Essay

The *Other Hand* Formula: Explaining Gain-Based Liability

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A defendant who obtained an undeserved benefit at the plaintiff's expense must make restitution of that benefit. This is the fundamental maxim of the law of gain-based liability, allowing recovery based on the defendant's gain rather than on the plaintiff's loss. Unfortunately, gain-based liability is notoriously unprincipled. The key problem is that scholars and courts cannot agree on the correct manner for distinguishing meritorious claims from non-meritorious ones in this important area of the law. To correct this deficiency, the present Essay provides a simple mathematical formula explaining when plaintiffs should be able to recover the defendant's gain, and when they should not. The proposed formula explains the fundamental reasoning underlying gain-based liability, just as the classic Hand formula explains the reasoning behind loss-based liability. Our proposed Other Hand formula explains that the defendant's gain is to be returned to the plaintiff if it is of a general type that plaintiffs could have secured for themselves through a relatively modest investment. Conversely, when plaintiffs were not in a position to secure the benefit in question for themselves, the defendant's gain cannot be claimed by the plaintiff. The Other Hand formula provides, for the first time, a clear criterion for gain-based liability, thereby solving the central puzzle courts and scholars have been grappling with in studying this area of civil liability. We illustrate the operation of the proposed formula through an analysis of central categories of gain-based liability, and discuss its normative implications.

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INTRODUCTION

A person unjustly enriched at the expense of another must make restitution of the benefit thus obtained.[1] This is the basic premise of the law of gain-based liability, commonly termed the law of restitution[2] or the law of unjust enrichment.[3] This form of liability is not based on the plaintiff's loss, but on the defendant's undue gain.[4] The law of unjust enrichment has a long history,[5] with roots in ancient Roman law[6] and in the common law tradition;[7] it also increasingly draws contemporary interest, with a special issue of the Harvard Law Review recently dedicated to the subject.[8] Yet despite the importance of this area of law,[9] scholars agree it remains difficult to understand, and crucially under-defined.[10] The main point of ambiguity pertains to the requirement for the "injustice" of the defendant's enrichment.[11] Thus, it is unclear when the defendant's enrichment is to be considered "unjust," and therefore when liability should be available.[12] Absent such basic definitions, the law of gain-based liability remains an enigma.[13] The current Essay aims to fill this gap and provides, for the first time, a clear and simple criterion for gain-based liability.

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[1] Douglas Laycock, *The Scope and Significance of Restitution*, 67 TEX. L. REV. 1277, 1277 (1989).

[2] *Id*.

[3] WARD FARNSWORTH, RESTITUTION: CIVIL LIABILITY FOR UNJUST ENRICHMENT 1-2 (2014).

[4] Maytal Gilboa & Yotam Kaplan, *The Mistake about Mistakes: Rethinking Partial and Full Restitution*, 26 GEO. MASON L. REV. 427, 430 (2019); Laycock, *supra* note 1, at 1283.

[5] Andrew Kull, *James Barr Ames and the Early Modern History of Unjust Enrichment*, 25 OXFORD J. LEGAL STUD. 297, 303 (2005) (describing the early development of the law of gain-based liability).

[6] *The Intellectual History of Unjust Enrichment* 133 HARV. L. REV. 2077, 2078-9 (2020).

[7] *Id*.

[8] 133 HARV. L. REV. 2062 (2020).

[9] Laycock, *supra* note 1, at 1277 (explaining the centrality of gain-based liability to private law adjudication); Richard A. Epstein, *The Ubiquity of the Benefit Principle*, 67 S. CAL. L. REV. 1369 (1994) (explaining the importance of benefits to legal doctrine).

[10] Laycock, *supra* note 1, at 1277.

[11] Robert Stevens, *The Unjust Enrichment Disaster*, 134 L.Q. REV. 574 (2018); Lionel Smith, *Restitution: A New Start*?, in THE IMPACT OF EQUITY AND RESTITUTION IN COMMERCE 87 (Devonshire and Havelock eds. 2018) (arguing that there is no general concept tying the different categories of gain-based liability together, and explaining what separates "unjust" enrichment, which should be returned to the plaintiff, from "just" enrichment, which the defendant should be allowed to keep).

[12] *Id*.

[13] Andrew Kull, *Rationalizing Restitution*, 83 CAL. L. REV. 1191, 1191, 1196 (1995).

First, let us illustrate the problem. Consider the recent case of Lenin Gutierrez, a 24-year-old college student working as a barista in a San Diego Starbucks.[14] In June 2020, during the height of the Covid-19 pandemic, Gutierrez refused service to a customer who was unwilling to don a face mask.[15] In response, the enraged customer, Amber Lynn Gilles, attempted to shame the barista through a Facebook post.[16] The attempt backfired, resulting in a flood of positive responses for the barista's actions instead of the rage Gilles had hoped for;[17] support for Gutierrez was overwhelming, eventually snowballing to a GoFundMe campaign amassing over $100,000 for him.[18] In a final twist, Gilles, the enraged customer, now seeks to sue Gutierrez for half of his gains.[19] Should gain-based liability be available in such a case?

Gilles's claim seems outlandish, but because of the unpredictable nature of gain-based liability, it is difficult to say for sure that the claim will be rejected, or explain why it should be. Consider the details of Gilles's claim. First, it is based on the fact that her involvement was the source of Gutierrez's gain, in the sense of a but-for cause.[20] If it were not for Gilles's actions, Gutierrez would never have netted the $100,000.[21] But to establish her claim, Gilles must also show that Gutierrez's gain is "unjust."[22] This is the crux of the problem, because no general explanation is currently available to clarify what this unjust requirement entails.[23] We may intuit that Gutierrez's benefit

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[14] John Wilkens, Starbucks Barista Who Got $100K Over Face-Mask Dustup: 'This is Mind-Blowing'. SAN-DIEGO UNION TRIBUNE, July 12 (2020).

[15] Caitlin O'Kane, *Women How Refused to Wear a Mask in Starbucks Now Wants Half of $100,000 donated to barista*, CBS NEWS, July 16 (2020).

[16] *Id*.

[17] *Id*.

[18] *Id*.

[19] *Id*.

[20] On the requirements of causation in the law of gain-based liability, see Maytal Gilboa & Yotam Kaplan, *Loser Takes All: Multiple Claimants and Probabilistic Restitution*, 10 UC IRVINE L. REV 907, 908 (2020).

[21] For an explanation of the basic operation of a claim based on the defendant's enrichment, see Andrew Burrows, *Restitution of Mistaken Enrichment*, 92 B.U.L. REV. 767, 767 (2012); Saul Levmore, *Explaining Restitution*, 71 VA. L. REV. 65, 69-72 (1985).

[22] RESTATEMENT (THIRD) RESTITUTION AND UNJUST ENRICHMENT § 1 (2010) (delineating the three key elements for gain-based liability: a benefit to the defendant; the benefit coming at the expense of the plaintiff; and the injustice of the defendant's benefit).

[23] Emily Sherwin, *Restitution and Equity: An Analysis of the Principle of Unjust Enrichment*, 79 TEX. L. REV. 2083, 2106-2112 (2001) (arguing that unjust enrichment is merely a title lumping together various doctrines, with no direct role in guiding adjudication); Christopher Wonnell, *Replacing the Unitary Principle of Unjust Enrichment*, 45 EMORY L.J. 153 (1996) (suggesting to replace the unitary principle of unjust enrichment in favor of a more explicit focus on the individual legal categories comprising this supposed field of law); John P. Dawson, *Restitution without Enrichment*, 61 B.U. L. REV. 563 (1981) (arguing that the principle of unjust enrichment cannot be considered a unifying concept of the law of restitution); Smith, *supra* note 11.

is not unjust, and that liability is therefore unwarranted, but in the absence of a clear criterion for the unjust requirement, this is only a guess. The situation is further complicated by recent proposals for reform, calling to expend gain-based liability beyond its current scope.[24]

This problem is not unique to Gutierrez's case.[25] For decades, scholars have been attempting to provide a clear explanation for the "injustice" requirement.[26] To date, such attempts have been unsuccessful,[27] with current consensus among scholar drifting toward the position that such an explanation is unattainable.[28] Without a definition for the injustice of the defendant's gain, gain-based liability is widely considered to be unprincipled,[29] following *ad hoc* logic[30] and bordering on judicial fiat.[31]

This Essay offers a straightforward solution to this problem by introducing an unequivocal criterion for gain-based liability and for the requirement of the injustice of the defendant's gain.[32] In particular, we show that gain-based liability is available only for gains that the plaintiffs could have potentially secured for themselves through some relatively modest investment. In the example above, it is clear that there was no way for Gilles to obtain for herself the $100,000 Gutierrez received through the GoFundMe campaign. This sum was never under her potential control and never accessible to her in any way. Therefore, Gutierrez's gain cannot be considered "unjust," and Gilles is not entitled to gain-based recovery.

