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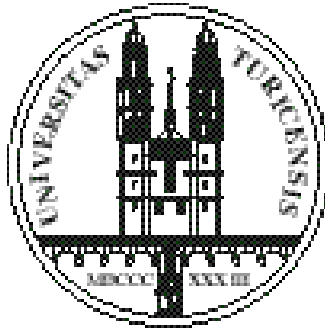
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ART FAKES - WHAT FAKES?

An Economic View

by

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Abstract

An economic analysis of fakes differs substantially from the legal and the art historic views which both tend to propose repressive policies against imitations. But there are large economic benefits from copying. In particular, the "propagation effect" yields utility to both consumers and creators of the original. In contrast, the harmful effects of fakes are small and are mitigated by emerging institutions (guarantees, sellers with reputation). The paper suggests "art quotations" (similar to academic quotations) as a beneficial solution to creators of originals and consumers. "Art quotations" are applicable to many art forms.

Key Words: Cultural Policy, art markets, art forgery, intellectual property rights, cultural industries

JEL codes: Z1; K11; L23

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ART FAKES - WHAT FAKES?

An Economic View^{**}

1. A Widespread Activity

The discussion of fakes in art is dominated by the legal and by the art history points of view. Lawyers tend to look at fakes in terms of forgery and counterfeiting and therefore as fraud to be prohibited. Art historians emphasize the uniqueness or "aura" of the original work which has to be specially protected against imitation.

This paper employs the economic point of view¹ to consider fakes. Its analysis and conclusions differ substantially from the legal and art historic approaches which both tend to have a negative attitude to imitations, and often suggest a repressive policy. Therefore, on purpose I do not distinguish between the various terms used in this context (copies, forgeries, fakes, imitations, counterfeit) because they are often *not* relevant from the economic point of view. (However, there are cases in which it makes economic sense to differentiate between e.g. legal and illegal copying²). A major conclusion of my analysis is that copies are not necessarily bad but rather

^{**} This paper was presented at the International Seminar on "The Economics of Copying and Counterfeiting" in Venice, 3-4 December 1998.

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¹ See e.g. Becker (1976), Hirshleifer (1985), or Frey (1992).

² Useful classifications are provided e.g. in Lazzaro, Moureau and Sagot-Duvaurox (1998), Benhamou and Ginsburgh (1998) or Benghozi and Santagata (1998).

good: the fact that they are undertaken on a grand scale indicates that such multiplication of the original creates utility for the persons demanding, and paying for them.

Faking activities have always been widespread³. They range from the reproduction of art objects to written texts (such as the *Protocols of the Elders of Zion*), historical relics (such as most chastity belts or 'Spanish Inquisition' torture chairs), musical works, forgeries undertaken for political purposes (such as the Donation of Constantine which sought to establish the medieval Papacy's claim to temporal power) or for war propaganda or espionage, the counterfeiting of banknotes, and – very importantly – commercial copies of branded goods (such as perfumes by Chanel or Dior, watches by Rolex, Bulgari or Cartier, shirts by Versace, Lacoste or Giorgio Armani or luggage by Gucci, Prada or Louis Vuitton⁴). This paper focusses on fakes in the fine arts, especially in paintings (for an early bibliography of the extensive literature see Reisner 1950).

While the economic view takes a rather positive attitude to fakes (at least compared to the prevailing negative evaluation by law and art history) this does not mean that forgeries do not create any problems. There are indeed significant costs created on both the demand and supply sides of the market. But it is argued that many problems can be mitigated or even overcome by appropriate legal constructs and institutional arrangements.

Section 2 of this paper briefly discusses the dominant views held in law and in art history. The beneficial, and the harmful effects of fakes from an economic point of view are considered in sections 3 and 4, respectively⁵. The final section 5 discusses the possible consequences to be

³ See the very useful book edited by Jones (1990) made for an exhibition on "*Fake? The Art of Deception*" in the British Museum. Other relevant works are e.g. Neuburger (1924), Kurz (1948), Isnard (1960), Savage (1963), Hamilton (1980), Waldron (1983) or Dutton (1983).

⁴ Estimates of the quantitative importance of commercial counterfeiting is given in Benghozi and Santagata (1998).

