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EXCLUSION, COMPETITION & CHANGE: THE SHIFTING BOUNDARIES OF THE TELEVISION MARKET

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Abstract. The aim of this work is to analyse the evolution of pay-TV as an example of the dynamics that characterise the media sector and in which copyright has played a pivotal role. In one simplified representation, we can identify two crucial levels on which the market is shaped: that of content, governed by copyright, and that of distribution. Control over each of these levels offers, in different ways, leverage for orienting the market, and has thus been an object of the strategies of firms. On the whole we can say that the innovation path characterising media markets extends beyond the purely technological sphere to also embrace the market as an "organisational technology" for production and exchange. Hence, the competitive process, so important for defining the market configurations, must be discussed from an intertemporal perspective in which technological choices, the regulatory framework and control of copyrights can be viewed as both exogenous and strategic variables manipulated by firms to obtain profits.

1. Introduction

The television industry offers end users information visible on a screen, delivered by means of a technological apparatus. The manner in which this is done, and the economic model on which the activity is based, depend on the available technology, the regulatory framework and the opportunities for profit. These three factors are in continual interplay, and together determine the operating margins of the market and its competition.

In this light, we examine the market of pay-TV, which arose in tandem with free-to-air (FTA) television but gradually grew apart from it, acquiring its own specific traits under pressure from a variety of drivers. Although these two markets are today perceived and treated as distinct, as evinced by certain European antitrust cases (AGCM, 2002; CEC, 2003), they share a common thread and have alternately moved closer and further apart at different stages in their history. As such fluctuations are likely to continue in future, no configuration can be considered definitive.

The current separation between FTA and pay-TV is a contingent effect of the possibilities afforded by technology and the specific strategic choices of firms, abetted by the regulatory framework. For a long time, FTA terrestrial television was the only transmission platform available, and thus itself synonymous with the television market. Only later did technological innovation bring new distribution systems (cable, satellite, digital terrestrial, etc.) that variously affected the original market, sometimes favouring its development, as happened during the initial stages with cable television in the US, and at other times altering its character, as with the siphoning of certain FTA content into pay-TV. The strategic element on which this transformation hinged was extensive recourse to exclusion, exerted on the consumer side to put a direct price on access to television entertainment, and on the supply side – for both technology and content, in the case of the latter via copyright – to erect barriers to the entry of competitors.

Naturally, the described change is still ongoing, to the extent that the convergence process, impelled by digital technology, continues to alter the production, distribution and competitive configuration of the audiovisual sector (OECD, 2006).

The purpose of this work is to analyse the evolution of pay-TV as an example of the dynamics that characterise the sectors of television and media in general and in which copyright has played a pivotal role. On the one hand, we can say that the innovation path extends beyond the purely technological sphere to also embrace the market as an organisational technology for production and exchange. On the other, the competitive process, so important for defining the market configurations, must be discussed from an intertemporal perspective in which technological choices, the regulatory framework and control of copyrights can be viewed as both exogenous and strategic variables manipulated by firms to obtain profits.

2. The Television Industry

The market structure of the television sector depends on idiosyncratic factors connected with the nature of its production and the peculiar characteristics of its consumption. It is therefore useful to briefly describe the production chain and the markets in which television firms operate, thereby deriving a schematic representation for use in the ensuing analysis.

2.1. **Elements of video economics.** The television industry involves a series of activities that can be integrated in a single firm or acquired externally (Nicita and Ramello, 2005). The first of these is the production or outsourcing of the content to be broadcast: in the case of production, the broadcaster creates the content internally (as generally happens with television news programmes, talk shows, etc.) while in the case of outsourcing, copyrights are acquired on the market if they belong to third parties (for example sporting events, films, etc.). The two alternatives are not mutually exclusive, and in general television firms will purchase some kinds of content while at the same time independently producing others.[1]

Strictly speaking, advertising is also part of television content. However it enjoys special status as a revenue source, and must therefore be interpreted under a different economic model.

The second activity in the production chain is the editorial task of creating the programme schedule: this consists of arranging the various types of content to be broadcast during the day so as to best satisfy the audience being targeted, and can involve a single channel or a group of channels. The editorial phase demands particular care as it defines the overall programme schedule offered to end consumers, which in the case of pay-TV is crucially important for the pricing strategies and attracting subscriptions.

In defining the programme schedule, a broadcaster that owns more than one channel must also take care to avoid competition between its own channels, while

[1]In some cases there is a third, hybrid situation where an external firm owns the format, that is to say the design of a show, which is then acquired under license and produced by the television firm.

at the same time attracting the largest number of spectators overall. Furthermore, in the case of pay-TV the combined multi-channel offering becomes the package that spectators purchase from the station, so that devising the right overall programme schedule, taking into account all the channels offered, is key to securing the decision to subscribe and the attendant profits. In particular, pay-TV firms have the opportunity – not possible in FTA programming – of putting together packages (or channel menus) and pricing plans tailored to customers with different tastes and willingness to pay, thereby extracting higher profits than can be obtained producing for an average consumer, as the FTA sector is forced to do.

The practice is known in the literature as 'bundling', and belongs to the class of discrimination strategies that seek to maximise profits by segmenting demand into groups characterised by different willingness to pay, so as to extract the highest possible price (Owen and Wildman, 1992; Shy, 2001).

In the pay-TV market, technology has allowed bundling to become increasingly sophisticated. Today, consumers can not only purchase a pre-set channel package for a fixed price, chosen out of those available, but they can also add a variable à la carte component purchased individually each time (e.g. a specific film or sports event) through various formulas and technologies (for instance pay-per-view, near video on demand or video on demand).[2] This makes it possible to further fragment the demand, creating a sort of sub-bundle.