Moving beyond this particular example, we provide a general and precise formula, defining this criterion for gain-based liability. We term this analytical tool the Other Hand formula, and show that it explains the law of

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[24] Ariel Porat, *Private Production of Public goods: Liability for Unrequested Benefits* 108 MICH. L. REV. 189, 191 (2009).

[25] Robert Stevens, *supra* note 11; Smith, *supra* note 11.

[26] Robert Stevens, *supra* note 11.

[27] Sherwin, *supra* note 23, at 2106-2112; Wonnell, *supra* note 23; Dawson, *supra* note 23; Smith, *supra* note 11.

[28] Mark P. Gregen, *What Renders Enrichment Unjust,* 79 TEX. L. REV.1927, 1949 (2001); Doug Rendleman, *Restating Restitution: The Restatement Process and Its Critics*, 65 WASH. & LEE L. REV. 933, 936 (2008).

[29] Stephen A. Smith, *Justifying the Law of Unjust Enrichment*, 79 TEX. L. REV. 2177, 2177, 2177 (2001) ("That there is such a thing as 'the law of unjust enrichment' or 'the law of restitution' is still a matter for debate in the common law world. And amongst scholars who accept that there is such a body of law, there exist fundamental disagreements as to its scope and nature. In the United States, the ground-breaking *Restatement* was published in 1937, but since then only one treatise has been published on the subject—now almost twenty-five years old—and courses on unjust enrichment or restitution are taught at only a handful of American law schools.").

[30] Smith, *supra* note 11, at 96.

[31] Sherwin, *supra* note 23, at 2107 (expressing concern that gain-based liability, if not clearly defined, "invests judges with a tremendous amount of power").

[32] *Infra*, Part I.

gain-based liability in the same way that the now classic Hand formula explains the law of loss-based liability, or the law of torts. The Other Hand formula explains the main categories of gain-based liability and provides a normative justification for it.[33]

The Other Hand formula serves both a descriptive and a prescriptive role. From a descriptive perspective, we show that the suggested formula explains the main features of existing doctrine as exercised by the courts, and the central patterns of gain-based liability. We also show that the Other Hand formula reveals the rationale and justification for the existing practices. This is an incredibly important analytical step forward, as it provides clear structure and logic to this area of law, which is currently chaotic and poorly understood.[34] The formula also serves a prescriptive or normative role, in explaining why certain proposals to expand gain-based liability beyond its current scope[35] ought to be rejected.[36] We show that recent proposals to use the law of gain-based liability to encourage the production of public goods by private actors[37] go beyond the underlying rationale of this area of law and are not consistent with its core function.

The Essay proceeds as follows. Part I introduces the proposed Other Hand formula by juxtaposing gain-based and loss-based liability. The scope and justification of loss-based liability are currently explained using the classic Hand formula;[38] at the same time, no similar concept exists to explain gain-based liability. To fill this gap, we offer the Other Hand formula, as a parallel to the familiar Hand formula used to explain loss-based liability. This Part details the operation of the Other Hand formula and delineates its basic elements. Part II contains the core of our analysis, and uses the Other Hand

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[33] *Infra*, Part II.

[34] Kull, *supra* note 13, at 1191 ("Significant uncertainty shrouds the modern law of restitution. Few American lawyers, judges, or law professors are familiar with even the standard propositions of the doctrine, and the few who are, continue to disagree about elementary issues of definition. This Article argues that the law of restitution will remain inaccessible until these issues are resolved."); Rendleman, *supra* note 28, at 936 ("Restitution is an essential and nuanced common law area. But many smaller American states lack a decision on particular restitution points. States, large and small, have muddled restitution analysis or have made just plain incorrect restitution decisions. Many lawyers, judges, and professors misunderstand and misstate basic restitution principles.").

[35] Porat, *supra* note 24, at 191.

[36] *Infra*, Part IV.

[37] Porat, *supra* note 24, at 191; Robert Cooter & Ariel Porat, *Torts and Restitution: Legal Divergence and Economic Convergence*, 92 S. CAL. L. REV. 897 (2019) (arguing that just as injurers in tort law internalize their wrongful harms through damages, benefactors should internalize the benefits they confer on others through the law of restitution).

[38] The Hand formula is named after Judge Learned Hand, who articulated the negligence test as a balancing calculus in United States v. Carroll Towing Co., 159 F.2d 169, 173–74 (2d Cir. 1947).

formula to explain the normative justification for gain-based liability. We bring the example of mistaken monetary payments, a core case of gain-based liability, to illustrate our argument in this Part.[39] In the classic mistaken payment scenario, a payer who unintendedly transferred a sum of money to another is typically entitled to recover the transferred sum.[40] We show that the logic of the Other Hand formula explains this outcome. The transferred sum is a benefit enjoyed by the defendant, which the plaintiff, the payer, was able to secure by investing in preventing mistakes.[41] This being a benefit the plaintiffs were able to secure for themselves, the Other Hand formula instructs us that gain-based liability should be available, as indeed it is under prevailing law.[42] The analysis in this Part also explains the rationale for liability in this case, as gain-based recovery allows payers to lower their investments in protecting themselves from mistakes. We generalize on this example to offer a universal justification for gain-based liability. Part III carries the analysis forward, using the Other Hand formula, to explain the measure of recovery in cases of gain-based liability. We illustrate this point with the example of emergency rescue cases, in which only part of the defendant's gain is given to the plaintiff. We show that the Other Hand formula readily accounts for these results, explaining not only the source of gain-based liability, but also its measure.[43] Finally, Part IV completes the analysis by studying the limits of gain-based liability and pointing out cases in which liability is unavailable. The analysis in this part brings examples of positive externalities[44] and the production of public goods,[45] and shows that

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[39] Mistaken payments are commonly considered the archetypical case of gain-based liability; HANOCH DAGAN, THE LAW AND ETHICS OF RESTITUTION, 11-25, 37-85 (2004); Burrows, *supra* note 21, at 767; PETER BIRKS, UNJUST ENRICHMENT 3 (2nd ed. 2005). This example is therefore particularly appropriate for explaining the concept of liability in restitution and its rationale.

[40] RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 6 (AM. LAW INST. 2010) ("Payment by mistake gives the payor a claim in restitution against the recipient to the extent payment was not due").

[41] Gilboa & Kaplan, *supra* note 4, at 430.

[42] RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 6 (AM. LAW INST. 2010).

[43] *Id*. at § 20(1) ("A person who performs, supplies, or obtains professional services required for the protection of another's life or health is entitled to restitution from the other as necessary to prevent unjust enrichment, if the circumstances justify the decision to intervene without request"). The rule determining a right to restitution to physicians who provide emergency services is generally associated with the familiar ruling in *Cotnam v. Wisdom*, 83 Ark. 601, 104 S.W. 164 (1907) in which two physicians were entitled to restitution for the surgery they performed with due skill and care. We discuss cases of restitution for rescue in light of our proposed Other Hand Formula in Part III.

[44] STEVEN M. SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 7 (2004) (defining externality as the effect of the action of one party on the wellbeing of another).

[45] Porat, *supra* note 24, at 191.

gain-based liability should not be available in these cases. In this Part, we use the Other Hand formula to show why recent proposals for reforming the law of gain-based liability ought to be rejected. A short conclusion follows.

I. GAIN-BASED VS LOSS-BASED LIABILITY

The law of gain-based liability is structured as a mirror image of the law of torts,[46] which is the law of loss-based liability.[47] Compared to tort law,[48] the law of gain-based liability is relatively neglected[49] and under-studied.[50] The main reason for this persistent neglect is the absence of a clear and operable criterion for granting gain-based recovery.[51] In particular, to impose liability based on the defendant's gain, it is not enough for a person to have benefited at the expense of another; an additional condition must be met: the benefit must be considered *unjust*.[52] Yet the requirement for the injustice of the defendant's enrichment has been a matter of ongoing controversy[53] and

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[46] Gilboa & Kaplan, *supra* note 4, at 430 (highlighting the structural differences between the law of restitution and the law of torts); Laycock, *supra* note 1, at 1283 (explaining the distinction between restitution and compensation).

