

Market Design in the Presence of Repugnancy: A Market for Children

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Abstract

A market-like mechanism for the allocation of children in both the primary market (market for babies) and the secondary market (adoption market) will result in greater social welfare, and hence be more efficient, than the current allocation methods used in practice, even in the face of repugnancy. Since a market for children falls under the realm of repugnant transactions, it is necessary to design a market with enough safeguards to bypass repugnancy while avoiding the excessive regulations that unnecessarily distort the supply and demand pressures of a competitive market. The goal of designing a market for children herein is two-fold: 1) By creating a feasible market for children, a set of generalizable rules and principles can be realized for designing functioning and efficient markets in the face of repugnancy and 2) The presence of a potential, credible and efficient market in the presence of this repugnancy will stimulate debate into the need for such markets in other similar areas, especially in cases creating a tradable market for organs for transplantation, wherein the absence of the transaction is often a death sentence for those who wish to, but are prevented from, participating in the market.

Introduction

What is a Repugnant Transaction? Why Care About It?

Classical economics posits that when the marginal benefit of an action outweighs its marginal cost, a market mechanism can be implemented wherein an appropriate price emerges that balances the marginal benefit and marginal cost of the action through a suitable transaction between counterparties. While this principle of economic equilibrium emerges in most of the exchanges in modern life, it is sometimes violated in certain economic transactions.¹ Repugnant transactions belong in this class of constraints on market forces. The precise definition of a repugnant transaction is a bit amorphous but a working definition will suffice in this current context. For the purpose of this paper, a repugnant transaction will be defined as a transaction that is not illegal per se², but one which a member of society as an

1 Monopoly markets, externalities and the public goods markets are examples of market failures.

2 It is important to note that although repugnant transactions are not illegal per se, they can become illegal due to rent-seeking actions, as is evidenced in the example of horsemeat for human consumption in California.

unencumbered third party to the transaction, deems to be outside the sphere of acceptable market transactions either from a moral or emotional aversion to the transaction, and seeks to prevent it. Therefore, repugnancy to a certain transaction introduces constraints that prevent the marginal benefits of the transaction from equating to the marginal cost of the transaction thereby leading to inefficiencies.

Perhaps a key idea in understanding repugnant transactions is to map repugnancy as a social preference model in which an outsider (sometimes a group of outsiders) who is not counterparty in the transaction finds it necessary to prevent the transaction in order to maximize his private utility. Sen (1970) presents the liberal paradox as the situation wherein respecting certain liberal values of all individuals in a society would lead to an ordering of preferences that are in conflict with the Pareto optimality ordering of preferences. These liberal values that conflict with the Pareto optimality condition are usually the cases where individuals in a society have some nosey preferences, or repugnance, over domains of choices that are outside their own choice function. As Sen puts it, a majority of a community might have a nosey preference for you to sleep on your back or on your belly even if the Pareto optimal condition is for only you to decide how to sleep. Sen shows that it is often impossible to have a society that respects individuals' nosey preferences and still conforms to Pareto optimal ordering of preference. The only way out of this paradox is either to ignore these nosey preferences or to find a way to bargain around them. Although the social preference model is not the generally accepted view of repugnant transactions, thinking of repugnant transactions along these lines helps elucidate the constraints that they present on market forces.

Roth (2007) presents the case of buying and selling horsemeat for human consumption in California as an example of a repugnant transaction. Many Californians do not enjoy eating horsemeat and these people avoid consuming horsemeat in whatever forms. Still, a sizeable subset of this group also finds the transaction, the buying and selling of horsemeat for human consumption, so repugnant that they take active steps in order to prevent anyone else from consuming it. The extent of their repugnancy to this transaction is so extreme that they have sought, and succeeded in, the banishment of trading horsemeat for human consumption via a referendum in 1998³. At the time of the referendum, there were no slaughterhouses in California and all slaughters were conducted out of state. The meats

3 A referendum, also referred to as a ballot question, is a direct vote in which an issue is put to a vote and the electorate decides whether to accept or reject the proposal. The California referendum in question is California Proposition 6, Prohibition on Slaughter of Horses for Human Consumption (1998). The referendum passed on November 3, 1998 with 4,672,457 approval votes (59.39%) versus 3,195,619 (40.61%) rejection votes. Full information on the proposition can be found on the CA Secretary of State's website (<http://vote98.sos.ca.gov/VoterGuide/Propositions/6.htm>).

were eventually shipped to foreign markets, including Canada, Europe and Japan, and rarely did the meat make it back to the Californian market for sale (“Prop 6 Bans Slaughtering Horses to Eat”, 1998). The law effectively prevents Californian equine farms from entering into a knowing transaction to transfer rights of a horse to an individual whose intent is to slaughter the horse and use the meat for human consumption; almost any other use of the horse is acceptable, including consumption of the meat by other animals. Today, a national debate is currently ongoing, even in the legislative branch of government, as to whether horsemeat for human consumption should be banned nationally because horses should be recognized and treated as pets (H.R. 503, 2006 & S. 311, 2007) or whether horsemeat for human consumption should be permitted since populations in Europe and South Asia maintain a historical traditional of consuming equine (Zeder et al. 2006) and a viable U.S. market exists to meet that demand. The bill passed in the House of Representatives by a vote of 263 Ayes to 146 Nays but was tabled in the Senate without a vote.⁴

Roth’s (2007) analysis of repugnant transactions also details various interesting features of this phenomenon. Repugnant transactions seem to follow both arrows of time, in that certain transactions, such as cadavers for anatomical study, short selling and life insurance were once considered repugnant but are no longer. Meanwhile other transactions, such as the use of mercenary soldiers, indentured servitude, debtor’s prison, sale of indulgences, and ecclesiastical offices were once considered acceptable but are now repugnant. Furthermore, Roth details how repugnant transactions often combine with other market distortion factors, such as taboo tradeoffs (prostitution market), externalities (alcohol market), precedent for bad behavior (the moral hazard of the life insurance market), moral issues (prediction market for terrorist attacks) and decency concerns (dwarf tossing market) (pg 39-42). It is society’s intense antagonism toward, or disgust, dislike, and distaste of these repugnant transactions that causes the constraint on efficient markets by preventing the equating of supply and demand at the prevailing equilibrium price. These transactions, although not ubiquitous in everyday life, still create market distinction and reduce aggregate social welfare.

While predicting ex-ante how a repugnant transaction will constrain market forces might be fruitful in helping to design markets to avoid such constraints, making such predictions is difficult, if not impossible. Luckily, great research and effort has been put into an ex-post descriptive theory of repugnant transactions. Fiske and Tetlock (1997) point to the effectiveness

4 More information on the voting details on H.R. 503 can be seen at (<http://www.govtrack.us/congress/vote.xpd?vote=h2006-433>). The corresponding Senate bill (S. 311) can be seen at (<http://www.govtrack.us/congress/bill.xpd?bill=s110-311>).

of a value pluralism model⁵ in trying to deal with the repugnancy that is elicited in taboo tradeoff transactions. Taboo tradeoffs are those tradeoffs that violate society's deeply held intuition about integrity, sanctity and moral and political values. The authors include asking a parent to put a price on their child as one of those taboo tradeoffs that people not only find confusing but also intractable. The advantage of thinking of taboo tradeoffs within a value pluralism model is that it focuses the individual on the numerous conflicting values involved in the tradeoff and encourages the individual to undergo critical reflection on the tradeoff. This reflection helps the individual to try to understand that tradeoffs are necessary and then to try to identify solutions that are effective but do not violate the moral intuitions of the individual. The authors identify a four step procedural outline⁶ in trying to deal with individuals' initial repugnant reaction to these tradeoffs, in hopes of devising a solution that takes these value tradeoffs into consideration. The key takeaway is that often communal brainstorming can help to overcome market constraints, such as repugnant transactions, and help move society to propose solutions that increase the social welfare of the populace. Fiske and Tetlock's research seems to point to the need for market design that takes these repugnancies into consideration and seeks to alleviate them while still achieving the socially efficient result that is common of market transactions.