⁵ Most economic analyses have addressed the issue from a narrow property rights perspective, see e.g. Takeyama (1994), Deardorff (1995), Koboldt (1995), Hansman and Santilli (1997), Burke (1998). Partial exceptions are Grossman and Shapiro (1988, 1989) and Mossetto (1993).

drawn. It rejects a repressive policy against copying and proposes a possible solution, namely, a general rule for "quotations in art".

2. Dominant Views on Fakes

2.1 The Legal Position

Lawyers are concerned with fraud linked with copying activities, i.e. the production, sale, and purchase of reproductions. Two situations are prominent.

Firstly, a person *buys* a fake assuming it to be an original. He or she has acquired an art object and can have reasonable expectations that it meets the conditions under which it has been sold. Thus, a particular painting bought from a well-established art dealer or at a serious auction should indeed be an original. Most auction houses guarantee that if the painting does not turn out to be an original as specified, it can be returned. However, in other cases where the seller deliberately cheats the buyer, the transaction constitutes an illegal act.

Secondly, an artist creates a tangible (a painting or sculpture) or intangible (a novel, play or piece of music) object but steals the idea from another artist without the latter's consent, and without compensating him or her.

The two cases just discussed have been constructed to constitute a fraud, but a small variation makes it a legal transaction. If a buyer has unreasonable expectations (e.g. if he pays a low price for a "Rembrandt" at a country fair) the seller is not responsible because of the principle of 'caveat emptor'. In the second case, an artist may reproduce the style, or work closely within a movement (e.g. within Impressionism) without violating any rights, i.e. there are artistic ideas which cannot be protected.

The legal norms in a particular country and at a particular point in time are not necessary consonant with the *moral* views on faking generally held by art experts and artists. But the moral evaluation is also important because it affects behaviour, at least to some extent. The sense of wrongdoing when copying art works has strongly changed over time. In former centuries in the West (and even more elsewhere), replicating the work of other artists was a perfectly acceptable activity. Michelangelo forged a work by his master Domenico Ghirlandaio in order to demonstrate his ability as an artist. (The forgery of Cupid Asleep, which was sold in 1496 as a

classical sculpture, may not have been so innocent; see Wilson 1990). There are even accounts of purchasers who welcomed a reproduction even though they had bought it as an original. Thus, the buyers of the claimed Renaissance bust of Lucrezia Donati were pleased on discovering that it was a fake; that an artist of such talent was still alive (Jones 1990, p. 15). As for religious relics, authenticity was not relevant but its value depended on their ability to beget miracles. Sacred relics multiply without losing their value. Thus, five churches could lay claim to the original head of John the Baptist etc. (Loewenthal 1990, p. 18).

In modern times, some artists such as Salvador Dali or Magritte intentionally erased the difference between original and fake in order to revolt against the burden of the dead past. Obviously, if these artist and movements such as performance art, auto-destructive art or earth art refuse to make the distinction, there is neither a moral nor legal case against "fakes" – the term loses its meaning.

2.2 The Art Historic Position

The dominant position in art history is that the original has a special and unique quality which fakes lack. The original art work has an "aura" which, though invisible, is nevertheless real (Benjamin 1963). As in many cases it is no longer possible for a viewer to distinguish the original from a reproduction (not even sophisticated technical means are always able to differentiate them), it is not the physical nor esthetic aspect of the art work but rather the context and history of its creation which marks the original.

This is difficult for an economist to understand but even well-established art experts are at a loss to explain why a (perfect) copy is considered so much less valuable than the original. Thus the (former) director of the British Museum, Sir David Wilson wonders: "...the final question is the one that appears unanswerable, although psychologists have tried to explain it: why does an object which is declared a fake lose virtue immediately?" (Wilson 1990, p. 9).

