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Towards an economic theory of unjust enrichment law

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1. Introduction

The legal concept of unjust enrichment is an important pillar of private law, but it does not enjoy the same level of internal coherency and comprehensiveness typical of other legal categories such as contract law and tort law (Birks, 1990, pp. 1–2). It exists in various legal systems under different titles—restitution, quasi-contract, unjust enrichment and illegal enrichment. Its content varies, and in most systems it is a rather general principle that encompasses a whole set of disconnected rules sharing only a common rationale.[1] The underlying rationale of these rules is the idea that "a party's 'unjust' gain may be extracted and turned over to a more deserving party, or to one whose loss or effort caused the gain in the first place." (Newman 1998, p. 644). Several attempts have been made to apply law and economics theories to analyze the doctrine of unjust enrichment. However, as the formal-legal definition of unjust enrichment is not agreed upon, these attempts have also not yet matured to provide a unitary analytical framework, or even to a basis for a common discussion.

Two recent decisions by the Israeli Supreme Court prompted this paper. The common feature of the rulings is that in both it was the beneficiary who created an added value that was thought of by the Court as belonging to the benefactor, and it was, therefore, restituted to him by the Court. The two cases amount to an expansion of the traditional categories of unjust enrichment in which the added value is created by the benefactor.

The two Israeli cases, ten years apart, applied the doctrine of unjust enrichment in different areas of law and thereby completed a transformation of Israeli private law. This transformation placed the unjust enrichment doctrine as a superior principle playing a pivotal

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role in private law. Justice Barak, the President of the Israeli Supreme Court, even portrayed this doctrine as a giant eagle which spreads out its wings to cover all fields of law.[2]

The significance of these decisions, however, goes beyond their landmark contribution to the development of Israeli private law. The special circumstances in which the court applied unjust enrichment illuminate the interface between unjust enrichment and other traditional private law branches. The broad definition and use of the unjust enrichment doctrine in the Israeli context begs a new theoretical modeling. In this task law and economics may play a major role, by facilitating the deconstruction of traditional legal categories and focusing on their actual functions.

This paper seeks to begin such a task. Part II provides an overview of two major attempts to theoretically analyze unjust enrichment from a law and economic perspective. It subsequently turns to introduce the two Israeli cases, which expanded the application of unjust enrichment beyond the definitions offered by this literature. Part III offers a new theoretical framework, which distinguishes between unjust enrichment as a source for legal entitlements and unjust enrichment as a remedy designated to protect entitlements. Relying on the Calabresi and Melamed (1972) paradigm of private law, we show how the fundamental distinction between entitlements and remedies may enhance the coherent understanding of unjust enrichment as a legal doctrine. Part IV offers several considerations applicable to the use of unjust enrichment as a source of entitlements. Part V discusses some considerations for the application of unjust enrichment as a remedy.

2. Unjust enrichment in theory and practice

2.1. The wings of the eagle—the use of unjust enrichment in Israeli law

In 1979 the Israeli parliament, the Knesset, legislated the Unjust Enrichment Law, which holds in its first article:

> 1. (a) Where a person obtains any property, service or other benefit from another person without legal cause (the two persons hereinafter respectively referred to as "the beneficiary" and "the benefactor"—the beneficiary shall make restitution to the benefactor, and if restitution in kind is impossible or unreasonable shall pay him the value of the benefit.
>
> (b) It shall be immaterial whether the benefit was obtained through an act of the beneficiary or an act of the benefactor or any other way.

The statute was part of a far-reaching process shifting Israeli private law from its Anglo American doctrinal sources, through Continental doctrines of private law, and finally into what is becoming an original Israeli private law jurisprudence.[3] This process resulted in a hybrid legal system, not yet locked in rigid concepts. Such a system could provide a fascinating laboratory for testing the functions of some of the conventional legal doctrines.

The 1979 unjust enrichment law was further developed by the Israeli Supreme Court, in two landmark decisions, in the area of contract law and intellectual property. The first case, *Adras - Building Materials Ltd. v. Harlo and Jones G.M.B.H*,[4] involved a breach of commercial contract for the sale of iron. The seller, the German Company of Harlow and

Jones, took advantage of a sudden significant increase in the world market value of iron, and sold the iron, designated for Adras, to a third party for a significantly higher price. The buyer filed a lawsuit for breach of contract only after the price of iron cropped down back to the original contract price. He, therefore, failed to prove any losses from the breach of contract, which only counts for the difference between the contract price and the price at the time the contract was revoked. Instead, the buyer claimed the profits of the seller from the breach of contract, on the basis of unjust enrichment. The Court was asked to determine whether Unjust Enrichment Law is applicable when the parties are already engaged in contractual relations, and, further, whether a promisee is entitled to recover the promisor's profits from the breach of contract.[5]

The Majority, led by Barak, J. answered both questions in the affirmative, holding that the 1979 Act promoted unjust enrichment to a leading principle in Israeli law. This Act, Barak held, is of open texture; it is not limited to protection of property rights and it may apply also to contractual parties. Contract law protects reliance interests, expectation interests, as well as unjust enrichment interests, Barak held. Article 1 of the Unjust Enrichment Law orders restitution where a person received a benefit, which originates from another person and was not obtained by lawful right. Since there is a causal link between the breach of contract committed by Harlo & Jones and their enrichment, all the three conditions set forth in article 1 of the statute are met.

Barak, well aware of the law and economics literature on efficient breach, and of the fact that his ruling is in contrast to this literature,[6] noted that economic efficiency is not the sole goal of contract law, and that fulfillment of promises is an important basis for the life of a community, society and nation. A promise enshrined in a contract is a protected interest that strengthens commercial stability. Breach of contracts generates transaction costs, such as litigation, and uncertainty, which at times can outweigh the economic efficiency of the breach, even if it is an "inefficient contract."[7]

Ten years later, once again by the majority of an enlarged bench of seven judges, the Israeli Supreme Court pulled out of a hat the doctrine of unjust enrichment, this time in an intellectual property case. In this case, *A.Sh.I.R v. Forum Avizarim*, the Supreme Court was asked to determine whether legal protection should be accorded to an unregistered design against copying by competitors. The Court held that the alleged copier made unjust enrichment by using an intangible idea/design developed by another.[8]

Designs in Israel are typically protected under the Patents and Designs Ordinance 1924. A design protects the configuration applied to an article by any industrial process, which is judged solely by the eye. The creator of any "new or original" design may apply to register the design,[9] and such registration allows the owner to prevent any person from imitating the design for a maximum of 15 years. In the case brought to the Israeli Supreme Court the plaintiffs failed to register their designs and, therefore, were not entitled to any intellectual property right. The plaintiffs thus claimed recovery of the imitators' profits on the bases of unjust enrichment.

The majority opinion held that the law of unjust enrichment can coexist with intellectual property law. Whereas intellectual property laws address property rights in intangibles, unjust enrichment addresses a different set of interests. It provides a personal (rather than a property) claim regarding restitution. Unjust enrichment should, therefore, provide a supplementary remedy whenever enrichment is unjustly obtained. On this basis, the Court

granted an injunction in favor of the plaintiffs. The minority opinion held that in most cases intellectual property laws imply an exclusionary rule; thus, once a work is unprotected by intellectual property a remedy should not be allowed under unjust enrichment.

