WELFARE ANALYSIS OF LEGAL RULES: A LITERATURE REVIEW AND CRITIQUE OF LOUIS KAPLOW AND STEVEN SHAVELL'S *FAIRNESS VERSUS WELFARE*

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TABLE OF CONTENTS

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1. INTRODUCTION

Kaplow and Shavell's book *Fairness versus Welfare* (*FVW*) discusses the way in which society should select legal rules. The argument presented in *FVW* is reminiscent of the age old conflict between consequentialism and deontology, and it claims to have put an end to this quarrel. The authors thus compare the choice of a legal rule based exclusively on a welfare economic analysis to a legal rule based on fairness. Their thesis is that an ex ante welfare-based normative economic approach should be used exclusively when determining legal rules and that notions of fairness should be accorded no independent weight in that decision. In fact, they argue that rules based on notions of fairness that differ from rules based on economic welfare will, under some circumstances, have the undesirable consequence of leaving *everybody* worse off. Therefore, fairness should never be the basis of legal policy choice.

However, this body of work has been heavily criticized. The definitions and use of welfare functions and fairness has been critically reviewed in the literature. From the outset of the book, the authors are already convinced that welfare will prevail over fairness and, problematically, they do not present a balanced argument for both sides as the title suggests they have done. Furthermore, the selection of a welfare function and the refusal to restrict objectionable preferences has served as a lightening rod for critics.

These critiques, among others, illustrate that while *FVW* is groundbreaking in understanding and advancing economic legal analysis, there are many problems within the setup that make this analysis less than convincing.

This discussion will begin with a summary of the book and popular critiques written by other authors. The goal of this summary is to make the proceeding critique more accessible and to highlight the controversy and uneasiness surrounding the book. Next, the main critique will evaluate the author's claim from within the welfare analysis and demonstrate that it is incomplete at best. The first critique will show that the welfare analysis may lead to mistaken policy recommendations because it fails to take into account preferences, and particularly tastes for fairness, in the social welfare function. Secondly, although the author's strongly argue in favor of an ex ante welfare analysis, there is an equally strong argument that legal rules should be based on an ex post welfare analysis. The claims made by the authors that ex ante and ex post social welfare will be equal is overstated because they have not considered informational constraints that make the ex ante analysis troubling. In fact, since the optimal ex ante and the optimal ex post legal rule may not be the same, this will create tension in the legal system. In order for the legal system to incorporate principles of welfarism and solve this problem of tension that commitment creates, this necessarily implies that legal rules should be based on an ex post welfare analysis. In fact, pre-determined legal rules should be abandoned altogether and a welfare analysis should be conducted after the event has occurred, necessarily entailing an ex post welfare analysis if the ultimate goal of society is to

maximize ex post welfare. Whether this is desired or ex ante optimality is preferred will be based on the values of society.

Section 2 will outline the major points of Kaplow and Shavell's argument and will focus mainly on their example of tort rules since this example will be used throughout to explain the ex ante and ex post critique. Section 3 presents a summary of critiques of Kaplow and Shavell. Sections 4 and 5 will present the main critique of *FVW*. Section 4 focuses on the problem of defining cost minimization as the social objective and ignoring preferences, in particular tastes for fairness. Section 5 will present the argument for an ex post welfare analysis. Lastly, section 6 concludes the paper.

2. OVERVIEW OF KAPLOW AND SHAVELL'S *FAIRNESS VERSUS WELFARE*

In *FVW,* Kaplow and Shavell argue that legal rules should be chosen exclusively on the basis of a welfare economic analysis and that no independent weight should be accorded to notions of fairness (2002, 1-2).[1] In other words, analysts should select legal rules based only on what maximizes social welfare which is some aggregate function of individuals' utilities. This is superior to the selection of legal rules that attribute independent weight to notions of fairness such as corrective justice or retributive justice. The premise of this argument is that if a rule chosen based on notions of fairness is different than one chosen

[1] As will further be explained later, in this context, fairness refers to such concepts as justice and rights. What is "fair" or "just" is determined by an enlightened society and includes adherence to theories such as corrective and distributive justice as first defined by Aristotle in his book *Nicomachean Ethics* and as it has evolved through time. Fairness is evaluated on merits independent of welfare. For instance, distributive justice is "where the shares of those involved are in alignment with one another according to desert" (Rescher 2002, 1); it is what an individual is entitled to by right and has a good claim for. If a victim has the right to be free from harm in all circumstances, distributive justice requires that a victim be fully compensated. This is independent of consideration for social welfare. A welfare analysis does not ask what the victims deserves but rather what will maximize social welfare.

based on a welfare economic approach, that rule will reduce some individuals' well-being. In fact, in some circumstances it can be shown that the choice of a rule based on notions of fairness may make *everyone* worse off (2002, 8). Kaplow and Shavell admit that this argument is tautological since it rests on the notion that making a decision based on anything but the maximization of welfare necessarily reduces welfare if the outcome differs, however, this conflict between welfare and fairness is underappreciated. By presenting these arguments, they hope to make the problematic implications of legal policy based on fairness better understood (2002, 7-8).

A. Social Welfare

In *FVW*, the welfare economic approach to assessing legal rules looks exclusively at the well-being of individuals as measured by utility. Well-being is affected positively by anything that an individual may value such as goods and services and pleasure. It is negatively affected by harms such as cost, inconvenience and pain. However, Kaplow and Shavell claim not to restrict well-being to materialistic and hedonistic considerations but also include preferences and tastes for any and everything such as personally held notions of fulfillment, legal redress for injury, sympathetic feelings for others, and, most notably, one's taste for fairness. In general, anything that affect's an individuals' well-being is included in the measurement of utility and is only limited by the individuals themselves (2002, 18-19).

In the welfare economics analysis, the objective is to maximize social welfare. Social welfare is an increasing function of individuals' utilities (Kaplow and Shavell 2002, 24). Kaplow and Shavell formally state the social welfare function (SWF) as:

$$W(x) = F((u^1(x^1), u^2(x^2), u^3(x^3), \ldots , u^H(x^H))$$

where each individual's utility, $u(x)$, includes preferences and tastes such as the taste for fairness (2002, 24 n. 15). The analyst must take two steps when conducting this analysis: 1) the analyst must make interpersonal comparisons of utility by choosing a numerical representation for each individual welfare function; 2) the analyst chooses a way to aggregate the function F (Kaplow and Shavell 2002, 24 n. 15).[2] Note that Kaplow and Shavell assume that an individual is always fully informed and always knows how a certain situation will affect their well-being. If well-being is ambiguous and an individual does not know how a certain situation will affect them, then actual well-being is used – what they would prefer if they correctly understood how they would be affected (Kaplow and Shavell 2002, 23). This assumption will later be rejected under an analysis with incomplete information.

Kaplow and Shavell ascribe the following characteristics to the SWF. First, they define the SWF as being symmetric. Each individual's well-being symmetrically affects social welfare therefore W does not depend on who has what utility level; the SWF has equal concern for every individual (2002, 25). Second, in terms of the aggregation of individuals' utilities, they purport not to endorse any particular view of how utilities should be aggregated. This will entail a value-based decision on what the proper

[2] Both of these steps have received major direct attacks as will be outlined in the critiques section. First, interpersonal comparisons are very difficult to apply in practice and, secondly, the choice of SWF may presuppose the outcome desired.

distribution of well-being or income is as long as some way is chosen to provide a means to compare policies (2002, 27). Lastly, Kaplow and Shavell argue that the distribution of income does not have to explicitly be taken into account when doing normative economic analysis on legal rules: 1) as a matter of convenience; 2) because legal rules have a minimal impact on the distribution of income especially when the parties share similar characteristics and only a small fraction of the population is ever affected by legal rules; and 3) because distributional objectives are better met by the tax and transfer system and legal rules are a crude means of redistribution (2002, 32-34). However, if these reasons are inapplicable in a particular setting, distributional issues will be taken into account simply by employing a SWF that takes into account distributional issues. For example, if the marginal utility of income is greater for the poor than the rich, the SWF will reflect that (Kaplow and Shavell 2002, 35). In this sense, Kaplow and Shavell argue that the SWF does take distributional issues into account.

In conclusion, Kaplow and Shavell state that the preceding arguments highlight why a method similar to "wealth maximization" is an appropriate social objective (2002, 35). Although they acknowledge that wealth maximization is not without its problems, it is analytically useful to study because some "wealth-like aggregate" can "reasonably approximate" social welfare (2002, 37). Thus, in the rest of the analysis, wealth maximization (or cost minimization) is used to approximate the maximization of social welfare. Although it is clear that Kaplow and Shavell restrict the analysis as such to avoid difficult interpersonal comparisons of well-being, this simplification causes problems later because it does not take into account tastes for fairness.

