Ex Post Liability for Harm vs. Ex Ante Safety Regulation: Substitutes or Complements? Comment

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Abstract. Kolstad, Ulen and Johnson (1990) have conjectured that exclusive use of negligence liability leads to suboptimal choice of precaution in the presence of uncertainty and that ex ante regulation can correct these inefficiencies. We complete their argument by making a mild additional premise.

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In a past article for this *Review,* Charles Kolstad, Thomas Ulen, and Gary Johnson (1990) argue that the exclusive use of negligence liability leads to sub-optimal choice of precaution in the presence of uncertainty and that ex ante regulation can correct these inefficiencies. The authors state five propositions that illustrate the distortionary effect of an ex-post liability rule and show how ex-ante regulation can promote a more efficient level of precaution. Kolstad, Ulen, and Johnson (1990) base the proofs of these propositions on their equation (8), which gives a derived expression for the expected total cost of the injurer. However, under the general assumptions made by the authors, this equation must read

$$TC(x) = C(x) + \tilde{A}(x)R(x),$$

where $\tilde{A}(x)$ is expected damage payment *conditional* on the event that the injurer is found liable by the court, i.e.

$$\tilde{A}(x) = E[p(x,\varepsilon)D(x,\varepsilon) \mid \bar{x}(\varepsilon) > x].$$

There is no obvious reason why, in the absense of further assumptions, the conditional expectation $\tilde{A}(x)$ should be equal to the unconditional

$$A(x) = E[p(x,\varepsilon)D(x,\varepsilon)],$$

as suggested in the article.

The analysis of Kolstad, Ulen, and Johnson (1990) is complete under mild additional premises. Assume first that – as suggested by Shavell (1987 p.152) – the magnitude of liability equals ex-ante *expected* damages $E[D(x,\varepsilon)]$ instead

of *actual* damages $D(x, \varepsilon)$. Assume in addition that the probability of an accident is independent of the random variable ε representing the "view-of-the-court", i.e. that $p(x, \varepsilon) = p(x)$. Then the injurer's total cost given by equation (5) in Kolstad, Ulen, and Johnson (1990) amounts to

$$TC(x) = E[C(x) + L(x, \varepsilon)p(x)E[D(x, \varepsilon)]].$$

Since $A(x) = p(x)E[D(x, \varepsilon)]$ is now independent of ε, their equation (8) in fact holds true.

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