[47] RESTATEMENT (THIRD) OF TORT: LIABILITY FOR PHYSICAL & EMOTIONAL HARM §§ 4, 45 (defining physical, emotional, and economic harms in the context of tort liability); Ellen M. Bublick, *A Restatement (Third) of Torts: Liability for Intentional Harm to Persons – Thoughts*, 44 WAKE FOREST L. REV. 1335 (2009) (reviewing the distinction between different types of harms).

[48] John C. P. Goldberg, *Twentieth Century Tort Theory*, 90 GEO. L. J. 513 (2002) (reviewing contemporary tort theory).

[49] Laycock, *supra* note 1, at 1277 ("Despite its importance, restitution is a relatively neglected and underdeveloped part of the law"); Smith, *supra* note 29; David F. Partlett & Russell L. Weaver, *Restitution: Ancient Wisdom*, 36 LOY. L.A. L. REV. 975, 975 (2003); Candace Saari Kovacic-Fleischer, *Quantum Meruit and the Restatement (Third) of Restitution and Unjust Enrichment*, 27 REV. LITIG. 127, 127 (2008); Epstein, *supra* note 9, at 1371; Ernest J. Weinrib, *Restoring Restitution*, 91 VA. L. REV. 861 (2005).

[50] Michael Heller & Christopher Serkin, *Revaluing Restitution: From the Talmud to Postsocialism*, 97 MICH. L. REV. 1385, 1385 (1999) ("Whatever happened to the study of restitution? Once a core private law subject along with property, torts, and contracts, restitution has receded from American legal scholarship. Few law professors teach the material, fewer still write in the area, and no one even agrees what the field comprises anymore").

[51] Gregen, *supra* note 28, at 1947.

[52] *Supra* note 22. An additional element to consider is the inquiry into the applicability of defenses. *See*, *e.g.*, BIRKS, *supra* note 39, at 39-40.

[53] Gregen, *supra* note 28, at 1947 ("A strong objection to defining a precept of law in such broad terms is that it does almost no normative work. Too much is left to be done to distinguish meritorious claims from unmeritorious ones. Another way of putting this objection is that a broad precept of enrichment by impoverishment puts too many dispositions of wealth into question.").

an area of obscurity,[54] leaving the main requirement for liability in this area of law undefined.[55] Such a conceptual flaw would be unthinkable in other areas of law.[56] Because gain-based liability is considered to be unprincipled, judges and lawyers refrain from applying it when it is appropriate,[57] and scholars have largely renounced any attempt to study it in a systematic way.[58]

In the law of torts, the touchstone for liability is much more clearly defined, and the Hand formula[59] has been widely endorsed by both courts and scholars as the key criterion for granting loss-based recovery.[60] Our proposed Other Hand formula explains gain-based liability in much the same way the Hand formula explains loss-based liability.[61] We show that the Other Hand formula operationalizes the concept of *unjust* gains, just as the Hand formula operationalizes the concept of *fault* in tort. To see this point, consider first the details of the Hand formula in tort law.

Tort law, as the law of loss-based liability, orders defendants to compensate for the harms plaintiffs have suffered.[62] Naturally, not every loss generates liability, only losses caused by the defendant's *fault*.[63] In tort law, the defendant's fault is usually operationalized through the notions of

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[54] Rendleman, *supra* note 28, at 936.

[55] *Id*.

[56] Kull, *supra* note 13, at 1196 ("To put it bluntly, American lawyers today (judges and law professors included) do not know what restitution is. […] The technical competence of published opinions in straightforward restitution cases has noticeably declined; judges and lawyers sometimes fail to grasp the rudiments of the doctrine even when they know where to find it. Cases involving classic restitution scenarios may be argued and decided without any apparent recognition-by the court or by counsel-that principles of unjust enrichment might have a bearing on the issue at hand. […] No legal topic can long survive this degree of professional neglect. Unless the means are found to revive it, restitution in this country may effectively revert to its pre-Restatement status").

[57] *Id.* at 1191 ("Significant uncertainty shrouds the modern law of restitution. Few American lawyers, judges, or law professors are familiar with even the standard propositions of the doctrine, and the few who are continue to disagree about elementary issues of definition. […] [T]he law of restitution will remain inaccessible until these issues are resolved.").

[58] Laycock, *supra* note 1, at 1277 ("Few law schools teach a separate course in restitution, no restitution casebook is in print, and scholarship in the field is largely devoted to specific applications.")

[59] United States v. Carroll Towing Co., 159 F.2d 169, 173–74 (2d Cir. 1947).

[60] See *infra* notes 47-50 and accompanying text.).

[61] WILLIAM M. LANDES & RICHARD POSNER, THE ECONOMIC STRUCTURE OF TORT LAW 4 (1987).

[62] Oliver W. Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 471 (1897) (describing tort liability as originating from a failure to avoid causing foreseeable harms).

[63] John C.P. Goldberg & Benjamin Zipursky, *Torts as Wrongs*, 88 TEX. L. REV. 917 (2010) (explaining that tort law is the law of wrongs, meaning that tort liability follows from the defendant's wrongful conduct).

negligence[64] or unreasonableness,[65] as captured by the Hand formula.[66] According to the Hand formula, tort defendants were at fault if they failed to take efficient precautions (typically annotated "B" for "burden"), which would have prevented the harm to the plaintiff ("L" for "loss") if it occurred (with probability "P").[67] If the expected loss (PL) exceeds the cost of precautions, the defendant is considered to be at fault and is held liable for the resulting harm. Using this simple notation, the fault requirement for liability in negligence is defined by the neat formula, $B < PL$.[68] The formula states that defendants acted unreasonably if they were able to prevent the expected harm at a cost lower than the expected harm.[69] The Hand formula has been extensively debated in scholarship,[70] and although it is far from giving a comprehensive definition of the entire field of tort law,[71] its

[64] James A. Henderson Jr., *Why Negligence Dominates Tort*, 50 UCLA L. REV. 377 (2012) (explaining the centrality of negligence as the determinant of liability in tort law); LANDES & POSNER, *supra* note 61, at 4 (providing a detailed analysis of the Hand formula and the negligence calculous); Robert L. Rabin, *The Historical Development of the Fault Principle: A Reinterpretation*, 15 GA. L. REV. 925 (1981) (presenting negligence as "the" modern tort, representing the pure "fault principle" within tort law).

[65] RESTATEMENT (THIRD) OF TORT: LIABILITY FOR PHYSICAL & EMOTIONAL HARM § 3 cmt. d, k (measuring reasonableness "by applying the standard of the reasonable careful person").

[66] Gregory C. Keating, *Reasonableness and Rationality in Negligence Theory*, 48 STAN. L. REV. 311 (1996) (maintaining that the importance of the Hand formula is not technical but conceptual, as it "identifies the basic variables of negligence and their relation to one another").

[67] Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 32 (1972) (introducing the Hand formula through the analysis of court opinions).

[68] *Id*.

[69] The Hands Formula employs an objective, rather than a subjective, standard; STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW § 4.1 (1987); Keating, *supra* note 66, at 338 (explaining the practical considerations leading scholars to adopt an objective reasonable person standard "as a second-best solution to the problem of interpersonal comparison").

[70] Richard W. Wright, *Hand, Posner, and the Myth of the "Hand Formula"*, 4 THEORETICAL INQ. L. 145 (2003) (criticizing Posner's analysis of negligence and the Hand formula); Stephen G. Gilles, *On Determining Negligence: Hand Formula Balancing, the Reasonable Person Standard, and the Jury*, 54 Van. L. Rev. 813 (2001) (discussing the underlying value judgments of the formula and its relationship with the reasonable person standard); DAN B. DOBBS, THE LAW OF TORTS §§ 144-146, at 337-348 (2000); LANDES & POSNER, *supra* note 61, at 54-77 (discussing the economic theory of negligence); Keating, *supra* note 66.