B. Notions of Fairness

Kaplow and Shavell define notions of fairness as including such concepts as justice, rights and related ideas (2002, 38). Justice, as a concept of fairness in the legal context, may be defined as refraining from *pleonexia*: abstaining from denying a person what is due to him, the fulfillment of a promise or repayment of debt and so on (Rawls 1999, 9 sourced from Aristotle's *Nicomachean Ethics*). For instance, the belief that victims have the right to be free from wrongful harm and should be compensated by the injurer or that people should always fulfill their contract because it is a type of promise are examples of notions of fairness in torts and contracts respectively.

Kaplow and Shavell's definition of the term "notions of fairness" follow from deontologist principles. This can be defined as anything that is non-consequentialist; for instance, the choice of a legal rule based on a moral position that the rule is prima facie "right" regardless of the consequences (Simons, 1996). What is "fair" is determined on merits independent of an individual's well-being (Kaplow and Shavell 2002, 44).[3] Kaplow and Shavell allow for a mixed stance on notions of fairness. For instance, an analyst may accord weight to both deontological principles and well-being (2002, 43). One possible example of a formal definition is provided as:

$$Z(x) = F((u^1(x^1), u^2(x^2), u^3(x^3), \ldots, u^H(x^H), x)$$

where $Z(x)$ may depend on utility but also directly on x which are notions of fairness (Kaplow and Shavell, 2002, 40 n.52). $Z(x)$ can be defined as attributing some weight to individuals' utility, between zero but less than one and some weight to x greater than

[3] Although some determinations of fairness can, to some extent, take social welfare into account. The argument is that social welfare is not the independent evaluative criterion that determines what is "fair."

zero. In sum, notions of fairness are anything that do not *exclusively* take individuals' well-being into consideration but that the analyst regards as important (Kaplow and Shavell 2002, 39).

C. Notions of Fairness versus Tastes for Fairness

Kaplow and Shavell identify a sharp distinction between tastes for fairness and notions of fairness. Tastes for fairness are a component of individual well-being (2002, 21). They involve asking how much, if at all, fairness impacts individual well-being. This is a purely empirical question and which rules philosophers or policy analysts believe are important are irrelevant (2002, 22). On the other hand, notions of fairness are completely independent of tastes. They are rules developed by an enlightened society and believed by analysts or politicians to be important for some reason independent of whether people have tastes for them.

D. Torts Analysis

In this analysis, unintentional torts (accidents) and nuisance suits are the subjects under consideration. There is an analyst who makes policy recommendations either on the basis of a welfare analysis or on the basis of fairness. These recommendations are then made into legislation or regulation and applied by legal decision makers, such as judges. In the welfare evaluation of legal rules, the analyst looks at the circumstances and asks about the nature of the parties. If the parties are similar, i.e., drivers who drive with the same frequency, the analyst will choose the rule that produces the greatest net benefit per person. If the parties are distinct, i.e., corporation and consumers, distributional issues

must also be considered. All rules are set before the accident occurs given the general characteristics of the parties and circumstances.

In the torts analysis, three basic legal regimes are compared. Strict liability requires that an injurer pay for the harm whenever he causes it, regardless of the circumstances. Under a negligence rule, the injurer is only liable if he fails to take an adequate level of precaution or, in other words, he does not meet the required duty of care and wrongfully causes harm. Lastly, under a rule of no liability, the victim bears the entire cost of the harm regardless of the liability of the injurer. Kaplow and Shavell assume that under the regimes of strict liability and negligence, administrative costs[4] are incurred however there are no administrative costs associated with a rule of no liability.[5]

The welfare analysis of tort used by Kaplow and Shavell is focused on cost minimization. In particular, it looks at incentives created for the potential injurer to take precaution and reduce the expected harm given the cost of both, the allocation of risk of harm resulting from an accident and administrative costs. In general, under strict liability, injurers should only take precaution if the cost of precaution is less than the expected cost of harm and should not take precaution if precaution costs more than the expected harm. Injurer's act the same way under a negligence rule where a fully informed court sets the cost of optimal precaution equal to the duty of care owed. Under no liability, the injurer will never take precaution and harm will have a much higher probability of occurring.

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[4] These include legal costs to the parties such as lost time and lawyer costs as well as the cost associated with using the court system (i.e., taxes required to pay the judge ands staff, the use of the courtroom, etc).
[5] This assumes that under no liability, the victim will not file suit as they know the rule that they face before the accident occurs.

In the general case where there is certainty, potential injurers will undertake an activity that will cause harm to victims. If the injurer takes precaution, the probability of an accident is reduced to zero but, if they do not take precaution, the accident occurs with certainty. Victims do not contribute to the accident. Settlement and bargaining is not considered as it is assumed liability results in the payment of damages which could also be imagined as the result of a settlement. Two separate scenarios are evaluated, one where the individual is a victim and injurer exactly one time each (reciprocal case). The other case is when the victims and injurers are two distinct groups of people (nonreciprocal case).

i) Case 1: Reciprocal Case

a) Cost of Harm is Known

In this case, an individual plays the role of injurer and victim exactly one time each and the parties share similar characteristics. For example, both are drivers or they are neighbors so there are no distributional issues as they share similar backgrounds. Kaplow and Shavell argue that, given the parties start from the same position and are equally well-off, damage payments received as a victim will not alter net well-being of an individual because damages will be paid once as an injurer and received back as a victim. The only effect damages will have in this analysis is through the influencing of precaution-taking behavior (2002, 102). Due to this, any costs borne by the parties are a loss equal to total per capita social costs (2002, 102). The goal of a legal rule as argued by Kaplow and Shavell is to minimize social costs by efficiently allocating risk to the low cost risk bearer.

Kaplow and Shavell argue that any of the three legal regimes could potentially minimize costs (2002, 102). If precaution is less than expected harm, the injurer should take precaution so a rule of strict liability or a negligence rule should be imposed.[6] Under either rule, the injurer must either take precaution or risk being held liable. Being held liable costs more than precaution therefore a liability rule will induce the potential injurer to take precaution and no accident will occur with certainty. Whichever liability rule has lower administrative costs should be considered the optimal regime (2002, 103). Likewise, if precaution costs are higher than expected harm, the injurer should not take precaution therefore a rule of no liability is optimal. The victim will then bear the lower cost of harm rather than the injurer paying the higher cost of precaution or both parties incurring legal costs on top of the cost of harm when no precaution is taken (Kaplow and Shavell 2002, 103).

Kaplow and Shavell argue that if the rule for torts was based on notions of fairness, strict liability would result whenever fairness requires compensation for the victim regardless of the circumstances and a negligence rule would result when fairness requires that the victim should be compensated only if the injurer was at fault (2002, 103). Corrective justice requires that an injurer be held liable when they act wrongly and compensate the victim so they are put back on their status quo position.[7] Generally, this favors the negligence rule however, when an injurer's act is particularly dangerous, this may support a rule of strict liability (Kaplow and Shavell 200, 104 n. 45). For instance,

[6] Note that "liability rule" refers to either a rule of strict liability or a negligence rule: any rule where the injurer can be held liable.

[7] Note that corrective justice in this sense is an ex post analysis. It asks, after the accident occurs, did the injurer act wrongly? And should the injurer be compensated? Although the rule is set before the accident, the perspective is ex post.

consider traffic laws in Canada. An injurer who causes a traffic accident faces a negligence rule; if it is found that the injurer was negligent, the victim is entitled to full compensation.[8] However, if the injurer is participating in street racing or stunting, the injurer is strictly liable as this is considered a dangerous activity (*Ontario Highway Traffic Act,* RSO 1990).

These laws do not consider the consequences that the law will have on social welfare. Assuming that, more often than not in the case of traffic accidents, precaution costs less than the expected harm, it may be cost minimizing to have a rule of strict liability in both cases instead of a negligence rule if the administrative costs are less. Strict liability may be cost minimizing as less information is needed to make a judgment. Both strict liability and a negligence rule would create the same incentive for the injurer to take precaution and therefore whatever rule is cheaper is the ex ante optimal rule.[9] Although these rules based on fairness result in two different rules for virtually the same activity with similar cost associations, it is welfare maximizing to have the same rule for both based on which rule has the lower administrative costs. Rules based on fairness can result in different rules for virtually the same activity depending on what is considered "just" given the behavior of the injurer and outcome.