It should be pointed out here that bundling can equally well be practiced by broadcasters when the purchaser is not the end consumer, but a distributor that resells the content to spectators through a different technological medium (e. g. an internet provider looking to enter the television entertainment sector). In this case the practice can have the anticompetitive intent of keeping competitors out of the distribution market, as will be discussed below. If this happens, as we shall see, the result is to substantially alter the organisation of the industry, with serious repercussions on efficiency.

The last activity in the production chain is delivery of the content to the end user by means of a technology platform. Traditional FTA television, at least in Europe, has generally relied heavily on analogue terrestrial signals, broadcast over the airwaves by a system of repeaters (Nicita, Ramello and Silva, 2008). Pay television was instead born out of a technological or de facto opportunity, as happened in the case of cable distribution, of making access to the signal excludable.

Today there are many alternative technologies, both *wireline* (coaxial cable, optical fibre, xDSL) and *wireless* (digital terrestrial, UMTS, satellite, etc.) whose emergence is effectively a result of both competitive and innovation processes. Their number will likely continue to grow as technology advances, making any attempt at an exhaustive taxonomy difficult and inevitably non-definitive.

In deciding how to organise production, television firms face the classic 'make or buy' dilemma, i.e. of whether to vertically integrate every stage of the process within themselves, or turn to the market for part of their operational needs. This decision, according to the economic theory, must be based on careful evaluation of economic variables such as the presence of economies of scale, efficiency considerations, existence of high transaction costs, or the need for specific investments (Klein, Crawford and Alchian, 1978).

[2]These are various technological solutions that allow one-shot consumption for users equipped with the necessary technological apparatus.

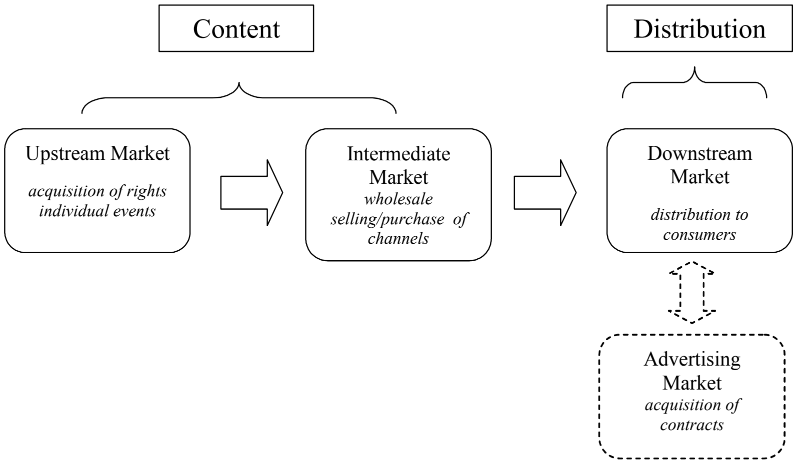

FIGURE 1

However, alongside these standard arguments, content production is subject to a peculiar condition (and one which is crucial in the case of pay-TV) tied to the nature of television consumption: the need for the transmitted content to be sufficiently attractive to the spectators. This condition cannot generally be met solely through vertical integration. Successful films are launched and build up their appeal within a separate market – that of the cinema – which television stations cannot readily control. Likewise, sports events emanate from a social dimension that television firms cannot easily recreate, though there have been attempts by broadcasters to create proprietary championships alternative to the existing ones (Cave and Crandall, 2001).

2.2. **Television and markets.** As a consequence of the above, television companies generally have to operate in a number of different markets, corresponding to the production stages described previously. These markets can be schematically represented as shown in Figure 1, divided into three hierarchical levels plus a collateral market.

The upstream market is that for acquisition of the content, where television firms compete to purchase rights to programmes not internally produced (e.g. films and sports events). The intermediate market involves the wholesale purchase or sale of ready-made channels, used to complete or create ex-novo the television offerings of a particular distribution technology. This market is crucial to those firms that do not possess all the content needed for television programming, but have the capacity to deliver television entertainment to consumers and so compete in that arena, for example thanks to a superior distribution technology. Competition in this market is thus essential for assuring a plurality of distribution technologies, from which the most efficient one can potentially emerge, and requires special care in handling the asymmetry between pure distributors and vertically integrated distributors who are also sellers of programmes. The latter may exert their control over content anticompetitively, to reduce or exclude competition in the distribution market.

The downstream market is that for distribution to the end consumer through a technology platform. Competition on this market can be played out on the fronts of both technology and content: for example two distributors – cable and satellite – may compete to distribute similar content (so that the accent is on the technology), or two firms that use the same distribution medium might produce different television entertainment offerings, or finally two different distribution technologies could be used to deliver different types of content. Often, the form of competition is dependent on the upstream choices: for example, if a firm has exclusive control of a distribution technology while the content is accessible, competition can only occur via a different platform. All this implies that if a firm, for whatever reason, has a chance to influence and restrict competition in one of the markets of the production chain, this will have a marked effect on the overall competitive paradigm of the television sector.

The last market involved is that of advertising, which has the peculiar attribute of being one of the possible revenue sources for broadcasting firms – the only one for commercial FTA firms – and is naturally tied to the market power and appeal exerted by the individual channels. As a first approximation, the price commanded by a broadcaster for advertising spots is correlated with the viewer ratings.[3] Hence success on the downstream market is key to securing advertising profits. But because the pay-TV financing model relies chiefly on direct profits from subscriptions, and only secondarily on advertising revenue, we shall exclude this aspect from the present analysis,[4] and focus instead on the first three markets as the main arenas in which to observe and discuss the transformation of FTA television into pay-TV.

We can make another simplification to further hone in on the essential elements of the television market as a whole (as represented in Figure 1): the first two markets both concern access to content, which can be purchased 'rough' on the upstream market and then reworked to obtained a finished product, or 'ready-finished' on the intermediate market in the case of firms that decide to simply enter as distributors. In either case, the allocation of property rights governed by copyright is crucial. The third market instead concerns access to distribution, and is connected on one side to the technological opportunities, and on the other to the firm's choice of one particular technology over the others.

