12. Art Productivity in the Information Age

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ART SECTOR GROWTH: INCOME OR SUBSTITUTION EFFECT?

Information Age Conditions

Private and public expenditures for the arts have been growing at an accelerating pace over the past 40 years in all developed societies. What is the nature of the phenomenon? Is the "culture boom" just a current fad or is it here to stay? In this paper I want to argue that it is here to stay.

The basic argument goes like this: assume that the major change in the institutional and technological infrastructure of our society is a change toward easier, faster and fuzzier processing of information. Under such conditions, art activities gain more quickly in value than other types of activities. Therefore, if the change towards an information society continues, we should expect a further increase in the relative size of the art sector.

Every one of these three sentences needs to be explained. I begin by outlining those features which are most commonly associated with the label "information age".

(1) Faster data processing and easier data storage are the most prominent effects of new computer technology. The energy input per logical operation in computers has been reduced to one-tenth every three or four years since 1940; conversely, storage capacity has increased tenfold during the same time span (Otto and Sonntag 1985). The connection of participants through radio, television and telephones approaches full coverage of the population in developed countries. Every second adult in these countries reads a newspaper, apart from numerous other print media. The rapid proliferation of home computers spreads information through software and through access to data nets. Ubiquitous reception from a wide variety of sources becomes a reality.

(2) There is an increase in the range of signals which communication media are able to process. Information can be printed in any desirable form, visual and auditory entertainment applies digitally controlled reproduction techniques. The expanded technical range extends the range of communicable information. Broader channels permit the transmission of a fuzzy, i.e. ambiguous, vague or unclear, information. Much of human communication is fuzzy in content and in form, art communication in particular depends on the precision with which the details of its complex and thus inevitably fuzzy messages - like painted shapes, music pieces and texts - reach the participants.

(3) The information technology changes the structure of total employment. Information, as is well-known, has properties of a public good. It can be consumed without additional cost as long as processing, transmission and reception
permits. As the technical conditions improve, information reproduction and communication services increase. In consequence, a growing portion of our national products are generated in sectors which reproduce information or provide opportunities for communication. At the end of the century more than half of all employment in the European community is estimated to be more or less dependent on telecommunications. (Glotz 1990, Toffler 1980).

The information age, then, will be above all an age of communication intensification. Such communication intensification will have a dramatic effect on the volume and the structure of the art sector. It is already evident today that new technological conditions transform the scope and the scale of art and art-related activities. The images of Van Gogh's "Sunflowers", of Andy Warhol's "Soupcan" and of Michelangelo's "Sistine Chapel" have been televised and printed around the globe. The sound of Mozart's Quintets and of Mick Jagger's voice can be recorded and reproduced so accurately that audiences are aware of fine compositional and sensory details before ever hearing a live performance. The texts of our literary heritage are in the process of being stored in data banks, made accessible through a wide variety of key words.

Art and Productivity

Art is strongly affected by the communication boom. But - and here we come to sentence number two - what makes art activities gain more quickly in value than other activities?

Within an economy, "value gains" appear as increases in expenditures, measured with the rod of money units. Expenditure increases can be traced to two causes only: increases in the "nominal price level" and increase in "real productivity". In the first case the purchasing power of those who spend money on art increases faster than that of all other factors. Therefore, we observe higher relative prices for art goods and services, even though the output of the art sector need not have increased. Such a scenario is quite plausible in most industrialized societies. Disposable income in O.E.C.D. countries has risen constantly since 1950, a growing proportion of the income goes to households which can be characterized as art consumers: incomes above the median, advanced education, service sector occupations. Yet, the income effect is not a sufficient explanation for the culture boom. There are many other commodities competing for the expenditure of educated households and service-centered communities, and there are clear indications that the output volume of the art sector is growing as well. This brings us to cause number two: increases in the productivity of art goods and services. The formal argument is well-known: in producing a desired output, several input factors are usually involved. If the level of output varies with the quality of a specific input factor, then we attribute the change in output to a change in the "productivity" of that factor. Relative productivity increases of art lead to a change in the combination of art and non-art inputs necessary for given production levels. Such increases lead to a substitution away from non-art commodities toward art commodities.

It needs to be emphasized that the actual process of production is not an economic one. It may be a mechanical process, as in the production of cars, or an organic process, as in the production of wheat, or a social process, as in the production of childcare services or operas. None of these processes "knows" anything about utility and value. They are all intrinsically useless - yet, they cannot avoid being valued and utilized. Productivity is a reflection and a measure of the utilized process, but not its internal driving force.

Art, therefore, can be intrinsically useless, and yet be used for a range of diverse purposes. Information industries constantly need new information, despite their skills in re-using old ideas, patterns or events. The modern industrial process therefore takes...
place in a penumbra of fuzzy, new communication, a mist of possibilities out of which
the information of the future will be gained. In such a situation, the art sector out-
performs a number of competing sectors: art goods and services are "high on
performance" in processing new and fuzzy communications, and, in addition, they
destroy comparatively little of their environment for their own production and re-
production.

