, Federal Research Division

[2] Technology advancements do compensate for labor force insufficiency, as demonstrated by PPF, or the Product Possibility Frontier (Mankiw et al.).

[3] At least one disaster struck every year in Northern Sung (Institute of History).

[4] Numerous disaster records depict severe damage to crops and farmland (Ibid. 1-372).

[5] As *shoshika* (少子化) in Japanese. The fertility rate in 1988 was 11.9 per 1000 (Dolan, Worden, Federal Research Division 87).

[6] The life expectancy in 1988 was 81.3 years for men and 75.5 years for women (Ibid. 87).

89) government healthcare systems. While the Northern Sung example illustrates that the possibility of fair sharing enforcement does not constitute the promotion of people's welfare, the Japan example further explicates that repercussions of population decline is nonetheless staggering regardless of the presence of these Hardinian ideals. Altogether the two examples reinforce my argument that the deleterious impact of perpetual population reduction—natural or artificial—undermines the stability of social system and diminishes the welfare of people.

Potential Objection: Perpetual Population Reduction Creates Bipolar Stability

My opponents will possibly pose their objection in the following form: Hardinian solution does imply fierce, global and all-out war. As elimination continues, however, it is possible to form a bipolar world at a point when only two states remain. Bipolarity is the most likely solution to the Tragedy of Commons in a Hardinian world wherein every state plots the demise of as many opponents as possible for its self-interest; unipolarity signifies internal competition for common resources and leaves the Tragedy of Commons unresolved, while multipolarity possesses a tendency to reduce itself to bipolarity. Like the US-USSR bipolarity in the Cold War era, the Hardinian bipolarity will be stable. The two states' armistice would thereby promote people's welfare. The bipolar model is also applicable for domestic competition, which can be viewed as miniature elimination.[viii]

Political scientist Kenneth Waltz has powerful arguments for the stability of bipolarity and provides four stability-enhancing elements that both Hardinian and realist bipolar system exhibit:

1. The absence of peripheries (Waltz 882-883). No third power could exist between USSR and US, as smaller states were all allies of either hegemon. The absence of peripheral states will also be present in the Hardinian bipolarity, for there simply exists none. Disturbance is then further eliminated and the stability will thereby be enhanced.[7]
2. The two poles' heightened involvements in a wider range of increasingly complicated factors, making partial changes more relevant (883). In the Cold War, regional conflicts could stimulate the two poles' reactions through alliance interconnections[ix]. Similarly, the Hardinian poles would regard no factor as exclusive due to narrowed concentration. As a result, increased relevancy of partial changes encourages their responsibility and enhances stability.

[7] As Waltz writes, "[The US's] response in a two-power world was geared to Soviet action, and [the Soviets'] to [the Americans',] which produced an increasingly solid bipolar balance." (Waltz 883) John Lewis Gaddis also suggests that bipolarity is one of the structural elements that establish systematic stability (Gaddis 105).

3. The nearly constant presence of pressure and the recurrence of crises (883-886). Both poles' hostility towards each other never fades unless bipolarity collapses. Moreover, a striking-first strategy is advantageous[x] only when the target can be immediately eradicated—an unlikely situation. Instead, the impossibility of a disarming blow allows retaliation, which entails mutual destruction. It is therefore the menace of mutual destruction that encourages statesmanship and discourages brinksmanship, thereby enhancing bipolar stability.[xi]
4. The preponderant power of both poles (887). Waltz argues that the three factors above are the "most important characteristics" that enhance stability, and the preponderant power amplifies the consequences of minute happenings, combining the previous three to absorb[8] the "revolutionary political, military, and economic changes" within the bipolar balance. Such preponderant power was present during the Cold War and will be observed in Hardinian bipolarity as a result of fierce competition.

The absence of peripheries, the increased relevance of actions, the persistence of pressure and crises, and the preponderant power of both poles reinforce the stability of a bipolar system. Even if the pursuit of self-interest encourages military veraciousness, these elements would impel the two states to settle and stabilize. I consider this to be the strongest counterargument that my opponents will possibly present.