We thus obtain a simplified representation that provides a useful framework for explaining the shape of the competitive paradigm at different times. In fact, market configurations have always been tied to the accessibility/excludability of the object of exchange (the good) or its distribution. In the past, this involved control over trading routes and directly managing the transit of goods through privileges, duties and various forms of regulation, so that the discovery of new routes, for example, could increase competition and alter the overall configuration and market power of particular operators (Polanyi, 1957). Today, it is instead often a matter of simply controlling access to the technological distribution channels and to the copyrights of the content.

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[3]Firms that advertise on television must on the one hand pay the producers of the content, and on the other the brokers that that act as commercial intermediaries with the television networks. At a first approximation, the latter cost is determined by the value attributed to a single viewer, dependent on factors like the type of audience and the type of television firm and programme, multiplied by the expected number of viewers.

[4]For an in-depth study on the relationship between television and advertising see Owen and Wilson (1992).

It is important to point out that content is decisive for the appeal of any television channel. This because eliciting consumer interest and demand requires sufficiently attractive content, even when access is free, as in the case of FTA television.[5] An attractive programme schedule captures spectators who might otherwise spend their time watching other channels or engaging in other activities. It is at root an opportunity cost: the benefit derived from watching television must be greater than the cost of relinquishing the alternatives.[6] This is an important consideration for FTA channels and especially for commercial stations, given that viewer ratings determine the price commanded by advertising spots.

For pay-TV, which is chiefly remunerated through subscriptions, offering attractive content is crucial to its existence, because it elicits the specific willingness to pay that prompts consumers to subscribe and adopt the conditional access device for the broadcasts of a particular platform (e.g. a decoder). Ultimately, spectators will decide in favour of pay-TV only if it offers something different from what is available on FTA television, and that matches the tastes of whoever pays the subscription. Conversely, an inability to offer sufficiently appealing content may ultimately compromise a firm's ability to operate in the pay-TV market.

The necessary condition of content is not, however, in itself sufficient: there is also the distribution side. Availability of attractive content must be paired with access to a technology for reaching the consumer, in the absence of which the content loses meaning. Alternative distribution platforms do not necessarily eliminate this problem, due to the technological dynamics involved. For example there is consumer inertia due to the switching costs subscribers incur to shift from one platform to another (because they have to buy a new conditional access device, or learn to use the new system, etc.; see. Klemperer, 1995). This creates a demand inertia that benefits the distribution platforms already in operation, even if there are others theoretically just as efficient and potentially competitive, with distorting effects on the innovation process. A large body of literature on the economics of innovation has shown how the existence of such constraints, known as 'lock-in', can work against the emergence of more efficient technologies (David, 1985).

Sometimes there can be additional constraints, of an institutional nature, that limit the exploitation of particular technologies: both in the US and Europe, at certain times, telephone operators were debarred from producing and/or distributing television (AGCM, 2000; Shy, 2001).

Overall, therefore, the contestability and profitability of markets, today as in the past, are determined by a heterogeneous assemblage of forces which are at times competitive, and at others captured by individual actors. The institutional and regulatory framework of the economy can be viewed as one of the operational levers that contribute to defining the markets. In some cases, the rules and regulations have had the object of controlling economic activities and appropriating the benefits deriving from them, making them in every respect sensitive and strategic variables of the competitive process.

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[5] It worth noting that the attractiveness of content is inversely related to its substitutability; low appeal thus produces an elastic demand curve while stronger appeal makes the program imperfectly substitutable, yielding a demand curve with negative slope.

[6] This explains why the elderly and children are often easier to capture: because they do not work, their time has a lower opportunity cost. We are of course here disregarding the sociological aspects that can be just as important.

The evolution of the television market has followed this logic, hinging upon control of distribution channels that are themselves ever-changing, under the effects of technological innovation and the regulations that govern distribution and access to content (generally intellectual property rights and their exercise, intrinsically tied to exclusivity).

In the following paragraphs we show how control over distribution (mainly in the US market) and of content (mainly in the European market) have characterised the emergence of pay-TV and shaped its aspect also with regard to the market structure.

3. Cable and the Transformation of Distribution: The US Case

In the United States, the origins of pay-TV are bound up with the development of FTA television. The new cable distribution platform was launched in the late 1940s as a technological solution to widespread difficulties receiving the terrestrial analog signal in the rural and mountain areas of North America (Johnson, 1994). It was therefore introduced as an answer to a technical problem, without any revolutionary intent, and closely tied to the existing demand for FTA television.

The difficulty of receiving the television signal in remote areas was overcome through community antenna television (CATV), powerful reception systems that picked up the weak FTA signal, amplified it and retransmitted it to the homes of a particular urban area through a system of cables. The apparatus was essentially a more sophisticated version of the cable radio system of the 1920s, used in both the US and Europe to 'capture' radio signals from the airwaves and distribute them to households via cable for a charge, as was already being done for electricity (Parsons and Frieden, 1998). The CATV system essentially took up the cable radio model and brought it into the television era, ultimately achieving far greater success, though uptake proceeded gradually and only reached a certain maturity around the 1970s (Crandall and Furchtgott-Roth, 1996).

The first CATV system was the response of a solicitous husband, a certain Mr. Parsons, to the pressing requests of his wife, whose traditional antenna did not allow her to pick up the new television signal being broadcast across North America (Parsons and Frieden, 1998). The solution he arrived at was to boost reception by placing a more powerful antenna on the highest building of the area, and routing a cable from there to the Parsons home. This proved such a success that soon all the citizens in the area decided to hook up to the system.

It should be underlined here that the local families' decision to connect to a single CATV apparatus, rather than each building their own, was only partly due to considerations of cost and convenience. It was largely an unforeseen effect of bans issued by the city authorities, who worried about a forest of antennas sprouting in the skyline. So here we see the regulatory sphere making a first, timid contribution to shaping the television market.