Here we reach sentence number three, which is the heart of the argument. It must be
shown that art communication not only increases under information age conditions, but
that it grows at a faster rate than other communication sectors. We begin by outlining a
general theory of art productivity. Then the possible substitutions between art and five
other major communication systems are examined one by one. The results confirm the
expectation of a continuing culture boom.

COMPARING COMMUNICATION PERFORMANCES

A Theory of Communication Systems

The focus of this study is on communication-related changes of art productivity. Its
concern are the substitution effects between the major communication systems of a
society under information age conditions. The term "communication system" is used
here as a synonym for language system, language play (Sprachspiel) and social system.
All four terms are alien to the economist whose world view has not been concerned
much with communication until recently. They therefore need an explanation.

At bottom is the view that the fabric of a society consists of communication events.
Individuals and organizations participate in these events, they depend on them for self-
description and survival. Despite the instability and contingency of single events, the
fabric of society is perceived as a coherent stream of conversation which reproduces
itself continuously through new communication events. The "system" consists of
language, and it is organized as a play, i.e. as a self-organizing process of self-
referential communication acts (Hutter 1990). In our society's history, religion was the
only accepted self-sufficient play, the only source of "ultimate meaning" until the 16th
century. Since the 17th century religion has been slowly relegated to a less prominent
role. More important became a number of language systems which were able to gain
autonomy within the totality of social discourse: the language of politics, of the law, of
the economy, of science, and of art. As we communicate today, we utilize the semantic
capacity of the elaborate codes of these systems to maintain an understanding of our
complex societies.2

Every one of these language systems has different strengths and weaknesses in
communicating a specific content. Yet, the capacities of the systems overlap. At the
margins, substitution takes place. The substitution between political and economic
control of events, for instance, is a hotly contested topic, and so is the role of legal as
compared to religious rules. Similarly, art communication has begun to substitute the
performance of other language systems. These substitution processes will be discussed
the following sections.

To illustrate the argument, the current events around the Van Gogh anniversary may
serve as an example. The wide-spread reproduction of Van Gogh's motifs, the hotly
debated auction sales of a handful of his paintings and the feasibility of global
marketing all have combined to make the Van Gogh celebrations a major event,
expected to generate millions of Dutch guilders. The total volume of expenditures
related to the Van Gogh anniversary is taken as an indicator for its social evaluation.
But only a portion of the expenditures is genuinely economic. This is the portion which
goes to the purchase of paintings that serve as financial assets, as "art money".
Another, larger portion reflects the valuation in other language systems: the political
identity value of "Great Dutch Art", the moral value of "Desperate Outcast Art", the scientific value of "New Structure of Composition Art", the religious value of "Absolute Art". In all of these capacities, the Van Gogh paintings are substitutes, to a small but noticeable degree, of other symbols and media previously used in the other language systems. The causes of the changes in productivity that made Van Gogh paintings a more valuable communication form than (economic) bonds, (political) red stars, (moral) crime novels, (scientific) topological spaces or (religious) holy rituals are the information age conditions enumerated above.

A last epistemological note: interpreting society as a complex of interdependent yet autonomous language systems robs the observer of his or her previously intrepid outside position. His texts are nothing but texts as well, and the observer has to be conscious of his choice of language of observation. In the present case, we observe in scientific language the observations of economic observers. Economic observers, due to the limitations of their language, perceive only changes in performance as they appear through payments (expenditures). We therefore register the substitution between, say, art and politics only in the expenditure dimension although we are perfectly aware of the wider implications of such a change. Yet such wider applications do not appear through the chosen "prisma" and they therefore cannot be formulated in a way that would be consistent with the chosen mode of observation.

The hypothesis, to repeat, is that art language will gain advantages over all other language systems under information age conditions, and that these advantages will be reflected in changed relative expenditures. At this point, we are far away from being able to test the hypothesis. However, we are in a position to compare the general features of the major communication systems.

Art and Politics

Political power is basically invisible. It needs to be enacted. Architecture, festivals, rituals and symbols are used to create the necessary visibility. The electronic media favor forms of enactment that are more personal and flexible than the forms adapted to print media. Skills of acting and rhetoric become important. Ronald Reagan demonstrated that the success of a president can be built on acting skills and on television know-how. The vacuum of credible political figures in Eastern Europe was partly filled with literary writers. In general, there is a tendency to create an electronic community, where the public participates like the spectators in an Athenian drama and city affairs collapse into one with artistic enactment.