My Response to Potential Objection

In the above section my opponents argues that the Hardinian bipolarity will remain stable, allowing the promotion of people's welfare. My response to this objection comprises two parts. Grounded in the realm of political sciences, the first part demonstrates that structurally impelled maximization of utility in hypothetical rational model does not guarantee systematic stability in reality, especially under contingency. In the second part I return to moral grounds, proposing that even if such systematic stability is guaranteed, Hardin's solution do not provide adequate practical guidance for international relations.

Hypothesized Utility Maximization Does Not Guarantee Stability

A widespread and traditional model to explicate international relations, the Rational Actor Model personifies and summarizes states as "unitary," "value-maximizing" (Allison 67) and omnipotent[9] rational decisionmakers. Waltz's arguments above

[8] Gaddis also argues that more powerful states in a bipolar system can tolerate more defections, such as China who reversed its alignment twice during the Cold War (Gaddis 110). Such indifference to defections means the ability to "counteract stimuli that would otherwise threaten [the system's] survival." (103)

[9] A state's omnipotence here alludes to its complete awareness of the situation and unified control of its organizations, allowing it to choose the alternative with the best payoff. In reality a

represent the quintessence of this model: deterred by the unpredictable consequences, the increasingly complicated involvement and the potential mutual annihilation, a rational actor would not initiate any war at all, thereby enhancing stability.

However, the Rational Actor Model is often too rigorous for practical analysis. In the Cuban Missile Crisis, for example, all hypotheses under the Rational Actor Model attempt to explain the deployment of Soviet missiles as means to further strategic objectives[xii]. These strategically important missiles should be strictly protected, whereas the absence of camouflage,[10] belated completion of protection[11] and the easily visible insignias[12] mark these hypotheses' overt inconsistencies, as what can only be regarded as "inexplicable." (Allison 106) Such inconsistencies expose the model's shortcomings that its implementation demand constant and full rationality, while the states' choices of action in reality are never perfectly rational, especially when constrained by organizational factors. In other words, perfectly rational action in hypotheses does not constitute practical utility maximization, and therefore does not guarantee systematic stability.

The fallacy of Waltz's arguments is also evident even under the same roof of Rational Actor Model. Using the same model, Thomas Schelling argues that in a situation of mutual deterrence, the probability of nuclear war is reduced not by the balance but rather by the stability of the balance (Schelling). The stability of Hardinian bipolarity can only be established in an unstable bipolar balance in which both poles' intention to initiate limited war[13] is deterred by their cognizance of the resulting nuclear annihilation, for the attacked state would rather retaliate with nuclear weapons than accept the "humiliating defeat." (Allison 61) On the contrary, stable balance

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state is usually not "completely informed" and not "centrally controlled" (Allison 67), making its choices of action imperfect.

[10] The missile sites were not camouflaged until US announced its discovery of them. In addition, the Soviet personnel should have been aware of American surveillance before construction began, since they had shot down a U-2 plane before. Moreover, the missile sites were constructed in standard and "trapezoidal" patterns which American analysts had been familiar with, making them more easily recognizable (Allison 107-108).

[11] The Soviet SAMs (Surface-to-Air Missiles) became operational in Oct 27, 1962, *after* all the MRBMs (Medium-Range Ballistic Missiles) "reached operational readiness." If the SAMs were installed to protect the MRBMs from airborne attacks, they should have been well prepared *before* MRBMs arrive. Also, the Soviets failed to complete deploying the radar systems before the introduction of MRBMs (Ibid. 106).

[12] The Soviet army painted ground insignias that were easily visible from above, and even painted "a Red Army Star." (Ibid. 109) It would be irrational for them to paint large insignias to decorate their barracks if they did not want to be discovered.

[13] "Limited war" here does not denote regional military conflicts. It refers to wars fought mainly with conventional weapons, as opposed to nuclear weapons.

encourages limited war as the attacker is convinced that the target, knowing the detrimental consequences of nuclear weapons, does not dare to retaliate using nuclear weapons. Waltz's arguments are then circular: the stability of bipolar balance determines the probability of war, while the probability of war indicates how stable the bipolar balance is. Such circularity further exposes the fallacy of Waltz's arguments that it is not the potential mutual destruction of nuclear war, but the probability of the target to retaliate with nuclear weapons, that determines the bipolar stability. Therefore, Waltz's four elements do not guarantee the stability of bipolarity.