What is Market Design?

The National Bureau of Economic Research (2011) defines market design as the examination of why markets, institutions or government policies fail, and the consideration of the properties of alternative mechanism, in terms of efficiency, fairness, incentives and complexity. The aim of market design in this context is to address the failures of the current allocation process in the market for children and remedy these failures by constructing new mechanisms whereby a socially efficient outcome can be realized, even in the face of repugnancy. Designing a market in the face of repugnancy must take advantage of what Thaler and Sunstein have termed choice architecture in order to arrive at the desired outcome through the incentivized actions of market participants. Thaler and Sunstein (2008) describe choice architecture as a process of designing mechanisms to nudge choices towards expected outcomes (which are often in the best interest of the society and the decision maker) without forcing the decision maker towards a certain

5 The value pluralism method states that people are likely to think of issues within many domains, with some of those domains activating conflicting values but with no conceivable way to rank those values and resolve the conflict.

6 These steps are 1) Acknowledge the legitimacy of the repugnancy that people sensibly have to the taboo tradeoffs, 2) Encourage the deliberative body to define itself as a collective in search of a common answer to shared problems, 3) Encourage each member to devise, elaborate and defend at least one possible implementation, 4) Encourage critical reflection on why reasonable people might choose a given model or combination of models to solve the problem at hand.

path. At all times, market participants respond to the incentives in play and always reserve the choice to choose any action set available to them without coercion.⁷ In this case, the desired social outcome is the equilibrium point at which market pressure is used to determine the allocation bundles and the division of surpluses.

Why Design a Market?

The market is the most widely accepted mechanism used to allocate scarce resources in the most efficient manner. Equilibrium in the market is generally defined as the price at which the quantity demanded by consumers is perfectly balanced by the quantity supplied by firms. Any shock to the market, whether endogenous or exogenous, causes a corresponding change to market forces that set to restore the equilibrium. It is this dynamic equilibrium that characterizes the efficiency of the market. The structure of a well-defined market is best approximated by the theory of perfect competition, which requires many buyers and sellers, perfect information, homogenous goods and little to no barriers to entry. In reality, one or more of these factors are missing in any transaction and the goal of market design is to design a structure that mimics, as closely as possible, the results of a perfectly competitive market. In the presence of a repugnant transaction, this dynamic equilibrium cannot be realized and the market remains in a static state that is far from efficient. The lofty goal of market design, therefore, is to supersede this technical barrier and allow the use of market-like forces to arrive at a dynamic equilibrium.

What is Social Efficiency? Why Desire It?

In economics, Pareto efficiency (or Pareto optimality) is defined as an allocation of a set of goods in a society such that it's impossible to change the current allocation to make someone better off without making at least one individual worse off. An economic system that is not Pareto efficient implies that it is possible to improve the welfare state of an individual without harming any other member of society, ergo there is no marginal cost associated with taking that Pareto improvement. Essentially, there are numerous allocations that meet the Pareto efficiency requirement, which create a Pareto frontier of potential allocation. Pareto efficiency is a widely used normative criterion to evaluate public policy alternatives mainly because it creates a rule to rank the allocative efficiency of each policy outcome without any judgments

⁷ It must be noted that although market design avoids the need for coercion of market participants, this does not preclude the inclusion of punishment or costs attributed to a certain action. A market participant is always free to choose any action, however perverse. Economic theory states that the market participant will be incentivized to choose the action in which their private marginal benefit (PMB) is greater than their private marginal cost (PMC) + the cost of punishment (or benefit of reward). This concept is economically identical to a Pigouvian tax.

on the fairness or the interpersonal utility of those allocations.⁸ Still there exist infinite possibilities of allocations that lie on the Pareto frontier, and so Pareto efficiency is usually regarded in practice as a minimal requirement for allocation distribution.

The Kaldor-Hicks efficiency criteria is a measure of economic efficiency that builds upon the concept of Pareto efficiency but allows the ranking of Pareto efficient outcomes in order to determine the one that generates the greatest social welfare. Under the Kaldor-Hicks efficiency criteria, an outcome is efficient if those that are made better off could, in theory, compensate those that are made worse off. Therefore, if it is possible to change the current allocation so that the winners receive a bigger benefit than the corresponding loss suffered by the losers, the new allocation is more efficient than the previous outcome. Kaldor-Hicks efficiency – hereafter referred to as social efficiency – does not require any actual compensation to be made by winners to losers, only that the mere possibility of such compensation exists. The principle is that if the winners receive a greater benefit under a different allocation regime (their total willingness to pay to switch to the new regime) than the harm caused to the losers in the switch (their total willingness to prevent to switch to the new regime), then economic benefits are realized as the winners can compensate the losers completely for their loss while still retaining a bit of benefit for themselves. In short, social efficiency creates a criterion that marks as efficient the outcome that maximizes social welfare for a given society.⁹

Why a Market for Children?

Ever since Jonathan Swift satirically proposed the idea of slaughtering the children of the Irish poor and serving them as food for the rich in order to reduce the burden of the poor on Ireland,¹⁰ any proposal that attempts

8 In a two-person economy, Pareto efficiency dictates that the scenario wherein all the wealth is given to any one of the two individuals is as efficient as another scenario wherein the wealth is split evenly, or even split 60%-40%. In fact, any allocation wherein the sum of the wealth of both individuals adds up to 100% of the economy's endowment lies on the Pareto optimal frontier. Pareto efficiency gives no other way to rank among these alternatives.

9 In the previous example of a two-person economy, the socially efficient allocation would be one in which the wealth is allocated to the two individuals so that their marginal utility of wealth would be equal. If one individual derives a greater marginal benefit from wealth, that individual could theoretically work (or perform some other task) for the other individual for more wealth, which in turn would serve to decrease his marginal utility of wealth and increase that of the other individual. Note however that this does not require that the final allocation be evenly divided (50-50) between the two individuals, as no assumption as to the shape of their utility curve is required and their utility curves do not have to be the same. Also note that all socially efficient outcomes are also Pareto efficient. In fact, the socially efficient outcome is an allocation that also lies on the Pareto efficient frontier but one that has the greatest social welfare among the subset.

10 Jonathan Swift wrote "A Modest Proposal: For Preventing The Children Of Poor People In Ireland From Being A Burden To Their Parents Or Country, And For Making Them Beneficial To The Public in 1729 as a satire while using the tools of economic analysis to suggest that the poor would benefit by selling their children as food for the rich, thereby reducing the burden of parenthood and making a little economic profit from the endeavor to better their circumstance – a win-win for everyone involved.

to place a commercial value on the life of a child has also been deemed as satire; a nonstarter in the world of public policy. It is under this context that I announce that the market proposed herein is not satirical and I do not intend the argument to disintegrate to *reductio ad absurdum*. Instead, the primary goal of designing a market for children is because it is the belief of this author that the current repugnancy concerning a transaction in the market for children is greater than that concerning a transaction in the market for organs transplants. Many individuals consider child making/rearing to be sacrosanct and not the place for market interaction. Therefore, the idea of a market designed to allow for the trade of children is regarded as one of the most repugnant transactions and thus serves as a suitable launch pad for market design. The goal therefore, is to see if even a reasoned market design can overcome such initial repugnancy and stimulate debates into the benefits and costs of having transactions in markets where they were once considered repugnant, especially the market for organs destined for transplantation.

