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Creativity in a Brave New World The Interrelation between Creative Work and AI: voices from the music industry.

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This work is not just the product of my dreams, but it is also the result of advice from many important people in my life. My thanks are dedicated to all those who have helped me and supported me during this journey.

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ABSTRACT

EN: The present thesis studies how business processes have changed in Creative and Cultural Industries (CCIs) due to the mainstream advent of Artificial Intelligence (AI) in recent years. Drawing from two theoretical frameworks – namely CCI theory and AI theory – and blending them together, it is possible to envision plausible AI applications in creative work. To further support research, music industry professionals served as case study reference. Results proved fragmented and correlated with expertise and resistance to change within organizations, denoting a slow disposition in CI professionals to embrace AI systems.

IT: Il presente lavoro si propone di studiare come sono cambiati, negli ultimi anni, i processi di business nelle industrie creative con l'arrivo massiccio dell'Intelligenza Artificiale (IA) nella vita quotidiana. Partendo dalla letteratura sulle industrie creative e applicandola a quella disponibile sull'IA, si crea un nuovo framework teorico ancora inesplorato. Per supportare la presente ricerca, sono stati intervistati vari professionisti del settore musicale. I risultati ottenuti sono fortemente frammentati, dipendendo dall'esperienza e la resistenza al cambiamento propria delle imprese creative, specialmente quelle di piccole e medie dimensioni.

Introduction

The motivation to start this work stems from the author's deep love and interest, and first-hand experience in music and arts and how they are constantly shaped by available technologies in the present day.

It is unquestionable that the outbreak of artificial intelligence (AI) in mainstream culture symbolized a major turning point for society and businesses. Nowadays, every aspect of production and consumption is affected by AI. However, studies, contributions and inventions in this field are nothing new; in fact, most academicians and scientists place AI's birth in 1966, when computer scientist Joseph Weizenbaum created the first chatbot ever: Eliza. Fast forward to 2022, OpenAI released the first version of ChatGPT and at the same time other companies and firms came up with new and innovative platforms able to create audio files, images, videos, and texts by providing detailed instructions, known as prompts. Because AI – especially Generative AI – is a groundbreaking group of diverse technologies, their use is becoming increasingly present in the wider economy and, therefore, in all productive sectors. One of these is the creative sector, or the creative industries.

Defining creative industries is not at all simple, particularly due to the ongoing changes and mutations in today's world, but these may be referred to as those industries where human cognitive and manual skills are employed to create something unique. This definition, which will be used only in this introduction, is too broad and extremely vague, because it does not pinpoint specific businesses or practices. It is no coincidence that the academia has been arguing about the definition of creative industries for almost thirty years.

Why are creative industries so important? Creative industries not only express and satisfy the need for artistic and innovative products in the wider economy, but they also count for a significant percentage in a country's Gross Domestic Product (GDP). Nevertheless, the same cannot be said for all advanced and developed countries. In Italy, for instance, investment in culture has lowered since the 1990s and artistic assets have been treated only as a mass selling product contained in vacation bundles and trip promotions (A.

Spranzi, 2008).[1] Furthermore, economists have no real knowledge of artistic heritage and lack, most times, basic aesthetic foundations. The economics of art and culture is a very specialized domain which few academic courses explore, usually in very few universities, colleges, business schools or artistic institutions around the world. What is more, the study of economics has – in most mainstream cases - always been centered around the theories of the Neoclassical School, which has turned an intrinsic social science – thus concerning people and individuals – into an engineering science (Caselli, 2025)[2][3]. This has proved crucial in the role art and culture play in Italy today. Due to this negligence in the cultural domain, AI represents a gamble: on one hand, it may help create a better environment for the diffusion of artistic works and lower the barriers in creativity, normally characterized by the time and investment required in developing high technical skills. However, on the other hand, artists, as well as workers in creative sectors, dread the ever-growing use of AI might displace them from the workforce. This calls for the necessity of adequate laws – raging from copyright to employability – to face this problem and the need to master the use of AI technology in order to gain a competitive advantage in the long run.