[71] Arthur Ripstein, *Philosophy of Tort Law*, *in* THE OXFORD HANDBOOK OF JURISPRUDENCE AND LEGAL PHILOSOPHY 656, 673 (Jules Coleman & Scott Shapiro eds., 2002) (noting that the formula provides a solid starting point, allowing scholars, judges, and lawyers to treat tort liability as a fairly well-defined concept).

balancing approach has been largely endorsed by courts[72] and by the *Restatement*.[73]

In a similar fashion, our proposed Other Hand formula provides a clear touchstone for gain-based liability, by offering a simple mathematical criterion explaining the requirement for the injustice of the defendant's gain. According to our suggested formula, the defendant's gain is considered unjust if the plaintiff was able to secure this gain for himself or herself at a cost lower than the expected gain for the defendant. In other words, the defendant's gain is unjust if the plaintiff could have invested in effective precautionary measures ("B" for burden) that would have secured that benefit ("G" for gain) in case it somehow escaped the plaintiff's control and ended up with the defendant (with probability "P"). Using this notation, we can state that a defendant's gain is unjust if the condition $B < PG$ holds true. This formula captures a simple configuration of facts: the plaintiff faces the possibility of conferring a benefit on the defendant (PG), but may be able to secure that benefit for himself or herself at some cost (B). If that cost is lower than the expected benefit, and therefore it would be profitable for the plaintiff to invest in this way (that is, if $B < PG$), the court should award restitution of that benefit in case it was conferred on the defendant.

As a prelude to the more detailed analysis we provide in Part II, consider the case of Lenin Gutierrez in the terms of our proposed formula. Gutierrez enjoyed a significant gain (G) of over $100,000. Yet, before the fact, the probability (P) that such a gain would be incurred seems almost negligible: after all, *ex ante*, who could have guessed that this minor incident, and Gilles's behavior, would result in such an unexpected profit for Gutierrez? Finally, and most important, *ex ante* there was no way for Gilles to secure the

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[72] *Raab v. Utah Ry. Co.*, 221 P.3d 219, 232 (Utah, 2009) (explaining that tort liability depends on a "basic 'Hand Formula' negligence analysis, where the determination of duty depends on balancing the burdens associated with taking a particular preventative measure against the probability and magnitude of injury that might occur absent the measure"); Braun v Soldier of Fortune Magazine, inc., 968 F. 2d 1110, 1115 (1992) (same); Marknowitz v. Ariz. Parks Bd., 706 P.2d 364 (Ariz. 1985); Archie v. Racine, 847 F. 2d 1211 (App. 1988) (distinguishing between negligence and gross negligence, indicating that whereas the former means that the cost of taking precautions was lower than the expected loss, the latter means that the cost of taking precautions was substantially lower than that expected loss); U.S. Fid. & Guar. Co. v. Jadranska Slobodna Plovidba, 683 F.2d 1022, 1026 (7th Cir. 1982) (generally noting that "the formula is a valuable aid to clear thinking [...] It gives federal district courts in maritime cases, where the liability standard is a matter of federal rather than state law, a useful framework"); Gilles, *supra* note 70, at 815-16 (supporting Gery Schwartz's observation that there is no American Jurisdiction "whose cases explicitly (or by clear implication) reject the balancing approach as an interpretation of the negligence standard").

[73] RESTATEMENT (THIRD) OF TORT: LIABILITY FOR PHYSICAL & EMOTIONAL HARM § 3 cmt. e. (noting that negligence can be estimated by a risk-benefit test, which is essentially identical to the Hand formula).

benefit of $100,000 for herself, or to make sure that she would enjoy this benefit instead of Gutierrez. In this case, B is extremely high, perhaps infinitely so. Therefore, and since PG is very small, the condition in B < PG clearly does not hold true. Accordingly, gain-based liability is unavailable. The benefit in question was never within Gilles's grasp, does not belong to her, and she has no business claiming it.

In the following parts we show how this simple formula can be easily implemented in gain-based liability case law. We demonstrate that the Other Hand formula not only points out when a defendant should be held liable for unjust gains, but also reveals what the scope of the defendant's liability should be, and explains the rationale for this form of liability.

II. JUSTIFYING GAIN-BASED LIABILITY

In this part, we use the Other Hand formula to explain the rationale for gain-based liability. The analysis is based on the classic case of a mistaken money payment, commonly considered the core case of gain-based liability.[74] In such cases, a payer unintentionally transfers a sum of money to a recipient,[75] who is thereby enriched at the payer's expense.[76] Following the mistaken transfer, the recipient-defendant is generally obligated to make restitution of the transferred sum to the payer-plaintiff,[77] subject to some

[74] DAGAN, *supra* note 39, at 11-25, 37-85; Burrows, *supra* note 21, at 767 ("The restitution of a mistaken payment is generally regarded as the paradigm example of the restitution of an unjust enrichment"); BIRKS, *supra* note 39, at 3 ("The law of unjust enrichment is the law of all events materially identical to the mistaken payment of a non-existent debt").

[75] Mistaken payments may occur for different reasons, such as clerical errors (Gen. Elec. Capitol Corp. v, Central Bank, 49 F. 3d 280, 286 (7th Cir. 1995); Credit Lyonnais v. Koval, 745 So. 2d 837, 840-841 (Miss. 1999)), misunderstanding of payment orders (Banque Worms v. BankAmerica Int'l, 570 N.E.2d 189, 191-196 (N.Y. 1991)), and mistaken interpretation of the legal validity of a debt (Estate of Hatch ex rel. Ruzow v. NYCO Minerals, Inc., 270 A.D.2d 590, 591 (N.Y. App. Div. 2000).

[76] RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 57, illustration 26 (explaining the element "at the expense" by noting the existence of a causal link between a claimant's mistake and the defendant's enrichment); RESTATEMENT (THIRD) RESTITUTION AND UNJUST ENRICHMENT § 5 (2)a (Tentative Draft No. 7, 2010) ("…(2) Invalidating mistake is a misapprehension of fact or law on the part of the transferor, where (a) but for the mistake the transfer would not have taken place; …"); Barclays Bank Ltd v. W J Simms Son & Cooke, [1980] QB 677 (Eng.).

[77] Gilboa & Kaplan, *supra* note 4, at 428-429.

defense rules.[78] In this type of case, liability seems intuitively justified,[79] despite the fact that the recipient-defendant committed no tort (indeed, did nothing at all),[80] and that there has been no contract between the payer and the recipient; [81] the parties are strangers to one another, and the payment is a unilateral legal action,[82] not a contract.[83]

Nevertheless, although none of the elements of liability in tort or contract exist, according to prevailing law, the recipient should be held liable and make restitution of the mistakenly transferred sum.[84] This paradigmatic case of gain-based liability sheds light on the inner workings of our proposed Other Hand formula, which, in turn, reveals the general rationale for gain-based liability. Consider *Example 1* below, describing a simple mistaken payment scenario.

> *Example 1*: Bank A intends to make a money transfer to Bank B in the sum of $1M. Owing to a clerical error, Bank A mistakenly transfers the money to Bank C instead. Bank A now files a claim against Bank C for restitution of the mistakenly paid sum. Assume also that mistakes of this type have a 1% chance of occurring, and that Bank A could invest $1K in *ex ante* precautions

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[78] The doctrine of change of position is one central defense in such cases. This doctrine is used to limit restitution when the recipient of a mistaken payment relied on the mistaken payment in good faith, so that returning it to the payor would cause a loss to the recipient; *Id*. at 432; RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 65 cmt. a, d (AM. LAW INST. 2011).

[79] Ernest Weinrib justified restitution in these cases based on an idea of performance and acceptance*;* Ernest Weinrib, *Correctively Unjust Enrichment*, *in* PHILOSOPHICAL FOUNDATIONS OF THE LAW OF UNJUST ENRICHMENT 31 (Robert Chambers, Charles Mitchell & James Penner ed., 2009); for a critique of this explanation, see Stevens, *supra* note, 11 at 580-581 ("[A] performance cannot be made unilaterally: a performance rendered by the claimant must have been accepted by the defendant… the payment of a sum of money can be made only if accepted by the recipient"). Dennis Klimchuk offers a similar critique; Dennis Klimchuk, *The Normative Foundations of Unjust Enrichment*, *in* PHILOSOPHICAL FOUNDATIONS OF THE LAW OF UNJUST ENRICHMENT 81 (Robert Chambers, Charles Mitchell & James Penner ed., 2009) (arguing that when the defendant has no awareness of the benefit her acceptance "is so constructive that it no longer serves to explain her liability"). For a response to Stevens, see Andrew Burrows, *In Defence of Unjust Enrichment*, 78 CAMBRIDGE L. J. 521, 530-41 (2019) (claiming that the idea of acceptance is not the criteria for determining whether the enrichment was unjust, but may be relevant to determine whether the defendant was enriched).