The idea to design a functioning market for children was concocted while reading past articles about the inefficiencies in the market for babies and the adoption market. Krawiec (2009) details how the ban on baby selling in the United States has created an industry in which asymmetrical legal restrictions have led to intermediary parties (lawyers, counselors, adoption agencies, facilitators) earning outsized profits while the market suppliers (the mothers, surrogates, etc.) are told to be content with only the altruism of their actions as payment for services rendered. She argues that while a ban on the commercial sale of babies has prevented the suppliers from earning any surplus, it has only bolstered the profit-making activities of these fertility specialists, brokers and middlemen whose commercial enterprises have flourished unconstrained on the back of this restricted market. Krawiec concludes that despite government regulation to ban a market for babies, there is a thriving legal market in the U.S. that has simply adapted around the current legislation.

Furthermore, Spar (2006) details modern day scenarios in which advances in reproductive medicine have indeed created a market for babies with in-vitro fertilization, purchases of sperm, eggs and embryos, and surrogacy option as evidence of a thriving and lucrative market even as the government seeks to actively ban the buying and selling of babies. Spar documents numerous scenarios that show that the demand for children is so strong that people will do almost anything to fulfill it; stories of fifty year olds resorting to in-vitro fertilization, couples crossing international borders to unregulated markets and families emptying savings accounts to pay adoption agencies and commercial entities were among the strategies listed.

Likewise, Prichard (1984) details how the current existing regulatory

procedures that determine the adoption of newborns by couples often come with high, and sometimes prohibitive, costs to be incurred by the adoptive parents. Using evidence from Canadian adoption agencies, Prichard found that couples often remain on waitlists for a minimum of a year and a half and sometimes up to ten years, only to receive a malnourished and infirmed child because the birth mother had no incentive to take care of it either pre- or post-birth. To game the required residency requirements, many couples maintain multiple residences, especially in areas where the waitlists are shorter, in order to increase their chances of qualifying for an adoption. Meanwhile these couples pay outsized sums to middlemen, such as physicians and lawyers, to help guide them through the regulatory rules that are common in the industry.¹¹ Couples unwilling to bear with the legal hurdles and shortages of available children for adoption are often tempted to resort to fertility clinics to increase their chances of conception while increasing the risk of the child being born with numerous ailments. Landes and Posner (1978) describe how a disequilibrium leading to a baby shortage in the adoption market has been created because of the U.S. regulatory environment. This disequilibrium has allowed a separate black market to exist while also creating a surplus of unadopted children to be managed at the public expense. As of their writing in the late '70s, Landes and Posner documented prices for babies in the black market ranging from lows of \$9,000 to highs of \$40,000. Meanwhile the authors also document that some 350,000 children were in foster care at an annual expense to the U.S. government of \$700 million. This represents the possibility of a net social efficiency gain: removing the social costs of the current U.S. regulations, and moving to a market-based system that provides additional benefits.

What is Inalienability? Are Parental Rights Inalienable?

In trying to design a market for children, it is crucial to ask the normative question as to whether or not parental rights are inalienable. It is difficult to imagine that a child could be considered a commodity; a product that is easily traded in the marketplace and subject to the same laws of supply and demand as most everyday items. While U.S. state laws forbid direct payments to biological parents, these laws still allow biological parents to receive non-monetary compensation in order to transfer or to gift their parental rights without any compensation. The spirit of the laws seem to underlie the fact that although parents acquire property rights over their children upon birth, these parents cannot transfer these property rights commercially. Yet commercial transactions occur on a daily basis for these very same parental rights transfers, all within the letter of the law. In a sense, these laws would like to treat parental rights as inalienable property rights

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The Canadian adoption market operates with comparable costs to the U.S. adoption market.

but the intended spirit of the laws are limited by practical purposes.

Inalienability is a restriction on property rights. The generally acceptable definition of inalienability is the restriction on saleability, transferability, ownership or use of a given right. Even the United States Declaration of Independence includes, in its second sentence, an affirmation that “all men are endowed with certain inalienable rights and among these rights are Life, Liberty and the pursuit of Happiness”. Although these three rights are given to be inalienable by the Declaration, it neither makes clear why these three rights are indeed inalienable nor makes clear how far the subset of these rights extend. While the inalienability of Life, Liberty and the pursuit of Happiness might possibly be argued on normative grounds, this process still does not shed any insight into how a criterion can be applied to other rights to determine their eligibility as inalienable rights. Such a criterion will certainly be required to try to explain why and if parental rights meet the standard for inalienability.

Calabresi and Melamed (1972) make a good attempt to try to find the criterion for determining the eligibility of inalienability of rights. In their research on the differences between property and liability rules, Calabresi and Melamed devote a section to discussing inalienable rights and examining why these restrictions on property rights are so pervasive. By analyzing scenarios in which they believed it might be conducive to social efficiency to restrict certain rights, the authors try to generalize principles that lead to the inalienability of certain rights and they suggest two reasons why inalienable rights are seen in practice. Their first suggestion is that a given property right can elicit a moral externality. Unlike the case of a traditional externality, it is possible for a moral externality to be unbounded. Therefore, the moral nature of the externality that is caused by exercising the full range of a property right might be so great that it is impossible to cure through Coase theorem¹² or any bargaining opportunity. The only recourse in this scenario is a restriction on these property rights. The authors’ second suggestion is that inalienability can be seen as a sort of commitment device, protecting people when their short-term incentives conflict with their long-term interests. The restriction on property rights can then be seen as a paternalistic effort by the state to protect its citizens from their shortsighted actions.

Calabresi and Melamed are to be congratulated for their efforts to

12 In “The Problem of Social Cost” (1960), economist Ronald Coase laid down a procedure for dealing with externality to achieve economic efficiency. His theorem states that, absent transaction costs and with well-defined property rights, it is possible for both parties to bargain to reach the efficient level regardless of which party has the initial allocation of property rights. Coase analysis shows that the role of government in correcting externalities is to maintain laws that defend property rights and to structure rules and regulations in order to reduce transaction costs to bargaining. Prior to Coase’s analysis, the prevailing thought was that the role of the government was to set a tax (or subsidy) on private production or consumption to make individuals internalize their externality à la Pigouvian tax. Coase won the Nobel Memorial Prize in Economic Science in 1991 for this work and an earlier work, “The Nature of the Firm” (1937).

elucidate the necessity for inalienability of property rights even though their reasoning ultimately falls short of accomplishing this fact. To take the authors' first suggestion is to accept that individuals' utility have a social preference model. As previously shown, Sen (1970) would tell us that to constantly respect an individual's preferences for actions and transactions that are outside the sphere of their own choices would lead to a liberal paradox – the impossibility of respecting everyone's preferences and achieving a Pareto efficient outcome. Calabresi and Melamed's second suggestion simply sets up a straw man in its implication that inalienability can or should be used as a commitment device. This argument disregards the role that well structured incentives can play in achieving a greater benefit at a lower social cost. Rose-Ackerman (1985) attempts to build on Calabresi and Melamed's justification of inalienable rights by showing that economic efficiency might actually require restriction on property and therefore leads to a valid public policy position. She also posits that certain specialized distributive goals can only be achieved through some kind of inalienability rule and that an unfettered market process may be incompatible with the responsible functioning of a democratic state. In her analysis, Rose-Ackerman examines a broad range of economic activities in which some given rights have been deemed inalienable in market transactions by society. Through these examples, Rose-Ackerman identifies the ultimate justification of the inalienability of property rights. Inalienability is a second-best public policy response to the messiness and complexity of the physical world. She concurs that it is generally easier to conceive of an alternate policy that would be superior, if only transaction costs were lower and that policy were implementable. Then, if Rose-Ackerman's conclusion is to be accepted, it would seem that the justification for the inalienability of parental rights was simply one of technological constraints – it was once impossible to conceive of a better public policy in practice.