Comparing the choice of legal rules on the basis of welfare economics to the choice of rules on the basis of notions of fairness, Kaplow and Shavell conclude that whenever a

[8] Given the victim does not contribute to the accident.
[9] It could also be argued that a negligence rule would be socially optimal in both cases if the administrative costs of a negligence rule are less than the costs of a rule of strict liability since both create the same incentive to take precaution.

liability rule chosen under notions of fairness differs from the one chosen under welfare economics, this can make *everyone* worse off (2002, 104).[10] This is because if a notion of fairness requires strict liability yet a negligence rule would entail lower legal costs and result in the same outcome, a rule of strict liability would mean that everyone would pay more (2002, 105). This is clearly not cost minimizing. Kaplow and Shavell sum up by stating that if an analyst chooses a rule based on a notion of fairness, they are endorsing a rule that may make everyone worse off and should have to defend the choice of such a rule (2002, 111).

b) Cost of Harm is Uncertain

The preceding considered the case when the cost of expected harm was known. If the cost of expected harm is uncertain,[11] Shavell and Kaplow argue that the analysis would result in the same conclusion for legal rules as the uncertain expected cost of harm would be replaced by a known insurance premium. Assuming that both parties are risk-adverse and can purchase insurance on actuarially fair terms, they will purchase insurance equal to the expected cost of harm.[12] This converts a risky situation into one where harm is certain (2002, 124-125).

However, insurance cannot always be bought on actuarially fair terms. If the victims do not buy insurance because the premium costs more than when it was actuarially fair, the

[10] This naturally assumes that every case is identical. Consider the example of traffic laws. This statement makes the assumption that precaution is *always* less than expected harm in all traffic accident cases. Then, if the more expensive rule is chosen, both the injurers and victims will have to pay more. This assumption may not be realistic because not every case is identical.

[11] i.e., there is a 10% probability of an accident when precaution is taken.

[12] For instance, under a rule of no liability, the victim will buy full insurance equal to the expected cost of harm so they will be fully compensated for the harm they suffer. Likewise, if the rule is a rule of strict liability, the injurer will buy liability insurance to cover the damages he may have to pay.

welfare effects, Kaplow and Shavell argue, are the same as before except in the cases where the harm is uncompensated (2002, 127). Victims are not compensated when there is a rule of no liability or a negligence rule and precaution is greater than expected harm. Strict liability may become more attractive since the victim's risk-adjusted valuation of harm exceeds the expected value of harm but is less than the cost of insurance. For instance, if the expected harm is $100 and the insurance premium cost $110, the victim will not buy insurance if their reduction in well-being from exposure to risk is less than the price of insurance. If their risk-adjusted valuation is $105, they will not buy insurance. Under the negligence rule or no liability, social welfare decreases by the difference in the risk-adjusted valuation and the expected harm. If under strict liability, administrative costs were less than that difference, it may be more attractive. The argument is symmetric if injurer's are uninsured. Again, in this case, Kaplow and Shavell conclude that pursuing notions of fairness may make everyone worse off since they do not take into account all these various costs associated with the rules that impact social welfare.

ii) Case 2: Non-reciprocal Case

a) Cost of Harm is Known

In this case, the injurers and victims are distinctly different parties, for instance, a firm and an individual. Kaplow and Shavell argue that the behavior of the parties is the same as before however, the parties may have different preferences about choice of legal rule as now one group will gain and another will lose under particular legal rules (2002, 118). For a rule based on welfare economics, Kaplow and Shavell argue that if the injurers and

victims have the same level of wealth and the rules do not significantly change those wealth levels, the lowest cost rule will maximize social welfare (2002, 118). The analysis would be identical to the analysis in the reciprocal case. However, if the wealth of the parties is significantly different from the outset, it is argued that either a rule of strict liability or a negligence rule would be optimal (2002, 119). It is dependent on the magnitude of the distributive effects and the ability of a rule to minimize total costs. For instance, if the victims are poor and the injurers are rich, then the damages paid to the victims may be weighted more heavily than the cost of the injurers due to decreasing marginal utility. Kaplow and Shavell argue that due to the distributive effect, strict liability may be preferred (ignoring for now the more efficient tax system). On the other hand, a negligence rule may minimize total costs as fewer lawsuits may be filed and administrative costs will be minimized. The choice of rule in the non-reciprocal case on the basis of fairness is the same as in the reciprocal case (2002, 120).

In the non-reciprocal case, Kaplow and Shavell assert that, due to the distributive effects, a rule based on notions of fairness may not make everyone worse off although social welfare will still be reduced if the rule differs (2002, 120). Some individuals may benefit from a rule based on fairness due to the distribution effect however such a rule may decrease overall social welfare. It is acknowledged that notions of fairness may be a good proxy for improved distribution of wealth if victims are always poorer than injurers, however, this is not always the case. In conclusion, giving weight to factors other than an individuals' well-being can decrease social welfare.

b) Cost of Harm is Unknown

To begin with, Kaplow and Shavell assume that insurance is actuarially fair and that both parties purchase insurance. Therefore, even if the cost of harm is unknown, the insurance premium is known. Injurers insure against liability and victims insure against all potential loss. This analysis will be identical to the analysis for the non-reciprocal case when the cost of harm is known. The same conclusions are made and the critiques of notions of fairness still apply (Kaplow and Shavell 2002, 132).

E. Conclusion

To sum up Kaplow and Shavell's argument, their position is that legal rules based on notions of fairness have led us astray. Any rule that deviates from a rule chosen on the basis of welfare maximization, including those based on notions of fairness, will make at least some people worse off. In fact, any other rule could potentially make *everyone* worse off.

3. MAJOR CRITICISMS OF KAPLOW AND SHAVELL'S *FAIRNESS VERSUS WELFARE*

With this book, Kaplow and Shavell sought to put an end to the centuries old debate of consequentialism versus deontology. However, the flurry of criticisms that resulted from this body of work was substantial indicating that no such end has been achieved. Much of the criticism of this book has come from two major schools of thought. On the one side rests the advocates for fairness such as philosophers and legal scholars. This is not surprising as the book comes across as hostile and contemptuous at points against this

group of scholars. On the other side rests the economists whose critiques focus on the welfare analysis of legal rules. This is a more surprising group of critics as this book is written in the language of and resolves the argument is favor of economists yet most see serious flaws with the setup of the welfare approach.

A. General Criticisms

A major criticism of the book is that the argument is tautological in nature and even though this concern is acknowledged in *FVW*, it is downplayed (White, 2004; Coleman 2003; d'Amato, 2003). The basis for this critique is that Kaplow and Shavell argue that if individual well-being matters then any rule that does not increase well-being, such as rules based on notions of fairness, is inferior to the welfare-maximizing rule; "welfare-maximization maximizes welfare and if the latter is desired, the former is recommended" (White 2004, 510). This tautology is troubling as the same argument could be written from a fairness perspective, such that any rule that does not maximize fairness, like rules based on welfare maximization, should not be chosen if maximizing fairness is the desired outcome (White 2004, 511). Most importantly, Coleman argues that in order for Kaplow and Shavell to actually conclude that legal rules based on welfare are truly superior to rules on any other basis, they should have set out a standard for choosing between different bases and defended that standard (2003, 1521). They failed to do this.

B. The Philosophers/Legal Theorists Critique: Critiques of Fairness

These criticisms revolve around Kaplow and Shavell's definition of notions of fairness. Unfortunately, no critique was available that made the reverse argument of *FVW*: that

legal rules based on fairness are superior to legal rules based on a welfare analysis and a justification for this position. Many of the fairness critiques, rather than advocating for fairness, alter the definition of fairness in some way to exclusively consider social welfare when fairness and welfare conflict. In this sense, they are conceding that Kaplow and Shavell are correct – that welfare is superior. Although this paper does not advocate for or against the position taken by *FVW* in terms of whether fairness or welfare is superior, the lack of defense for rules based on fairness by critics is alarming.

One such critique finds that Kaplow and Shavell's definition of fairness is unreasonable and suggests there are other possible definitions of fairness in the literature that were not examined (Chang, 2000; Ferzan, 2004; Craswell, 2003). Howard Chang argues that an alternate theory of fairness that should also be examined in this context is one that takes the Pareto principle into account so as not to conflict. For example, suppose when a right is invoked, it grants the individual protection from interference by all others. If the right is alienable and there is a situation in which it would in the interest of the bearer and society to waive the right, he would waive it and there would be no conflict with the Pareto principle (Chang 2000, 209). This naturally assumes that rights can be waived. The premise of this argument relies on Allan Gibbard's earlier work that if rights are alienable, the parties can bargain to the Pareto optimal outcome. These rights could only be waived in exceptional circumstances or when fairness conflicts with the Pareto optimal outcome (1974).