The lively demand for the system spurred the entrepreneurial efforts of Mr. Parsons and his emulators. But events might have taken a different turn – in all likelihood leading to the entry of new FTA stations located less far away and hence more easily picked up by domestic reception systems – had it not been for the regulatory intervention of the Federal Communication Commission (FCC), which *de jure* prevented applicants from opening their own television stations. Consequently, prospective spectators, impelled by a "nearly insatiable" demand for television

(Parsons and Frieden, 1998, pg. 31), were obliged to rely on the reception boosting system to pick up existing signals elsewhere on the airwaves, thus favouring the diffusion of cable. This set off a dialectical process between technological innovation, regulatory framework and profit opportunities that was to drive and characterise the television sector through the various stages of its evolution.

It should be noted that, at the beginning of the process, even though CATV systems were occasionally paid-for commercial enterprises, the price charged was in exchange for access to the technological service, while television itself remained FTA and as such accessible to all. The reception difficulties produced a *de facto* but not *de jure* exclusion of consumers, and cable restored their access to the television signal. In fact, the availability of FTA channels was a necessary and essential condition for motivating the development of CATV and the demand of users.

What is more, since CATV operators took on the high fixed costs of building the network and offered subscription to the service as an alternative to weak individual antennas, their service also competed on the distribution market with traditional transmission systems and, potentially, with other CATV operators. On the other hand there was no competition in the market for content, which was always the same (that of the local FTA signal).

The high initial profitability attracted many entrepreneurs whose appetite, at least at this stage, was sufficiently assuaged by the revenues from simple CATV. Originally, the spectators' willingness-to-pay, generally in the form of an installation fee plus a monthly charge, was for improved reception of the FTA signal and not for access to content, thus creating a relationship between FTA and CATV that some have eloquently termed symbiotic (Besen et al., 1999).

Before proceeding, it is interesting to note that economies of scale in setting up the distribution network were not immediately used to indiscriminately uphold the natural monopoly argument and favour emergence of a single operator. In point of fact, sufficient resources to cover the costs of building the distribution infrastructure in the cable sector were provided through the market and competition – lively also thanks to the absence (provoked ex-lege) of dominant players. In particular, the 1956 consent decree signed between AT&T and the U.S. Department of Justice (here again we see the regulatory sphere making its appearance to determine competition) warded off entry of the American telephone colossus, thus leaving a sufficiently contestable market for the new and small CATV operators.

Thanks to the lack of barriers to entry, and despite the possibility of failure (reflecting a certain degree of competition), consumer demand for the reception service gave many investors sufficient incentive to build and pay back cable networks, while at the same time the mark-up practiced on consumers was limited by the discipline of the market which offered alternatives like the direct FTA signal, as well as the threat of entry of other competitors.

This shores up the many criticisms levelled against the US authority's granting of exclusive distribution concessions to cable operators, on the grounds of the natural monopoly argument.[7]

The first attempts to launch fully fledged pay-TVs with their own content, between the end of the 1950s and the start of the 1960s, did not prove lucrative, especially due to direct competition from FTA stations which responded by adding

[7]Crandall and Furchtgott-Roth (1996, pg. 84) already argued a decade ago that "[t]here is no inherent reason why only one cable system should exist in a community".

more films to their programming (as happened in Texas) or calling for regulatory interventions to explicitly prohibit charging for access to television content (as happened in California for sports events, following protests by theatres that already profitably offered such a service).

The content/copyright issue thus started to come to the fore, precisely thanks to the development of pay-TV, and become a strategic variable for the operators. In fact the ensuing stages in the development of the pay-TV market show a growing awareness of the role of content in attracting consumers, with cable operators trying to augment appeal and subscriber numbers through broader channel package offerings that also included very distant and otherwise inaccessible FTA stations, while local FTA stations faced erosion of their advertising revenues by new competition from stations re-transmitted via cable, against which they could not compete in terms of the ratings crucial to determining advertising profits.

The diatribe was again resolved outside the market by the FCC which, under pressure from the television stations, quashed the potential competitive pressure of cable by bringing the US regulatory framework – with its emphasis on fostering and protecting local stations – to bear upon it. This led to a drawn-out legal saga, widely reported in the news and literature, which after various dramatic turns of events ultimately had the effect of preventing cable operators from retransmitting distant signals for about four years.[8]

At the same time, the FCC substantially limited the offering of sports content, television series and other programming in order to prevent the impoverishment of FTA channels through its anti-siphoning restrictions, and introduced the 'must carry' rule which, to prevent the disappearance of local stations unable to compete with the extensive penetration of cable, required cable operators ex-lege to distribute free of charge any FTA station that requested it.[9]

This decision was harshly criticised by cable operators, but in the long run helped to further entrench the platform as the preferential mode of access to television in the US, generating strong consumer inertias that persist to this day, despite the availability of alternative distribution platforms such as satellite.

What is more, the gradual loosening of the restrictions imposed by the FCC rules, which had held cable television hostage of FTA stations (Besen and Crandall, 1981) definitively opened the door to the present-day development of cable-TV in the United States. The new cable television, unshackled from the role of mere CATV, has today become the principal distribution medium for both FTA channels and specific content, eliciting a willingness to pay in consumers that has made it the dominant television entertainment platform, currently chosen by 70 % of US families (OECD, 2006).

Despite the interventions of the US regulatory system and the gradual advent of alternative distribution platforms, the recent history of the pay-TV market shows that the cable operators' market power continues to persist. The deregulations attempted over time to make the market more competitive have generally led to

[8]See the celebrated *Fortnightly* Supreme Court case, and others, ref. Owen and Wildman (1992), Parsons and Frieden (1998).

[9]In particular, this obligation helped support the weaker FTA operators, while the stronger ones could demand payment for retransmitting their content, but at the cost of losing the 'must carry right'. For a description of the current regulations in various countries of the world, see OECD (2006).

higher, rather than lower, subscription prices, confirming the existence of substantial market power.[10] Recent studies indicate that the impact of competing distributions such as satellite is still low today due to consumption inertias essentially tied to switching costs, which produce significant lock-in to choices made in the past (Wise and Duwadi, 2005).