This work does not intend to study in detail the consequences in creativity and creative outputs, but, rather, how the creative process has changed since AI has become widely available. Little literature has been so far published on this topic, so the intent here is to provide a solid foundation of what has been said until now and what direction creative processes might take. It is important to highlight that all creative industries are subject to different and industry-specific creative processes; so, a musician will not be affected by artificial intelligence as a film director will be. Because only a handful of valuable scientific papers have, in the last couple years, been published and consulted, the present thesis draws concepts from general artificial intelligence economics and creative-industry-specific features. These will later be blended to form a new theoretical

[1] Spranzi A., 2008, "Il marketing dell'arte", Edizioni Unicopli
[2] Caselli L., 2025, "I rapporti tra etica ed economia. Sette approcci per stabilire ciò che è buono e giusto". Seminar held by Professor Caselli on March 27th, 2025, in which he cited Amartya Sen's seven approaches to define what is good and what is bad.
[3] It is crucial to understand, however, that the "engineering side" of economics cannot be neglected altogether, since it provides the observer with the right tools – the latter being also adapted to the context – to understand and ameliorate their environment, both efficiently and effectively.

framework.

In chapter 1 of the present work, definitional and foundational concepts stemming from academic literature – but also from official documents – concerning Creative and Cultural Industries (CCIs) are presented and summarized, drawing primarily from theories regarding artistic clusters, growth models and necessities shown by experts in creative industries. Chapter 2 lays down all foundations and crucial concepts about Artificial Intelligence, along with literature and official reports, such as the G7 Report on AI, presented at the G7 Summit in 2025. Chapter 3 merges the two theoretical frameworks together, creating a common field where both worlds collide and develop continually, whereas Chapter 4 focuses solely on music business and production processes, their history and how they might change due to the advent of AI.

The purpose of this work is not to assess how creative industries will *actually* change, an argument too delicate and too precocious to deal with, but to study how business processes have changed and integrate historical evidence to support findings. In other terms, the research question acting as foundation of the present writing is the following: *How have business processes in creative industries changed in recent years due to advent of Artificial Intelligence?* To further endorse results, six case studies spanning from Classical Music to Underground Electronic Music are presented in Chapter 4. Interviews have been conducted through video and phone calls and a simple set of questions on their history, business process changes, growth, synergies and AI adoption have been asked to all participants.

Chapter I – Definition of creative industries and the derivative economic spillovers

1.1 Definition of Creative Industries

Defining what creative industry means is no easy task, especially if we consider what is creative, how fast the world is changing due to the advent of Artificial Intelligence (AI) – particularly Generative Artificial Intelligence (Gen AI) – and the many facets this group of sectors presents. Authors, artists, economists, institutions and the academic community struggle to find a unanimous definition of such a vast realm. This depends on the point of view from which it is observed.
Collectively, the creative industries (CIs) are perceived as all those activities concerning culture and intellectual property rights (IPRs) by which outcomes result in something beautiful conveying an artistic and critical vision of society. CIs, which constitute the creative economy, are the industries involved in creating, producing, and distributing goods and services that use creativity and intellectual capital as primary inputs. Potts (2011) states that *"the emergence of the concept of creative industries relates to developments in new growth theory, institutional economics, and evolutionary economics, which emphasize the importance of intangible investments and innovation (which begins with creativity) as long term sources of productivity growth and competitiveness".* Also, Potts and Morrison (2009) stress that innovation in cultural industries, such as advertisement and design, fosters further innovation dynamics in other economic sectors by feeding inputs directly into other business production processes.

Though it may seem well-consolidated, the creative economy is a relatively new concept in economic and industrial literature. Sociologists Theodor W. Adorno and Max Horkheimer coined the term *Kulturindustrie* in 1947 to highlight how marketing and mass production of cultural goods and services would lead to homogenization and hyper-utilitarian use of artistic content, following a mere profit-based logic (this stands true for most artists-turned-entrepreneurs, as stated further on). However, the first time the expression

"creative industries" is considered to have been used was in 1994 in Australian consulting firm Cutler & Company.