[80] Stevens, *supra* note 11, at 577; Lionel Smith, *The Province of the Law of Restitution*, 71 CANADIAN BAR REV. 672, 675 (1992).

[81] Smith, *supra* note 80, at 675.

[82] *Id*.

[83] *Id*.

[84] *Id*.

> to eliminate such mistakes entirely. Thus, Bank A could require more than one clerk to review each transfer, purchase more sophisticated software to identify and prevent mistakes, or require more identifying details as a condition for executing payment orders.

Consider the details of *Example 1* in the language of the proposed Other Hand formula. Bank C received a benefit (G) in the sum of $1M from Bank A.[85] From an *ex ante* perspective, Bank A faced a 1% probability (P) of transferring this benefit to Bank C by mistake. Finally, Bank A was able to invest $1K in precautions (B) to prevent the mistake. Based on these assumptions, Bank A was able to make an *ex ante* investment of $1K to secure for itself the other bank's expected benefit of $10K (as P equals 1% and G equals $1M). This means that the cost of precautionary measures is lower than the expected benefit, or $B < PG$. Under these circumstances, the Other Hand formula instructs us that restitution to Bank A is warranted.

To understand the underlying rationale for liability in this case, imagine first the possibility that recovery was *not* available, and Bank A was unable to retrieve the mistakenly transferred sum. If recovery was unavailable for Bank A, the expected cost of a mistake for Bank A would have been $10K (that is, a 1% chance of losing $1M). Based on this assumption, because the mistake is so costly for Bank A, the bank would have preferred to invest $1K to prevent it. Conversely, if recovery is available, the mistake is no longer harmful for Bank A, because the money is returned to it in case of a mistake. Therefore, Bank A will choose not to invest $1K to prevent the mistake. Gain-based liability is beneficial because it frees Bank A, the payer, from the need to make this wasteful $1K investment.[86]

Gain-based liability is beneficial because the mistake is a socially neutral event, not a harmful one.[87] Although the mistaken payment is harmful for Bank A, it is equally beneficial for Bank C, which received the mistakenly

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[85] Gilboa & Kaplan, *supra* note 20 (discussing the requirement of a causal link between the defendant's gain and the plaintiff's actions).

[86] Note that even if, generally speaking, preventing unintended transfers is cheaper, *per transfer*, than reversing unintended transfers using the litigation system, the option of reversing unintended transfers through liability is still valuable for the payor, because the cost of *ex ante* precautions is borne for every transfer, whereas the cost of litigation is probabilistic, and it is incurred only for those rare transfers where a mistake actually occurred. This advantage of litigation over precautions is comparable to the advantage of litigation over regulation, described by Shavell (Steven M. Shavell, *A Fundamental Enforcement Cost Advantage of the Negligence Rule over Regulation*, 42 J. LEGAL STUD. 275 (2013)).

[87] Gilboa & Kaplan, *supra* note 4, at 430.

transferred sum.[88] Because the unintended transfer is an overall neutral event, and not a harmful one, any investment in precautions by Bank A to prevent the mistake is by definition wasteful.[89] Gain-based liability is beneficial because it saves the need for this wasteful form of investment.[90] As *Example 1* demonstrates, the goal of gain-based liability, as reflected in the Other Hand formula, is to save the plaintiff's wasteful investment in preventing a socially neutral event, or a transfer of the gain from the plaintiff to the defendant.

The Other Hand formula is thus a perfect mirror image of the traditional tort Hand formula.[91] In both formulas, B stands for precautionary measures or defensive behavior, but whereas in the tort formula these precautions are expected to be taken by the *defendant*, in the gain-based formula they are expected to be taken by the *plaintiff*. Furthermore, in the tort formula the precautions are designed to *prevent a harmful outcome* to the plaintiff,[92] whereas in the proposed formula they are intended to *prevent a gain for the defendant and secure this gain for the plaintiff.*

These differences between the formulas derive from the different goals of the two legal fields: in tort, the goal of liability is to *induce* the defendant to invest in precautions to prevent harm to the plaintiff; in the gain-based case, the goal of liability is to allow the plaintiff to *reduce* the burden of taking precautions in attempt to prevent an unintended transfer of wealth to the defendant. This comparison is summarized in the table below:

Hand Formula	**Other Hand Formula**
Aims to induce *higher* investment in precautions	Aims to induce *lower* investment in precautions
Targets precautions by the *defendant*	Targets precautions by the *plaintiff*
Targets precautions designed to prevent a *harm to the plaintiff*	Targets precautions designed to prevent a *gain to the defendant*

[88] *Id*.

[89] *Id*.

[90] A similar rationale is used to explain doctrines in other areas of law; *see* Keith N. Hylton, *Property Rules and Defensive Conduct in Tort Law Theory*, 4(1) J. TORT L. 1 (2011) (demonstrating the function of preventing the need for wasteful self-help as a key element of property law).

[91] RESTATEMENT (THIRD) OF TORT: LIABILITY FOR PHYSICAL & EMOTIONAL HARM § 3 cmt. e (AM. LAW INST., 2010); LANDES & POSNER, *supra* note 61, at 4.

[92] William Landes & Richard A. Posner, *The Positive Economic Theory of Tort Law* 15 GA. L. REV. 851, 884 (1981).

An important contribution of the twin hand formulas therefore lies in explaining the rationales for liability in their respective fields. In tort law, the Hand formula explains the rationale for loss-based liability, aimed at inducing injurers to achieve efficient levels of precaution. If B < PL, the injurer is able to prevent the loss at a cost lower than the expected loss.[93] Holding injurers liable in these circumstances induces them to efficiently prevent the loss *ex ante*.[94] The Other Hand formula mirrors this rationale in the law of gain-based liability. If B < PG, the plaintiff-benefactor can (and therefore will) invest in B to secure the benefit (G), and make sure it is not conferred on the defendant. Such an investment is wasteful, however, because it is designed only to prevent a transfer of wealth to the defendant-beneficiary, rather than a harmful event.[95] Allowing recovery in these circumstances saves the plaintiff-benefactor the need to make this wasteful investment. As the benefit will be returned to the plaintiff anyway through restitution, the plaintiff's motivation to make this wasteful investment is obviated.

Note that the outcome that gain-based liability is desirable critically depends on the fact that the transfer is socially neutral rather than harmful. This is a fundamental feature of restitution scenarios, in which the defendant was enriched, meaning that any loss to the plaintiff is at least partially offset by a benefit to the defendant.[96] The basic mistaken payment scenario reflects this logic perfectly, because the defendant-recipient is enriched by exactly the amount that the payer-plaintiff lost.[97] Other cases, which represent transfers of wealth that are also harmful to some degree, may entail certain complications.[98] For example, in unintended transfers of non-monetary assets, it is possible that the defendant, who received the asset by mistake, has little or no practical use for it.[99] In such a case, the mistake did not truly benefit the defendant,[100] and therefore under the logic of the Other Hand formula, restitution should not be available.[101]

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[93] *Id*.

[94] *Id*.

[95] Gilboa & Kaplan, *supra* note 4, at 430.

[96] *Id*. at 431.

[97] *Id*.

[98] *Id*.

[99] Levmore, *supra* note 21 (highlighting the difference between the unintended transfer of money and the unintended transfer of non-monetary goods or services).

[100] Gilboa & Kaplan, *supra* note 4, at 437 (studying the problem of devaluation resulting from the involuntary transfer of non-monetary assets).

[101] Similarly, in money transfers, the transfer itself can be harmful to some degree if the recipients relied on the money to their detriment (Ball v Shepard, 202 NY 247, 254; Paramount Film Distrib. Corp. v State of New York, 30 NY2d 414, 422). For a comprehensive discussion of this issue, see Gilboa & Kaplan, *supra* note 4, at 431.

Similarly, gain-based liability generates an efficient outcome only if the condition expressed by the Other Hand formula holds true, that is, only if $B < PG$. To understand why, consider again *Example 1*. Recall that liability is desirable under these circumstances because it lowers the investment of Bank A in precautions (B). The bank is expected to invest in B only if $B < PG$. Conversely, if this condition does not hold true (i.e., if $B \geq PG$), the bank will prefer risking the mistake rather than preventing it, which is too costly. In the case where the bank is not expected to invest in precautions (B), there is no need for gain-based liability, which is designed to lower this investment.[102] Thus, the condition in $B < PG$ reflects the rationale for gain-based liability: a wasteful investment in B would occur only if $B < PG$, therefore, liability is needed only when this condition is true, as liability is intended to reduce this investment.