4. Content, Copyright and Exclusivity: The European Case

Events in the European market have differed substantially from the US model. With fewer orographic and geographical obstacles to interfere with the terrestrial television signal, there was not the same spur to creating alternative platforms to FTA television. Nor was there reason, for its own sake, to stimulate a specific willingness to pay on the part of consumers.[11]

In the old continent, pay-TV only appeared toward the middle of the 1990s. In many countries the FTA signal was for a long time the primary vehicle for accessing television entertainment, so that establishing pay-TV required creating a new and different product, capable of eliciting a specific demand. Hence the adoption of distribution platforms in competition with the analog terrestrial signal, that could allow access to be controlled and granted at a price, was in most cases aimed at launching pay-TV.

The establishment of different technologies, again often with interference from the regulatory sphere, took a variety of routes. In Great Britain, for example, cable challenged the primacy of satellite with some initial success, before running into trouble and significantly losing ground due to the system of regional licenses which caused excessive fragmentation of the network (Armstrong, 1999).[12] Other countries, that had instead for historical reasons already opted for cable – e.g. Belgium, Germany, The Netherlands – naturally continued to make this their preeminent transmission medium (OECD, 2005).

In Italy, an early attempt in the 1970s to launch a local cable network (Telebiella case) was unsuccessful, due to regulatory constraints erected to protect the incumbents. The real debut of pay-TV came via encrypted analog terrestrial signal in the case of Telepiù, and via cable transmissions in the case of Stream, a company that originated in the telephony sector and had for years been restricted ex-lege to retransmitting over cable the channels of others (AGCM, 2000). The subsequent removal of the regulatory constraint and the need for more efficient technologies then pushed both operators, toward the end of the 1990s, to switch to digital satellite(AGCM, 2000).

Despite these different distribution choices, there was a common strategy that emerged in all the countries: to create an offering differentiated from FTA television, capable of eliciting a specific willingness to pay through the presence of sufficiently attractive content.

The manner in which broadcasters could achieve such a result were naturally the two described previously: to create the required content themselves – i.e. the

[10]For example the liberalisation of prices in the mid 1980s brought significant rises in prices, to the point of requiring a new intervention of the FCC, in 1992 (Besen et al., 1999).

[11]Different countries followed different routes, often marked by particular technological and/or regulatory choices, sometimes favouring specific platforms (OECD, 2006).

[12]Interestingly, in this case the natural monopoly argument, used to justify the licensing system, ended up causing cable to fail as a distribution medium in favour of satellite. This gives support to the criticisms made against indiscriminate use of this argument.

vertical integration discussed above – in the form of specialty channels and new programs, or to purchase the copyright of an existing content.

Relying only on internally produced content generally entails a certain amount of risk, as the proposed content may not necessarily appeal to consumers and hence fail to attract the desired subscriptions. Neither is it a safe strategy to concentrate only on narrow specialty interests, since the lower viewer numbers involved and the unpredictability of preferences may not make them profitable. Conversely, certain types of general-interest content have connotations tied to the social sphere that allow them to attract sufficiently large audiences whilst posing little or no risk: for example because the content/copyright has already been successful in another market, or because it has been backed by strong advertising investments and so exhibits consumer inertia also on the complementary television market (as in the case of films circulated in cinemas).[13]

This type of content, called 'premium content', is safer and more certain to attract demand, but only includes a limited range of products: major blockbuster films and high-profile sporting events, plus a few other events such as concerts and performances of particular importance. The central role of premium content in today's pay-TV market has been remarked on in various sources (e.g., CEC, 2003, par. 54 and 113).

Naturally, the degree of attractiveness depends on the spectators' preferences and is more uniform across different countries for what concerns the film sector, dominated by Hollywood productions, whereas the map is more variegated when it comes to sport (Weinberg, 2005; Cave and Crandall, 2001). The United States, for example, has a more balanced mix of sports with popular following, whereas in Europe the premium sport content consists primarily, or even exclusively, of the national major league football matches (Cave and Crandall, 2001).

The solution adopted by European pay-TV was – as already attempted in the US, prompting intervention of the FCC and the previously cited anti-siphoning measures – to remove this surer, more attractive content from FTA television so as to transfer the latent and unexploited willingness to pay. So we can say that the differentiation strategy took two routes: the direct one of creating attractive programming, and the indirect route of impoverishing FTA programming by removing some of its premium content. In this regard, an interesting observation is that, although today's European pay-TV differentiates itself from FTA by the additional utility it offers consumers, and is thus only mildly in competition with it – as noted for example by the European Commission (CEC, 2003) –, such an outcome can be largely ascribed to the siphoning of the most attractive content from one medium to the other.

So in the absence of regulatory restrictions, many European pay-TVs built themselves around the heavy acquisition of premium content, often at the expense of FTA programming, without meeting much resistance from the institutions or the public, with a few rare exceptions (Boardman and Hargreaves-Heap, 1999).

We should not be misled by the fact that FTA stations can access the same premium content at a later date. The value of a sports event, for example, is

[13]Many studies have found a strong positive correlation between the success attained on the cinematographic market and that on secondary markets such as home video, pay-TV, FTA television. This correlation also exists between North American and overseas success (Weinberg, 2005).

clearly at its peak during live coverage, and rapidly falls off to zero subsequently (few spectators would be willing to pay, today, to watch a match from a past championship). In the case of blockbuster movies, there is a similar, but more sophisticated, dynamic at work, again related to siphoning. Here again the value is inversely dependent on time, with a peak immediately following the film's release in theatres and then tapering off (Weinberg, 2005). The effect reflects the diminishing inertia of the film's success on the cinema circuit, which loses impetus as time goes by and new substitute blockbuster films appear to distract the demand. So even though the technical attributes remain unchanged, the perception of them alters over time, progressively eroding the uniqueness associated with the product and hence the consumer's willingness-to-pay.