Despite the fact that the Israeli Supreme Court explicitly rejected the economic approach, in very important aspects it actually followed the methodology of this approach. Thus, in line with the Calabresi-Melamed model (1972) of private law, it ignored the traditional legal doctrines that distinguish between obligatory rights and property rights. Free of any conceptual doctrinal barriers, the Court was engaged in propertizing contractual rights, on the one hand, and unprotected intangibles on the other hand, by applying principles of unjust enrichment to both cases. In the rest of the paper we will examine the doctrine of unjust enrichment used by the Court in the prism of the economic approach.

2.2. The law and economic literature on unjust enrichment

Attempts to apply law and economics theories to analyze unjust enrichment doctrine are sparse. Two of the most important studies in this field were made on two different sides of the Atlantic. In the US Soul Levmore (1985) suggested that restitution should be viewed as a middle-way between contract and tort law. Just like contract law, restitution deals with benefits. Yet, while contract law addresses bargained benefits (and harms), restitution law strictly deals with nonbargained benefits. Restitution is, therefore, different from tort law, which addresses nonbargained harm. Levemore's definition of restitution focuses on situations in which the law intervenes by the creation of bargains where the parties have failed to do so. These bargains may enhance social welfare and thus the intervention is desirable. Levmore seeks to explain, and predict, the circumstances in which restitution for nonbargained benefits is allowed or denied, by suggesting four possible factors determining whether a court would intervene. These factors are valuation difficulties, a search for the better bargainer, a notion of wealth dependency, and a consideration of market encouragement.

Levmore's model, however, strictly focuses on cases where an active party transferred a benefit to a the beneficiary, and the legal question for restitution law is, therefore, whether the court should order recovery to the benefactor. This model is of limited applicability for our current paper. The two Israeli cases which applied unjust enrichment are dealing with quite a different type of situations—where the benefit slips into the pocket of the active party. In such circumstances the beneficiary receives the benefit through her own actions. If restitution is awarded, the beneficiary is required to transfer her benefits to the benefactor, who is considered entitled to the benefit despite the fact that she did not create it.

For instance, in the case of *Adras* restitution was applied to require the beneficiary (the promisor) to hand over his profits from the breach of contract to the promisee. The added value, profits made by the sale to a third party, was obtained through a transaction entered by the beneficiary. These profits were nevertheless considered as belonging to the plaintiff.

Similarly, in the case of *A.Sh.I.R* the beneficiary was a copier of an unregistered design who benefited from the investment in research and development made by the original creator. A value (the development of the design) was created by the benefactor, but the added value (using the sunk-cost of R&D to create other products and selling them for a lower price)

resulted from the copying by the beneficiary. When the beneficiary, rather than the benefactor, is the active party different considerations might be invoked.

Bouckaert and De Geest (1995) focus on a subset of restitution cases that deal with coerced transfer of property between individuals. These instances of coerced transfers, which are doctrinally treated as quasi-contracts, are organized around three themes: private takings, private taxes, and private compulsory services. The examples focus on situations in which there is no agreement. The transfer is decided (and thus agreed upon) by one individual, whereas the other individual is obliged to accept it. The authors provide us with a law and economics explanation as to this intervention. Although their categories include cases where the added value was created by the beneficiary, these are limited to situations where the law authorizes (and even encourages) such actions, but it is supplemented by an obligation of engorgement.

The definition of unjust enrichment provided by Bouckaert and De Geest does not cover the use of unjust enrichment in the two Israeli cases. First, In both cases the active party or the infringer is the side who himself benefited from the action. In both cases the legal finding of unjust enrichment was based on perceiving the gains as belonging to a "more deserving" party, even though such gains were the outcome of the beneficiary's efforts. The party who gained profits became a beneficiary by virtue of taking advantage of someone else's legal right.[10] Under such circumstances it is the beneficiary whose behavior may be affected by incentives created by a restitutive rule, and therefore such effects should be incorporated into the analysis of legal intervention. Furthermore, The coerced transfer seems more intuitive when the benefit was created by the benefactor and he is, therefore, compensated for his investment. It is less obvious, and more difficult to justify, when the benefit was created by the beneficiary and is transferred to the benefactor.

Second, the two cases invoke another issue not yet addressed by the law and economic literature on restitution. In both cases unjust enrichment doctrine was applied in the context of a different and well-established legal field—in *Adras* in the framework of contractual relations, and in *A.Sh.I.R* in the realm of intellectual property. Such use of unjust enrichment goes beyond traditional private law categories and does not fit into recent attempts to describe coerced transfers in private law. These cases, therefore, beg a fresh definition and analysis of the doctrine.

3. A fresh definition of unjust enrichment

As we have seen, unjust enrichment as a legal category has been applied to a wide range of circumstances that can be arranged in various ways. However, these cases have an important common feature: the legal rule turns over an added value (a gain, a profit), which was created by one party (either to itself or to another party), and is perceived by the law as an unjust gain, to the "more deserving" party. Thus, the operation of the unjust enrichment doctrine manifests itself in two stages: determining the entitlement of the deserving party, and providing a source for the transfer imposed by the law to this deserving party. A distinction between these two stages is very often overlooked.

We propose, therefore, to distinguish between two different *functions* of unjust enrichment as a legal doctrine: a source for the allocation of entitlements and a remedy to protect such

allocation.[11] In the next two sections of this paper we will point out that different considerations may govern the efficiency of unjust enrichment in its two distinct functions. But first, in order to clarify our categorization, let us resort to the path-breaking Calabresi-Melamed (1972) theory of private law, which can serve as a general theoretical framework for our analysis.

Calabresi and Melamed (1972) describe private law as a two-tier structure of legal rules: first order rules, which allocate entitlements, and second order rules, which specify the methods of protecting theses entitlements. The revolutionary perspective of their model is manifested by two factors. The first is the usage of the term "entitlement," which is wider than the conventional concept of "right" in private law. The second is the blurring of boundaries between the various traditional fields of private law, primarily the distinction between property law and the law of obligations (contracts and torts).

An allocation of entitlement constitutes a decision whom to favor in case of conflicting interests. Such a conflict exist when two or more people want to make use of a good or a service—the classical object of rights in private law. But it exist also when A wants to exclude information from others, while B wants to make use of this information, or when A wants to voice a protest, while B wants to prevent her from doing so, or when A wants to perform a religious ceremony, while B wants to prohibit it, and so forth with regard to any conflicting interests.[12]

Once a decision about an allocation of entitlement is made, there is a second decision, no less important, as to the method by which such an entitlement ought to be protected. Calabresi and Melamed specify three types of protections—property rules, liability rules and inalienability rules. A property rule means that the transfer of the entitlement can materialize only through voluntary transaction, and that the state will intervene by injunction to protect the holder from an involuntary transfer. A liability rule means that a person, who has not been allocated the entitlement, can obtain it, even without the consent of its legal holder, but that this person will have to pay compensation, determined by court, to the holder. Inalienability rule prohibits the transfer of the entitlement altogether, even when both parties are interested in this transfer.

Analyzing the doctrine of unjust enrichment in the framework of the Calabresi-Melamed model can help to understand what unjust enrichment is all about. It may further allow to develop the Calabresi-Melamed model itself.[13] The use of the concept of "unjust enrichment" encompasses, in fact, two very different phenomena. First, unjust enrichment is used as a source for the allocation of entitlements. Second, unjust enrichment is applied as an additional remedy (to the three remedies specified by Calabresi and Melamed) for the protection of entitlements.