Inalienability could have been appropriate for parental rights in the past but that is no longer the case in today's society. While the law might still consider parental rights to be inalienable in principle, it does not actually prevent commercial transactions of parental rights from occurring in practice. Transactions for the exchange of parental rights still occur legally so long as these exchanges avoid any monetary compensation to the biological parents. The entire system of adoption, surrogacy and other intermediary markets for children function within the confines of this law and treat parental rights as transferable. Since inefficiencies have been introduced due to regulative pressures brought on by preventing repugnant transactions in the current system, the solution to these inefficiencies lies with creating a Coasean solution in the marketplace: creating well defined property rights for parents over their children, removing transaction costs and barriers to

entries in the market and minimizing the repugnancy that brought about the regulative pressures. The challenge then is to create a market that surpasses the technological barriers that necessitated classifying parental rights as inalienable in the first place.

Primary and Secondary Market Distinctions

The market for children is meant as a catchall for a market that would include both the market for babies (hereafter the “primary market”) and the adoption market (hereafter the “secondary market”). Having an unregulated transaction in both the primary and the secondary market is often regarded as a repugnant transaction under the working definition of this paper and to prevent this transaction, rent-seekers have pushed for regulatory restrictions that prevent such unfettered market interactions. These restrictions, although beneficial to one group, have introduced inefficiencies into the allocation system that ultimately result in reduced social welfare and therefore make an interesting case study for market design. If it is possible to design a market for children that can allow for the proper functioning of the mechanism of supply and demand, while reducing the repugnant effects of unfettered market exchange, then it is possible to increase social welfare and move closer towards a socially efficient outcome. In this drive, it might also be possible to realize a set of generalizable principles for comprehensive market design in the face of repugnancy. These principles would go a long way in helping better design markets that would continue to improve social welfare and surpass many of the technical barriers that prevent transaction in numerous scenarios. Perhaps these principles can jumpstart the creation of a market for transplantation organs, saving the lives of those who might have otherwise died without a functioning marketplace to create a supply for the increasing demand of organs for transplantation.

Designing the Market

Supply and Demand In the Primary Market

Mothers who would be willing to transfer their parental rights for adequate compensation would meet the initial supply in the primary market. In order to participate in the marketplace, all mothers would be required to submit to registration, background checks and regular pre-natal care for the duration of their pregnancy. The goal of requiring all mothers to submit to screening is to maintain a list of eligible suppliers in the marketplace while also allowing the market to screen for adverse selection. As the market develops, it is quite likely that entrepreneurial enterprises will push for further efficiency gains in the marketplace. One of the simplest gains that can be achieved on the supply side of the market is that of economies of

scale. It would be possible for firms to enter the supply side of the market as agents that manage a team of mothers whom are cherished for their offspring rearing potentials. The firm could easily achieve a reduction in the cost and effort required to comply with the general screening devices for the mothers.

In order for firms to emerge in this industry, it must be because such firms provide a service to the initial suppliers in order to entice these mothers to become a part of the firms. The reduction in screening costs would be one of the potential contributions of the firms. Since multiple firms could potentially be created to help manage the supply in the marketplace, these submarkets would operate as close to a perfectly competitive market as possible. There would be continual market pressure on these firms to maintain a certain level of quality demanded by the consumers. This naturally leads to a race in which the suppliers attempt to signal the quality of their supplies over the competition.¹³ This would drive general upkeep in the market and ensure not only appropriate screening for eligible mothers who enter the market, but would also serve to make sure the suppliers continue to deliver a certain baseline level of care (pre-natal care, etc.) before they can find an appropriate consumer in the marketplace. The role of the government would be to track all the information flow in the primary market.

Parents who would be willing to receive a transfer of parental rights at a price would meet the demand in the primary market. Given the backlog in the current allocation system and the presence of a black market that attempts to meet that demand, it is safe to assume that there would be adequate demand in the marketplace and no other mechanism would be needed to try to stimulate it. The role of the government in the demand side of the market would also be to maintain a screening process for would-be parents before they are accepted into the market's pool of consumers. The current allocation method in the primary and secondary market already uses a process called home study¹⁴ and a similar process could be implemented herein. To accomplish this screening, the government would create an agency, National Children To Good Homes (NCGH), which would be responsible for drafting the minimum requirement necessary to enter both the supply and demand side of the primary market. The NCGH would be funded initially through a government loan and the eligibility requirements would have to be approved by the federal government. After this initial phase, the NCGH would become a private, independent agency, both politically and economically. The role of the NCGH would be limited to being counterparty to all transactions in

13 This would be similar to the use of trademarks in the marketplace to signal the quality of a producer's wares to the consumer. The screening information and past history of transactions would inevitably become the suppliers trademark.

14 A home study is the screening of the home and the lives of the adoptive parents in order to determine that the adoptive parents are fit to receive parental rights over an adoptive child. In the U.S., a home study is mandated by law.

the marketplace as the approval and licensing agency. The NCGH would be counterparty to these transactions in order to verify not only that both sides of the transaction have met the screening requirement, but also to keep a running database of all transactions that have been consummated. Licensed parents would be free to enter the market to seek appropriate transactions to trade parental rights through whatever legal means they choose including, but not limited to, hiring intermediaries to help facilitate the search and matching process.

It would be the responsibility of the participants in the marketplace to find suitable transactions. Technological advances in marketing and advertising should reduce the search costs to a minimal level that facilitates quick and mutually beneficial transactions. Still, there is the possibility that intermediaries could enter the marketplace in order to provide services and expertise that continue to lower these costs. Unlike the current allocation system though, these intermediaries could not earn outsized profits since a central clearinghouse would already exist through the NCGH database to provide a context for each new transaction. Such information disclosure would remove the asymmetric information that these intermediaries currently exploit in order to charge outrageous sums to the consumers in the marketplace. Suppliers, demanders and their respective agents would be free to come to an agreement as to how best to share the surpluses in the marketplace.

Of course, several equilibrium prices would emerge; each child in the primary market would have differential demand and differential supply. This would be a natural consequence of the system and should not be a primary concern. The market would be robust and respond to these differential supplies and demands through the price mechanism. Also, as the market emerges, reputational effects would begin to develop in the market and the providers (mothers and firms alike) would be able to generate a premium by providing appropriate signals for their exceptional products. These premiums would be earned as suppliers willingly signal additional positive information about their type in order to find an appropriate demand. Biological parents would finally get a chance to earn a premium in the marketplace and could choose to allocate a portion of their premium to intermediaries who would help facilitate the process. Similarly, consumers would begin to be able to earn a surplus in the market, as their needs would be better able to be satisfied with an appropriate and differentiated supply, in whose type they could be extremely confident before engaging in a transaction. Consumers could also engage the services of intermediaries to help facilitate the process.