In the case of films, siphoning has been achieved by lengthening the time it takes for films released in theatres to reach FTA channels, with the insertion of three new time 'windows' prior to FTA transmission, for an overall delay of about 15 months (Owen and Wildman, 1992; CEC, 2003). Empirical findings confirm that the value lost between even contiguous windows is generally very high. For example, European Commission studies (CEC, 2003) indicate that the price at which premium films are sold to pay-TVs declines substantially between the adjacent first and second release windows (there is also a preceding window for pay-per-view, with different economic traits) despite there being only a six-month delay: the same content is sold in the second window at a price ranging from 5% to 25 % of that charged in the first window

This fall in value directly reflects the loss of appeal of the content, since according to the same study (CEC, 2003) only first window access is sufficiently attractive to motivate subscription.

Naturally, the described siphoning process relies on exclusive access to the premium content – i.e., the copyright exclusive licence – for a specific time span, since its simultaneous transmission on FTA channels would negate the ability of pay-TV operators to charge consumers a positive price. In the absence of technical obstacles justifying payment, as occurred in the US market due to a general scarcity of access to television signals, the first European pay-TV operators put the accent on scarcity of content as the element for attracting demand. The requisite scarcity was artificially created by the first operators through the exclusive licensing of premium content, thereby removing it from FTA television, and this strategy was later interpreted as fundamental to the nature of the pay-TV market. The first operators who held exclusive contracts simply continued to assume that such control was crucial to competitiveness, and devoted their efforts to the continued acquisition of premium content, adopting a model of competition 'for the market' rather than the customary one of competition 'in the market' on the basis of price (and, sometimes, quality). This approach in its turn led to an escalation in the value of the copyrights.

The Italian case, illustrated in Table 1 with data from the Italian Antitrust Authority (AGCM, 2002), eloquently illustrates the consequences of competition 'for the market' in term of copyright acquisition between a dominant firm (Telepiù) and a new entrant (Stream). As we can see, between 1998 and 2000 the total price of the rights nearly tripled, against a doubling in subscriber numbers. There was thus a marked rise in costs not justified by any corresponding rise in demand, and a ceteris paribus increase in the revenues of the owners of the rights.

Table 1: Costs of content and pay-TV subscribers in Italy, 1998-2000

	Total cost (million €)		Number of subscribers		Cost per subscription (€)	
	1998	2000	1998	2000	1998	2000
Stream	38	304	89,373	668,568	425.184	454.703
Telepiù	516	1032	1,066,016	1,557,991	484.045	662.391
TOTAL	552	1336	1,155,389	2,226,559	477.761	600.029

Source: processing of AGCM data

The per-capita cost of each subscription, in terms of the rights paid by the pay-TV firms, went from around 478 euros to 600 euros, an increase of 25.6%. Analysis of the disaggregated data also shows that, while for the new entrant (Stream) this increase was in the order of 7%, it was a much higher 37% for the dominant firm (Telepiù); in other words, the incumbent firm had a stronger incentive to invest in maintaining a dominant position, consistently with the economic literature on the persistence of monopoly in copyright markets (Nicita and Ramello, 2007).

In general, the various types of premium content have shown comparable rises: in the case of rights to the Italian Serie A football championships, the acquisition costs went from 25 million euros in 1994 to 250 million in 2006, with similar values occurring in other markets both inside and outside Europe (Nicita and Ramello, 2005).

These prices are not justified on the side of production costs, and are instead accounted for by revenue dispersion, which as we would expect is much more accentuated for the incumbent firm, which generally has a stronger interest in trying to maintain its market power. The price rises are also compatible with vertical foreclosure strategies aimed at excluding from the market firms that are unable to acquire content, with crucial implications for efficiency, as we shall discuss in the following paragraphs.

But it should also be noted that the frenetic race to rights, occurring in many European countries, ultimately caused television firms to suffer chronic losses, prompting some commentators to again raise the natural monopoly argument in support of exclusivity as the only way to attain positive profits (Watchmeister, 1998).

5. Distinctive Features of the Competitive Process

The development of pay-TV in Europe and the United States is marked by certain common elements as well as distinguishing traits. In both continents, firms faced the same problems of attracting paying demand and the threat of entry of competitors; however the operational decisions and strategies adopted to encourage the former and discourage the latter took different routes in response to the contingent situations that arose.

In particular, the firms tried to identify which elements held the key to attracting consumers, while at the same time maintaining control over the production chain in order to limit competition.

In the North American market, the distribution platform – cable – became the prevailing element for attracting demand, building upon its ancillary ability to guarantee access to television even in unfavourable locations. Firms thus oriented their strategies mainly at controlling distribution. Abetted by the regulatory framework, which in many areas gave operators a local monopoly through the concession of exclusive licences, cable achieved a penetration that subsequently created substantial consumer inertia and market power for the incumbent operators. This also had the effect of limiting the competitive pressure from other platforms subsequently introduced, provoking, according to some authors, a substantial and unjustified closure of the market with respect to distribution (Johnson, 1996; Besen et al., 1999). Hence the actions for promoting competition in the US were mainly aimed at facilitating competition in the sphere of content, with the implicit assumption that this would in some measure guarantee the contestability of the market overall (Besen et al. 1999). Nevertheless, both past and present-day data show that there continue to be many areas with reduced competition, where cable is still the prevailing distribution platform, despite the presence on the downstream market of alternative technologies (Wise and Duwadi, 2005; OECD, 2006).

The European markets instead adopted the opposite model: competition in the downstream market was assumed to be a sufficient condition for maintaining an adequate competitive pressure overall.