The source consideration for the allocation of entitlements based on unjust enrichment belongs to a wider family of considerations of "justice." This family of considerations exists alongside another family of considerations of (economic) efficiency. The remedy of unjust enrichment is different from a property rule and from a liability rule. It is a "softer" remedy than a property rule. As in a liability rule, it allows the involuntary taking of an entitlement. Yet, unlike a liability rule, which requires the taker to compensate the rightholder for the harm, unjust enrichment requires the taker to restitute the profits made out of the entitlement.

In the case of *Adras*, the Court used unjust enrichment as a remedy to protect a contractual entitlement. The defendant who breached his promise to supply iron to the plaintiff, and, instead, sold the iron to a third party at profit, was ordered by the Court to transfer his profits

to the plaintiff. The allocation of the entitlement—the right of Adras (the promisee) to receive the iron - was founded on the general rationale of contract law, which is based on efficiency.[14] The remedy selected by the Court for protecting this entitlement was an unjust enrichment remedy. We will further analyze the use of this remedy in part V.

In the case of *A.Sh.I.R* unjust enrichment was applied as a source consideration for allocating the entitlement to a production idea. The Court held that the originator of an unregistered design is entitled to a remedy if the copying of his idea is found to be unjust. In the absence of any other legal ground for awarding a remedy, unjust enrichment was used to establish the entitlement of the original designer. Thus, unjust enrichment doctrine was used as a source for allocating entitlements, and subsequently holding the (otherwise noninfringing) copier of a design, liable.

Despite the restitutive-based allocation of entitlement, the remedy granted in *A.Sh.I.R* was, in fact, not restitutive. The Court granted an injunction prohibiting altogether any copying by the defendant. Thus, the entitlement created by unjust enrichment was protected by a property rule. In other words, the result of the case—an injunction prohibiting the defendant from using, producing and selling goods that are manufactured with the nonpatentable aluminum frames—constitutes a property rule to protect the entitlement. Had the Court opted for an unjust enrichment *remedy* it would have ordered the defendants only to pay the costs of developing the original production method, or, alternatively, to pay the profits derived from the copying.[15] A liability rule would have resulted in an order to pay the plaintiffs their economic loss from copying their design or production methods. It is unclear in this case which remedy—liability rule or unjust enrichment rule—would have resulted in a higher sum.

There are two other headings, used in various legal systems as synonyms for the doctrine of unjust enrichment: quasi contracts and restitution. Both titles, though, refer only to the remedial aspect of unjust enrichment. In both doctrines the initial allocation of entitlement is presumed and the question is what ought to be the legal remedy for involuntary transfers of entitlements. The treatment of unjust enrichment as a unitary doctrine, without clearly differentiating between its different functions, obfuscates the possibility to provide a comprehensive economic analysis of unjust enrichment law. The following discussion seeks to disentangle the different functions of the unjust enrichment doctrine and to examine them separately.

4. Unjust enrichment as a source for the allocation of entitlements

4.1. The general framework

Restitution is ordered when entitlement was denied to its legal holder (or when a detriment was “forced” on a person), whereas the initial allocation of entitlements is presumed and justified by other principles external to restitution law. But at times the initial allocation of entitlements itself is under question. Such is the case of entitlements outside the realm of tangible property or contracts. Entitlements in form of political and civil rights are one example for such cases; intellectual property is another.

The various considerations for the initial allocation of entitlements can be crudely mapped by two major dichotomies. One dichotomy is between allocation governed by teleological or

"end state" principles and allocation governed by deontological principles (Nozik 1974, 155–157).[16] A second dichotomy is between allocation governed by maximization principles and allocation governed by distributional principles. Economic efficiency belongs to the "end state" family of considerations, which are governed by maximization principles. Unjust enrichment is usually a legal expression for an allocation governed by deontological principles. Thus, an entitlement allocated on the basis of unjust enrichment usually ignores end state consequences (such as maximization of utility or wealth), and is determined on the basis of intrinsic values, such as natural rights.

In the *A.Sh.I.R.* case, the Israeli Supreme Court decided that the entitlement to the fruits of a certain production idea, thought of and developed by the plaintiffs, ought to be allocated to the plaintiffs. Therefore, the Court held that the involuntary "taking" of these fruits, by the copying defendants, ought to be remedied. The conceptual source for the allocation of this entitlement was not an "end state" consideration, but a deontological one: those who thought of and developed the production idea deserve to be granted an exclusive entitlement for its production and sale. This sort of reasoning did not take into account distributional considerations (such as equality); nor did it take into account efficiency or utility maximization.

In fact, the Court in the *A.Sh.I.R* decision implicitly adopted a Nozikian concept of property rights, holding that the main rationale for granting a property right is "historical principles" (Nozik, 1974, 149–153). A person should be entitled to whatever she has created. In a first glance, the decision of the majority can be thought of as having a "progressive" ramification, by departing from a strict application of legal doctrine (only those who registered their designs are entitled to the protection of the law) and being based on policy reasoning—sanctioning those "free rider" entrepreneurs who copy an idea from a rival firm. But it is somehow ironic that a more careful examination of what the Court did results with an opposite conclusion. By allocating the entitlement to the plaintiffs the Court, in fact, adopted an extreme libertarian concept, ignoring both considerations of total social welfare and distributional or egalitarian considerations.

4.2. Economic analysis of intellectual property

Does the allocation of entitlements made by the Court reflect also efficiency? In order to fully appreciate the ramifications of the decision for efficiency we should first take a brief look at the economics of information, which is an important theoretical basis for intellectual property law, and can thus serve as a good framework to evaluate the use of unjust enrichment as a source for the allocation of entitlements.

Information in the broad sense of the term is considered a public good. Books, computer programs, fashion designs, or technical inventions all share a number of attributes. The creation of all such products usually involves relatively large investments, while the copying of such information products, once created, is usually easy and cheap. That is because the use of information may not be efficiently excluded.[17] The writing of a book requires relatively expensive labor and research by the author, and the development of a computer program may require heavy investment in research and development. Copying such information, however, involves negligible cost: the cost of time and communication means spent when downloading a computer program from the Internet, or the cost of photocopying a book.

The result is that without central intervention inventors might lack sufficient incentives to invest in the creation of information. Inventors would not invest in inventions unless their expected returns exceed their investment. Under no legal protection, once A invested in the development of a computer program, a second comer B may easily copy the program and, furthermore, he might sell the program to other consumers for less than the price charged by A, at a price that equals to the marginal cost of an additional copy. This will drive the original inventor A out of the market. In the law and economics terminology this amounts to a market failure of the nature of nonexcludable public good. Intellectual property laws provide incentives to inventors, by grating them a legal right to exclude nonpayers and to deter potential free riders. If inventors are able to exclude nonpayers they can reap returns on their investment by collecting fees for the use of their works.

Information has another characteristic of a public good: nonrivalry. Information is nonrival in that its use by one person does not deprive others from using it. The use of a book or a computer program by one does not prevent anyone else from using the same. Indeed, in some cases additional users would even create positive externalities (Lemley, 1997). A classic example is a computer operating system: the more users adopt it, the higher the utility each user may derive from its use (Menell, 1989). Furthermore, certain level of free access to information is essential for further innovation. The production of Information is incremental. Existing information stimulates the creation of more information and, therefore, extensive use of information may increase the likelihood of further development.