In this chapter - and for the overall sake of this work - the broad definition provided by the Creative Industries Taskforce, put together by Chris Smith – responsible portfolio minister of the 1997 UK Labor government – and the Department for Culture, Media and Sport (DCMS) is the one used. The outcome was a document published under the name *Creative Industries Mapping Document* in which CIs are defined as "those industries which have their origin in individual creativity, skill and talent, which have a potential for job and wealth creation through the exploitation of intellectual property (DMCS, 1998, p.3). The standard definition of the creative industries used by the DMCS included 13 industry sectors: advertising, architecture, art and antiques, computer games/leisure software, crafts, design, designer fashion, film and video, music, performing arts, publishing, software, TV and radio.[1] This definition proved valuable because it shared the mainstream economic effects of culture, media and design, recognizing that creativity is a critical input into contemporary economies that demonstrate features of "*culturalization*", digitization and highly digitized goods and services, as stated by Lash and Urry (1994), Du Gay and Pryke (2002). The fields therein listed range from the resolutely non-commercial to the high tech and commercial […] where generically creative, rather than culturally specific, content drives advances (Cunningham and Potts, 2013). According to the authors, the reason why this definition was chosen is due to the connection of "two key contemporary policy clusters: on the one hand high-growth ICT and R&D-based sectors; on the other the experience economy with cultural identity and social empowerment, that is consumption in the new economy".

Even though the former definition seems to encompass every aspect of what a creative industry might be, it received quite a big share of criticisms. As Dyson (2010) puts it, the DCMS definition buys *"in too the new economy*

[1] Creative industries and the wider economy. – Stuart Cunningham and Jason Potts – The Oxford Handbook of Creative Industries, Chapter 20. 2015 edition.

thinking and its promotion of intangibles". Leadbeater (2000), additionally, recalls that "the outputs" of creative industries were always a mix of high value-added services and manufactured goods. Other criticisms argue the DMCS mapping brought together businesses that share little to no relation to one another in the attempt to make *Britain look like a world leader in a field it had defined for and by itself* (Cunningham and Potts, 2015). Notwithstanding, the UK is fairly renowned for the presence of many excellent craftsmen and artists in every domain – from the Shakespearian works in literature, to the Beatles in music, to Vivienne Westwood in fashion – and earlier in 2025, the University of Cambridge, through its Minderoo Centre for Technology and Democracy (MCTD) published a report[2] regarding AI, Copyright, and Productivity in the Creative Industries, with a 360-degree look onto the British creative sector, which, according to official governmental data has expanded significantly[3].

1.2 Economic Turns, Accordion Growth Strategy Model

By focusing on the economics of the creative industries and how their productivity spills over into the wider economy, the current available studies do not maintain a cohesive structure due to the differences in markets and geographical locations creative firms are placed within. Metrics like industry revenues and sales lead to inconsistencies in methodology (UNCTAD, 2024)[4]. Data available comes primarily from advanced economies and those which have datasets of about ten years ago account for a percentage of 0.5% to 7.3% in their Gross Domestic Product (GDP), employing up to about 13% of the workforce of a country. However, inconsistencies are not only attributable to lack of data but also to differences in culture and definition of creative industries. Andari et al. (2007) find a correlation between increase in the wealth of nations and their demand for cultural products. This generates

[2] AI, Copyright, and Productivity in the Creative Industries – Dr Ann Kristin Glenster, Lucy Hampton, Professor Gina Neff, Thomas Lacy – Minderoo Centre for Technology and Democracy (MCTD), Cambridge University, February 2025.
[3] On the British creative sector: https://www.business.gov.uk/invest-in-uk/investment/sectors/creative-industries/
[4] Creative Economy Outlook 2024, United Nations Conference on Trade and Development, UNCTAD.

disproportional benefits in those countries with a competitive advantage; that is to say, most developed countries.

Nevertheless, most authors assert that the creative economy represents a significant driver in global and regional economic growth. In fact, according to UNCTAD's 2024 report on creative economy, cultural and creative industries generate annual revenues of almost 2.3 trillion USD globally, contributing to 3.1% of global GDP.
That growth is the result of digitalization which has contributed to a record flourishing in paid royalties, where streaming services have succeeded in building customer loyalty. Also, increments in creative services have been without precedent: in fact, for the first time creative services exports have raised more than creative goods exports, from a mere 490 million USD in the early 2010s to 1.4 trillion USD in 2024.