This would apply to the analysis of tort in the following way: suppose there is a particular legal rule based on fairness and corrective justice where the victim has the right to be compensated whenever the injurer wrongfully causes harm. Suppose the right to be free from harm and compensated if wrongful harm does occur is an alienable right. In the reciprocal case as proposed by Kaplow and Shavell where precaution cost more than the expected harm and the welfare maximizing rule is no liability, this rule based on fairness conflicts with the welfare maximizing rule. Therefore, the victim will waive this right to compensation that stems from the basis of fairness. Society will be better off as this is Pareto optimal according to Kaplow and Shavell's argument. If this alternate theory of fairness were employed, then basing legal rules on welfare or on fairness would result in the same outcome.

Another critique summarized by Richard Craswell concerning Kaplow and Shavell's definition of fairness, similar to the last, is that had fairness been defined as a hybrid theory of fairness, their conclusion would not have any force (2003, 249). A hybrid theory of fairness takes the general form: 1) choose which rule to support on the basis of a theory of fairness, 2) except when a rule would make everyone in society better off, then support that rule (Craswell 2003, 250). This critique is very similar to the one discussed above where individuals have irrevocable rights unless they conflict with the Pareto principle. Then and only then those rights can be waived and re-negotiated in favor of maximizing welfare.

Kaplow and Shavell have responded to this critique of 'hybrid' theories of fairness proposed by Craswell and Chang (2003). First, they argue that this critique makes it clear that legal rules based on notions of fairness are indeed "troubling" if theories of fairness have to be fine-tuned in order to be welfare maximizing. They also argue that this idea of 'hybrid fairness' would shift the normative evaluation depending on whether or not there was a conflict between fairness rules and Pareto optimality. Changes to the weight given to fairness would change at an infinite rate when a conflict arises due to a change in welfare or distribution of welfare by a tiny amount. This would result in a discontinuous SWF which violates the criteria for a continuous SWF required by this type of normative welfare evaluation (Kaplow and Shavell 2003, 350).

Another critique of the definition of fairness employed by Kaplow and Shavell is that it appears to be contradictory (Waldron, 2003). Jeremy Waldron argues that the definition of fairness used is not the ordinary meaning of the word insofar as the ordinary meaning of fairness generally refers to distributive fairness. When someone exclaims "that's not fair!" they are usually referring to some outcome in distribution of welfare (Waldron 2003, 280). However, this definition is not considered by Kaplow and Shavell. Kaplow and Shavell should consider notions of fairness such as corrective justice that are distributional in nature in terms of how these distributional concepts affect welfare rather than writing them off.[13]

[13] This critique is very similar to the one made later in the paper where it will be argued that people will have tastes for what they consider a fair outcome of distribution and this can affect ex post welfare.

C. The Economists Debate: Critiques of the Welfare Approach

The first and foremost critique of the welfare approach to examine is the critique of the assumption made by Kaplow and Shavell that individual utility is measurable and interpersonally comparable by the analyst (Farber, 2003; Adler, 2005). Measuring utility, especially a utility defined by preferences, is theoretically daunting. For instance when comparing two individuals who glean happiness or well-being from two very different activities, there is substantial difficulty in trying to quantify this happiness and create a cardinal scale on which to compare them (Farber, 2003). How to measure and make comparable the increase of utility of one individual from the enjoyment of an apple to the utility of another individual from reading poetry is problematic: it is near impossible to make quantitative comparisons of welfare (Farber 2003, 1812). Therefore this premise that an analyst will be able to measure utility and compare SWF's to make a choice based on welfare-economics is not feasible and may prove unrealistic.[14]

Another critique focuses on the definition of well-being employed by Kaplow and Shavell. That is, they define well-being as "not restricted to hedonistic and materialistic enjoyment or to any other named class of pleasure and pains: the only limit on what is included in well-being is to be found in the minds of individuals themselves, not in the minds of the analysts" (2002, 18-19). This utility function is strongly concerned with the satisfaction of preferences. The difficulty with this type of preference-satisfaction function lies in defining exactly what preferences should be included in well-being (Van

[14] It is useful to note here that because Kaplow and Shavell end up using cost minimization as a proxy for welfare maximization, this problem of comparing interpersonal utilities is solved. The only problem with solving this problem in this manner is that preferences are no longer taken into account – only one preference counts and that is cost minimization. The implication of this will be examined in section 4.

Aaken, 2004; Adler, 2005). Kaplow and Shavell refuse to restrict preferences included in the utility function as they view any attempt to "cleanse" preferences as supporting the analyst's notion of satisfaction rather than society's actual preferences (2002, 418-420); they take a very anti-paternalistic stance. For instance, they do not restrict sadistic or objectionable or moral preferences as welfare enhancing (Adler, 2005). If any weight is given to these objectionable preferences, is the welfare function still truly maximizing society's well-being? It would seem counter-intuitive to give the satisfaction gained from torture positive weight in aggregating society's well-being. It is argued that this problem inherent in all welfare economic analysis can not be ignored as Kaplow and Shavell do (van Aaken 2004, 423).

Another large body of critique revolves around the choice of the social welfare function. Kaplow and Shavell claim they do not advocate for any particular aggregation of the SWF and leave it to the analyst to choose it while they conduct their normative analysis from a general perspective (2002, 27). However, they fail to appreciate that the choice of a SWF necessarily entails a value judgment which could include a fairness analysis in terms of choosing a distribution of weights whether it be utilitarian or some other weighting (Dorff, 2002; Farber, 2003). Therefore Kaplow and Shavell are critiqued as mistaken when they argue that analysts should never give weight independently to notions of fairness or anything else that does not consider welfare; they have to in order to choose the welfare function as a welfare function cannot be chosen on the basis of welfare (Dorff, 2002).

Similarly, Kaplow and Shavell's use of a utilitarian function is problematic. Farber argues the choice of a utilitarian welfare function is the obvious choice for Kaplow and Shavell's analysis as ex ante and ex post welfare will be identical if calculated with regards to the criteria set out by them[15] and therefore ex ante valuations can be used without trepidation (2003). That is, they can argue that another criteria of the SWF should be that it is temporal consistent and therefore utilitarianism fits this criteria (Farber, 2003). If anything other than a utilitarian SWF is used, ex ante and ex post measurement of welfare will not be the same and therefore the choice of the SWF will have to be based on some fairness or constitutional value. Kaplow and Shavell sidestep this concern (Farber 2003, 1806-1808).

Likewise, given a finite set of points, an SWF can be chosen to satisfy any desirable qualities therefore the choice of an SWF is critical to welfare analysis (Farber, 2003). The choice of the SWF determines what the policy outcome will be. Michael Dorff provides a detailed example of this, employing a host of different SWF's and evaluating their outcomes in the context of torts as set out by Kaplow and Shavell (2002). The different welfare functions examined include: 1) a wealth maximizing SWF based on Posner's work; 2) a redistributive SWF similar to Rawl's work where only the welfare of the least well-off member of society is counted; 3) a deontologist function based on Kant's work where member's are better off when the rules are kept; and 4) an anarchic function where welfare is affected only when the individual is not coerced by the state. The general conclusion is that each of these SWF's lead to a different policy recommendation not necessary endorsed or examined by Kaplow and Shavell. For instance the deontologist

[15] i.e., individuals can correctly measure the consequences and the SWF is symmetric

function would lead to the same conclusion as rules based on notions of fairness but would also increase welfare within its definition and set of characteristics that Kaplow and Shavell set out for a welfare function. *FVW* offers no basis as to how the SWF should be chosen.

D. Conclusion

Given the sheer volume of critiques of *FVW,* it is clear that the analysis presented is not convincing. From the perspective of this paper, the welfare critiques are the most interesting as they demonstrate that the welfare analysis is deficient because it fails to consider critical alternatives. The following critique will illustrate additional examples of why this welfare analysis is problematic.