Information can never be used up (Landes and Posner, 1989, p. 335). Thus, it does not create the same allocation problems created by scarce tangible resources. Tangibles, such as land, require the allocation of control over the asset to the highest bidder who presumably would make the most efficient use. Informational products may be used by all simultaneously. Since the use of information involves no cost (or very small cost), efficiency requires that it will be maximized.

As a consequence, the main goal of intellectual property laws is to balance two conflicting objectives. On the one hand, they seek to induce production of information by allowing nonpayers to be excluded and information to be marketed at a price that reflects the development and research expenses. On the other hand, they are designed to keep this monopoly limited to serve its ultimate purpose of maximizing access to information. If intellectual property owners can charge a monopolistic price, fewer people would use an informational product than if it were distributed on a competitive basis. Such underuse of information would be inefficient. The law, thus, regulates access to information by balancing incentives to create and accessibility of information.

The majority opinion in *A.Sh.I.R* held that unjust enrichment ought to be an independent source of entitlement even in the absence of protection under IP laws. The judges held that the defendant/copier was unjustly enriched by copying the unregistered design created by the plaintiff. Thus, even though intellectual property laws did not offer any remedy to the plaintiff, the Court found that his claims should be allowed, as the defendant had unjustly benefited from the efforts made by the designer. The court granted an entitlement to the original designer to make an exclusive use of the design and to prevent any unauthorized use by others. Let us use the analytical framework of legal protection of informational goods to examine the consequences of

using unjust enrichment as a source of entitlement regarding information, or to examine how the *A.Sh.I.R* rule affects the behavior of users and the behavior of inventors.

4.3. The effects of entitlements based on unjust enrichment on the behavior of inventors

The *A.Sh.I.R* Rule is likely to reduce reliance on the Registry. In particular, inventors will avoid registering designs if they expect to receive at least equivalent protection for unregistered designs. In fact, they are likely to avoid registration even when they expect to receive lower protection, because registration itself involves costs, such as the registration fees, the cost of preparing the application, search cost, prosecution in the Registrar office (if the application is refused). Moreover, some forms of registration, such as in the case of patent system, involve disclosure to the public that inventors may well wish to avoid. There are cases (e.g., an innovative machine or the production process of a new drug) in which the commercial secret is not visible to the user, and therefore one implication of registration is the disclosure of these secrets, which without registration would not be revealed. This is part of the balancing IP laws are engaged in, which will be distorted if protection on the basis of unjust enrichment is allowed. The disclosure involved in registration is also a significant benefit—an increase in information—of IP laws in the framework presented in the previous section.

Other benefits entailed by the Registry include a reduction in transaction costs involving litigation. In cases of alleged copy, the owner of a registered patent or design must simply present the registration certificate in court, while in an unjust enrichment regime further evidence is necessary (as to the origin of the idea and the fact that it deserves protection). This may substantially increase transaction costs.

An additional benefit is a higher level of certainty regarding protection. When entitlements are allocated on the basis of unjust enrichment judicial discretion and the scope of error are greater and they may prevent an ex-ante estimation of the inventor as to the value of his invention.[18] A related benefit of registration is the ability to capture the value users' place on the invention. Thus the *A.Sh.I.R* rule would not eliminate registration all together. Registration threshold would be set at the rate where the benefits of IP protection minus the protection costs are higher than the benefits of protection by unjust enrichment.

A second effect of the *A.Sh.I.R* rule is an increase of the level of incentives for innovative activity. That is because inventors would anticipate *ex ante* a stronger likelihood of winning against copiers, either under intellectual property laws or under unjust enrichment rule. Inventors can further anticipate higher sums of compensation, having an additional entitlement that is not necessarily equivalent to their entitlement under intellectual property law.[19]

Moreover, entitlements on the basis of unjust enrichment law are likely to provide a greater protection than intellectual property laws. That is because an entitlement based on unjust enrichment may be protected by either a property or a liability rule and not necessarily by restitutive remedies. In *A.Sh.I.R*, for instance, the court had granted an injunction against the defendant's unauthorized copying, thus choosing to protect the unjust enrichment entitlement by a property rule. While intellectual property protection, for reasons discussed above, is limited in scope and duration, entitlement under unjust enrichment is not subject to the same economic considerations that require balancing rights in information. Conse-

quently, inventors would anticipate *ex ante* a stronger protection, which is likely to increase the incentives for research and development.

4.4. The effects of entitlements based on unjust enrichment on the use of information

It seems that the *A.Sh.I.R.* rule would lead to underuse of information. There are several causes for this outcome. First, under an IP regime users can check the Registry and copy any design that is either unregistered or for which protection had expired. Under the *A.Sh.I.R* rule copying becomes more expensive due to the increased legal risk. When there is a risk that copying an unregistered design would be considered unjust, then a copier may refrain from copying, even when it is socially beneficial that she would do so (Nard, 1999).

The *A.Sh.I.R* rule requires users to undertake costly and time-consuming searches to identify the designer and to find out information regarding the design in order to evaluate whether it is protected under unjust enrichment law. Users may not always have sufficient incentives to find out whether an invention is protected or not. Consequently, users would take overall extra precautions and are likely to copy less, decreasing the level of information in the market.

Users may, of course, assume that all information is potentially protected, either under IP laws or under unjust enrichment. As a result, they would seek a bargain with owners, if identified, to obtain a license to use the invention. But in the absence of registration the cost of identifying the right holder are likely to be much higher. Furthermore, such bargaining would be inefficient. Recall that information does not present the same allocative problems of tangibles. Once information was created it may be used by all at no cost (or negligible cost). It would, therefore, be socially beneficial to maximize its use, subject to limits that would preserve some level of incentives for inventors. Copying information, once created, would be socially beneficial since it would reduce the price to end-users and increase the number of users of any given design or invention. If users must purchase a license to use an unregistered design, or if they refrain from copying an unprotected design, the monopoly power of the original designer would be strengthened and competition would be discouraged.

In addition, high transaction costs are likely to cause users either to pay royalties in order to reduce the risk of being sued, or to avoid copying altogether, even in cases when copying is allowed under IP laws. This chilling effect is inefficient.

IP laws protect the inventors, but at the same time they provide for the disclosure of the invention. This should allow researchers to use the knowledge for further research and development. Such disclosure is indeed part of the "patent bargain" - society is granting a limited monopoly to the inventor in return for disclosure of the invention. Should the inventor relay on unjust enrichment rather than on IP laws, the added informational effect for general research would disappear.

4.5. Summary

Legal and economic literature reflect a high level of uncertainty regarding the appropriate level of protection that should be accorded to information.[20] There are no sufficient data on what would be a minimal level of monopoly necessary to guarantee sufficient incentives to create. It is also unclear what constitutes an optimal level of use of information. If IP laws

reflect an optimal level of use of information then the *A.Sh.I.R.* rule would lead to underuse of information. If IP laws do not adequately guarantee the optimal level of use then it is necessary to change the rule. This was, in fact, the rationale adopted by several judges in *A.Sh.I.R.* Their line of reasoning was that the current system does not provide adequate protection and it is, therefore, necessary to offer a remedy to designers under unjust enrichment law. The question is, however, whether unjust enrichment law is adequate for providing a residual remedy for work not protected under IP laws.