The peculiarity of creative industries is evident in the trade-off between economic growth and content. Professors Sigrun Sigurdardottir and Candi (2019) proved the existence of an anti-business attitude in CIs, where growth is seen as a secondary goal compared to creative output. The authors proposed a model regarding how CIs alternate growth phases over time, and that is known as *Accordion Growth Strategy Model*.
In line with the model, creative firms tend to grow and shrink to accommodate artistic content in response to business externalities (Sigrun Sigurdardottir and Candi, 2019). This is due to two key factors: the project-based mentality of work in CIs, which explains why many artists do not benefit from long-term work contracts, and the fact that business models in these sectors tend to resolve around artistic content, often creating a conflict between economical concerns and artistic viewpoint (Sigurdardottir, Ujwary-Gil, & Candi, 2018). The concept of *art for art's sake* is prevalent in CIs as evidenced by the derogatory label of *selling out*, normally attributed when artistic production is no longer based on the intrinsic value of creation, but rather on profit (Abbing, 2002; Frey & Jegen, 2001; Menger, 1999). Due to these factors, artists become entrepreneurs out of necessity rather than willingness.

In fact, though most artists recognized how economic and business characteristics might be beneficial to their professional growth, mixed feelings about the introduction of business-oriented logics in the firms – which are predominantly micro or small – prevailed. To justify this perspective, artists express the fear of losing quality because of short-term earnings. So, art is made for the love of it and not to make large sums of money (some authors described this stance as the *bohemian entrepreneur*). Therefore, managers and directors of creative businesses are more interested in "making ends meet", thus breaking even or gaining just enough, to keep doing things as they have always been done or as they like them to be. Professors Sigrun Sigurdardottir and Candi concluded *"that companies in the CIs either do not intend to grow or, if they do, [they] do not seem to view growth as a persistent strategy"*. In their opinion, the accordion growth strategy reflects *"the ideologies of businesses in CIs and because of their flexibility, these firms may be better equipped to survive harsh economic times and adjust to new environments".*

1.3 Economic Spillovers

The interest of the first chapter of the present work regards how creative firms impact onto the wider economy. In other terms, how spillover effects influence the surrounding economic environments. According to research conducted by Chaplain et al. (2010) spillovers can take the form of knowledge – such as collaborative organizations -; products – from the selling of toys to the ubiquity of on-demand music -; and network spillovers – creative melting pots where high concentrations of firms and producers (artists of all kinds) get together.

Knowledge spillovers include flexible, collaborative models of work organization developed for highly dynamic competitive environments which can influence sectors that engage with the creative industries – the sector's version of "nudging innovation" (Potts and Morrison, 2009). Basically, they are about the transfer and diffusion of know-how, skills and ideas between actors. Moreover, they can either be tacit or expressed.

The former are usually found in ways the work is done, in etiquette, and transfers due to co-location. The latter are expressed as laws or other written or cited forms, such as codes, patents, technical books, etc.
Product spillovers occur when creative ideas and innovations move beyond their original purpose or market. For instance, the design and marketing principles developed for the toy industry may influence educational tools or interactive media. Similarly, the evolution of digital music platforms, originally designed to distribute endless amounts of music, reshaped broader patterns of consumption, data analytics, and user experience design. These spillovers highlight how creativity embedded in cultural production — branding, storytelling, design thinking — permeates other industries, enriching them with symbolic and experiential value.
Network spillovers draw on the idea that innovation spreads through proximity, interaction, and imitation. Therefore, clusters - where creativity and creative minds gather to share ideas and visions - are born. Artistic exchanges generate cumulative learning and the circulation of know-how, which can lead to entirely new creative outputs or technological advancements. This is the case of many artist-populated sites such as Berlin's Kreuzberg, Rome's Trastevere, Madrid's Malasaña, Lisbon's Avenidas Novas or São Paulo's Centro Histórico. So, network spillovers represent a "creative milieu" (the presence of significant numbers of creative businesses, people, and activities) influencing tourism, property values, or specialist retail (café society, etc.).
The description of network spillovers has quite a few links with Richard Florida's 3Ts model (2002). The model considers three variables in the relation to the creative class and economic growth and explains the presence of people in creative professions. These variables are *talent, tolerance and technology*.
The presence of a large creative class leads to a social climate with high acceptance of minorities and minority points of view (tolerance). In addition, the presence of the creative class improves the attractiveness of an area as a place for highly educated people to live (talent). Social diversity, creativity