Information In the Primary Market

In the primary market, the suppliers would possess private information about their type that would not initially be available to the consumers in the marketplace. A biological mother knows the precautions she took during her pregnancy and only she is readily aware of this level of precaution. This private information introduces information asymmetry into the market and possibly jeopardizes the quality of it. Akerlof (1970) discusses how heterogeneity of quality along with asymmetric information can lead to market failure for above average quality goods. In Akerlof's market, the only equilibrium is a market for low quality goods at an appropriate price. The market failure results because buyers cannot easily identify the various quality types that are available in the marketplace and would only be able to correctly identify the type if they find potential problems much later after the transaction has occurred. Akerlof's analysis, also colloquially called the Market For Lemons, is a fear of any market with asymmetric information. Fortunately, the proposed primary market can avoid such a fate for two reasons. First, the private information leading to asymmetric information in this market is verifiable and second, the primary market assumes repeated play.

The first reason the primary market can avoid the fate of the Akerlof's lemon market is that the private information of the supplier is verifiable. Take as an example a mother who enters into a transaction to transfer her parental rights after her child has been conceived. After agreeing to monetary terms, the mother refuses to follow scheduled pre-natal care and consumes alcohol during the term of her pregnancy. Once a child is born with fetal alcohol syndrome, the mother's actions would be easily verifiable and considered a breach of the contract terms. The biological mother would also lose all parental rights under the law and receive any legal punitive measures already in place for such an offense. Still, without waiting the full term of a pregnancy, it is easily verifiable whether a mother is taking adequate precaution in the best interest of the infant. Mandatory alcohol and drug screenings along with regular prenatal care could become standard requirements that consumers demand of suppliers in the marketplace as part of the contract terms. These contract terms help identify the supplier types by bringing the supplier's private information into the public sphere.

The second reason the primary market can avoid the fate of Akerlof's Lemon Market is that the market assumes repeated play. Suppliers that continually operate within the marketplace must rely on reputational effects to signal their quality. Since the private information that the suppliers possess can evidence their superior quality over the competitors, it is in their best

interest to publicly disclose such information. A firm that provides excellent prenatal care to pregnant mothers, houses them in spa-like environments and has on-site obstetricians would be willing to disclose such information to potential consumers. Since this information is also verifiable, revealing such information would lead to an unraveling result.¹⁵ The unraveling result produces another condition under which suppliers are incentivized to reveal their private information in order to earn premiums in the marketplace. Those who refuse to will be assumed to already signal their low quality of care by their resistance to information disclosure and would receive a price in the marketplace commensurate with their quality type.

Supply and Demand In the Secondary Market

The increase in supply in the primary market would necessitate a secondary market to act as a backstop. The function of the secondary market is to continue to find suitable matches for those children who were unmatched in the primary market. In the United States, the current adoption system plays a similar role and the secondary market is loosely based on that system. While the secondary market is similar to the adoption market in that its main function is to find parents who are willing to assume parental rights over a child, it is unique in that the secondary market uses financial incentives to motivate that function.

The supply in this market would still be the mothers and firms who provide the supply in the primary market. Unlike in the primary market though, the goal of the suppliers in this market would be simply to assign their parental rights and turn the children over to NCGH for care. In order to effectuate a transfer, all suppliers would be required to provide annual physical checkups and documentation for the children, including birth information, name, known allergies, medical history, etc. Any supplier found in violation would be required to pay 15% of the current spot price for a child at birth (or an appropriate proxy) as penalty before assigning parental rights to the NCGH. Repeat offenders could be censured, with the information becoming public in the NCGH database and also with the addition of either increasing punitive fines, prohibition from further engagement in

¹⁵ Unraveling of private information occurs when suppliers benefit from revealing their private information in order to gain a surplus in the market. Consider the market for orange juice with 100 suppliers each with fruit concentration in the juice between 0% and 100%. Suppliers are aware of the percent of fruit by content used in their juice but consumers do not know this amount. This information is verifiable by consumers but only after they have purchased the juice. If all suppliers do not reveal the percentage of oranges by content in the juice, the market is left to assume that every supplier is of equal type and would pay the same amount for all orange juice. The supplier that uses 100% fruit in the juice is therefore incentivized to reveal to consumers that his juice is 100% fruit. Since this information is verifiable, this supplier can start to enjoy a premium and every other supplier will receive a price with the expectation that their juices contain between 0% and 99% fruit. This incentivizes the 99% supplier to reveal his juice concentration, then the 98% supplier and so on until every juice provider reveals his fruit content – an unraveling of private information. This is actually the case in the U.S. market for orange juice – every orange juice provider reveals on their label the percent of oranges by content contained in the juice.

the marketplace or criminal prosecutions if the repeated cases are deemed to be egregious enough to warrant a prosecution by current criminal law. Anyone not in violation could transfer parental rights and turn the children over to NCGH for care at an appropriate time. Failure of the suppliers to comply with these turnover rules in a timely manner would also be regarded as a violation and carry the same penalties. None of these new functions preclude the NCGH from continuing the current role of the adoption market of receiving parental rights from mothers who are not part of the primary market and seek to transfer their rights for whatever reason. Similarly, the NCGH can continue to provide a safe haven for those children who are referred to the agency by a state's department of children's services due to concern of abuse or neglect by the current parents. Likewise, none of these rules prevent suppliers from exiting the market and retaining their parental rights at any point.

The demand in the market would initially be maintained by the NCGH. The role of the NCGH in the secondary market would be to accept parental rights from primary market suppliers. The NCGH would continue to maintain the child's care, uptake, education and development until the earlier of: a suitable match is made in the secondary market or the child graduates from a college or a similar educational facility (technical or trade school as an example). All primary and secondary education expenses for a child would be fully covered by the federal government with the revenue collected from its tax receipts from the primary market along with the money saved from the repeal of the Adoption Tax Credit.¹⁶ While a child is raised inside the NCGH facilities, there would still be the possibility that the child could be matched in the secondary market. This new demand would be met by willing parents who are either unwilling, due to financial issues, or unable to engage in a transaction in the primary market. These consumers would be subject to the same screening mechanism in place for consumers in the primary market. Unlike in the primary market, the compensation would be awarded to the parents who are adopting the child in the secondary market. Once again, market forces would determine the appropriate price in the marketplace. As a profit-maximizing firm, NCGH would realize that the present value cost of taking care of a child until the above constraints are met could easily dwarf the spot price of the most in-demand child in the secondary market. As such, the NCGH would be incentivized to seek a suitable match for the child as quickly as possible. Likewise, parents, perhaps

16 In the U.S., an adoption tax credit offered to adoptive parents to incentivize them to adopt a child. The adoption credit allows parents to claim a reduction in their federal tax payable for qualified adoption expenses including attorney fees, home study, adoption fees, etc. The credit is a dollar for dollar reduction up to \$13,360 per child. This amount is partially phased out for couples with household modified adjusted gross income (MAGI) above \$185,210 and fully phased out for couples with household income above \$225,210.

motivated by altruism, might seek to drive down the price in the secondary market to increase the probability of finding a match (to as close to certainty as possible) in the secondary market. The end goal is to create a market with strong incentives for both the supply and demand side to seek a transaction as quickly and efficiently as possible in order to allow these children to enter suitable homes. The clearance rate of children should be close to 100% with these incentives and anyone not matching in the secondary market would be provided with a safety net until maturity. These incentives would not only help meet the demand for children but would also increase social welfare by quickly assigning children to homes where they can be loved.