The consequence of substitution from politics to arts is less need for power. The social value of an artistic event lies not in being a more effective instrument of politics (although that may happen), but in being an alternative to political events in special cases. Such cases will in all probability be marginal to central political tasks. Nothing more is claimed but a trend in proportion.

Art and Law

Penal codes and codes of justice are only a fraction of all the social rules of behavior in force at any given time. The feeling of being treated "justly" goes far beyond acts coded as legal action it reacts along a myriad of conventions and moral guidelines (Teubner, 1990, Hutter 1989). New guidelines and role models are continuously produced in literary and visual fiction, from Thomas More's Utopia and Daniel Defoe's Robinson Crusoe to Sylvester Stallone's Rocky. The limits of acceptable behavior are tested and contested in Flaubert's novels, in Genet's plays and in Fassbinder's films. Such tests are not limited to the printing press any more. Video clips and global movies are a more
effective way of distributing and updating moral education. Unavoidably, the effective educational tools will, like Mickey Mouse, be highly derivative products. They will be "pulp" compared with the original aesthetic innovations after which they are patterned. Again, only a marginal increase in the proportion of artistically coded communication as compared to legally coded communication is predicted.

Art and Science

Until the 16th century, art and science were hardly separable. In the wake of a generally accepted distinction between "objective" and "subjective" concerns, the scientific code specialized on communicating external phenomena, while the aesthetic code concentrated on internal phenomena - both in relation to an observing, conscious mind. Historical examples show how often that distinction was transgressed: central perspective solved a puzzle that was originally posed in terms of optical theory; music theory was the immediate predecessor of a theory of dynamic physics (Hutter 1988). Cases that attest to the inductive capacity of artistic forms for new formulations in science continue to appear. Art-generated structures describe hitherto unknown natural and social phenomena, like "quarks" or "punk" - phenomena which are soft from a science and hard from an art perspective. An example of changes in the large volume of every-day uses of scientific coding is the substitution in the field of therapy - for individuals, groups and organizations - away from science based approaches to art based approaches. Artistic approaches are cheaper, more flexible and more open in their outcomes. Particularly the new possibilities of musical representation through processed sound are hardly explored.

We forecast, therefore, a substantial substitution from science to art communication. Yet, since science will continue to increase in productivity compared to the older language systems, science communication will increase in absolute terms.

Art and Religion

Art was used extensively for religious purposes at a time when religion was the only valid communication system. Today, after religion has been relegated to a residual position in the "conversation of mankind" (Oakeshott 1966) and after art has gained its own autonomy of form, art fulfills many of the functions previously held by religion. Effects like transcendence of consciousness, achievement of superindividual unity and inner peace through contemplation are today more frequently achieved when paintings are presented as "icons" in altar-like museum architecture; when opera or symphonic music performances are celebrated as spiritual services; when art critics serve as priests linking the mysterium of art with the uninitiated; and when singers and movie actors take the place of idols for devotional needs. The messages of every community of artistic faith are now mass-distributable, new versions can enter easily and they are in fact promoted and tried out constantly. Again, the substitution reaches only those events at the borderline between religious and artistic conversation, it only changes the proportions of the two language plays without ever leading to a replacement of religion through art.

Art and Economy

The comparison between art-derived goods and services and those deriving from other communication systems is limited to a few basic considerations in this study. Art's
relationship with the economy, however, is central, given our observational bias, and it will therefore be discussed in somewhat greater detail.

Every complete model of an economy's performance contains not only product but also money markets. While most goods and services are acquired and paid because of their product performance, some goods and services are acquired and paid because of their money performance. It seems rather obvious whether we are in a given case, observing bananas or bonds, technical or financial services. But that difference becomes blurry in the case of art goods and services. The "performance effect" of art results in a substitutions discussed above: expenditures for such performances are measured using the "rod of money". The "money effect", however, results in a substitution of the economic code itself: the communication form, the infrastructure of the economic system itself is, albeit slightly, changed. It is this effect of substituting the art code for the money code which interests us in the following section.

Art's impact on the money supply has been noted in three variations.

(1) The possession or the sponsorship of art communicates to participants who are in a position to advance money that the owner or sponsor of art is, in turn, in a position to return advanced money. We may, as Lopez (1962) said in the case of Fresco commissions in 15th century Florence, speak of a "credit card of the elite". Art's credit effect may still be small in proportion to current total credit volumes. But art's role in signalling someone's credit rating becomes the more prominent the more economic participants are also participants in art language plays.