Weak Explanatory Power

For the argument's sake, I shall start with the assumption that a Hardinian bipolar world is stable enough for domestic promotion of people's welfare. However, the descriptive claim of Hardinian stability does not entail the normative conclusion that we should enact Lifeboat Ethics in reality, hostilely refusing to provide aid in the hope for others' demise.

Philosophy scholars and even laymen cannot be more familiar with the argument that descriptive claims do not entail normative claims. In other words, "what the world is" (or "what the world can be") does not denote "what the world ought to be." This notion addresses one's limited perception of his surrounding world and acknowledges the unlimited uncertainty beyond perception. For example, the existence of several philandering husbands does not give rise to the conclusion that all husbands are philanderers; nor does it suggest that all wives ought to divorce their husbands who are (or can be) philanderers. In a similar sense, the absence of supreme authority indeed provides the possibility for anarchy, but it does not follow that all countries are unscrupulously competing; nor does it suggest that we should be unscrupulous because others are (or can be) unscrupulous. In short, Lifeboat Ethics theory fails to provide practical guidance for deriving normative rules of conduct from descriptive assumptions.

Furthermore, the failure of Lifeboat Ethics stems from the structure of the collective sharing problem that it attempts to solve. Encapsulated by the "Tragedy of Commons," the collective sharing problem highlights the conflict between individual and collective interest; Hardin's solution is merely choosing one side while neglecting the other. Here, one's choice of action never escapes the realm of interest maximization and enters the sanctuary of moral philosophy. Since the pursuit of self-interest is all that matters, the Hardinian solution to the Tragedy of Commons does not even require the support of utilitarianism. Therefore, Lifeboat Ethics only pertains to self-interest maximization and does not provide adequate theoretical strength.

Conclusion

In this paper, I firstly introduce Garrett Hardin's concept of the "Tragedy of Commons" and his Lifeboat Ethics theory. The "Tragedy of Commons" illustrates that maximization of pure self-interest ultimately results in tragic depletion of the common resources. Due to the lack of a supreme coercive power, the "Tragedy of Commons" is inevitable. Under such circumstance, the Lifeboat Ethics theory suggests that people should perpetually reduce population to secure a greater share of common resources. Perpetual population reduction is passively achieved by rendering foreign aid and actively achieved by aggressive eradication of other countries. My counterargument against Hardin is that perpetual population reduction results in social instability, which has a greater tendency to inflict distress than to maximize welfare. My opponents would probably pose the objection that perpetual population reduction entails a bipolar world that introduces stability, as demonstrated by the US-USSR bipolarity. In response, I point out that bipolar stability can only be established from the perspective of Rational Actor Model, but this model is often too rigorous for practical application. I also suggest that Lifeboat Ethics theory does not provide adequate explanatory power even if bipolar stability is possible, because the descriptive assumption of potential anarchic competition does not entail the normative rule of unscrupulous competition, and because the structure of the collective sharing problem provides no good moral reason to guide actions.

I would also like to propose further suggestion that proper population reduction that ameliorates areal overpopulation should be implemented along with famine relief. Third-party, context-sensitive and non-profit aid agencies would be an optimal choice to provide both relief supplies and contraception means since it precludes implicit financial manipulation, as represented by the P.L.480 program ("Commentary" Hardin 563). In reality, the equilibrium point at which population size suits total resources can be sustained by these agencies' intervention. These agencies do not exercise forceful control to act as the supreme referee and consequently provide ample incentive for anarchic competition for resources, but unscrupulousness can be discouraged by contextual bindings, such as reciprocal altruism (Trivers).