4. GENERAL WELFARE CRITIQUE: TASTES FOR FAIRNESS

For the remainder of this critique, it is assumed that interpersonal comparisons of well-being can be made and welfare can be measured. It is also assumed that the policy analyst is not omniscient. The analyst can only observe what has happened in the past and the current public actions of the actors (i.e., the purchase of insurance but not how fast an individual drives their car). The analyst faces uncertainty in the future in terms of identifying exactly who will be harmed. Most importantly, Kaplow and Shavell's assumption that individuals are fully informed or, even if they are not, the analyst can use their actual utility as if they were fully informed, is dropped. This is an unrealistic assumption as individuals are not always fully informed and, as stated previously, analysts are not omniscient. There will always be information limitations in policy

analysis. With regards to the timing of this model, it is assumed that the analyst is starting from scratch. There is no tort system and the analyst is looking to create a set of rules for judges to apply and work within. This will create a body of precedent that binds the legal system and is very difficult to alter. The change of a rule will have to be made through subsequent legislation or a ruling that the rule is unconstitutional.[16]

In the setup of the welfare function, Kaplow and Shavell permit individual utility to include any and all preferences and tastes that may affect an individuals' well-being. Therefore, social welfare as a function of individual utilities incorporates into it preferences and can examine how policy interacts with these preferences to alter social welfare. This approach to the welfare analysis of legal rules breaks away from its predecessors such as Posner who strongly supported the maximization of wealth as the social objective in economic legal analysis as opposed to the maximization of utility (Posner, 1979). The maximization of wealth was contentious and criticized for lacking explanative power and ignoring ethics (Coleman, 1980; Dworkin, 1980). For instance, if wealth maximization is the ultimate social goal, then an action is "good" to the extent that it promotes wealth. This necessarily requires that all actions are associated with a set market price. However, when there are no market prices, the goal of wealth maximization can tell us nothing of our rights or responsibilities (Coleman 1980, 524). Furthermore, even when there are fixed market prices, not all actions that promote wealth will increase society's well-being; the action may also be morally repugnant. For instance, a firm may switch from more-expensive adult labor to cheap child labor to generate a larger profit.

[16] This critique of the welfarism analysis is in no way an endorsement for welfarism as the basis of legal rules over notions of fairness. This critique is looking within the welfare analysis to highlight potential difficulties with it.

Although this increases wealth, society may have a preference that children be in school rather than provide cheap labor.

All told, maximization of wealth looks at a very small section of the overall picture; it is merely one feature of the greater social welfare. Maximization of social welfare, which includes all preferences and tastes, takes a much more expansive and complete view. For instance, it takes into account ethical considerations. When maximizing utility, something is "good" if individuals have a preference for it. Therefore, an act that is morally repugnant will, to some degree, decrease social welfare if individuals are opposed to such an action regardless of whether or not it increases wealth. No fixed market prices are necessarily needed as utility can be measured by "utils" or on a constructed measure of happiness. For this reason is a more complete measure of society's well-being.

After stating that individual utility includes all preferences and tastes and establishing that the goal of society is to maximize social welfare based on some aggregation of individual utility functions, Kaplow and Shavell's analysis ignores preferences. Even more problematic is their disregard for tastes for fairness. Instead, they focus on what they term the appropriate social goal: wealth maximization or the willingness to pay for social resources (2002, 35). For instance, in the example of torts, they merely look at the cost of precaution, the cost of expected harm, legal costs and the actions that will minimize these costs. Preferences play no role in their analysis. In fact, Kaplow and Shavell state that in order to include tastes for notions of fairness in the SWF an empirical analysis would need to be performed: "these are empirical questions, best answered by

statisticians and opinion researchers; they are not questions that can be answered by philosophical inquiry" (2002, 431). Thus, they rationalize the decision to drop from the SWF consideration for tastes for fairness. As a result, their welfare function is better characterized as a wealth maximizing function rather than a utility maximizing function and the attempted break from highly criticized predecessors is not accomplished.

Kaplow and Shavell's simplified model of welfare analysis, which focuses on cost minimization, is used to assess cases so that a concrete policy recommendation can be made and, as such, they argue that it is analytically useful as a guideline for maximization of social welfare (2002, 37). However, this simplification removes important qualities from the analysis, such as the examination of tastes for fairness. When the taste for fairness is excluded from the welfare analysis, a legal rule based on cost minimization that is unjust will have negative externalities associated with it that have not been taken into account (Dorff and Ferzan, 2009). These negative externalities imply that a rule that is cost minimizing may not be welfare maximizing if society's preferences for fairness outweigh the preferences for cost minimization. Tastes for fairness can have major consequentialist impacts that are ignored in this model. For this reason, the welfare analysis that uses cost minimization as the social objective and ignores tastes for fairness is incomplete and flawed. Still worse, it will lead to misguided policy recommendations.

Arguably, it is understandable why Kaplow and Shavell dropped the consideration of preferences from their welfare analysis. How preferences affect individual utility is measured through revealed preferences; the choice an individual makes will reveal what

they prefer. However, these revealed preferences do not necessarily reveal all preferences. For instance, through choices, an individual may demonstrate they have a preference for apples by buying an apple but it would be difficult to demonstrate tastes for fairness since it cannot be bought on the market. Surveys that attempt to reveal tastes for fairness may be unreliable. This makes the welfare analysis very difficult to apply. However, it remains that in a welfare analysis it is crucial to take into consideration tastes for fairness and any welfare analysis that excludes this will be mistaken. Kaplow and Shavell's simplified analysis is not complete as it lacks consideration for tastes for fairness. This implies that in order to advance in this stream of academic reasoning and correct it, this problem of how to incorporate crucial tastes for fairness into a welfare analysis of legal rules should be answered.

5. CRITIQUE: EX ANTE VERSUS EX POST WELFARE

Kaplow and Shavell evaluate various legal rules from an ex ante welfare perspective while arguing that rules based on notions of fairness take an ex post perspective (2002, 49). When there is uncertainty in an economic choice model and the model is examined over time, an ex ante perspective examines welfare from the uncertain point of view; it asks what choice maximizes welfare at the beginning of the period, before the change or event has occurred. On the other hand, an ex post perspective asks what choice maximizes welfare after the event or change has been observed (Steiger, 2008). While Kaplow and Shavell go to great lengths to argue that an ex ante perspective is superior to an ex post perspective, there is nonetheless a strong argument for the evaluation of legal rules from an ex post perspective. Ex ante and ex post welfare will not be equal as

claimed because individuals are not always fully informed about their probability of harm or how a rule will affect their preferences ex post. This leads to both subjective ex ante expectations and potential changes in the magnitude of preferences ex post when information is "discovered". This may lead to a failure of the legal system to commit to rules on the basis of ex ante welfare analysis if they are not optimal ex post. If the legal system is to be directed by welfarism and policy makers want to avoid this failure, this necessarily implies an ex post welfare analysis. In fact, since each case has unique circumstances, to ensure ex post optimality, pre-determined legal rules should be abandoned.

Kaplow and Shavell argue that the ex ante perspective is superior hence an explanation of why a welfare approach to legal rules is superior over notions of fairness. They argue that notions of fairness evaluate legal rules from an ex post perspective and are therefore limited to looking at specific consequences, ignoring important aspects of policy evaluation such as incentive for risk-taking behavior (2002, 49). On the other hand, an ex ante welfare approach takes into account behavior that influences the ultimate results. For instance, it takes into account the decision making process of the injurer and whether or not to take precaution (Kaplow and Shavell 2002, 49). Furthermore, Kaplow and Shavell argue that an ex post welfare perspective looks only at atypical outcomes such as the consequences that result from an accident or breach of contract that are merely 'bad luck' outcomes. Kaplow and Shavell argue that, conversely, a proper welfare analysis should consider all possible outcomes using ex ante welfare. Due to the consideration of all

outcomes weighted by their probabilities, an ex ante welfare analysis does not grant excess weight to a limited subset of outcomes (2002, 437).

Lastly, Kaplow and Shavell argue that even if the reader is not yet convinced that ex ante welfare is superior, it is irrelevant as their argument does not depend on whether the perspective is ex ante or ex post. This is because there is no difference as to what is expected ex ante and what occurs ex post (2002, 439 n. 86). For example, in the case of torts with certainty, the ex ante and ex post welfare analysis will result in the same policy recommendation. In the case of uncertainty, the examples are modified so as to make the outcome certain. For instance, a certain insurance premium replaces the cost of expected harm an injurer would pay in the uncertainty case. This last claim is confusing at best because, if it is true, and notions of fairness are also based on an ex post analysis, there should be more overlap. However, this is not the case and will be examined.

A. Background

Before a critique is presented on Kaplow and Shavell's analysis, it is useful to review some important concepts related to ex ante and ex post welfare analysis. Ex ante and ex post approaches look at welfare from different temporal perspectives. Assume there are two periods. In period 2, there are multiple possible outcomes, or a "lottery" of outcomes, each associated with some probability of occurring. However, only one outcome will be realized and the actual outcome is not known in period 1. In period 1, the ex ante decision is made given the uncertainty as to the outcome in period 2.

Ex ante welfare examines expected well-being aggregated for all concerned parties across all possible outcomes. Each individual has a lottery across certain outcomes and the individual, ex ante, will make a choice that maximizes their expected well being given all possible outcomes (Adler and Sanchirico 2006, 286). Maximized expected utilities for all individuals are then aggregated to find the optimal ex ante welfare. The ex ante approach can also be viewed as maximizing *expected* utility for all individuals. This view is consistent with the definition of ex ante well-being used by Kaplow and Shavell (2002, 18). For instance, in the case of uncertainty in torts, two possible outcomes are considered: if an accident occurs and if an accident does not occur. The expected cost of harm is calculated using the probability of the outcome of each state and the harm that would occur in each. The expected cost of harm is then compared along with the cost of precaution, the decision whether to take precaution given the expected harm and administrative costs across each state. The injurer and victim's expected utilities are aggregated to choose the rule that is cost minimizing.