Note that this does not mean that gain-based liability would be unavailable to Bank A if $B < PG$ does not hold true *in a specific case*. The reason for this is that the Other Hand formula is not intended to distinguish between individual cases, but between *categories of cases*. In this sense, their relative level of concreteness is another difference between the two formulas. The tort Hand formula is meant to be used by judges on a case-by-case basis to determine which cases merit tort liability and which do not.[103] Conversely, the Other Hand formula distinguishes between *categories* of cases and is not applied on a case-by-case basis. In particular, the Other Hand formula can be used to distinguish between general categories of cases in which restitution is awarded, such as mistaken payments, and those in which it is not.[104] For example, liability for mistaken payments is justified because the condition in $B < PG$ *generally* holds true for cases of mistaken payments, even if it does not hold true for *every individual case of mistaken payment*. To illustrate this

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[102] YORAM BARZEL, ECONOMIC ANALYSIS OF PROPERTY RIGHTS 4 (1997); YORAM BARZEL, A THEORY OF THE STATE (2002) (explaining rights in relation to people's investment to prevent their assets from escaping their control).

[103] The variables B, P, and L in the Hand formula are determined based on the factual circumstances of the particular case. Therefore, loss-based liability is highly context-dependent; Munn v. Hotchkiss Sch., 165 A.3d 1167, 1171 (Conn, 2017) (noting that "the Learned Hand formula may make sense in the context of determining whether reasonable care requires the adoption of an individual precautionary measure"); Dobson v. Louisiana Power & Light Co., 567 So. 2d 569, 575 (La. 1990) ("The Hand formula provides a method for accommodating and weighing all of these factors including the more subjective factors, such as the existence of an emergency, a party's capacity, or his awareness of the risk." […] The Hand formula, or balancing process, moreover, helps to "center attention upon which one of the factors may be determinative in any given situation." (citing Moisan v. Loftus, 178 F.2d 148, 149 (2d Cir. 1949)); Munn v. Hotchkiss Sch., 165 A.3d 1167, 1171 (stating that the standard of negligence applies "within the context of the facts and circumstances of the particular case."); Agni v. Wenshall, 522 F.3d 279, 282 (App. 2008) (same).

[104] We discuss the latter cases at length in Part IV.

point, assume an identical scenario to *Example 1*, with one difference: the transferred sum is $10K, rather than $1M. In this case, preventing the mistake would cost $1K, but the expected cost of the mistake for the bank is only $100 (for a 1% chance of losing $10,000). Under these assumptions, it is unlikely that the bank will invest in precautions (B), and restitution is therefore supposedly unnecessary. Yet, restitution for mistaken money payments is still *generally* beneficial because in this category of cases B < PG *generally* holds true, and it would be beneficial even if it held true only occasionally. Payers are generally able and likely to invest in preventing mistakes and in attempts to secure for themselves the benefits they confer on others, therefore gain-based liability is desirable to reduce such wasteful investments.[105]

To conclude the analysis in this part, the Other Hand formula explains why in the general case of mistaken payments—a core case of gain-based liability—the benefit conferred on the defendant is such that B < PG *potentially* holds true, and restitution is therefore justified and available in this category of cases. Conversely, as we explain and demonstrate in Parts III and IV below, in some categories of cases, B < PG *never* holds true, or categorically cannot hold true. In such cases, the benefit enjoyed by the defendant is one that plaintiffs are unable to secure for themselves. It is therefore unlikely that they would make this type of wasteful investment, and consequently restitution is, and should be, unwarranted and unavailable.

III. THE MEASURE OF GAIN-BASED RECOVERY

In this part, we expand the analysis in Part II and demonstrate the usefulness of the Other Hand formula in explaining not only why gain-based recovery is granted, but also its measure. We show that in cases in which restitution is granted, the Other Hand formula can explain which *portions* of the defendant's gain should be given to the plaintiff in restitution. The Other Hand formula explains such cases in the following way: the part of the defendant's gain that should be returned to the plaintiff is the one for which B < PG holds true; symmetrically, any part of the defendant's gain that does not conform to this condition, should *not* be returned to the plaintiff.

To illustrate this claim, we use another staple example of the law of gain-based liability, that of emergency medical services. We focus on cases in which medical professionals perform emergency life-saving procedures

[105] As these kinds of investments are common, it pays to allow restitution to minimize them. In other words, the scenario of mistaken payments presents a category of cases in which B < PG typically holds true, or has a significant potential of being true in the majority of cases. This is sufficient to justify gain-based liability.

without first securing consent to pay,[106] when medical professionals are typically entitled to restitution of their expenses, including payment for their services, even without prior consent from the patient to the medical treatment or to payment for it.[107] Gain-based liability in these cases is based on the fact that patients benefit from the medical intervention, even if they have not explicitly agreed to pay for it.[108] This rule was applied in the seminal case of *Cotnam v. Wisdom*,[109] where two physicians provided aid to an unconscious person who was thrown out of a street car. The Supreme Court of Arkansas held that the two physicians were entitled to restitution for the surgery they performed with due skill and care.[110] The ruling in *Cotnam* has been reaffirmed multiple times[111] and became the general rule when physicians provide emergency[112] services to unconscious patients.[113] The Other Hand formula can explain the logic underlying this general rule. Consider *Example 2* below.

> *Example 2*: An unconscious patient is rushed into a hospital emergency room. The patient briefly wakes up and the physicians determine that she requires immediate treatment to save her life. The physicians can

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[106] In cases in which professionals (as opposed to bystanders) operate to save the life of another (as opposed to another's property), it is easiest for courts to determine that the defendant indeed enjoyed a benefit, and therefore order restitution; Levmore, *supra* note 21, at 69-72 (discussing typical valuation problems in examining the defendant's gain).

[107] RESTATEMENT (THIRD) RESTITUTION AND UNJUST ENRICHMENT § 20(2) (2010).

[108] *Id*., at § 20(1).

[109] 83 Ark. 601, 104 S.W. 164 (1907).

[110] *Id.*, at 166.

[111] The rule set in *Cotnam* was reaffirmed in and outside the United States; K.A.L. v Southern Med Bus Servs 854 So 2d 106 (Ala Civ App 2003); Bingham Mem Hosp v Boyd (in Re Estate of Boyd) 8 P 3d 664 (Ida App 2000); In re Estate of Crisan 107 N.W.2d 907 (Mich 1961); Matheson v Smiley 40 Mam R 247 [1932] D.L.R 787 (C.A.).

[112] Restitution is available only in emergency cases. Thus, in non-emergency situations, if the service provider neglected to secure consent to pay, it might be considered to have volunteered the medical services free of charge, and is therefore denied restitution; RESTATEMENT (THIRD) RESTITUTION AND UNJUST ENRICHMENT § 2(3) (2010) ("There is no liability in restitution for an unrequested benefit voluntarily conferred, unless the circumstances of the transaction justify the claimant's intervention in the absence of contract").

[113] K.A.L. v. Southern Med. Bus. Servs., 854 So. 2d 106 (Ala. Civ. App. 2003) (an unconscious patient was brought to the hospital after a failed suicide attempt; the patient's life was saved and the hospital was entitled to restitution for reasonable costs); Bingham Mem. Hosp. v. Boyd (in Re Estate of Boyd), 8 P.3d 664 (Ida. App. 2000) (a patient was admitted to the hospital by his wife and stepson and refused to pay medical bills; the court granted restitution); In re Estate of Crisan, 362 Mich. 569 (1961) (reaffirming the general restitutionary rule according to which consent is not required to establish duty to pay in emergency cases where patients were unable to express their medical need).

> try to stabilize the patient to secure agreement to pay, but this seems like a waste of valuable time. For the sake of simplicity, assume that physicians can invest time and medical treatment at a cost equivalent to $100 for a 50% chance of being able to secure consent for payment from the patient. The physicians decide this is not worth the time, perform the necessary medical procedures at a cost of $10K to the hospital, and save the patient's life.