(2) Art is a unique way of storing monetary value. This effect can be shown using the following 2 x 2 - matrix:

<table>
<thead>
<tr>
<th>liquid</th>
<th>illiquid</th>
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<tbody>
<tr>
<td>private property stocks</td>
<td>real estate</td>
</tr>
<tr>
<td>property shares</td>
<td>commodities</td>
</tr>
<tr>
<td>public property notes</td>
<td>art objects</td>
</tr>
<tr>
<td>property bonds</td>
<td></td>
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</tbody>
</table>

When financial assets are positioned along the dimension of exclusivity and transferability, then art objects appear in a portfolio slot which has the natural stability characteristic of real property and the social stability characteristic of state - or community - enforced action. The valuation of old master paintings, expressed through the quotation of payments for a few exemplary objects, has strong similarities with the valuation of singular pearls and gem stones in some Micronesian societies (Einzig 1949). The value accorded to a particular piece is, there and here, determined by the amount of money put into value storage using that particular object. Art objects store excess money and provide a near-money beyond the restrictions of central bank control. Under condition of increased transferability of art objects and conditions of more effectively protected intellectual property, we should expect a substitution of art objects for other money forms.
The mere fact of rising art prices induces speculation for future changes in art prices. It is well known since Keynes that future prices can be created by current expectations. Thus, art objects can be turned into interest-bearing assets although there is no real production to justify the value increases. The available empirical studies on rates of return to art capital have noted average rates below those of bonds and stocks. They attribute the result to the "un-anchored value" of art: tastes are assumed to fluctuate randomly, therefore every prediction of future prices must be in vain (Baumol 1986; Frey and Pommerehne 1989).

Within the frame of argument developed in this text a counterthesis is ventured: the value of art objects is self-referentially anchored in the functions and the tastes of a society. Around that value, a corridor of speculative activity is maintained in order to facilitate future value changes. As in other corridors of speculations, there are winners and losers. Positive returns on investment are earned by those who have inside information about future fundamental performance effects of an art object. Negative returns are earned by those without information, or those with a willingness to pay for the privilege of possessing art objects. The speculation effect is an inevitable consequence of the portfolio effect. Investments in paintings or performances, although intended as a hedge against the risk of instability and devaluation, increase in value if information about rising prices continues to spread. As it becomes easier to communicate information about art, more types of art objects and services can be specified and canonized sufficiently to start speculation about their future prices.

All three of the effects noted are still small in relation to total money volume. But they are sufficiently large to lead to unprecedented upheaval and growth, particularly in the market for art objects.

To conclude: there are plausible reasons for expecting an increased productivity of art goods and services relative to the productivity of the goods and services derived from five other major language systems.

SUPPLY SIDE CONDITIONS: SOME FINAL THOUGHTS

This essay attempts to forecast the future of the art sector during the next 30 years. Many issues are broached, many questions remain open. Possibly the most serious limitation of the text is its emphasis on conditions of demand. Nothing has been said about the conditions of supply. Elsewhere I have analyzed the difficulties in financing, producing and distributing art goods and services (Hutter 1989b). The probability with which sufficient conditions for producing the "exhaustible resource" art can be expected was judged to be low. If private investment can be made more attractive, if public policy can be made aware of the inevitability of its own cultural impact, particularly with respect to education policy - only then will the artistic quality of the objects, the performances and the texts produced to meet the demand of an information society be comparable to what we experience as art today. If such conditions cannot be created, then art, as we know it, will not survive the culture boom.

FOOTNOTES

1 Of course, art also entertains and it also uplifts the soul, and its ability to fulfill both of these desires is dramatically increased through communication improvements. For each effect, one supporting voice must do: Naisbitt and Aldurene (1990) predict that cultural
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events will increase their market share at the expense of sports events, the current leader in satisfying entertainment and tension-release needs. McLuhan (1964) perceives art as "exact information of how to re-arrange one's psyche in order to anticipate the next blow from our own extended faculties". It may well be that art's greatest contribution to a society lies in its capacity to shape the cognition and consciousness of individuals, and it may also be that art entertainment industries, from fantasy films to hitparade CD's, account for the largest share of art sector expenditures. Yet, such events are peripheral to the focus of this study.

2The view presented above relies strongly on the work of Luhmann (1984, 1986). See also Hutter (1989a and 1989b). But there are many observers of society who have come to similar conclusions on different routes. For a sample, compare the notion of language systems with Habermas' or Foucault's "Discourse", Oakeshott's "Conversation", Eco's "Texts", McCloskey's "Rhetoric" or Lyotard's "Language Plays".

3See Strong's (1973) study of Renaissance Festivals for a detailed example of political dependence on art services.

4These two texts were the subject of detailed study in Hutter (1991).

5Most of the examples for value losses can be explained quite well using Thompson's "Rubbish Theory". According to Thompson (1979) every valuation process is cyclical. Most objects do not survive their first cycle, they eventually disappear into oblivion. Even those objects, scores and texts which survive must have passed through a "valley of oblivion", i.e. a period of time when their value could not be perceived. Numerous examples for the validity of the theory, ranging from Bach to Balzac, can be cited.

6For detailed empirical support of these claims see Holub et al. 1990.

REFERENCES