The ex post welfare approach asks what maximizes social welfare after the event or accident has occurred and there is full knowledge of the outcome. There are two different ways to consider ex post welfare. First, egalitarian ex post welfare is concerned with the distribution of utilities of affected individuals for each particular outcome; it seeks to concentrate the distribution of individual well-being around some mean (Harel et al 2005, 60). For each policy, the distribution of utility to what proportion of the population is known but individual outcomes are not. For instance, the distribution of cost to the victim is known in the case of an accident as well as to the injurer but the specific identity of

each party is not known. If society prefers equality, they will be willing to give up some of the average ex ante utility for a smaller variation of distribution around a mean for a given outcome ex post (Harel at al, 2005). The second approach to ex post welfare examines total ex post welfare (Adler and Sanchirico, 2006; Harris and Olewiler, 1979). The utility for each separate outcome is calculated first, regardless of the party affected and that number is then weighed by the probability of that outcome occurring. The total utility of all possible outcomes are aggregated.[17]

Both ex ante and ex post welfare are measures of equity. The ex ante approach examines equity in prospects whereas the ex post approach examines equity in outcomes (Adler and Sanchirico 2006, 287). To illustrate this, consider a case where there are 2 individuals (A and B), 2 time periods (1 and 2) and a choice between policy X and policy Y. The individuals are the same in all respects, i.e., they start with the same utility level and relatively the same income levels. Under policy X, each person is guaranteed an increase in utility by 100 utils each, (100, 100). The total increase in welfare ex ante under policy X is 200 utils. Under policy Y, there are 2 potential outcomes. First, there is a 50% chance that person A will receive 300 utils and a 50% chance that person B will receive 0 utils or vice versa, (300, 0) or (0, 300). Ex ante, the expected utility of both A and B from policy Y is 150 utils and the total increase in welfare is 300 regardless of the individual outcome. Ex ante, both policies demonstrate equal equity in prospect. Under X, both individuals have a 100% chance of gaining 100 and under policy Y, both individuals have a 50% chance of gaining 300. Given equity in prospect, policy Y will be

[17] For both these approaches, it is important to note that ex post welfare is calculated at the same point in time as ex ante welfare. The name ex post may be misleading since it is measured before the accident occurs however, it is the method of calculation that differs from the ex ante approach.

preferred by a policy analyst concerned with ex ante welfare as it maximizes total expected utility assuming individuals are risk neutral. On the other hand, an analyst concerned with an egalitarian ex post welfare will favor policy X as the outcome is more concentrated whereas under policy Y the outcome is not as concentrated; policy X has a more equitable outcome than Y (Adler and Sanchirico, 2006).[18]

In this sense, ex post analysis is sometimes referred to as a paternalistic approach because it disregards individuals' wants ex ante for a more equal distribution ex post. For instance, if the government is considering making a regulation concerning minors wearing helmets while riding bikes, the analyst may consider that ex ante, the cost of buying a helmet is greater than the expected harm. However, ex post, only one child out of all the children in society, of which there are many, will be involved in an accident, potentially resulting in death. This cost to the parents is concentrated and will be inequitable as only a small segment of the population suffers. This concentrated cost of harm to the parents will be larger than the cost of buying a helmet ex ante. Therefore an ex post analyst may advise the regulation be put in place whereas an ex ante analyst will not. Ex post egalitarian welfare equalizes well-being between the "winners" and the "losers" through compensation or equally distributing costs (Adler and Sanchirico, 2006). This will generally require government or third party intervention.

[18] Note that if the ex ante/ex post total welfare is looked at as opposed to the egalitarian measure, and the SWF is utilitarian, policy Y will have an ex ante and ex post welfare of 150 and policy X will have an ex post and ex ante welfare of 100. Therefore, a policy analyst concerned with utilitarian welfare ex ante versus an analyst concerned with utilitarian welfare ex post will come to the same conclusion: that policy Y will be preferred. This is what Kaplow and Shavell argue. This critique argues this by showing that if there are information constraints, this is not necessarily true.

Depending on what society values more, equity in outcome or equity in potential, will determine what approach should be used. Both approaches will result in a Pareto optimal policy recommendation, however, just what policy is recommended may conflict. In other words, it is possible to have two different policy recommendation that are both Pareto optimal, one ex ante and one ex post. A rule that is ex post optimal is Pareto optimal ex post but may be Pareto inefficient ex ante (Adler and Sanchirico, 2006, 288-289).

B. Critique of Kaplow and Shavell's Ex Ante Position

There is, regardless of Kaplow and Shavell's position, a strong argument for consideration of ex post welfare when evaluating legal rules. Although they argue that ex ante and ex post welfare will be equal in every situation, this is not necessarily true. This has implications for the legal system which does not engage with individuals until after the event has occurred and the outcome is realized. Judges (and other decision makers) do not observe injurers and victims ex ante but rather only apply legal rules after the accident has occurred. A judge may be more concerned with the equity of a particular outcome, as that is what the judge observes, as opposed to equity of prospect. Although ex ante considerations are important in allocating risk between parties before the event, it may not be feasible for a court to make a judgment that is not optimal ex post because it would have been efficient ex ante.

Kaplow and Shavell use the terms ex ante and ex post without careful consideration. First, they criticize rules based on notions of fairness because they take an ex post

perspective. Then, they argue in the welfare analysis, ex ante and ex post welfare will be the same given certainty in the model. This conflicts because if ex ante welfare equals ex post welfare, then why is it that rules based on fairness, which are also ex post, differ from rules based on welfare? With reference to notions of fairness, Kaplow and Shavell are referring to ex post in terms of evaluation of the parties after the event or accident has occurred; after the accident occurs, the court asks was the injurer negligent and/or should the victim be compensated? However, to some degree, rules of fairness are also concerned with the distribution of harm. This becomes more clear when one considers that the legal remedy in tort is to put the victim back into the position they would have been in had the accident not occurred. This remedy assesses the victim's distribution of utility and compensates the victim to order to alter that distribution. This type of assessment is one-sided as the distribution of utility of the injurer is not necessarily taken into consideration; fairness seeks to set the victim's distribution back to status quo. This stems from the idea of corrective justice.

With reference to rules based on welfare, when Kaplow and Shavell claim they are equal, what they are referring to is that the total welfare will be always be relatively equal ex ante and ex post.[19] This is only necessarily true for Kaplow and Shavell's case where they assume all individuals are fully informed. A reason that ex post and ex ante welfare would differ in this type of setup is that individuals are not fully informed. Even in a normative analysis, it is not realistic to assume full information is available to everybody:

[19] Here, unlike under notions of fairness, Kaplow and Shavell are interested in aggregating total utility either ex ante or ex post. Because they assume there's certainty and no change in preferences, it will not matter which SWF is used as long as it is consistent: the same policy recommendation ex ante and ex post will always result whether a utilitarian or some other SWF is used (although when comparing the two different SWF's, the same policy recommendation may not hold).

the analyst cannot observe every individual's actions and correctly interpret them as being correct or mistaken (and then apply the 'correct' welfare analysis) and individuals do not always seek out full information or it may not be readily available.

C. Ex Ante Welfare ≠ Ex Post Welfare

i) Subjective Expectations Ex Ante

Ex ante and ex post welfare will not necessarily be equal as claimed even when introducing insurance into the tort models with uncertainty. Ex ante, subjective probabilities can differ among individuals and therefore ex post market failure will occur (Harris and Olewiler, 1979). For instance, in the Kaplow and Shavell example of torts, the injurer buys actuarially fair insurance until the premium is equal to the expected harm. However, the expectation of harm may be subjective. A potential injurer may enjoy speeding in his vehicle which raises the actual probability of an accident. Yet, the injurer believes he is a safe driver even when he is speeding and therefore his subjective probability of an accident is lower than the actual probability of an accident. Likewise, potential victims may systematically underestimate their probability of harm. There are results to suggest that the larger the loss, the higher the subjective probability a victim will attach to it as opposed to a neutral event (Harris, Corner, et al, 2009). For example, victims may attach a higher subjective probability to being involved in a nuclear meltdown as opposed to a traffic accident which is opposite of the actual probabilities.