This is an empirical question that requires some data on the deficiencies of the IP system in a particular market, and the optimal balance necessary in such a market between use and monopoly, as well as between legal certainty and casuistic precision. Each and every branch of IP law may invoke different considerations and a different balance. For instance, while overprotection of copyrighted works by unjust enrichment law may have ramifications on freedom of speech, extraprotection of patents may affect the public health and scientific cooperation in R&D. There are further considerations particular to each market, such as the "life span" of a product, or the duration of market head-start.

Several general observations may, however, be applicable. First, the full Nozikian rationale for entitlements based on unjust enrichment does not even attempt to strike a balance between innovation and information. In its basis it is a corner solution, unintentionally in favor of the former (as considerations regarding incentives to create are not explicit part of its rationale), ignoring the latter.

Second, unjust enrichment as entitlement involves higher transaction costs than IP laws, even if the considerations to apply it are led by a cost-benefit analysis in the particular case brought to the court. The high transaction costs are related to the uncertainty involved in applying restitution law to particular cases. It is difficult (and therefore expensive) to predict *ex ante* what would be considered by the court unjust. As acknowledged by many commentators, the notion of unjust enrichment is indefinable and suffers difficulties somewhat similar to the notion of justice (Palmer 1978, Dagan 1997). Displacing IP as a source of entitlement by unjust enrichment reflects a shift from rules to standards (Kaplow 1992). While IP rules, as a general matter, provide inventors and users with a relatively high level of certainty regarding protection, awarding entitlement based on unjust enrichment subjects the allocation of entitlements to a sweeping exercise of judicial discretion. This would be developed on a case-by-case basis, making prediction very hard.

Third, unjust enrichment as an entitlement increases uncertainties and information asymmetries. Both inventors and users are likely to be affected by the higher uncertainty, but the consequences on users' behavior are likely to be stronger, as inventors enjoy an information advantage over users. They have better information regarding their invention and the circumstances of its development. They also have adequate incentives to acquire information, which affects their legal position, the IP protection available, the prospects of receiving IP protection, and the case law applicable to their invention.[21] Consequently, inventors would be better able to predict whether an entitlement based on unjust enrichment remedy would be granted—and therefore their uncertainty would be lower.

Furthermore, uncertainty regarding the level of protection affects users and inventors differently. For inventors, the uncertainty regarding entitlement by unjust enrichment could reduce the expected award by the probability that this entitlement would be denied. For users,

uncertainty could induce infringement, because users would discount the potential liability by the probability that it would not be imposed (Schlicher, 1992). Yet, since an entitlement based on unjust enrichment does not substitute, but rather supplement IP protection, it is likely to lead to over deterrence.

Fourth, unjust enrichment as a source of entitlement may have a chilling effect on the public domain, namely, the pool of information that is left publicly accessible by intellectual property laws. Shrinking the public domain may entail negative consequences for creation and innovation. Information is often developed incrementally and therefore widespread access to information is essential for further innovation. Existing cultural artifacts stem from the works of the past (Landes & Posner, 1989), and exposure to current innovations may stimulate the creation of new technological developments. The chilling effect created by unjust enrichment may therefore be detrimental for further innovation.

To summarize, allocation of entitlements on the basis of unjust enrichment cannot be justified by efficiency considerations or by economic analysis.

5. Unjust enrichment as a remedy in private law

5.1. The nature of unjust enrichment remedy for breach of contract

We have seen how unjust enrichment can serve as a consideration for allocation of entitlements, as was the case in *A.Sh.I.R.*, and what are the disadvantages of this function. The more common use of this doctrine, though, is as a remedy to protect a pregiven allocation of entitlements. The case of *Adras* is a good example for such a use. The entitlement was the obligatory right to be supplied with a certain quantity of iron on a specific date. It originated from a contract. The allocation of this entitlement—a contractual right—is supported by both an "end state" of economic efficiency rationale and by deontological reasoning (Trebilcock, 1993). A contract is presumed to be efficient if rational parties had voluntarily entered it. Rational parties would enter a contract when it makes them both better off, provided that both parties enjoyed complete information regarding the transaction and that they acted voluntarily (Friedman, 1962). Contractual rights are justified also on a deontological basis, in that they are founded on a moral obligation—promises must be fulfilled (Fried, 1981)—and reflect a recognition of the free will of rational agents.[22]

Calabresi and Melamed (1972) in their seminal work specify three major remedies—property rule, liability rule and inalienability rule. The latter may be considered as the strongest remedy, as it prohibits the potential infringer of the entitlement from carrying out his intention of infringement, even in cases where the holder of the entitlement grants his consent for such an infringement. Inalienability will not be used to protect contractual rights because that would undermine the viability of this entitlement and the rationale behind it, which relies on free exchange. Property rule is the second "severe" remedy, as it prohibits the potential infringer of the entitlement from carrying out his intention of infringement unless the holder of the entitlement gives his consent for such an action. Specific performance or injunction will be the actual result of this remedy. Liability rule is the softer remedy, as it allows the infringement, and requires only that the infringer will compensate

the holder of the entitlement, either for the losses he incurred (damages based on reliance interest) or for the gains he was denied (damages based on expectancy interest).

Black-letter legal doctrine aligns unjust enrichment with a property rule, particularly when it is awarded to protect a contractual right. That is because ordering the disgorgment of profits created by the breach to the promisee, assumes that the promisee *owns* the contractual expectation and is, therefore, entitled to trade any profits associated with it. Unjust enrichment could be depicted, however, as an additional remedy, which is stronger than liability rule, but softer than property rule.[23] In fact, the remedy of unjust enrichment is much closer to a liability rule. Unlike a property rule, the remedy of unjust enrichment makes the infringement of the entitlement possible, even without the consent of the promisee. But it requires the payment of all gains made by the infringer as the result of the breach. Such gains are expected to be higher than damages based on expectation or reliance interests.

Mainstream economic theory perceives liability rule (expectancy-based damages), in most cases, as the only efficient remedy for a breach of contract. The economic theory of "efficient breach" holds that a promisee must be made as well off as she would have been had the promise been performed. Expectation damages can guarantee that the promisor would internalize the benefits of performance to all parties and thus her decision whether or not to breach the contract would be efficient (in terms of both wealth maximization and the Pareto principle) (Cooter & Ulen, 1997, pp. 289–292). Specific performance is perceived as inefficient in most cases, and as justifiable only upon deontological foundations rather than upon end state maximization considerations. Where should we classify the remedy of unjust enrichment?

Most law and economics scholars view the unjust enrichment remedy in the same way as a property rule, that is, as inefficient, and thus undesirable. The main objection to awarding restitutive damages is the assumption that such damages would normally make the promisee better off than if the contract had been performed. That would, in turn, distort incentives for efficient breach.[24] Such a remedy would be justified according to Posner (1998), for example, only where deterrence against opportunistic breach is required. Awarding an unjust enrichment remedy in such circumstances, namely, granting the promisee the profits made by the promisor from the breach, would deter such an opportunistic behavior by making it worthless for the promisor to breach the contract.[25] If the promisor must hand over all his profits from the breach to the promisee he may no longer have any incentives to breach.