Information In the Secondary Market

Since the secondary market transaction is between the primary market supplier and the NCGH and between the NCGH and the secondary market consumer, there are no asymmetric information issues present. As a condition of transferring parental rights over to the NCGH, the primary market suppliers would be required to provide all relevant information about the care and upbringing of the child. Any extra positive information that the suppliers would choose to disclose could only benefit them in quickening the transfer process. On the other side, once the NCGH later transfers parental rights to secondary market consumers, the agency already possesses all the required information about both the child and the adoptive parents. The secondary market would operate as close to perfect information as possible. Any concern about the secondary market consumers' potential inability or unwillingness to acquire the information necessary to protect their interest in the marketplace is unwarranted. It would be possible for all consumers to continue to rely on intermediaries to help gather information. Since the information should be readily available through the agency, the role of the intermediaries would be to provide a service to the consumers by helping to facilitate the process.

Maximum Age for Trade In the Primary Market

In order to effectuate a drive towards efficiency, the market must be created so as to allow a balance of flow between the primary and the secondary market. Since the secondary market naturally feeds from the excesses of the primary market, it is crucial to designate a cutoff when the supply of the primary market must shift into the secondary market. A natural cut off seems to be a range between age one and two. Once a child reaches age one, suppliers in the primary market would be allowed to either continue to search for an appropriate transaction at their cost, or hand over the child to NCGH at no cost, if not in violation of the turnover rules. At the

age of two, the child must be turned over to NCGH while still subject to the turnover rules. A failure to meet the timeliness of the deadline would be considered a violation under the turnover rules and subject to the same punishment. Between the ages of one and two, the suppliers in the primary market would consider the decreasing marginal benefit of a transaction¹⁷ with the increasing marginal cost of meeting the turnover rules. While the system might encourage prices to plummet days before a child's second birthday, it does provide the incentives for primary suppliers to seek a transaction as soon as possible under the appropriate price.

Taxing the System

In order for the system to function properly, the NCGH must be able to collect enough revenue from the system to meet its obligations under the rules and the government must collect enough tax revenue to likewise meet its obligation. In the primary market, the NCGH must be able to earn a commission on this price to fund its obligations. The NCGH would start with commission of 10% with a gradual step down to 6% of the transaction price in the primary market.¹⁸ Along with the initial loan from the federal government, the NCGH would be able to meet its initial startup costs and fund its operating costs. Operating costs for the NCGH should be minimal for the first two years as the costs that should be incurred during this period are of monitoring/screening and enforcement costs. After the initial two years, the agency would be required to incur the cost of care for children in the secondary markets so costs should increase in this interim until sufficient demand can be found for the secondary market. The initial loan from the government should have a principle amount that covers the initial costs of the agency up and all foreseeable costs until year three.¹⁹

After the system is operational, the NCGH would be responsible for remitting 35% of its operating profit (EBIT) to the federal government as taxes. The NCGH would be subject to all tax rules of a corporation as dictated by the IRS. An accounting firm must audit the financial statements of the NCGH, with said firm subject approval of the federal government. The status of the accounting firm as auditor would be subject to renewal of approval every six years if the accounting firm is unchanged, otherwise each time a change of accounting firm is desired. The NCGH must detail the reason for choosing the particular accounting firm and the reason must be

17 The assumption is that the spot price of a child decreases with age. This is a fair assumption especially when interpreting data from the matching rate of children in adoption and foster homes as a function of age to be an adequate proxy for price.

18 The commission rate is to be 10% in the first three years, 8% percent in years 4 and 5 and 6% thereafter. This is to allow the NCGH to generate sufficient revenue as the quantity in the marketplace grows.

19 The primary costs will be the setup costs for the agency, the hiring cost of staff and the construction cost of a home center for children in the secondary market.

presented in a written document to the government for approval based on the merits of reason.

Contract Enforcement and Principles

A system of principles would be developed to guide transactions in the primary and secondary market. These principles would simply serve as a starting point for transactions that can be used as a yardstick in contracts. In order to prevent one-sided contracts, the NCGH would maintain a sample contract that contains the best practices and principle ideas for a transaction. Of course, once the suppliers and the demanders are familiar with the market, such principles might become moot as best practices would probably develop from experience. Suppliers and demanders would be free to come to any agreement to govern their transaction. These contracts would still be subject to traditional contract law and must contain offer, acceptance, and consideration in order to be considered valid. Likewise contract law would dictate when a contract could be voided or considered unenforceable, especially in cases of unequal bargaining power, outright coercion or duress. It would be up to the discretion of the judicial branch to establish the case law and precedents that would dictate governing rules behind a valid and enforceable contract in the marketplace. Contract law would also govern the rules dictating the remedial action for a breach under a valid contract.

Checks and Balances

The most important requirement in the system would be one of internal checks and balances to ensure its independence and survivability. Madison, in the Federalist Papers, writes, "If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficult lies in this; you must first enable the government to control the governed; and in the next place oblige it to control itself." (Federalist Papers, 51). Following this advice, the system must be properly designed in order to incentivize the participants to effectively control their actions within the bounds of the law.

To start, the NCGH must maintain a database of approved suppliers and consumers in the primary market and secondary market. The NCGH must also publish yearly all violators of the rules along with the remedial punishments assigned for breaches. This list would be publicly available. It would also be the role of the NCGH to verify that all transactions in the primary market fall under the accepted guidelines that would validate a contract. Meanwhile, it would be the role of the consumers to monitor the activities of the NCGH, especially in its role in providing suitable

accommodation and nurturing for children in the secondary market. The NCGH would have a fiduciary duty to the government to maintain the care of the children in the secondary market and its exclusive role, as agency in the market, is contingent on its performance of those duties. Any violation of that fiduciary trust could be reported to the Consumer Bureau Protection Agency.²⁰

Critiquing the Market

Market Design Critique

Roth (2008) defines an efficient market as one that provides thickness, overcomes congestion and makes it safe to participate. On these three metrics, the designed market for children passes the efficient market test. A market provides thickness if it can easily attract a sufficient proportion of participants to enter into mutually beneficial transactions. In that sense, the market for children provides thickness as it enables a marketplace where those who are willing to transfer their parental rights can meet those who are willing to compensate them for those parental rights. The market for children is designed to be as liberal as possible to allow these market participants to enter into a transaction. A market can overcome congestion by providing enough time, or making transactions fast enough so that market participants can consider alternative possible transactions to arrive at satisfactory ones. It is difficult to comment on the ability of the market for children to overcome congestion but the market is designed to provide sufficient information for supplier and consumers to make an informed decision. Even if gathering the information could potentially be time consuming, it only provides opportunity for intermediaries to enter the market and reduces the cost and time of information gathering in exchange for a share of the surplus. Lastly, a market can make it safe for participants to participate if it incentivizes them to use the market as a venue for transactions as opposed to transacting outside the market (in illegal/black markets). This is perhaps where the market for children excels. By designing this market to occur with government approval, it easily incentivizes both supply and demand to engage in transactions within the law yet provides them with the surplus to pull their activities away from illegal markets. As the market evolves it would bring all transfer of parental rights into regulated markets, thereby eradicating many of the criminal activities that have come to be associated with illegal markets. These metrics though are only a necessary condition for efficient markets and so further empirical analysis would still be required to determine whether this market for children could indeed be efficient in its operation.