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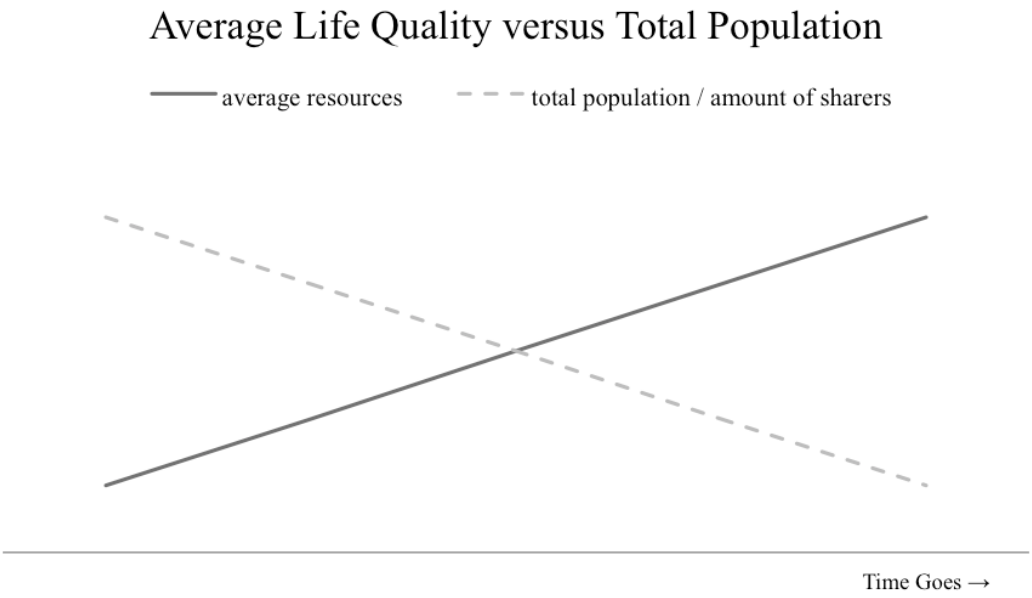
Notes

[i]



As demonstrated above, given the finite total resources, average resources increase as the amount of sharers decreases. The intersection point represents the utility-maximizing equilibrium where the maximum number of sharers can have the greatest average share. However, this equilibrium is not sustainable unless enforced by a supreme authority, which does not exist in reality.

[ii] Despite Northern Sung's rapid civilization, the dynasty's population increase was still slow in comparison with Ming and Ching. The slow population increase (Ting 386-387) had not been relieved until the introduction of sweet potato and other drought-enduring grain crops from South America in Ming dynasty. They could tolerate much more extreme climate and was therefore widely planted across China, significantly increasing the amount of available food (393).

[iii] Numerous records depict the plight of disaster-stricken people due to poorly executed disaster response measures. For example, food depositories exist but the food was often not enough; to survive, people ate inedible plants (Institute of History 113), enacted cannibalism (112-113) and voluntarily enslaved themselves to the wealthy for accommodation (111). Interested readers should seek Chinese translation assistance.

[iv] A sufficient example was the Wang Xiaobo-Li Shun farmers' rebellion (王小波、李顺起义), which featured an extreme egalitarian ideal "average fortune" (均贫富). (Bi)

[v] A sufficient example was Sung Emperor Huizong (宋徽宗)'s *Hua Shi Gang* (花石纲). To satisfy his appetite for novel entertainment, Huizong ordered people in the South to collect strange flowers ("*Hua,*" 花) and marbles ("*Shi,*" 石), and transport them to him using fleets ("*Gang,*" 纲). The prolonged project was perpetuated at the expense of people's welfare,

eventually causing the *Fang La rebellion* (方腊起义).

[vi] The harsher working environment also discouraged youths from employment. Since they are aware of the societal dysfunction in interpersonal relationships, they both avert reality relationships and choose to indulge in the affection for consumer-targeted virtual characters (Azuma). This also aggravates the low fertility trends.