If the insurer cannot directly observe the insured's actions, the insured will only buy partial insurance given their subjective probability is lower than the actual probability of

harm. In particular, if the analyst sets legal rules by observing revealed preferences, i.e., the amount of insurance bought, in some circumstances this will lead to a distortion between what is expected ex ante and what actually happens ex post. For instance, if the cost of precaution is greater than the cost of expected harm, the optimizing rule, according to Kaplow and Shavell, is no liability and the victim is expected to buy insurance equal to their expected cost of harm. If the victim underestimates the risk they will buy less liability insurance then they would have if they had known the actual probability of risk. However, ex post, after the victim has been in an accident, there is a Pareto-improving allocation of risk that could have been made ex ante to reflect the actual risk – the victim could have bought more insurance and this would be Pareto optimizing. Because the victim did not buy the correct amount of insurance, a rule of no liability is not optimal ex post –the harm could have been mitigated.

In such a case as this, where victims (or injurers) systematically underestimate risk, regardless of which rule is cost minimizing, it would be ex post Pareto optimal to have a rule of strict liability.[20] This forces the injurer to either take precaution or buy insurance as opposed to doing nothing under no liability. This outcome also assures that if the injurer's subjective valuation is mistaken (i.e., the injurer believes that the cost of precaution is greater than their subjective valuation of expected harm however it is the other way around) the injurer is given the correct incentive to purchase insurance.

[20] Provided that the difference between the actual expected harm and insurance bought by the victim is smaller than the legal costs under a rule of strict liability. This also assumes that the legal costs under a rule of strict liability are less than the legal costs under a negligence rule.

What's more, if Kaplow and Shavell extended their analysis to include other liability rules and include the assumption that the victim also contributes to the harm, it may be ex post optimal to have a rule of comparative negligence when victims systematically under value risk ex ante and engage in risky behavior. This is because, even under a rule of strict liability, the victim may be induced to take risky actions now that they know they are protected by law. When there is a rule of comparative negligence, the victim and injurer are both faced with the possible outcome that the other party may not be held liable if they meet their duty of care so they will buy either take full precaution or buy insurance as if they would bear the full risk.

Interestingly, Kaplow and Shavell acknowledge that strict liability may be optimal when expectations are subjective and mistaken ex ante (2002, 411). They argue that individuals may not be able to properly calculate and maximize their well-being and welfare economics should take these "limitations" into account. This supports the ex post welfare argument as there limitations that result in (mistaken) subjective probabilities are information limitations; individuals cannot know the true state of affairs until after the event has occurred or more information is made available. This is a well recognized difficulty that arises with the ex ante approach; the individual must make a 'compromise' before the true state is revealed (Milne and Shefrin 1988, 71). In order to adjust for these informational constraints, this would necessarily imply an ex post welfare analysis that considers the state specific outcomes rather than compromises. The rules should be analyzed after the event has occurred given all the information or, similarly, from the perspective of before the accident as if the true state has been revealed to the individual.

ii) Informational Constraints and Changes in the Magnitude of Preferences

When comparing rules to determine which one is cost minimizing, Kaplow and Shavell argue that ex ante and ex post analysis will result in the same conclusion by adding certainty through insurance markets. Although this may be true when full information and certainty is assumed, it is not as straightforward when these assumptions are dropped, considering the effects information can have on preferences. Again, take for example the case of torts. Kaplow and Shavell argue that in the case of uncertainty and reciprocal accidents, a rule of no liability may be optimal when precaution costs are greater than the expected cost of harm. To reflect costs associated with each rule, the costs of accidents are regulated to include "statistical lives." That is, when measuring expected harm it is the probabilistic harm to some unknown statistical person with no defining features. In this model, an individual can be either the injurer or victim; it is unknown which they will be before the accident. After the accident occurs, the identity of the victim becomes known and all the information that can be compiled in the accident case is complete.

The identity of the victim may cause some individual choices to change (although their preferences, arguably, do not). To see this, view the identity of the victim as an informational constraint. Ex ante, there is uncertainty as to who the victim will be however, ex post, all uncertainty is removed from the model as it is now abundantly clear who the victim is and what the cost of harm was. Ex ante and ex post, individuals have preferences that do not change with time. However, the relative magnitude of the preferences can and do change over time. Ex ante, even though an individual is told the value of a statistical life, this may not reflect their true valuation of a life ex post.

However, supplied with this uncertain information, they can only make a choice that compromises over the different outcomes ex ante given the uncertainty. This choice ex ante, with information constraints, will be second best (Milne and Shefrin, 1988). Ex post, when the true value of a life is revealed, individuals can again make a choice of legal rules but now there is no uncertainty over which role they play so this choice will be first best.

This is referred to as the "identifiable victim effect" in policy analysis; society is willing to spend more money to compensate the identifiable victim rather than on preventative measures for a statistical person (Adler and Sanchirico 2006, 357). It demonstrates why ex post, society will maximize utility by decreasing total accidents and decreasing inequity suffered by the parties affected but ex ante expected well-being is maximized by accepting the risk of accident and minimizing costs. Therefore, by compensating the victim ex post, this may increase the welfare of society ex post though not ex ante. It follows that a different legal rule ex post may maximize welfare. The question of by how much these preferences will change is an empirical question no doubt but to view the magnitude of preferences as changing ex ante and ex post to some degree is not problematic.

To illustrate this, consider the reciprocal model of torts with uncertainty as described by Kaplow and Shavell. Suppose that society's ex ante welfare is maximized when costs are minimized as they are given the value of a statistical life to base their decisions on or, in other words, there is an information constraint. However, ex post, the magnitude of

preferences shift when there is an identifiable victim due to the discovery of information that was not available ex ante. Ex post welfare is more concerned with equity in outcome over cost minimization. This is mirrored by the analyst. The expected harm is $100 so the injurer will either pay the cost of precaution, $150, or buy actuarially fair insurance with a premium of $100 if there is a rule of strict liability. Ex ante, a rule of no liability is optimal as it minimizes total costs: the injurer will not take precaution and the victim will suffer harm of $1000 with a 10% probability. Therefore, potential victims will buy insurance equal to the expected cost of harm of $100.[21] Under any other rule, there will also be legal costs incurred. Therefore no liability is cost minimizing as there are no legal costs associated with this rule. However, ex post, all three rules, no liability, strict liability and a negligence rule, have the same difference in distribution of outcome given there is an accident. The difference in costs is always equal to the cost of harm, $1000. The only distinction in the distribution is which party pays the majority of the costs. Under no liability, the victim bears the entire cost of harm whereas under strict liability and a negligence rule, the injurer bears the entire cost of harm and legal costs whereas the victim only bears the legal costs. An ex post analyst may view all three rules as equally welfare maximizing. Which distribution is preferred will depend on the magnitude of preferences for tastes for fairness versus cost minimization of the society.

Consider this example again, however suppose that the ex post analyst is concerned with concentrating the distribution of ex post welfare to achieve the smallest variance possible, such as zero variance, rather than simply minimizing the difference. If the optimal ex ante rule is a rule of no liability and there is an accident, the victim will suffer $1,000 harm

[21] It is assumed victims are risk-adverse.

and the injurer will pay nothing. This is not necessarily ex post optimal if the variance can be minimized. To make this ex post optimal, the analyst may consider ordering the injurer to compensate the victim $500 so that both parties equally lose $500. Since both parties have an equal chance of being the victim or the injurer and start from relatively equal positions, it may be argued that each should bear 50% of the harm to make welfare ex post equitable. Such a distribution would resemble a rule of comparative negligence[22] where both parties are held equally responsible for the harm.[23] A rule of comparative negligence will have associated legal costs therefore making it not cost minimizing ex ante. In sum, an ex ante analysis may recommend a rule of no liability on the basis of cost minimization however, ex post, a rule of comparative negligence may be the welfare maximizing rule as it results in a more equitable distribution. This is only true if there is a shift in the magnitude of preferences between ex ante and ex post due to new information or an identifiable victim.

An analyst concerned with ex ante welfare may adopt the approach suggested by Kaplow and Shavell and make the policy recommendations they suggest. However, an analyst concerned with ex post welfare will be concerned with the inequitable loss suffered by the victim and be aware of the changing magnitudes of preferences ex ante and ex post.

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[22] Comparative negligence is another legal regime under which the victim and injurer are both held liable to the same extent that they were the cause of the accident. For instance, if two drivers are both driving carelessly, they may both be held liable. Under this rule, both parties have incentive to take precaution. Assume that precaution or the standard of care costs less then the expected harm. If the injurer takes precaution and passes his duty of care, then he will not be held liable. The victim, knowing this, will also take precaution so he cannot be held liable.