Another critique of this market design comes from its dependency

²⁰ The FTC has a division committed to protecting American consumers. Their website can be accessed at <http://www.ftc.gov/bcp/index.shtml>.

on choice architecture. Santos (2011) criticizes market design and choice architecture as a means of stopping people from flexing their ethical muscles by making sure that individual goals do not conflict with social welfare. According to Santos, if markets were designed to lead people towards the best strategies without significant effort, it would leave the people ill prepared when they are confronted with a novel yet similar dilemma. Santos also criticizes market design and choice architectures by arguing that they promote a version of economic analysis that goes beyond the arenas traditionally reserved for economic study. On the first critique, Santos fails to recognize that ethical situations regularly arise that test individuals' moral intuitions. One cannot simply place blame on the simplification of individual decision-making as a way of anticipating that ethical decision-making would decline. In fact, it is equally as accurate to infer that aligning individual goals with those of social welfare can better allow individuals to realize that it is often possible to shift their perspectives in order to achieve an outcome that is not only individually beneficial but also socially desirable. The goal of market design, like technological advancement that simplifies decision-making, is to systemize processes towards efficiency and a critique cannot be successfully leveled at the system for creating an efficient process. There will always be ethical dilemmas that require our ethical muscles; many of these dilemmas would be created by the new designs that solved old problems. To the second critique, Santos is accurate to claim that market design does stretch the limit of economic analysis but there is nothing to say that economic analysis cannot strengthen decision-making in new and novel fields. If social welfare is indeed an outcome to be desired, then economic analysis has much to contribute to other fields of thought. Injecting economic analysis into other arenas can only shed insight into tradeoffs that occur in life. For example, economics takes no normative stance on which moral or ethical stance an agent must take but it can be used to sort moral or ethical views along an efficiency/equitable tradeoff. It is then society's decision which level of tradeoff would best serve its desires.²¹

Meanwhile, Satz (2010) tries to argue why things should not be for sale by appealing to the moral limits of markets.²² According to Satz, a market should be prohibited or highly regulated if it can be described as a noxious one. She defines a noxious market as 1) one with weak agency,

21 Economic analysis can make a recommendation to not accept an outcome that is Pareto dominated, that is, if two outcomes exist and one is better than the other on all levels (efficiency, social welfare, equitable, social justice, redistribution, etc.), then economic analysis can easily recommend rejecting the outcome that is inferior. This only applies to outcomes that are strictly dominated (in all relevant criteria).

22 Michael Sandel also posits similar arguments in his new book of a similar title, "What Money Can't Buy: The Moral Limits of Markets". Unfortunately, apart from book reviews and the lecture series of the same name, this author has not been fully exposed to Sandel's claims and therefore his arguments are not represented herein.

2) one with vulnerability, 3) one with extreme harms for individuals, 4) one with extreme harms for society. Weak agency is described as a market with “inadequate information about the nature of and/or consequence of a market; others enter the market on one’s behalf”. Vulnerability is described as “markets in a desperately needed good with limited suppliers; markets with origins in poverty and destitution; markets whose participants have very unequal needs for the goods being exchanged”. Extreme harm for individuals and society are self-descriptive in that they describe markets that harm the participants or society. It is these noxious markets, akin to repugnant transactions, that Satz believes need to be restricted and regulated to avoid commercial infringement on personhood, equality and morals. It should be noted that Satz includes the market for women’s reproductive labor and the market for human kidneys among these noxious markets. Still, Satz agrees that market forces should be encouraged in the non-noxious market, or the efficient and effective market as Satz refers to them. Indeed the aim of market design is to try to transform these noxious markets (or repugnant transactions as referred to herein) into suitable market transactions that overcome the technical constraints and result in increased social welfare. Perhaps it can even be said that the government regulation Satz believes is required of noxious markets can best be simulated with well-designed incentives and government oversight.

Finally, a point of contention against designed markets of this type is that there is still the possibility of government control through its monetary or political influence. This viewpoint is contrasted with another view that claims overt government regulation and control is a major requirement in markets of this type in order to overcome the repugnancy that constrains it. The point to be made here is that both sides of the government regulation debate will not be satisfied with this designed market that includes but minimizes the role of government; perhaps that is the key takeaway from this debate. With both sides unhappy with the current design of the system, it can be said that this newly designed market system lies closer to a moderate policy recommendation that includes major compromises. The point of designing a market in the face of repugnancy is to allow a market-based system to exist while still appreciating the concerns of repugnancy and mitigating the effects as much as possible; this is the role of government oversight in the marketplace.

Market for Children Critique

A question to be addressed is whether we should be designing a market for children in the presence of repugnancy. The argument is actually two-fold: 1) Should we even be designing a market for children in particular,

2) Should we even bother to respect repugnancy when designing a market? The first part of this argument deals with whether the aim of a market for children should be efficiency or satisfying demands for parental rights. Those that endorse this argument claim that the adoption market (and to a lesser extent the market for babies) is about ensuring that unfortunate children separated from their biological parents find a nurturing home. These critics claim that that the only priority of such allocation should be assigning unfortunate children to homes. Any intentional increase in the supply of children into the market would be regarded as immoral. This argument, though, ignores the failures in the current allocation system. Simply put, the current allocation system does not do an adequate job of placing children into homes. Davis (2011) maps out the demography of adoption behaviors in the U.S. In her analysis, she points out that the desired candidate for adoption is a healthy, white infant and matching said infant in a home is seamless. It is for the other “harder to place” children who are usually in foster care, slightly older and from a racial minority group or with special needs care that the current allocation system fails (pgs 8-9). By allowing a market transaction to allocate these for whom the current system fails to find homes, the children can receive an opportunity that they can only wish for under the current system.

The second side of the argument claims that repugnancy should not be a constraint that is to be respected but rather should be denounced. Those that espouse this viewpoint believe that repugnancy constrains free exchange between counterparties and that these constraints sometimes lead to disastrous results for all parties involved. In the case of a market for children, repugnancy as a constraint on market forces introduces excess bureaucracy that hinders parents willing to provide children with loving homes from finding these children. The critics claim that the market should be unconstrained if the ultimate goal of the market transactions (assigning children to homes) only contains pecuniary externalities.²³ Still, it can be argued against these claims that moral aversion can indeed be considered a non-pecuniary externality and so these justify the restrictions to an extent. If moral aversion to a transaction blocks the transaction, rather than just affecting the price, it could be regarded as a non-pecuniary externality. The answer to this critique, like the previous one, is that the current market allocation lies between both claims. The current designed market attempts

23 Pecuniary externalities are externalities that operate through the price mechanism. For example, if there is one buyer and one seller in a marketplace, the entrance of a second seller will depress the equilibrium price. Clearly the entrance of the second seller harms the original seller but because this externality operates through the price mechanism, the entrance of the second seller also benefits the buyer. In fact, the loss in surplus to the original seller is exactly balanced by the equal gain in surplus by the buyer, therefore resulting in no net social welfare loss. Pecuniary externalities basically shift the allocation of surplus in society. In the market for children, this pecuniary externality would shift surplus from intermediaries to the parents (both biological and adoptive).

to improve the lot of the children in the market beyond and above their current situation today while still allowing for the market based mechanism to conduct efficient transactions between consenting counterparties.