Yet the difference *is* real in the sense that most owners of art works are terribly disappointed when they detect that a presumably original piece is a copy – and that sentiment also applies to economists and other 'rationalists'. But it should nevertheless be noted that this "cult of the original" is not hard-wired for human beings but is historically dependent. As it has already been pointed out, Michelangelo's copy of a statue by Ghirlandaio was not considered a fraud nor of

lower quality. Vasari considered it a triumph, establishing the young Michelangelo among the great sculptors of his time, and beyond. In contrast, Van Meegeren's copies of Vermeer were considered much inferior once they were detected⁶. More recently, some forgers such as Tom Keating (see Jones 1990, pp. 240-242) have become TV celebrities, i.e. their work is considered to be essentially worthless by art lovers but they enjoy a certain measure of attention because they have been able to fool art experts. Partly as a result of these developments, many art historians now take a less sanguine view towards reproductions and fakes (Jones 1990) and no longer consider the "aura" to be attached to the original, only. Rather, art works are taken to be part of history which includes their modifications, renovations and copying. Indeed, in many cases, the distinctions are so blurred that they become meaningless. Leonardo da Vinci's "Last Supper" in Milan is a pertinent example.

But after all this has been said, the puzzle still remains: why are the owners (in most cases) disappointed when they detect that they have a copy instead of the original (if they are virtually identical, and even if the resale value is of no importance because one would never wish to sell it)?

3. Beneficial Aspects of Imitations

Three major benefits from copying can be identified from an economic point of view.

Firstly, the fact that an original is imitated and reproduced indicates that the respective art work is in demand. This in turn shows that consumers experience a utility gain from viewing, reading or hearing the art object, which is reflected in a willingness-to-pay. Imitations serve to propagate the

⁶ David Wilson (1990, p. 9) calls them "ghastly" and Jones (1990, p. 15) speaks of "grotesquely ugly and unpleasant paintings, altogether dissimilar to Vermeer's". Before the exposure, the great art historian Abraham Bredius wrote of Van Meegeren's "Vermeer" forgery *Christ at Emmaus*: "It is a wonderful moment in the life of a lover of art when he finds himself suddenly confronted with a hitherto unknown painting by a great master, untouched, on the original canvas, and without any restoration, just as it left the painter's studio! And what a picture! Neither the beautiful signature...nor the pointillé on the bread which Christ is blessing, is necessary to convince us that what we have here is – I am inclined to say – *the* masterpiece of Johannes Vermeer of Delft..." (*Burlington Magazine*, November 1937). An account of Van Meegeren's activities is given in Jones (1990, pp. 237-240).

original to a wider audience and therewith raises the total utility of prospective consumers. This "propagation effect" is produced irrespective of whether the copies are made legally, whether they are offered by the owners of the original art work (most leading art museums have recently been selling exact replicas of selected pieces of their collection in their museum shops⁷), or whether the copies are made illegally (as for e.g. the counterfeit of furnitures, musical pieces, or art objects).

The creator of the original art work may benefit in two ways from such imitations:

- (a) He or she may receive royalties from legal copying. In the case of music, this is usually the artiste's major source of income. It is of lesser importance for paintings, though in some cases, the income therewith gained is substantial.
- (b) Even if copying is done without the consent of the creator of the original (i.e. illegally), he or she may nevertheless benefit indirectly from it. The creator's name is propagated, thus allowing him or her to sell future (original) works at higher prices. Interestingly enough, the more closely the work is imitated, the greater the beneficial effect for the creator. In particular, he or she reaps the highest benefits if the copy is attributed to his or her name. In contrast, if the original is modified without any attribution in order to escape royalty payments, the creator benefits the least.

The exact extent to which the "propagation effect" benefits the creator of the original depends on the specific conditions of the respective art market, as well as the extent to which the existence of copies provide an effective signal pointing to the original and its creator.

⁷ Some museums even consciously mix copies with originals (see Pommerehne and Granica 1995, p. 247). The former idea of museums composed solely of copies has recently been peddled again by Banfield (1984). It has been realized in many "museums" located in shopping malls and similar venues (see Benhamou and Ginsburgh 1998).

A *second* benefit of copying is that it raises artistic capital. To produce faithful copies of great works has always been one of the major ways in which artists train themselves⁸. This applies not only to lesser known artists but also to painters who become great masters later in their lives. In addition, the existence of fakes presents a continuous challenge for art experts. It not only shows their fallibility (remember the evaluation of Van Meegeren's Vermeers) but also represents an important teaching device which helps art experts to overcome their 'tunnel vision' (for many examples see Jones 1990).