and talent make an area attractive as a location for (high-tech) firms and facilitate the innovativeness of organizations in this area (technology) (Stam, de Jong, Marlet, 2008). What is more, spillovers are driven by demand as well. Specifically, they are referred to as *demand-driven spillovers* that stimulate investment in technology and innovation on the supply side. Fundamentally, creative clustering or institutional geographical thickness by itself is not a panacea: spillovers are the result of social capital, willingness to share, size of companies, and types of companies and markets (domestic or international).
All of these must be developed over time and are subject to factors other than the policy imperatives (Gwee, 2009).

According to UNESCO, the creative economy generates around 4.3 trillion USD per year and it accounts for 6.1% of the global economy, and nearly 30 million jobs worldwide, employing more people aged 15 to 29 than any other sector, even though numerous studies, such as one by Bakhshi, Cunningham and Mateos-Garcia (2015) reveal that most creative or creativity-endowed workers, have jobs outside the strict creative sectors[5]. Despite that, cultural and creative industries have become essential for inclusive economic growth, reducing inequalities and achieving the goals set out in the 2030 Sustainable Development Agenda (UNESCO)[6].

To better live, a society needs art. Consequently, not only is art an aesthetic discipline, but also, as Spranzi (2008) states[7], it is a marketing discipline since it studies, through the typical marketing tools, how people come to need art in all its forms in the first place. It is an economic discipline as well: in fact, the economics of art represents a branch of industrial economics, since their goal is to best allocate the resources to it dedicated. And finally, it is an anthropological discipline, for much that surrounds a society in time may be regarded as art. By considering the aforesaid, art – in all its forms –

[5] Public Policy for the Creative Industries, Hasan Bakhshi, Stuart Cunningham, Juan Mateos-Garcia, The Oxford Handbook of Creative Industries, Chap. 25.
[6] Promoting the Diversity of Cultural Expressions and Creative Economy.
[7] Il Marketing dell'Arte, Cap.1, Ormai senza speranza, l'Arte aspetta che gli economisti si occupino di lei. Edizioni Unicopli, 2008.

encapsulates all the proper features of experience goods, meaning their enjoyment increases with experience and their value is strictly and intrinsically related to the context and background such goods or services are sold. Nevertheless, experience may vary from customer to customer. Since each consumer is different, it is impossible to tailor an experience based only on a consumer's needs. It is then standardized and, for some performances – namely opera or classical music – the intrinsic value depends on the business/consumer positioning. In this sense, art is not just perceived as the official artistic heritage a country owns, but as the fundamental paradigm behind the economic outcomes of every society. By following it, the words pronounced by the French giant in economic thought, Jean-Baptiste Say resound loudly today.

In his lifetime, J. B. Say dedicated great effort to teaching, making sure economic thought would be regarded as important as any other science – in line with the physiocratic thought – to make citizens better decision-makers, not only in their day-to-day and professional lives, but also in being politically good citizens.[8]

It is not sure whether this stands true for the arts: for instance, post-World War I Berlin was full of artists and open-minded intellectuals; yet the Nazi philosophy found fertile ground there and the horrors of World War II followed. The aim here is not to question the sociological potential of art per se, but rather, assume art is essential to make the world a better place. Professor Throsby (2000) claims cultural goods or services may have social value if they help convey *a sense of connection with others or help us understand the nature of the society in which we live.*

Bakhshi, Cunningham and Mateos-Garcia argue that the production of arts, cultural and creative goods, services and experiences can be organized on markets on their own in the same way as most other sectors in the economy. Yet, everywhere, high levels of government intervention in the production and consumption of art and culture can be found. That is the reason why

[8] De l'importance de l'enseignement pour Jean-Baptiste Say. Leçons d'économie politique IV, J.B. Say, Chap. 1, Economica (2003).

authors, such as Spranzi, complain about the inefficiency in economic policies dedicated to art and culture management. In agreement with Spranzi, art is either gatekept by purists and connoisseurs, who dictate abstract rules most art users cannot understand (hence ruining the interpretative meaning behind all art), or turned into a merit good.