A crucial role in creating the new pay-TV market was played by content (and its associated copyright), which became the means for differentiating demand and producing a positive willingness to pay among potential subscribers. However its central role in the market also turned content into a strategic tool for orienting competition and securing dominant positions. In fact the exclusive format of license contracts for premium content, which originally served to partially impoverish FTA programming and thus limit its competition, was later redeployed by firms to limit intra-market competition from new entrants, but with the paradoxical outcome of producing an exponential rise in operating costs and hence heavy losses for the firms.

Exclusivity of access, initially aimed at securing the new time windows for pay-TV, was expanded within the same time windows (or to adjacent windows) to become the main competitive lever, with the idea that ownership of premium content, at any price, could at the same time guarantee market power and profits. The situation was once again justified by the natural monopoly argument: faced with an over 60% incidence of content on costs, pay-TV operators repeatedly claimed that exclusive rights to the content were the only way to pay back its high costs, on the grounds that profit flows arising from exclusive rights are in general superior to profits arising from non-exclusive rights sold to a larger number of operators (Watchmeister, 1998).

However the data clearly show that the high content prices were an effect, and not a cause, of exclusivity, arising from a winner-takes-all escalation that awarded the victor market domination, but at the cost of expending resources that could have more efficiently been spent elsewhere (Frank and Cook, 1995). Such competition is rent-seeking in nature because the investments do not go toward paying production costs, but rather toward acquiring or maintaining market power. This is confirmed by the empirically observed price increase of rights to content that already existed, and was in any case paid for, even before the advent of pay-TV.

The winner-takes-all logic also has the effect of diverting competition toward strategies for excluding competitors, so that the race for content becomes a tool for pragmatically erecting endogenous barriers to discourage the entry of potential competitors with fewer resources, by making it unaffordable.

This can happen not just in the upstream market of content acquisition, but also in the intermediate market where channels are sold, as in the English case heard by the Office of Fair Trading (OFT, 2002), the British antitrust authority, against the dominant operator British Sky Broadcasting (BBSkyB), accused of abusing its position on the intermediate market to the detriment of distributors or producers of competing content.

The outcome of the case is controversial.[14] Nonetheless, it is an interesting example of how exclusive control over content can be leveraged on the intermediate market to create barriers to entry. The possibilities include limiting the downstream competition of other distributors through margin squeeze, or altering the competition of other programme producers on the intermediate market through mixed bundling and anticompetitive discounts (Bright and Williams, 2003). In the first case, a vertically integrated dominant operator licenses its programmes to competing distributors in the downstream market at a price designed to not allow them – even if they are efficient – to obtain sufficient profit margins (hence the term 'margin squeeze'). This was the accusation made in the British case by the cable and DTT competitors against BSkyB, which instead distributed via satellite.

The second possibility, mixed bundling, can become an excluding practice – that then no longer benefits efficiency but instead brings a net reduction in collective welfare – when a dominant firm jointly offers two or more products to a downstream firm at a lower price than the two products would cost sold separately, with the aim of excluding competing firms that can only offer a single product. For example a rival sports channel offering could be pushed out of the market by a combined discounted offer (costing less than it would to purchase two channels separately) of a sports channel plus a premium film channel.

A similar logic underlies the practice of anticompetitive discounts, where the dominant firm makes distributors 'an offer they cannot refuse' of progressive discounts with increasing subscriber numbers, making it more advantageous to distribute that firm's channels rather than those of its competitors in the intermediate market.

The above list of strategies obviously does not exhaust the anticompetitive possibilities, but gives an overall idea of how dominant control over one of the markets in the television sector can easily be used as a tool for exclusion, attracting resources that firms could otherwise invest in competition and production. This observation is especially important if we consider that one of the long-run outcomes of the television market is technological change and the emergence of the technologies that can most efficiently serve producers and consumers. Distortion of this process would thus not only (as expected) introduce market power with the usual consequences, but also have the effect of diverting the path of technological innovation from the direction that it might have taken in a freely competitive market. Attempts to forestall this, through abundant regulatory and antitrust interventions, are a further drain on resources which anyway does not guarantee attaining a genuinely competitive market.

[14] The OFT, which on these matters is considered bold in theory and timid in practice, despite strong grounds for suspicion preferred to conclude that there was insufficient evidence to charge *BSkyB* with abuse of dominant position, in exchange for a spontaneous undertaking by the firm to favour competition (Bright and Williams, 2003).

6. The Lesson of Pay-TV: Exclusion and Competition

The combined effects of technology, regulation and economic drivers are the principal ingredients in the evolution of pay-TV, and on closer analysis all rest upon a common element that plays a fundamental role in defining the market: *the possibility of exclusion.*

The existence of the pay-TV market and competition are closely bound up with how exclusion is accomplished in the different stages of television production. In particular, there are two significant and complementary forms of exclusion that shape the structure of the pay-TV market as we know it: 1) the *technological exclusion* of spectators which makes it possible to obtain a direct payment for consumption and 2) *legal exclusion* as an instrument for defining competition and possibly excluding competitors.

With regard to technological exclusion, there are two prerequisites for the existence of a pay television market: specific demand, and the ability of firms to exclude those who do not pay. These two conditions are interrelated because, if the latter does not hold, even those who theoretically ascribe a value to consuming the product will have an incentive not to do so and become free-riders, i.e. to not pay and consume for free. This is what generally happens with the terrestrial FTA signal, which from an economic standpoint is a public good, i.e. one that does not structurally permit exclusion of consumers and hence creation of a market yielding sufficient revenues to fund production of the good itself.

The FTA sector has essentially resolved this problem in two ways. One is for the state to become the supplier of the public good, which it finances through taxation, and the other is indirect funding through advertising (Owen and Wildman, 1992).

This organisation allowed television to prosper for decades in a market that often yielded excellent profits, thanks to limits on competition imposed by the scarcity of frequencies available for analog transmissions, and a regulatory framework that effectively prevented the entry of competitors.[15] The market was therefore everywhere significantly concentrated in the hands of a few stations.