A *third* benefit of copying is that it supports creativity and keeps the arts lively. "Each society, each generation, fakes the thing it covets most" (Jones 1990, p. 13). The smaller the barriers against imitating, the greater is the scope for future artists to experiment. If the creator of the original can easily interfere by legal injunction, artistic creativity is hampered. There are few great artists who would not have borrowed from earlier masters, and some of them have done so heavily (e.g. van Gogh or Dalí) – for the benefit of the arts.

Closely related is a view of the arts which welcomes blurring the distinction between originals and copies. Not only is the term "original" often poorly defined⁹ but there is also a continuity of history in which copies, all sorts of reproductions and renovations also play a role; art does not end with the creation of the "original". A case in point may be Michelangelo's paintings in the Capella Sistina where it is open to serious discussion what the original is, and where in any case the fundamental cleaning revealed a "new" art work to contemporary art lovers and art experts alike. The distinction between the original and copy has been further blurred in the digital age (Grefe 1998) which has made it possible to produce "identical" pieces of art at low cost.

4. Harmful Aspects of Imitations

It is useful to distinguish between the demand and the supply side.

⁸ Two related advantages of copying are no longer relevant today: Transport cost have fallen so much that most artists and consumers may see the originals. Neither is it necessary to have painted copies to "preserve" the original in case of loss or destruction because this can be achieved by purely technical (photographic) procedures.

⁹ In some art forms such as music and prints (see Pesando 1993) the distinction is difficult to draw or is irrelevant.

4.1 Demand

In the presence of fakes, buyers face a larger uncertainty about the art objects they intend to purchase¹⁰. There is a constant race between the forgers and the investigators who both use increasingly sophisticated technical means. There are periods in which one side seems to prevail but the incentives to forge originals, and to detect fakes, is so strong that it can be safely predicted that neither side will carry a final victory.

Such uncertainty induced by the existence of fakes imposes cost on financial investors looking for a high monetary return from buying art. Provided that the indirect effect of propagation is small, they would suffer a loss from the manufacture of copies, and of course, from buying a piece of work which is presumed to be original. However, such loss is smaller than it first seems. Rational buyers are well aware of both problems, and are therefore prepared to pay a lower price for the art work, *ceteris paribus* (or a higher price, *cet. par.*, if the propagation effect is positive).

As it has been pointed out at the beginning, it is a riddle why art lovers (without financial interests) should suffer a loss if they find out that a presumably original is indeed a copy. All the visible attributes are unchanged and should therefore not affect the esthetic judgement. It has moreover been shown empirically (Pommerehne and Granica 1995) that the esthetic evaluation (measured by willingness to pay) falls the more, the larger the number of reproductions.

Uncertainty due to fakes does create real resource costs in the form of outlays of time, effort and money for search and information activities. In an ideal world without forgeries, these costs would not arise – but such an ideal is unreachable so that these resource costs have to be taken as a fact of life.

As can be predicted by economic theory, the existence of these costs has created incentives to mitigate them:

(a) There are specialized suppliers who can be trusted because they would otherwise lose their reputation, and therewith future business. Exactly because there is considerable uncertainty in art markets, there is a niche for serious art dealers and auction houses.

¹⁰ See e.g. Hutter (1998) who refers to it as "information destruction effect".

(b) Legal rules exist which allow hedging against various degrees of uncertainty.

In both cases, higher certainty about the art work is reflected in higher purchase prices. There is thus a trade-off between risk and price, thus allowing prospective buyers to choose a particular degree of certainty. It is therefore wrong to think that buyers are solely the passive victims of forgers; rather they can react actively to the possibility of fakes.

4.2 Supply

Fakes affect the incentives to produce original art. This is the same problem as for innovation in general. There is a trade-off: free imitation of originals produces utility for consumers but at the same time reduces the (direct) profitability of innovations to the producers. Most law systems strike a balance by granting innovators a monopoly for a restricted period of time¹¹. This also applies to some, but not all, artistic "innovations" in the form of originals.

In the case of art, two considerations must be taken into account:

(a) In those cases in which the propagation of copies raises the willingness to pay for the original work of art, or for other art work produced by the artist, there is no case for a temporal monopolistic protection¹². On the contrary, the originator has an incentive to subsidize fakes.