[23] This is even more true if the victim is equally as likely to cause the accident: an accident is 50% the injurers fault and 50% the victims fault. If the victim's cost of precaution is also greater than the expected harm, they will not take precaution resulting in both parties being equally liable.

Taking this into account, it is very possible than an ex post optimal legal rule will not be equal to an ex ante optimal legal rule.

D. Cognitive Bias and Risk Allocation

Kaplow and Shavell refer to this change in preferences ex post as a cognitive bias and claim that it leads to mistakes in judgments (2002, 50-51). However, a more appropriate way to view the difference in the ex ante and ex post welfare maximizing rules is as a change in information. The ex ante approach considers probabilities over a lottery of outcomes and does not take into consideration the effect that an information constraint may have on welfare whereas the ex post approach examines welfare from the perspective of if this information was known.[24] A welfare analysis or policy recommendation is first best when the true state is revealed and is only second best when there are information constraints. Something that is ex ante efficient will not be efficient ex post when the informational constraint is not considered (Milne and Shefrin, 1988). Therefore, when the ex ante rule is applied after the event has occurred given all the information, it may not be optimal and will need to be 'tweaked.' The ex post welfare maximizing rule may be more appropriate given that it has already considered the change the information will have on subjective expectations and preferences.

Kaplow and Shavell argue that rules based on ex ante welfare analysis are superior because they create incentives for behavior. This is true in terms of creating incentives to efficiently allocate risk to the party that can bear the risk at lest cost. On the other hand, rules based on ex post welfare analysis, although they do not necessarily create incentives

[24] The ex post perspective asks what would this information add/change about the ex ante valuations.

for risk-bearing behavior, can direct an individual in how their behavior should change in order to protect themselves given a particular outcome. Consider the bicycle helmet example. Although the victim of an accident can bear the harm at least cost, an ex post policy analyst may want to influence individuals' behavior so that they protect themselves and buy helmets. The analyst would wish this if the outcome with no helmet policy is inequitable. As a result, rules based on ex post welfare analysis can create incentives for individuals to change their behavior to make the outcome in each state equitable.

E. Commitment to Legal Rules

Since it has been shown that ex ante and ex post legal rules may differ, a problem arises with regards to the ability of the legal system to commit to rules made ex ante that may be ex post inefficient. Within the models discussed, the analyst makes their ex ante policy recommendation and then judges apply that policy to the cases before them; rules are always applied ex post. Judges may be bound by the analyst's policy if the analyst is a government employee aiding in developing legislation or somehow influences precedent. A quick note is required on some problematic assumption in the timing of the torts model. Kaplow and Shavell assume that individuals will always know what rule they face before they engage in any activity. Therefore, under a rule of no liability, neither party will want to go to court and there will be no legal costs incurred. This assumption is problematic because it may be the case where the victim is not fully informed of the legal rules therefore they will want to start legal proceedings in order to discover what the legal rule is. After learning the legal rule, the victim is most likely to drop the suit but some

may still pursue it.[25] Therefore, this assumption that individuals will not go to court should be dropped and the legal costs examined in this analysis should be regarded as relative costs instead of absolute costs. It follows that for at least some accidents where there is a rule of no liability, victims who are not fully informed will at least file suit.[26]

For such a decision maker to apply a rule that is ex ante optimal but ex post inefficient may be problematic.[27] If the rules set by the analyst are binding and are not ex post optimal, tension will be created between the legal system and society. Particularly, if new information available only after the accident reveals expectations were mistaken or alters the magnitude of preferences ex post so equity in a given state rather than cost minimization across all states is preferred, an ex ante rule that does not take this into account will not maximize welfare ex post; it will not be favorably looked upon.

Legal rules are applied in judgments ex post to the actual parties given all the information and are not solely based on some ex ante position. To avoid this conflict of interest and have the legal system based on concepts of welfarism, the only feasible method of accomplishing this would be to apply an ex post welfare analysis. In fact, if ex post welfare maximization is the ultimate goal for the legal system, legal judgments should only consider what maximizes ex post welfare at the time the individual case comes before them; legal rules should not be pre-determined and each case should be evaluated

[25] This could happen in cases where the victim is challenging the rule itself or has ulterior motive to go to court, such as destroying the reputation of the injurer.
[26] The harm must be greater than legal costs for the victim to file a suit.
[27] Let us assume, for ease of analysis, cases will be reviewed by some sort of legal decision maker including some cases that face a rule of no liability.

on its particular circumstances. This way, welfare will always be maximized ex post since there is no commitment to any general rule that may not apply to a particular case.[28]

F. Ex Ante or Ex Post Welfare Analysis?

It has been clear from this discussion that an ex ante and ex post welfare analysis will not necessarily lead to the same policy recommendation. Then it is open to question whether an ex ante or ex post welfare analysis should be preferred. A rule based on ex ante welfare takes into account the risk-bearing behavior of the individual and seeks to efficiently allocate risk regardless of the individual outcome. On the other hand, an ex post welfare-based rule may be the only rule that can be applied without creating tension since the legal system judge's individuals after the accident has occurred. As distinguished earlier, an ex ante welfare analysis looks at equity in prospect whereas an ex post welfare analysis looks at equity in outcome.

Just because an ex post welfare analysis may be the only feasible approach given the set-up of the legal system, an ex ante rule may still be desirable. An ex post welfare analysis that places emphasis on equity in outcome may pursue this goal to the detriment of cost minimization. Furthermore, an ex post rule may be viewed in a negative light because it is paternalistic; it forces injurer's to compensate victims to make the outcome more egalitarian rather than focusing on risk-taking behavior ex ante. Deciding between the two will involve a value judgment. That is, the analyst will have to decide whether the efficient allocation of risk ex ante or an optimal outcome ex post is more attractive from a

[28] As to the question of what SWF should be applied at this time, this paper can offer no concrete answer except to say it will be based on some value-judgement of the analyst and the desires of society.

legal policy perspective. If ex ante optimality is desired, this will require binding legal rules to force the legal system to adhere to this goal and not give in to the tension that a rule not ex post optimal can create.

G. Conclusion

Kaplow and Shavell condemn notions of fairness as an ex post perspective of legal rules and praise legal rules chosen on the basis of ex ante welfare principles leaving no room for an ex post welfare analysis. This dismissal of ex post welfare analysis leaves Kaplow and Shavell's analysis incomplete. Although legal rules based on an ex ante analysis take into account incentives for behavior, legal institutions only apply rules ex post. When the optimal ex ante and ex post legal rules differ due to informational constraints, which rule should be applied is not as simple as Kaplow and Shavell would lead us to believe. Kaplow and Shavell argue that legal rules will not differ, however, they neglect to consider the role of information that has the potential to correct subjective expectations that were ex ante mistaken and/or shift in the magnitude of preferences. When optimal legal rules differ ex ante and ex post, applying a legal rule that was optimal ex ante but is not optimal ex post will lead to tensions between society and the legal institution. If it is desired that legal rules should be based on principles of welfarism and this tension is to be avoided, this necessarily implies an ex post welfare approach. Furthermore, legal rules should not be pre-determined but a welfare analysis should be applied to each individual case after the event has occurred to determine what maximizes social welfare ex post. Even though this ex post approach is the feasible approach given the conditions outlined, an ex ante optimal rule may still be desirable depending on the value judgments

of society. If society values ex ante optimality rather than ex post welfare maximization, the system does need to be committed to binding legal rules based on an ex ante welfare analysis in order to move the system closer to that ex ante optimality.

6. CONCLUSION

Kaplow and Shavell's neglect of the ex ante and ex post consideration as well as their dismissal of preferences such as tastes for fairness in the SWF are merely two examples of why their welfare analysis is not convincing. When an economic legal analysis is done without consideration for tastes for fairness in the SWF, this analysis is neglecting to take into account negative externalities that may have a detrimental impact on the welfare maximizing rule. Likewise, assuming that all individual's are fully informed and know how their preferences will be affected ex post is unrealistic. There are always information constraints present that make ex ante optimal rules and ex ante optimal rules different. Which should be used will be based on a value judgment. If economics wishes to move further in analyzing legal rules, these more complex considerations should be addressed. After an in-depth review of Kaplow and Shavell's book *Fairness versus Welfare* and the critiques surrounding it, it is clear that this book in no way put an end to the consequentialism and deontology debate. Although this book will enhance the way law and economic scholars think about the choice of legal rules, much more work is left to be done on the subject. A more complete and through understanding of the welfare analysis of legal rules is required including the consideration of tastes for preferences in the SWF and ex ante versus ex post welfare analysis. As well, the concepts of fairness require a more inclusive and better researched definition in order to really compare the two bases.

Finally, a standard for choosing between the two will eventually need to be defined and argued for in order to complete this argument.

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