Another critique against the market for children is that it will serve only to further benefit the rich while disadvantaging the poor. In this critique, the assumption is that the market for children would assign such a high price for children thereby excluding those without sufficient financial capital from participating in the marketplace. The initial response to this critique is to disregard it. After all, numerous markets exist that allocate goods with exorbitantly high prices but there are no calls for banning them. Certain sections of California neighborhoods have average house prices that surpass one million dollars. The price of these homes is prohibitive to the average American but no one questions whether free exchanges should be allowed in these marketplaces. Incidentally, the current regulations have actually made the price that a parent would have to pay in order to buy the parental rights of another artificially high so that only the rich can afford to adopt and the poor are prohibited from participating. Under the proposed market for children, the average prices should drop as the supply in the market increases to meet the available demand. As the price of acquiring parental rights drops, many more Americans would actually be able to participate in the market than are currently able to today. It is also to be said that poor mothers would not be exploited by the current system. The system does not coerce any biological mother to supply her parental rights against her will. On the contrary, contract law would prevent such coercion from being binding in the court of law. Moreover, these poor mothers would actually benefit under this new system since they are able to earn a profit from the sale of their parental rights – a benefit denied to them today.

Another critique on the market for children is that changing the price of the transfer of parental rights from zero (as it is currently today) to a positive amount might crowd-in suppliers who are undesirable.²⁴ This argument fails to ignore the safeguards that would have been introduced to catch, eliminate and discourage such suppliers. In fact, to be able to enjoy the surplus available in the marketplace, suppliers would need to be held accountable. Such information disclosure would actually lead to increase in the average health of children, as suppliers would try to capture as high a surplus as possible.

²⁴ There is also a crowd-out argument but that argument does not hold much weight in this market. The crowd-out argument is usually that those who are intrinsically motivated to commit a socially beneficial action might stop or reduce their action once given monetary compensation for their actions. An example could be paying people who spend their time in a Big Brother/Little Brother organization. When paying these men to spend their time with underprivileged minors, they tend to perform the action less, perhaps because the monetary aspect cheapens the signaling effect of their action. Nonetheless, it can be argued that there is minimal intrinsic motivation for a woman to give up her parental rights today. Such exchanges mostly occur when the mother is forced to surrender parental rights due to external pressures. As such, there is little crowd-out effect in this market.

Transferability Critique

A final critique against the market for children is that the market allows selling of human lives. Of course, any argument that begins with the sale of humans ultimately becomes a discussion on slavery. To be certain, the market for children is anything but a market for human lives. Instead, as often repeated in the texts, this is ultimately a market for the transfer of parental rights. Under the proposed market, birth mothers would receive a chance to transfer their parental rights over a child for compensation. The buyers in this market receive only the rights over the child that the biological parents initially possessed under the law. These transferred rights do not include the license to abuse, neglect or impose undue labor on a child. To assume that these transfers of parental rights can lead to extreme form of human degradation such as slavery is to fall prey to the slippery slope logical fallacy and to ignore the expanse of child protection laws already in place.

Conclusion

Organ Transplantation in the U.S.

It is the hope of this paper that genuine discussion into the market for children should bring more discussion into markets for other goods and services that also suffer from the constraints of repugnant transactions. The market for organs for transplantation is an excellent example of a system that can benefit from such market design. Currently in the United States, there is a shortage of available organs for donation. Many Americans that require life-saving organ transplantation will die because the current procurement system does not generate enough supply to meet the continually increasing demand. In fact, to be put on the waiting list for an organ is often a death sentence as it necessitates waiting in a multi-year queue. If a person's turn in line ever arises before succumbing to the disease that necessitated the transplant, too often the person is too sick to be able to benefit from the transplantation because of the length of time spent with the ailing organ. Goodwin (2006) writes that each day, eighteen people will die while waiting on the waitlist and another one hundred and ten people will take their place before the day ends. This translates to a growth rate of one person every thirteen minutes on the waitlist and that rate increases yearly. Despite the attempts of the United Network of Organ Sharing (UNOS), the current system cannot meet the current ballooning demand for organs. Included in this shortage statistics is the startling fact of racial inequity in the distribution of organs in the U.S. Citing UNOS data, Goodwin points out that Blacks wait longer than any ethnic group for all organs and have the highest death rate while waiting. Blacks were more likely to be donors and Whites recipients for six of the eight types of deceased donor organ transplant (pg 5). Even if all

the organs were equitably distributed along racial lines, demand for organs for transplantation would still outstrip their supply. This is as clear a call to action as can ever be made for market design to assist in increase the supply of organs for transplantation.

On December 5, 2011, Alexander Berger, wrote an op-ed piece for the New York Times arguing for the legalization of trading in kidneys for transplantation. The author's conclusion, also shared by this author, rests on the fact that altruism has fallen short in its goal of increasing kidneys for donation. It is due time to begin to consider other methods to increase the supply of organs for donation so that "people should not have to beg their friends and family for a kidney, or die while waiting for one" (Why Selling Kidneys should be Legal, 2011). Mr. Berger was due to donate one of his kidneys that Thursday (December 8) to a complete stranger. Indeed, kidney donation is one of those rare donations that can be done with living donors, wherein one person with two healthy kidneys donates one to a patient and both donor and recipient live healthily with one functioning kidney. Still supply of available kidneys is outstripped by its demand.

Generalizable Principles

Baron and Leshner (2000) have shown that protected values (such as repugnancy towards certain transactions) have been known to change with discussion. When people carefully consider the factors at stake in an issue, they can get beyond the initial repulsion of the repugnancy and consider the merits of the issues. It is the hope of this paper that the design of a market for children is able to overcome the initial repugnancy that is felt in the consideration of a tradable market for parental rights over children.

The laws against buying and selling of parental rights (or kidneys) reflect a reasonable widespread repugnance, and this repugnance may make it difficult for arguments that focus only on the gains from trade to make headway in changing these laws. Our moral intuition might tell us that the buying and selling of parental rights is repugnant because it places a value on human lives and could potentially coerce the poor into transactions against their interest. On most occasions, we can trust our moral intuition to guide us to an individually and socially beneficial outcome but we can only trust our intuitions until they have been shown to be wrong. Hopefully, this paper has proven that the initial moral intuition can be misguided or conflicted and careful discussion and analysis into the issues can reveal opportunities to increase social welfare. Furthermore, it can be possible to design Pareto-efficient markets that correct many of those intuition failures and guide individuals toward the socially acceptable outcomes.

Repugnant transactions can indeed constrain market forces but

understanding the cause and root of these repugnancies is often the first step in designing a market that reaches an efficient allocation regardless of repugnancy to the transaction. With such repugnancies present, there are roles for government to play in the market design but such roles must be minimized in order to allow market forces to continue to dominate the allocation. Rent-seeking activities could still potentially create unnecessary and costly restraints on trade in the marketplace but it is the goal of market design to consider the incentives of the participants involved to prevent the factions from stopping welfare gains. In all, the tools of economics can help govern behaviors to lead to socially efficient outcomes but it is imperative to understand the reasons behind repugnancies to transactions and analyze those intuitions to show the steps to design these markets.

Further Research Avenues

Predicting when a repugnant transaction will act as a constraint on market forces is beyond the scope of this paper, but it is the hope of this paper that a well functioning market can be designed in such cases to produce an outcome that is socially beneficial. By designing a market for children, it is the aim of the author to show that a workable market solution can generate an efficient allocation solution, at least in the theoretical sense of the word. With any market design, the goal is first to design the market, then later run it on a small enough scale to test the market in practical terms, and then to go back to the drawing board to continue to iterate on the market mechanism and achieve the desired efficient outcome. This paper is simply the first of those steps. The next approach is to see if designing such a market can be feasible and if empirical data can conform to theoretical expectations. Concurrently, experiments could be run to see whether introducing various iterations of this market design can actually reduce the repugnance toward a market for children. In the end, market design principle can be used to help solve some of the world's pressing allocation issues.

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