We believe that unjust enrichment remedy may have a broader economic rationale. In the framework of the Calabresi-Melamed model, unjust enrichment remedy can diminish the administrative costs, involved in the traditional liability rule, of judicial proceedings determining how much an infringer ought to pay the entitlement holder. Moreover, unjust enrichment remedy can also diminish the costs of bargaining between the contractual parties negotiating an efficient breach.

5.2. Unjust enrichment remedy and the efficient breach doctrine

Let us assume a contract between A and B for the sale of goods. Just before the supply date, the seller A receives an offer from C to buy the goods for a higher price. According to the efficient breach theory we ought to encourage A to breach the contract with B and to sell the goods to C. If A knows that in case of such a breach he will be ordered by the court to

pay B only the expectation damages that would place B in a position he would have been at had the contract been fulfilled, but nothing more, than A would go ahead and breach. He would not do so if he doesn't have a higher offer from C because then, after paying the damages, he would be worse off, as he evaluates the goods less than B.

This description, however, ignores an important eventuality—that B gets an offer from D to buy the goods for even a higher price from the one offered by C. In such a case economic efficiency will seek a rule encouraging a solution in which the goods would be sold to D. If the goods are sold to C, imperfect information may prevent it from reaching the hands that evaluate it the most. Even with no information fallacy, two transactions (between A and C, and between C and D) plus a breach of contract and conjoined litigation (between A and B), will result with very high transaction costs, which might hamper the desirable result.

Under an unjust enrichment remedy the picture is different. A will not breach the contract involuntarily, because in such a case he will be ordered to pay B all the gains he made. He will prefer, therefore, to renegotiate with B. If indeed C puts forward a higher offer for the good, B would agree to the breach in exchange for a share in the additional gains. If D is the highest bidder, A and B would negotiate the sale of the goods to him, without the additional transaction of the goods being sold to C, and, again, the gains would be shared by A and B, and litigation would be avoided.

In other words, unjust enrichment remedy may encourage ex post renegotiations between the contracting parties, rather than unilateral acts, which would result in efficient allocation. That is, of course, under the assumption that renegotiations are costless.[26] Such ex post renegotiations will affect the distribution of wealth between the breacher and the innocent party, and are, therefore, endorsed for noneconomic reasons.[27] But they will also promote efficient allocation. By incorporating more information into the market (the information held by promisee, which would not be contemplated under a liability rule), ex post renegotiations will increase the chances of an efficient allocation of entitlements. They will also decrease the probability of litigation, saving further transaction costs. A side benefit of this remedy rule is a more egalitarian distribution of the gained wealth.[28]

One of the implicit justifications for the efficient breach theory is that the seller, rather than the buyer, is the one who is more likely to reach other potential buyers willing to pay more for the goods. In order to motivate him to do so we ought to allocate the gains to him, and thus make do with a liability rule based on expectation interest (Farnsworth, 1985 and Dagan, 2000). However, the assumption that the seller is in a better position to locate higher bidders is not straightforward. In *Adras*, where the two parties were big corporations, this assumption did not necessarily hold.[29]

A major advantage of an unjust enrichment remedy is that it encourages the parties to exchange information, thereby increasing the information level in the market. This increase results from the fact that the infringer is obliged to renegotiate the breach, thus sharing his information regarding a potentially more lucrative bargain with the innocent party. The chances of identifying the higher bidder prior to the breach are, therefore, greater. We believe that this major benefit from an unjust enrichment remedy—the increase of the level of information—outweighs the assumption that the seller is the more qualified locator of higher bidders. Thus, in average, the unjust enrichment remedy is more efficient.

Our analysis relies also on an implicit assumption—that negotiation costs for agreed

breach are lower than litigation costs in a case for nonconsented breach. In order to examine this assumption let us resort to the Calabresi-Melamed model.

5.3. Unjust enrichment remedy and the Calabresi-Melamed model

If we apply the Calabresi-Melamed model to the case discussed here we would find out that the major consideration in favor of a liability rule—decreasing negotiation costs, which were point out, for example, in the case of the polluting factory—does not hold here. In a contractual situation negotiation costs should not be high, since negotiations already occurred between the same parties and resulted with the contract. In this case further negotiations, rather than litigation, appear to save transaction costs.

This brings us to an additional consideration in favor of unjust enrichment remedy when compared to damages based on expectancy interest: the costs of litigation itself, if litigation occurs (and, as we predict, the chances for litigation would be lower anyhow with the unjust enrichment remedy). The administrative costs of measuring actual gains are likely to be lower than the costs of evaluating hypothetical gains. Unjust enrichment rule directs us to calculate actual gains, while expectancy based damages direct us to calculate hypothetical gains. It seems that from this perspective, too, unjust enrichment remedy has an advantage.

5.4. Unjust enrichment remedy protecting entitlements of intellectual property

These considerations may equally apply to the use of restitution, or unjust enrichment, as a remedy in IP infringement cases. This remedy will require an infringer to disgorge his enrichment from the IP owner's property, based on the scope of the entitlement defined by intellectual property laws. Such enrichment may be measured by net profits attributable to the infringement. Enrichment may also be measured by saving of R&D costs caused by the copying.

Intellectual property is normally protected by a property rule, entitling the owner to an injunction against unauthorized use. The Calabresi-Melamed paradigm assumes that a property rule is more efficient for this kind of entitlements because the negotiation costs are lower than the litigation costs. A property rule will force negotiation for a license to use the entitlement. This will ensure efficient allocation. The Calabresi-Melamed paradigm, however, overlooks strategic use of entitlements that might cause owners to refuse negotiation, or deny any license whatsoever, even when such a bargain could be profitable in the short term (Melville, 1999). This is particularly common in hi-tech and information markets which are governed by intellectual property laws. These markets are characterized by "patent wars," and owners often refuse licensing in order to increase their competitive edge. For instance, an owner A may refuse a license for a new technology that would improve the production process for his competitor B, so that he could keep his price lower and drive his competitor out of the market.

Strategic use becomes even more pervasive in the new information economy where entry barriers are lower and market power is no longer measured by ownership of tangible goods. Intellectual property has turned out to be a major mean of expanding market power, reducing competition and concentrating control over production and distribution of information. Such strategic use, and failure to allocate information to its most efficient users, work against

public welfare. As we discussed above, innovation requires dissemination, use, and exchange of informational products.

Under such circumstances, unjust enrichment remedy may have an advantage over a property remedy. It may secure compensation to inventors, but at the same time would deny the veto power involved in a property rule. It pulls the spine of control away from the legal protection. A competitor could use the invention in his products, knowing that he would have to disgorge the enrichment attributable to the infringement to the owner. This could induce negotiations between the parties.

It can be argued that under a restitutive remedy when the infringer knows that he would be ordered by the court to disgorge every profit he made to the owner, he would never copy the patent (Melville, 1999). Some may even argue that this is a good outcome. We believe that such an outcome can be devastating to the public domain and to future innovation. But we argue that, in fact, the unjust enrichment remedy will achieve the opposite. It will induce the owner to give a license, knowing that he cannot all-together prevent the use of his invention. Unjust enrichment remedy would further induce the infringer to seek a license, and avoid the litigation cost involved in unauthorized use. Potential infringers may also expect some uncertainty regarding the damages determined by the court and the profits it would attribute to the infringement. That is particularly true when invention is converged together with other original or third party's technologies.