(b) A quite different, but essential, question is the extent to which artistic creativity depends on monetary incentives. Is it really the same as technical or scientific innovations, say, in devising a new motor for automobiles, or a new chemical drug?

Considerable empirical evidence points to *intrinsic* motivation as being crucial for artists' and other people's personal creativity¹³. While artists are strongly interested in monetary income¹⁴ it

¹¹ See the special issue of the *Journal of Cultural Economics* 19 (1995), No. 2 on "The Economics of Intellectual Property Rights".

¹² There is an analogy to photocopying, see e.g. Liebowitz (1985).

¹³ See, in particular, the social psychological experiments undertaken, and reported by Amabile (1996; 1997; 1998), Loveland and Olley (1979), Hennessey and Amabile (1988). A general discussion of how geniuses work and behave

may well be hypothesized that at least at the start of their careers – exactly in the period when they are generally most creative and innovative – they are primarily driven by inner motives (intrinsic motivation), perhaps even by a strong drive to embark on artistic endeavours. However, it may well be that it is only at a later stage in an artist's life that monetary incentives become more important. But then it is often doubtful whether the art produced is really innovative.

Taking these considerations seriously suggests that it is rather unlikely that *personal* creativity can be simply and systematically raised by monetary incentives. It is, in particular, most doubtful whether a higher monetary income is really able to induce higher creativity in the later phase of an artist's life. The effect on an artist's creativity disappears by definition once he or she is dead. In that case the monopoly granted to the heirs is a pure rent, and does not serve any socially beneficial allocative purpose.

5 Quotations as Solutions?

Following the economic arguments discussed in this paper, the beneficial aspects of fakes are rather strong and the harmful effects rather weak. Copying is a response to the demand by people who are otherwise unable to enjoy the original art work (which, *once produced*, should be offered at zero price to the public). Its reproduction produces utility and should therefore not be curtailed or prohibited. Moreover, faking benefits the originator when he or she thereby gains additional recognition and fame. The harmful effects of faking by raising uncertainty with prospective buyers are reduced or even eliminated by the development of legal guarantees. Uncertainty can also be reduced by buying from highly reputable art dealers and auctioneers. As monetary incentives are likely to have a minor impact on artistic creativity and innovation, granting a monopoly to the creator of the original piece of art, and therewith hindering its copying, has only weak, if any, beneficial allocative effects.

is given by Simonton (1984; 1988; 1994). Frey (1999) differentiates between institutional and personal creativity in the arts which is of considerable relevance for the issue discussed here .

¹⁴ Salvador Dali is reported to have said "All that interests me is money" but such statements have to be taken with a grain of salt. They often serve more to attract attention than to reflect a deeper sentiment.

While faking does not have as much harmful effects as often claimed, it nevertheless has cost implications. Some of these costs can be reduced without giving up the advantages of a liberal art market, i.e. the possibility to copy originals at a low cost and to therewith create utility. As it has just been pointed out, one possibility is to exploit contract law (the provision of guarantees about the quality of a work of art) and to turn to highly reputable dealers and auctioneers. This raises transaction costs to some degree but this cost increase is, under most circumstances, much lower than granting exclusive property rights to the creators of the original art work.

A repressive approach in which copying is only tolerated with the explicit consent of the creator, and where all other reproductions are automatically forgeries, imposes significant additional cost on society.

Firstly, considerable energy and material resources are wasted in fighting over which artist should get the property right for the original, and who "copied" from whom. Another rule to be settled is how far the monopoly right should extend. As is well known, "quotations" have played a great role not only in literature but also in painting. If the monopoly right is extensively defined, artistic progress is hampered because an artist must tediously seek the approval of the owner of the property right before he or she can make such a "quotation". This certainly interrupts the flow of artistic activity, and will therefore be avoided, at least by the creative artists. A repressive approach to copying thus does not only waste material resources but also biases artists' activities in an unproductive direction.

Secondly, the repressive policy against copying produces its own cost. Resources have to be used for art lawyers and an arts police and judiciary. But, more importantly, copying moves underground. This creates huge uncertainties for prospective buyers (e.g. guarantees cannot be legally informed) and it favours organized crime (The experience would not be unlike drug prohibition). As a consequence, prices will rise, and a substantial part of the profits created by art are appropriated by persons outside art.