In *Example 2*, the patient enjoyed two benefits: first, she received medical services free of charge, and second, her life was saved. Three different regimes are possible regarding the hospital's right to restitution. First, the patient may be obligated to repay all she benefited from the physicians' actions, which is no less than her life, or a monetary equivalent thereof.[114] Second, the patient may be required to pay the hospital a reasonable fee representing the fair market price for the physician's services.[115] Third, the patient may be exempt from any payment, not having agreed in advance to pay.[116]

The Other Hand formula readily guides the choice between these three options. Consider first the benefit of the patient's life. It is clear that this benefit never conformed to the condition $B < PG$, and could not possibly conform to this condition. No matter how much the hospital would have invested, it could not have secured this type of benefit for itself. Therefore, restitution for this part of the benefit is unavailable. The Other Hand formula

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[114] This solution would make sense from a tort-like perspective, where the goal is to internalize externalities. Contemporary tort theory is heavily influenced by the study of the problem of externalities; Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 13 (1960); Landes & Posner, *supra* note 92, at 854. According to the externality-based rationale, tort defendants are responsible for the entire harm they caused and are typically obligated to pay for this harm; following the same line of thought, the plaintiff-hospital in *Example 2* should be similarly entitled to a remedy measured by the benefit it created. After all, in the mistaken payment case described in Part I, the plaintiff was entitled to the full benefit it conferred on the defendant. But as we explain below, the benefit of the patient's life, although caused by the interference of the hospital, does not meet the requirement for "unjust" under the proposed Other Hand formula.

[115] RESTATEMENT (THIRD) RESTITUTION AND UNJUST ENRICHMENT § 20 cmt.c (2010) (indicating that liability for medical services in rescue cases is to be measured by market value for the services provided).

[116] RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 2(3) (AM. LAW INST. 2010) (stipulating the general rule according to which "[t]here is no liability in restitution for an unrequested benefit voluntarily conferred," as well as the exception to this rule, that liability in restitution may be imposed in circumstances where "the transaction justify the claimant's intervention in the absence of contract").

provides the means to explain the pragmatic sense behind the current state of the law: As the hospital is unable and unlikely to invest in order to secure this type of benefit for itself, restitution, designed to lower such investment, is unnecessary.

By contrast, the hospital was able to invest in securing fair payment for medical services by trying to obtain the patient's consent to treatment. This benefit potentially complies with the condition B < PG, and restitution for it is therefore available. The hospital was able to invest $100 for a 50% chance of securing the patient's consent to pay the sum of $10K. Because B < PG, the hospital would prefer investing $100 for an expected benefit of $5K. This explains why restitution is available for this benefit: as the hospital knows that the payment is secured, there is no reason for it to make this wasteful investment.

This also explains why the solution of no restitution is inappropriate here. Without restitution, hospitals and medical providers will have a perverse incentive to invest in securing payment to assure their monetary interests, even when doing so is not socially viable.

Thus, the Other Hand formula explicates not only the logic behind the rule of restitution in case of emergency life-saving procedures, but also the measure of recovery in such cases. When restitution is available, it is not measured based on the full benefit to the defendant from the plaintiff's life-saving action, but based only on that part of this benefit that was "unjust" according to the Other Hand formula test. Therefore, restitution is available for the value of the medical services, but not for the value of the patient's life. This is also true for other rescue cases, where the rescuing plaintiff is typically entitled to a fair market price for the services provided, but not to the value of what was saved. An instructive example is the recently approved section 274e to the USCS, permitting reasonable payments to organ donors for the costs associated with the organ procurement.[117]

Note that, as in *Example 1* above, the explanation for the rule of restitution in rescue cases, based on the Other Hand formula, does not require that all hospitals be able to invest in securing consent to pay *in every individual case*. Rather, to justify restitution for the value of the medical services, it is enough that hospitals are generally able to invest in this way, and that the benefit in question is of the general type that hospitals are likely to invest in securing, even if this is not true in all individual cases. For example, it may be that in

[117] 42 USCS § 274e (c)2 (approved on December 19, 2019): "(a) Prohibition. It shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce…" (C) Definitions. For the purposes of subsection (a) … (2) The term "valuable consideration" does not include… the expenses of travel, housing, and lost wages incurred by the donor of a human organ in connection with the donation of the organ."

a given case, the hospital in *Example 2* would need to invest $100 for a 50% chance of securing agreement to pay for a $100 treatment. In such a case, the hospital would not have made this wasteful investment, and restitution would have been therefore supposedly unnecessary. Yet, restitution for emergency medical services is generally beneficial (even if B < PG does not hold true *in every individual case*), as payment for medical services is the type of benefit that hospitals are *generally* able to secure, and *generally* likely to invest in securing. This is a benefit for which B < PG typically holds true, or can hold true. Restitution for this type of benefit is therefore beneficial in reducing the investment of hospitals in their attempts to secure it.

Conversely, the benefit of the patients' life is not of this general type. More accurately, this is a benefit that the benefactors-plaintiffs are categorically unable to secure for themselves. Because the benefit is of the general type, for which B < PG categorically does not hold true, restitution for it is not available. In Part IV below, we further develop the analysis of benefits of the latter type.

IV. THE LIMITS OF GAIN-BASED LIABILITY

In this part we use the Other Hand formula to study the outer limits of gain-based liability, or those general scenarios in which gain-based liability is categorically unavailable. The analysis in this part follows the case of a benefactor producing a public good, as a counter-example to the cases discussed in Parts II and III. Public goods are characterized by non-excludability and non-rivalry.[118] Non-excludability means that the creator of the good cannot effectively prevent others from using it once it is created;[119] non-rivalry means that use of the good by one party does not make it unavailable to others.[120] A simple example of a public good is clean air.[121] If one builds a machine that cleans the air for a certain radius of one's house, the people around the property can enjoy this benefit simultaneously, and the

[118] Richard A. Musgrave, *Provision for Social Goods*, in PUBLIC ECONOMICS: AN ANALYSIS OF PUBLIC PRODUCTION AND CONSUMPTION AND THEIR RELATIONS TO THE PRIVATE SECTORS 124, 126-29 (1969). Public goods have been studied by scholars from varied disciplines; ANGELA KALLHOFF, WHY DEMOCRACY NEEDS PUBLIC GOODS (2011) (demonstrating that public goods are essential for democracy); Richard G. A. Feachem & Carol A. Medlin, *Global Public Goods: Health is Wealth*, 417 Nature 695 (2002) (explaining the importance of global public goods for controlling communicable diseases on a worldwide scale). The unique properties of public goods have the potential to generate market failures; MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION. PUBLIC GOODS AND THE THEORY OF GROUPS (2002); IAN MALCOLM DAVID LITTLE, ETHICS, ECONOMICS, AND POLITICS. PRINCIPLES OF PUBLIC POLICY 89-100 (2002).

[119] Musgrave, *supra* note 118, at 126-29.

[120] *Id*.

[121] *Id*.

party producing the cleaner air cannot exclude them from enjoying it.[122] This means that private parties may have an insufficient incentive to create public goods,[123] because they cannot capture the full benefit of doing so.[124]

This familiar problem has recently led Ariel Porat and Robert Cooter to suggest rewarding private parties who created public goods by imposing a duty of restitution on the parties who enjoy them.[125] The idea behind this suggestion is to provide incentives for people to create positive externalities and produce public goods.[126] This proposal, however, is not the law, never has been,[127] and as the analysis in this part shows, should not be. The Other Hand formula explains why this proposal is beyond the scope of gain-based liability as practiced by courts, and why it contradicts the internal logic of this area of law. As we demonstrate below, public goods provide a useful illustration to complete the development of our formula, by presenting a case in which the defendant's gain is not "unjust," and restitution therefore does not, and should not, be awarded. To understand why, consider *Example 3* below, describing the production of a public good in simplified terms.

> *Example 3*: David, an affluent investor, decides to buy and renovate a large, old house. The house and the grounds surrounding it have been neglected for years, and require significant investment of both time and money. David hires the best professionals to do the job, and they turn the old house into an inviting home surrounded by a beautiful and vast garden. The garden is so impressive that it improves the aesthetics of the whole street, and home prices in the area begin to rise.

Example 3 describes a classic scenario of a positive externality,[128] or the production of a public good. At first blush, it may seem that restitution is in

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[122] Security is another classic example of a public good; *see* Ian Ayres & Steven D. Levitt, *Measuring Positive Externalities from Unobservable Victim Precaution: An Empirical Analysis of Lojack,* 113(1) Q.J. ECON. 43, 63-65 (1998).