Rational parties are likely to avoid litigation, *ex ante*, and therefore are likely to reach an agreement. Restitution award in IP cases is likely to induce the parties to negotiate and exchange information. If the copier can produce and distribute the innovation more efficiently than the inventor it would be worthwhile for him to buy the entitlement. A price resulting from negotiations will bring both parties to be better off. The inventor will profit more than he would from self-production of his innovation, and the copier's profit would be higher than the price he paid for the entitlement. Furthermore, under certain circumstances an injunction would not be operational. For instance, when a remedy is sought after the patent had expired.

To appreciate the consequences of protecting, for example, a patent entitlement by unjust enrichment remedy let us consider the following recent Israeli district court case: *Eli Lilly and Company v. Teva Pharmaceutical Industries Ltd*.[30] The plaintiff, a drug company, invented Prozac (an antidepression pill), and applied for a patent in 1975. The patent was registered in the US in December 1977, but it took another 10 years before it was approved by the FDA. In Israel, the drug was approved only in 1990, leaving the plaintiff four and a half years to distribute the drug under the patent before its expiry.[31] The defendant, Teva, conducted internal experiments with the drug, during the patent term. Those experiments enabled Teva to distribute a generic product exactly on the expiration date. This was found by the court to constitute a patent infringement.

The court had to decide on a remedy, or how to protect the right of the patentee under such circumstances. The patentee filed for an injunction that will prohibit the defendant from future distribution of the generic, though no longer infringing, product. The court did not grant an injunction. It held that even though infringing experiments provided the defendant with an unlawful market advantage, granting an injunction three years after the patent's expiry date is not justifiable. That is because the unlawful market head-start had already occurred and may no longer be denied. The court did, however, grant the plaintiff with a

choice between the higher of two remedies: actual damages (namely, compensations for any losses caused by the defendant's infringement) or restitution (namely, ordering to disgorge all the net profits that can be attributed to the infringement).

This case can demonstrate some of the advantages of unjust enrichment as a remedy in IP cases. First, as specified above, we predict that restitution award in IP cases will reduce the likelihood of litigation and will induce the parties to negotiate and exchange information. Second, under certain circumstances, such as those described here, an injunction would not be operational. When faced with the choice between actual damages (liability rule) and disgorgement of profits that resulted from the infringement (unjust enrichment rule) the latter seems to involve lower transaction costs. That is because a proof of actual damages is based on speculative predictions regarding the potential sales of the proprietary product. Any data regarding the potential market ought to be diminished by the potential effect of competing quasi-substitutes, market power, potential distribution capabilities of the inventor and other market circumstances. Disgorgement, by contrast, is based on actual data regarding net profits of the defendant attributable to the infringement.[32] The court's administrative costs of measuring actual gains are likely to be lower than the costs of evaluating hypothetical gains. Consequently, restitutive remedy will reduce transaction costs.

The process of determining the loss caused to the IP owner is far from being trivial. The main obstacle is the absence of a market price for works protected by intellectual property. This point is evident when examining Blair and Cotter (1998) model. Blair and Cotter argue that when a court encounters an infringement of an IP entitlement it should award the plaintiff the greater of the plaintiff's lost profits and the defendant's gains, as was in fact ruled in the *Eli Lily* case. This will preserve the property character of IP rights and the incentive structure of the law. Only such a rule, they argue, will guarantee that if the infringer is the more efficient producer than the patentee, he would nevertheless purchase a license from the patent owner. For if the infringer is a more efficient producer than the patentee then his profits would exceed the lost profits of the patentee. If that is the case, a liability rule that requires infringers to pay the lost profits would not deter. Infringers, in such a case, will choose to infringe and pay the patentee compensations as long as their expected profits are higher. Only unjust enrichment remedy will provide such deterrence.[33]

Liability rule, according to Blair and Cooter, will be sufficient to deter infringement when the patentee is the most efficient producer, since the lost profits of the patentee would exceed the gains of the infringer attributable to the infringement. In such a case an unjust enrichment remedy will not be sufficient. In the absence of information regarding the most efficient producer in any given case, awarding the greatest value, according to Blair and Cooter, will deter all potential copiers from infringing, and will encourage potential infringers to bargain with the patentee. If it becomes apparent that a particular user is a more efficient producer of the patent, then a license would be granted subject to a royalties agreement to cover R&D investments, preserving the incentives scheme.

We beg to differ. The main difficulty with this argument is that there is no single predefined market price. One has to remember that under IP protection a patentee enjoys a monopoly. Actual damages under a liability rule will award him such a monopolistic price. Therefore, even if he is the most efficient producer, the market price, under an IP regime, would not be competitive and would not reflect such efficiency; it would be higher than a

price reflecting investments in R&D. Only an infringement of the patent will bring the market price down towards a competitive price. Under these circumstances it is likely that liability remedy, namely awarding the patentee his lost profits, would be, in most cases, much higher than unjust enrichment remedy or disgorgement. Blair and Cotter's argument will award the patentee his monopolistic gains and therefore would not provide adequate incentives to bargain with potential licensees.

We argue, therefore, that in this sort of cases the remedy should not be the greater of actual damage or defendant profits, as the actual damage reflect a monopolistic price. In such cases unjust enrichment has a clear advantage over a liability rule. The problem with such a remedy is, in contrast to the main point of Blair and Cooter, that it may not provide *enough* incentives to break the monopoly. This problem can be solved by a narrower definition of the unjust enrichment. We may view unjust enrichment not as the profits made by the infringer, but only as a measure of the relative share of the investment in R&D made by the patentee, which was appropriated by the infringer. Such a remedy will give an incentive to the infringer to break the monopoly, and at the same time it will preserve the incentives of the original inventor to engage in innovative activities. It is also predicted that such a remedy will promote bargaining to allocate the efficient production tasks.

6. Conclusion

The fuzziness of unjust enrichment doctrine, and the lack of a clear, comprehensive and simple framework which draws its boundaries, makes it a fascinating subject for economic analysis. Yet, while the economic analysis of other traditional private law branches (e.g., contract law and tort law) has flourished, the economic literature on unjust enrichment remains underdeveloped.

Economic analysis can play a central role in establishing a more systematic understanding of this area of law. Calabresi and Melamed taught us to distinguish between entitlements and remedies. We believe that confusion regarding unjust enrichments is partly attributed to a failure to distinguish between these two different functions of unjust enrichment doctrine. In this paper we showed that unjust enrichment can serve as a source of legal entitlements, and as a remedy to protect pregiven legal entitlements, and that there is no analytical correlation between the two. An unjust enrichment–based entitlement does not have to be protected by an unjust enrichment remedy and vice versa. Our analysis has found that while economic analysis of law should find it difficult to endorse the allocation of entitlements based on unjust enrichment sources, in many cases it ought nevertheless to endorse the remedy of unjust enrichment to protect allocation of entitlements.