Subsequently, technological advances made possible the excludability of consumers, allowing a new pay-TV market to emerged in which a price was charged for access to encrypted transmissions. This new development brought with it novel opportunities for profit: in fact, despite the significant market power of FTA stations, the old commercial system forced firms to concentrate on an average viewer – or at best on different average types corresponding to different time bands – rendering impracticable the discrimination strategies by which firms charge different consumers different prices to maximise profits. The new technologies instead gave firms the chance to differentiate their offerings through bundling, creating different packages of channels tailored to consumers with different tastes/willingness to pay, thereby extracting the maximum surplus and benefiting from extra profits (Shy, 2001).

But technological advances also brought a multiplicity of new distribution systems, which opened the door to increased competition in the market by removing the scarcity constraints on FTA analog broadcasting frequencies, thus imperilling the aforementioned new profit opportunities.

[15] Management of the analog spectrum as a scarce resource and the public utility of television are the reasons that have always justified massive regulatory activity in the television sector (Owen and Wildman, 1992).

Overall, therefore, the technology triggered a dialectical process which was resolved by shifting control of the market from the level of distribution to that of content, through the exclusive acquisition of rights. This brought into play exclusion through copyright, facilitated by the regulatory framework that governs content in information markets (copyright with the stature of legal monopolies), to the detriment of competitors. Exclusive control over premium content – which is the chief motivator for pay-TV subscriptions – made it possible to keep out of the market players that did not own premium content, generating market power for the owners and allowing them to exact a higher price than the competitive price, and to practice discrimination.

In this way, exclusion became a characterising trait of the market, bringing with it various negative consequences on efficiency. First of all, the winner-takes-all logic triggered a race for control of copyright that shifted competition 'in the market' into competition 'for the market', resulting overall in an expenditure of resources that could have been better utilised elsewhere (Frank and Cook, 1995; Nicita and Ramello, 2005). In second place, this strategy distorted competition so much as to produce losses even for the winner of the competitive race. Finally, the described dynamic systematically altered the process of technological change, subjected to the interference of rent-seeking practices, in directions possibly distant from those it would have taken in a competitive market (for example, prevalence of the content owners' technology, rather than of the most efficient one).

Generally speaking, therefore, the configuration that long persisted in the pay-TV market seems mainly ascribable to undue reliance on the natural monopoly-exclusivity argument as a tool for stimulating investment in content and technology. This argument, often invoked to serve private interests, ought instead to be handled with care and is in many cases contradicted by the facts. A large body of economic literature in fact upholds policy measures to widen the scope for competition in the television sector, prescribing extensive interventions to limit the excluding power of firms.

With regard to distribution, economics offers plenty of examples in various sectors where, in the presence of resources essential to competition (the so-called 'essential facilities'), solutions have been devised for accessing those resources in a way that allows the owners to be remunerated without compromising the competitive structure of the market (Gerardin, 2005). The evidence also shows that competition in general is not only possible in the wider telecommunications sector (for example through mandatory access in exchange for a fair access price), but also desirable, because it favours the emergence of complementary or additional services that can, among other things, secure cross-subsidies in production and reduce risks. This solution has the added advantage of maintaining the integrity of the innovation process, helping to foster the path to increased convergence and complementarity of entertainment and communication services in the digital era (Shy, 2001).

On the side of content, as noted a full four decades ago by Arrow (1962), in a celebrated contribution studying the optimal incentive for inventive activities, it is likewise possible and desirable to preserve the competitive regime, limiting the burden of exclusion and thus favouring the attainment of collective welfare. Also in this case, there are solutions that can promote wide access to content (for example obligatory copyright licensing in exchange for fair remuneration), produce the necessary financial incentives for the owners and at the same time maintain an adequate degree of competition in the market.

This is the route that has been attempted – albeit partially and sporadically, and with certain difficulties arising from the pressures it puts on the legitimate exercise of copyright – by some recent antitrust proceedings and regulatory measures (Nicita and Ramello, 2005 and 2007).

So once again we see the regulatory sphere playing its part to shape the television market.

7. Conclusions

The television market, like media markets in general, exhibits a complex evolutionary dialectic, driven by the combined effects of technology, economic interests and the regulatory framework, which in turn is defined by an intricate web of property rights (intellectual and otherwise), legal disputes and regulations.

These three forces together contribute to defining the competitive configuration and direction of changes in the sector, interacting on the distinct economic levels that make up the market as a whole.

In one simplified representation, we can identify two crucial levels on which the market is shaped: that of content, governed by copyright, and that of distribution. Control over each of these levels offers, in different ways, leverage for orienting the market, and has thus been an object of the strategies of firms.

We can use this perspective to reinterpret the history of pay-TV, as arising from natural or artificially created restrictions on access to the television signal for spectators, and their specific willingness to pay to overcome them. These are the premises on which the market was built. In accordance with the findings of economic theory, firms attempted to maximise their profits by leveraging those variables that could augment or preserve their market power. In Europe, this was accomplished through exacerbation of the copyright monopoly and 'exclusive' access to the most attractive content, which was siphoned from FTA stations and jealously guarded, while in the US distribution monopolies delivered a comparable opportunity. Both routes provoked the usual damage in terms of static efficiency, and have also likely harmed dynamic efficiency, since rent-seeking strategies interfere with the free workings of technological change. What is more, in Europe, at least in the sector's first decade, there was the paradoxical and unexpected situation that operators suffered chronic losses, attributable essentially to the escalating race for premium content. So in this case the monopoly did not even serve the interests of the monopolist.

Regulatory and antitrust interventions have generally sought to correct these problems, reinstating a certain degree of competition by weakening property rights over the relevant resources. This suggests that, also for the future technological convergence that awaits the television sector, and entertainment and communication in general, the safest route to an efficient outcome is to preserve the competitive structure of the markets, in many cases by considerably limiting firms' exclusive rights over given resources. This, however, will necessarily clash with business models heavily relying upon exclusion.

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