[vii] The sufferings of old couples who live away from and who co-reside with their children are different. Exemplifying independence, the Yamaguchi couple reveals their inside tension and sacrifice "when one must care for the other" (Matsumoto 8). It is worth noting that governmental care insurance system (63-65) does *not* guarantee harmonious lifestyle: in Ms. Yamaguchi's allegations, Mr. Yamaguchi "[takes] care of" her government pension, leaving her with "no personal spending money," and "financially [abusing]" her (73-74). On the other hand, co-residing elderlies' life quality is improved by familial support, but their "proximity without direct involvement in household duties" (102-103) makes them view themselves as burden to the family. Moreover, the gap between generations induced their loneliness despite being in a family, "[constantly reminding them that they do not] fit in the modern world." (103) Consequently, the elderly may commit suicide to escape from psychological burdens and stressful family relationships (88). Such increasing likelihood of elderly suicides is well demonstrated in demographic data: the suicide rate of Japanese people over 90 is 47.8 per 100,000, starkly higher than the suicide rate for people in twenties or thirties, which is just approximately 20 per 100,000 (Nakata).

[viii] Some may cast doubt on the possibility to form a bipolar system; for the formation of US-USSR bipolarity was so contingent that it could not guarantee the formation of a Hardinian one. However, I believe that the mere possibility to form a Hardinian bipolar system provides enough argumentative strength in a highly abstract theoretical model. Furthermore, Hardinian states have more incentive to aggress in disregard for external constraints than countries in reality, making the formation of bipolarity more likely.

[ix] Numerous works discussing the characteristics of an interconnected international system present the same view that partial happenings could have system-wide influence. For example, Robert Jervis writes, "Changes in the relations between two states lead to alterations in the relations between other states." (George and Lauren 214) Furthermore, interconnectedness brings about unintended and sometimes undesired consequences, which "support the theory and practice of deterrence." (George and Lauren 215) Gaddis also supports this view, stating that the criterion for the existence of an "international system" is the interconnection, "so that changes in some parts of it produce changes in other parts as well." (Gaddis 102)

[x] Successful implementation of the strike-first strategy included the Nazi Germany's blitzkrieg strategy to break the French Maginot line, and Japan's rapid infiltration of the Gin Drinker's Line, the "Maginot of the East" in Hong Kong (Bell 83). Moreover, the delivery of attacks has to be conducted in a timely manner before the target's counterstrike, requiring smooth coordination in execution. The failure of the German Schlieffen Plan was due to inadequate coordination (Allison 100).

[xi] Indeed, pressure and recurrence of crises also exist in multipolarity, but "the dangers are diffused, responsibilities unclear, and definition of vital interests easily obscured," (Waltz 884) making the situation more unpredictable and more likely to be unstable. Also, Waltz suggests that the existence of nuclear weapons (or the most powerful weapon that the two Hardinian poles

reserve as the ultimate resort) alone does not create fear of mutual destruction, for they "reinforce a condition that would exist in their absence." (885)

[xii] Allison summarizes five hypotheses that propose different Soviet strategic objectives, each of which is logically inconsistent in addition to those mentioned in the body part. Hypothesis one guesstimates that USSR could retreat the Cuban missiles in exchange for US's withdrawal of missiles in Turkey, but it neglects the previous Soviet awareness of American intention to withdraw missiles in Turkey and England (Allison 43-45). Hypothesis two suggests that the Cuban installations were only a distracting move. This hypothesis explains why the missile sites were poorly camouflaged as if they were intentionally installed to be easily discovered. The question then arises: a total of 42 ballistic missiles were installed — if this was only bait, why not deploy fewer missiles (45-46)? Hypothesis three proposes that these missiles were emplaced to defend Cuba from American attacks. Judging from a rational actor's perspective, however, Khrushchev would have known that any amount of ballistic missiles could not save Cuba if US employed nuclear means; deploying missiles in Cuba was in fact useless (47-50). The fourth hypothesis suggests that the continued and even accelerated deployment of missiles despite President Kennedy's explicit warnings were political probes, since US's indecisive reaction would demonstrate the power of Soviet ideology and encourage other communist regimes. The logical inconsistency of this hypothesis is similar to the second one (50-52). The last hypothesis proposes that Khrushchev could have wanted to use the strategic closeness of the Cuban installations to compensate for technical inferiority in developing intercontinental ballistic missiles (ICBMs). However, it stresses most the strategic importance of Cuban installations, making itself the weakest hypothesis in the face of the scrutiny mentioned in the body part (52-56). In conclusion, the inconsistencies of these hypotheses stem from their intolerance to contingent occurrences and incompletely rational Soviet moves.