[123] Porat, *supra* note 24, at 191.

[124] *Id*.

[125] *Id*.; Cooter & Porat, *supra* note 37; Ariel Porat & Robert Cooter, *Can Restitution Save Fragile Spiderless Networks?*, 8 HARV. BUS. L. REV. 1 (2017) (suggesting to harness the idea of restitution for externalized benefits to create a mechanism for controlling moral hazard and free riding in high-tech and R&D firms).

[126] Porat, *supra* note 24, at 193-4.

[127] *Id.*

[128] SHAVELL, *supra* note 44, at 7 (defining an externality as the effect by the action of one party on the wellbeing of another); according to Coase (RONALD .H. COASE, THE FIRM, THE MARKET, AND THE LAW 174 (1988)), the term was first used by Samuelson (Paul A. Samuelson, *Aspects of Public Expenditure Theories*, 40 REV. ECON. & STATIS. 332 (1958);

order, according to the general principles of gain-based liability. After all, David's neighbors were indeed enriched at David's expense; [129] therefore, it seems reasonable to expect the neighbors to pay restitution for some of the benefit they received, or at least for some of David's expenses in creating this benefit. As noted above, scholars have recently argued that restitution should be available in such cases.[130] According to prevailing law, however, restitution is not available to David, and is generally unavailable in cases in this category.[131] The Other Hand formula explains and justifies the existing legal practice, and reveals a deep misconception underlying the recent proposals for its reform.

Indeed, in *Example* 3, David's neighbors enjoyed the aesthetic value of the garden, but David was not able to secure this benefit for himself by making any reasonable investment (B). Because the aesthetic value of the garden is a public good, David cannot exclude others from enjoying it, and therefore also cannot charge others for this benefit. As David cannot secure his neighbors' participation in the cost of the garden to begin with, the benefit from it does not meet the condition in $B < PG$, indeed $B < PG$ categorically does not hold true in this type of cases. Parties that produce a public good cannot secure the full benefit for themselves or make others pay for it. Therefore, rational benefactors are unlikely to make any wasteful investment in B, because they have no way of securing the benefit for themselves. This means that gain-based liability, designed to prevent the need for investment in B, is unnecessary.

The argument here is not simply that in the particular circumstances of *Example 3,* David was unable and unlikely to invest in securing the full benefit of his actions to himself. Rather, the claim is much broader, that such an investment is *generally impossible* in all cases of production of public goods. These cases are characterized by the fact that benefactors are unable to exclude others from the benefit they create, and thus also unable to secure this benefit, or a fair payment for it, for themselves. This type of investment is categorically impossible, therefore restitution, designed to lower it, is unnecessary.

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see also James M. Buchanan & Craig W. Stubblebine, *Externality*, 29(116) ECONOMICA 371 (1962). Coase suggested that the term is inaccurate, because it implies unidirectional causation, from an injurer to a victim, oversimplifying the problem and the reciprocal nature of causation (Coase, *supra* note 114, at 1-3).

[129] In the sense of a causal link between David's actions and the enrichment; RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 1 (AM. LAW INST. 2010).

[130] Porat, *supra* note 24, at 193-4.

[131] Smith, *supra* note 11, at 95.

To further illustrate this point, compare the case of the production of a public good with that of the mistaken payment described above.[132] Consider again the mistaken payment scenario in *Example 1*. The payer bank in this example is able (and likely) to invest in precautions to secure for itself the benefit (the mistakenly transferred sum) it conferred on another. Therefore, restitution of that benefit makes sense in order to save this wasteful investment. Conversely, in the case of the production of a non-excludable public good, as depicted in *Example 3*, the benefactors, by definition, cannot invest to secure for themselves the benefit they are conferring on others.[133] Therefore, the rationale for restitution is missing, and restitution is indeed unavailable.

It may make sense to find other means of encouraging people to create public goods like David's garden, but as our explanation shows, gain-based liability should not be used to provide this incentive. We believe that the recent proposals to expand the reach of gain-based liability to include also the sphere of public goods originate in a comparison between restitution and tort,[134] which is not sufficiently sensitive to the particular structural characteristics of the law of gain-based liability.[135] Some scholars, mainly in the field of law and economics, view tort law as a means of internalizing negative externalities:[136] injurers cause harms, and the law of tort supposedly operates to make them bear the harms they cause to optimize their incentives. By the same token, these scholars suggest to make the law of gain-based liability a means of internalizing positive externalities and optimizing

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[132] For a thorough examination of this core case of gain-based liability, in light of the Other Hand formula, see the analysis in Part II.

[133] Musgrave, *supra* mote 118, at 126-29 (defining and explaining the non-excludability feature of public goods).

[134] Current analysis of the law of restitution largely follows the far more developed analysis of the law of tort; Melvin A. Eisenberg, *Mistake in Contract Law*, 91 CALIF. L. REV. 1573, 1593-5 n.26 (2003); Andrew Kull, *Defenses to Restitution: The Bona Fide Creditor*, 81 B.U.L. REV. 919, 921-2 (2001); Peter K. Huber, *Mistaken Transfers and Profitable Infringement on Property Rights: An Economic Analysis*, 49 LA. L. REV. 71 (1988). For a critique of this current trend, see Gilboa & Kaplan, *supra* note 4, at 430.

[135] Gilboa & Kaplan, *supra* note 4, at 430.

[136] Coase, *supra* note 114 (introducing the idea that, in the absence of transaction costs, externalities are internalized through bargaining between victims and injurers, and therefore, there is no need for liability rules. This idea, also familiar as "the Coase Theorem," was later further developed to consider the more realistic case, which includes transaction costs; COASE, *supra* note, 128 at 174-75; Robert Cooter, *Economic Theories of Legal Liability*, 5 J. Econ. Perspectives 11 (1991); *see also* JULES L. COLEMAN, RISKS AND WRONGS, 242 (1992) (providing a non-economic justification for encouraging individuals to internalize externalities under an interpretation that perceives individuals who are not compelled to internalize externalities, as if "they are permitted to treat others as means to their own ends, and not as ends in themselves").

incentives for those who create beneficial effects.[137] But as the Other Hand formula reveals, this proposed symmetry imposes on the law of gain-based liability goals that are foreign to it, and are inconsistent with its apparent function.

We show that the function of the law of gain-based liability is best explained based on the understanding of its unique logic, as expressed by our proposed formula. The Other Hand formula makes it possible to clearly and consistently define the "unjust element" required to apply gain-based liability, and thus provides useful means for distinguishing when restitution is due and, equally important, when it is not. Although the comparison between tort and restitution is often helpful and illustrative,[138] it should not be taken too far, particularly not in a way that imposes on the law of gain-based liability a reasoning that is foreign to it.

CONCLUSION

This Essay is first to offer a clear and easy-to-apply mathematical formula explaining the rationale, scope, and limits of gain-based liability. Our proposed Other Hand formula shows that gain-based liability is available if, from an *ex ante* perspective, the plaintiff was able to secure the defendant's gain at a cost lower than that gain. We show that this formula explains the presence or absence of liability in the central categories of the law of gain-based liability. For each case, we show that our Other Hand formula not only accords with the existing doctrine, but also provides a clear pragmatic justification for it. Our analysis also explains why recent proposals to expand gain-based liability to allow restitution for the production of public goods contradict the internal logic guiding the law of gain-based liability.

The proposed Other Hand formula explains the underlying rationale for gain-based liability in the same way as the Hand formula explains the logic underlying loss-based liability. This contribution is both timely and essential. The Other Hand formula gives gain-based liability a more principled form, making this area of the law easier to understand and apply, and rendering its fundamental logic more easily accessible to students, lawyers, and judges.

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[137] Cooter & Porat, *supra* note 37 (arguing that restitution should be understood as an attempt to internalize positive externalities, as a mirror image of tort law, aiming to internalize negative externalities); Israel Gilead & Michael Green, *Positive Externalities and the Economics of Proximate Cause*, 74 WASH. & LEE L. REV. 1517, 1535-58 (2017) ("… [W]here D's conduct generates not only expected harms, but also expected benefits, the benefits that are externalized by D should also be internalized to her").

[138] *See e.g.* Gilboa & Kaplan, *supra* note 20 (finding the comparison between restitution and tort useful in analyzing cases of causal ambiguity).