For these reasons, a repressive policy against fakes makes little sense. On the other hand, the creator of an original piece of art should be given an incentive to pursue his or her activity – but this incentive need not be given by granting a monopoly right and resulting in monetary returns (as pointed out above). In the world of art, *recognition* plays a central role, and is certainly able to give a strong incentive to be creative. A good solution to balance the benefit and cost aspects

discussed would be to force every copyer to *acknowledge the creator of the original*. As no monetary costs are involved, the requirement to recognize the originator may be laid down in quite an extensive way. Each copyer must acknowledge his or her sources of inspiration even if the relationship is rather weak, only. He or she may easily be induced to do so because no monetary compensation has to be paid. But once this acknowledgement has been made, the process of copying, imitating, faking or forging may run its course: the distinction between these terms becomes immaterial. The suggestion of "art quotations" stands up also in the digital age. Indeed, it corresponds exactly to the need to compensate the creator of an original art work at the very beginning because imitations simply cannot be prevented¹⁵.

This is, of course, the solution found in academic research. In all disciplines, elaborate systems of *quotations* have evolved. Plagiarism exists but as far as it is known, it is restricted to relatively few cases. The system of quotations provides recognition to the creators of an academic work but no direct monetary payments are involved. The recognition received builds up reputation which can then be transformed into higher monetary income.

The crucial question is whether this well-functioning and efficient system of quotations in academic research can be transferred to art. The discussion of the practical possibilities goes beyond the scope of this paper. Obviously, the form these quotations take must differ widely among the various art forms. In some areas of art, formal quotations already exist (e.g. in some parts of music). In others the quotations are often implicit (e.g. in paintings or sculptures), or are otherwise non-existent. But it is highly possible that with the progress in electronics, quotations may be technically more feasible in many areas of art.

¹⁵ Greffe (1998) suggests a similar mechanism of front-end compensation but refers to monetary payment.

References

- Amabile, Teresa M. (1996), *Creativity in Context: Update to the Social Psychology of Creativity*. Boulder, CO: Westview Press.
- Amabile, Teresa M. (1997), "Motivating Creativity in Organizations: On Doing What You Love and Loving What You Do", *California Management Review*, 40 (Fall): 39-58.
- Amabile, Teresa M. (1998), "How To Kill Creativity", *Harvard Business Review*, Sept.-Oct.: 77-87.
- Banfield, Edward C. (1984), *The Democratic Muse: Visual Arts and the Public Interest*, New York: Basic Books.
- Becker, Gary S. (1976), *The Economic Approach to Human Behavior*, Chicago: Chicago University Press.
- Benghozi, Pierre-Jean and Santagata, Walter (1998), Market Piracy in the Design-based Industry: Economics and Policy Regulation. Paper presented at the International Conference on "The Economics of Copying and Counterfeiting", Venice, 3-4 December 1998.
- Benhamou, Françoise and Ginsburgh, Victor (1998), Copies and Markets. Paper presented at the International Conference on "The Economics of Copying and Counterfeiting", Venice, 3-4 December 1998.
- Benjamin, Walter (1963), *Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit*, Frankfurt a. M.: Suhrkamp.
- Burke, Andrew (1998), Legal Structure, Strategic Regulation and Dividing the Spoils from R&D in Intellectual Property. Paper presented at the International Conference on "The Economics of Copying and Counterfeiting", Venice, 3-4 December 1998.
- Deardorff, Alan V. (1995), "The Appropriate Extent of Intellectual Property Rights in Art", *Journal of Cultural Economics*, 19 (2): 119-130.
- Dutton, Dennis (1983), *The Forger's Art: Forgery and the Philosophy of Art*, Berkeley: University of California Press.