The Calabresi-Melamed paradigm, however, can also be seen as an impediment to the analysis of unjust enrichment. Its well established conceptual dichotomy between property rules and liability rules concealed the virtue of unjust enrichment as an independent remedy, worthy of study. Our paper examined the ramifications of this remedy in circumstances that were not often addressed by the literature, where the active party, the infringer, is also the beneficiary of the enrichment. In such circumstances, an incentive analysis should focus on the effects of a restitutive remedy on the behavior of the beneficiary. We showed that unjust enrichment remedy,

measuring actual profits, may carry consequences different from a liability rule or a property rule, and expand the considerations that must be addressed by the court when awarding a remedy to the plaintiff. We have tried to manifest the advantages of unjust enrichment remedy in such cases. However, further study is necessary in order to propose the exact conditions for the employment of this remedy instead of the traditional remedies in private law.

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Notes

1. See, for example, Dawson (1951); Bouckaert and De Geest (1995).
2. FH 20/82 *Adras - Building Materials Ltd. versus Harlo and Jones G.M.B.H* 42 (1) PD 221, 226.
3. This transformation was instigated by the legislature with the enactment of Contract Law (Remedies for Breach of Contract) 1970 and Contract Law (General Part) 1973, and subsequent legislation in the fields of contracts. These pieces of legislation shifted Israeli contract law from Common Law principles towards Continental, mostly German, principles of contract law. The new legislation, emphasizes contracts as a promise, which ought to be fulfilled. It resulted in abandoning the *consideration* requirement, and, more importantly, in making specific performance as the major and default remedy for breach of contracts (as a matter of right and not equity).
4. Supra Note 2.
5. The answer to this question in English law is negative, and remained so even after the Adras decision. See: *Surrey Country Council v. Bredero Homes* [1993] 3 All E. R. 705.
6. See, for example, Craswell (1988).
7. The minority opinion of Deputy President Ben Porat and Dov Levin, J. held that Unjust Enrichment Law cannot be applicable in contractual relations. Some principles and considerations of unjust enrichment are incorporated anyhow into the Contracts Law, but they derive from the various articles of the Contract Law (General Part) and the Contract Law (Remedies for Breach of Contract) and not from the Unjust Enrichment Law. More specifically, the Israeli contract law specifies the remedy of specific performance as the main remedy for breach of contact and derivable from this remedy is the right of tracing which might include gains of the breachor, but since in this case the buyer opted for the termination of the contract rather than applying for its enforcement, he is not entitled to the profits of the seller. Moreover, in case of termination, the contract law specifies that restitution will take place, but this restitution is meant to bring the plaintiff to a position he would have been in had he not entered the contract in the first place.

8. RCA 5768/94, 5614/95, 993/96 *A.Sh.I.R Import, Manufacture and Distribution et al. v. Forum Gadgets and Consumption Goods Ltd. et al.; Herrer et al. v. Shoham Machines and Molds Ltd. et al.; Atar Plastics Industries v. Shai Albums and Advertising Products Factory Ltd. et al.* 52(4) PD 289.
9. The registration process includes filing an application with the Patent Office including a picture or a drawing of the design, and a form detailing the name and address of the applicant, the title of the design and the purpose for which it is intended. The application is examined by the Patent Office, and if found new or original in light of prior design registrations and applications, it is registered within a few months.
10. Accordingly, in the case of *Adras* the benefits of the defendant were attributed by the Court to the plaintiff's contractual right. In the case of *A.Sh.I.R* profits were attributed to the efforts invested by the original designer.
11. This distinction is similar, but not identical, to a distinction made by the dictionary (Newman, 1998) according to which unjust enrichment may serve two functions: defining substantive liability, on the one hand, and serving as a measurement of damages on the other hand.
12. In the terminology of jurisprudence of rights (Hohfeld, 1923), Calabresi and Melamed describe liberties or immunities rather than rights.
13. On the absence of unjust enrichment remedies in the Calabresi-Melamed framework see Levmore (1997).
14. It should to be noted that justification for contract-based entitlement can also be found within justice led considerations. See Fried (1981).
15. We will discuss these two avenues of unjust enrichment remedy in section V.
16. A teleological principle evaluates an act, a rule or behavior solely on the basis of its consequence. A deontological principle evaluates an act, a rule or behavior according to its intrinsic value and regardless of its consequence. For example, a teleological principle will judge a lie according to its consequence. Thus, a lie which increases happiness or just distribution will be viewed positively. A deontological approach would ignore these consequence and relate only to the intrinsic (negative) value of lying.
17. The marginal costs of exclusion are often greater than the marginal costs of provision, so it is inefficient to spend resources to exclude nonpayers. See generally Landes and Posner (1989); Lemley (1997), 1048–1072.
18. Note, however, that some level of uncertainty is also associated with IP protection. A registered patent may be challenged in court, and registration may be canceled. Such determination is made by a judge. Yet, the registration may decrease the number of cases being litigated by deterring potential copiers. Furthermore, the grounds for challenging registration are limited. The uncertainty associated with IP protection is, therefore, likely to be lower than that associated with unjust enrichment.
19. See also the discussion of the Teva case in the next section around footnote 25.
20. For several different analyses see Easterbrook (1996) 208; Landes & Posner (1989) 399; Lunney, Jr (1996).
21. If a potential copier is working in the same market (such as a copier of a fashion design) then there is less asymmetry of that sort, although some information that is particular to the invention and the circumstances of its development is likely to be in

the sole control of the designer. In other instances, information in one area (e.g., an unregistered toy design) may be used in a different market (e.g., program interfaces).

22. Contracts as a form of governance ("private ordering") are the most consistent with liberal values of individualism, autonomy, and freedom, which require that any use of external forms of coercion be minimized.
23. It is also softer than punitive damages (Posner 1998, pp. 130–147).
24. Of course, the significance of remedies for efficient breach are only relevant when there are transaction costs. In the absent of transaction costs, court-designed remedies would not affect efficient allocation but only the distribution of the surplus from the additional exchange.
25. If he must hand all the revenues, rather than profits, we actually get to punitive damages because the costs of generating the breach are ignored.
26. At any event transaction costs involved in renegotiation are likely to be low since such negotiation occurs between parties that are acquainted in the context of an existing transaction.
27. This reasoning is reflected in the opinions of some of the judges of the Israeli Supreme Court in *Adras.* See also Friedmann (1989).
28. But see Craswell (1988) arguing that such redistributive effects of contract remedies may affect the price that the promisee would have to pay.
29. It ought to be remembered that in most legal systems the parties, in any case, can alter the standard remedy by contractual clauses, which fit their specific circumstances. As they can agree upon a set sum of damages, or punitive damages, they can also opt for expectancy damages if the standard rule is unjust enrichment and vice versa. The standard remedy, therefore, ought to be the one which will minimize the negotiation costs, by supplying the most commonly efficient rule. See Schwartz (1993).
30. CC 881/94 *Eli Lilly and Company v. Teva Pharmaceutical Industries Ltd.*, Tel-Aviv District Court 25.11.98.
31. A patent is protected under Israeli law for 20 years from the date of application. Patents Act, 5727-1967, S.52.
32. It has been argued that restitution as a remedy imposes practical difficulties of deriving an infringer's net profits from data on his gross revenues (Ciolino, 1999). Such costs, however, and the chance of error, would be much greater in the context of speculative damages.
33. It is unclear why Blair and Cotter are concerned with such underdeterrance. After all, as long as inventors receive their expected profits, either by selling in the market or via compensations, they enjoy the same level of incentives to invest in innovation.

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