- Frey, Bruno S. (1992), *Economics as a Science of Human Behaviour*, Boston and Dordrecht: Kluwer.
- Frey, Bruno S. (1999), State Support and Creativity in the Arts: Some New Considerations. *Journal of Cultural Economics*, forthcoming.
- Grefe, Xavier (1998), Intellectual Property Right in the Digital Age. Paper presented at the International Conference on "The Economics of Copying and Counterfeiting", Venice, 3-4 December 1998.
- Grossman, Gene M. and Shapiro, Carl (1988), "Counterfeit Product Trade", *American Economic Review*, 78: 59-75.
- Grossman, Gene M. and Shapiro, Carl (1989), "Foreign Counterfeit of Status Goods", *Quarterly Journal of Economics*, 103: 79-100.
- Hamilton, Charles (1980), *Great Forgers and Famous Fakes*, New York: Crown Publishers.
- Hansman, Henry and Santilli, Marina (1997), "Authors' and Artists' Moral Rights: A Comparative Legal and Economic Analysis", *Journal of Legal Studies*, 26: 95-143.
- Hennessey, B. A. and Amabile, Teresa M. (1988), "The Conditions of Creativity", in: R. J. Sternberg, ed., *The Nature of Creativity*, Cambridge: Cambridge University Press: 11-38.
- Hirshleifer, Jack (1985), "The Expanding Domain of Economics", *American Economic Review*, 75 (May): 53-68.
- Hutter, Michael (1998), Again Fake? Three Frameworks for Models of Information Goods, and a Remark on Regulation. Paper presented at the International Conference on "The Economics of Copying and Counterfeiting", Venice, 3-4 December 1998.
- Isnard, Guy (1960), *Faux et Imitations dans l'Art*, Paris: Fayard.
- Jones, Mark (ed.) (1990), *Fake? The Art of Deception*, London: British Museum Publ.
- Koboldt, Christian (1995), "Intellectual Property and Optimal Copyright Protection", *Journal of Cultural Economics*, 19 (2): 131-155.
- Kurz, Otto (1948), *Fakes. A Handbook for Collectors and Students*, London: Faber.

- Lazzaro, Elisabetta, Moureau, Nathalie and Sagot-Duvaouroux, Dominique (1998), From the Market of Copies to the Market of Fakes: Adverse Selection and Moral Hazard in the Market of Visual Arts. Paper presented at the International Conference on "The Economics of Copying and Counterfeiting", Venice, 3-4 December 1998.
- Liebowitz, S. J. (1985), "Copying and Indirect Appropriability. Photocopying of Journals", *Journal of Political Economy*, 93 (5): 945-957.
- Loewenthal, David (1990), "Forging the Past", in: Mark Jones, ed., *Fakes? The Art of Deception*, London: British Museum Publ.: 16-22.
- Loveland, K.K. and Olley, J.G. (1979), "The Effect of External Reward on Interest and Quality of Task Performance in Children of High and Low Intrinsic Motivation", *Children Development*, 50: 127-1210.
- Mossetto, Gianfranco (1993), *Aesthetics and Economics*, Kluwer: Dordrecht.
- Neuburger, Albert (1924), *Echt oder Fälschung*, Leipzig: Zentralantiquariat der DDR.
- Pesando, James E. (1993), "Art as an Investment: The Market for Modern Prints", *American Economic Review*, 83 (December): 1075-1089.
- Pommerehne, Werner W. and Granica, Martin J. (1995), "Perfect Reproduction of Works of Art: Substitutes or Heresy?", *Journal of Cultural Economics*, 19: 237-249.
- Reisner, R. G. (1950), *Fakes and Forgeries in the Fine Arts: A Bibliography*, New York: Special Libraries Association.
- Savage, George (1963), *Forgeries, Fakes and Reproductions*, London: Barrie and Rockliff.
- Simonton, Dean Keith (1984), *Genius, Creativity, and Leadership: Historiometric Inquiries*, Cambridge, MA: Harvard University Press.
- Simonton, Dean Keith (1988), *Scientific Genius: A Psychology of Science*, Cambridge, MA: Harvard University Press.
- Simonton, Dean Keith (1994), *Greatness. Who Makes History and Why*, New York and London: Guilford Press.

- Takeyama, Lisa N. (1994), "The Welfare Implications of Unauthorized Reproduction of Intellectual Property in the Presence of Demand Network Externalities", *Journal of Industrial Economics*, 42 (2): 155-166.
- Waldron, A. (1983), *True or False? Amazing Art Forgeries*, New York: Hastings House.
- Wilson, David M. (1990), "Preface", in: Mark Jones, ed., *Fakes? The Art of Deception*, London: British Museum Publ.: 9.