Creative products and services may be of two kinds: *public goods* and *merit goods*. The former, public goods and services, have benefits and costs not reflected in their prices, known as positive or negative externalities. Usually, it is believed these spillovers operate on the local level. Beyond doubt, some works may generate knowledge externalities that embody intangible ideas and concepts inspiring other artists without necessarily compensating their originators. So, entrepreneurs can exploit the new nascent market. If externalities are positive, wages tend to be higher. On the other hand, art treated as merit goods is underfunded because society is unaware of the benefits enacted by the arts. Becchetti, Bruni, and Zamagni (2020) define a merit good as a private good that generates strong positive externalities when consumed, often leading to societal benefits that individuals may not fully recognize or appreciate. These goods, such as education and vaccinations, may require intervention to ensure adequate supply due to their significant impact on community well-being and development.

With this in mind, arts are, from a public and welfarist standpoint, treated as merit goods, rather than experience goods, due to the social impact they cause. For instance, Van der Ploeg (2002) recalls how the Dutch government gave out cultural vouchers to school children to increase propensity to visit museums later in life and develop and cultivate knowledge of the nation's cultural heritage. Moreover, all school programs in most developed countries provide courses in art and music, where students should study the history and techniques of famous painters and musicians.

The notion of art as an experience relates to the previously seen concept of *art for art's sake* and short-term profits. In this light, it is no casualty

industrial policies in CIs have been widely criticized because they are perceived as distortionary since they interfere with the investment decisions of economic agents, by favoring some sectors over others, and the operation of the market, by potentially propping up otherwise uncompetitive industries (Bakhshi, Cunningham and Mateos-Garcia, 2015). Policymakers, also, feel concerned because of the *"upstreamness"* in the value chain of CIs. Because of it, activities are harder to imitate or outsource to lower-cost-emerging market competitors.

The production of an initial master may require substantial investment, whereas subsequent copies are much cheaper to make, so the marginal costs of additional unities produced are lower (Bakhshi, Cunningham and Mateos-Garcia, 2015). Besides, not only did digital technologies decrease barriers of entry in the creative sectors, but also, they have reinforced returns to scale characterizing production arising from network effects. This may create a winner-take-all scenario where just one or few producers account for all production and distribution in a particular sector (for instance, in music streaming a somewhat monopolistic position is held by Spotify)[9]. This already existing problem will turn into a major hassle for governments and policymakers. AI is redefining what culture is and is lowering the threshold of quality content and access into creative worlds. To further extend this problem, fixed and marginal costs are to diminish significantly, since all the work is done by a machine trained to produce the best result possible. However, businesses face training costs, that is the expenses they bear to grind all the data available on a certain topic and to pay professionals working, manipulating, and processing machine-learning systems.

Academicians and artists alike have been debating for years on how the internet has made it *easier* to gain access to content and to self-proclaim as artists. The ever-growing advancements in AI are going to further facilitate the creative process, and long-time skilled artists are complaining about such

[9] Further in-depth discussion on the power of music streaming platform, Long Tail Theory and Superstar Effect is found in Chapter 4.

scenario because of the fear of losing value and market share to AI-fakes.

Most creatives – especially independent ones – wonder about and question the potential of AI.
In a way, AI can, and definitely will, make art more accessible in terms of cost reduction in process management, but it may become so efficient that some mansions will be erased. While that is not the case yet, at least on the macro-sector level, workers are going to need to master AI technologies to survive in today's world. Creative firms and individual artists using AI in their workflow are increasing, but they are nothing new, since the first musician who created an entire album aided by AI was Benoit Carré, better known as SKYGGE, in 2018. The project, named Hello World, explored the many possibilities musicians may enjoy in music production by utilizing Artificial Intelligence. But that was just the beginning and ever since technology has made leaps forwards.
The use of artificial intelligence has become massive, utterly invasive, in the last couple of years, when Open AI released ChatGPT in 2022, and other Silicon Valley giants introduced similar and competitive pieces of software and platforms centered on the exploitation of algorithms in creative processes. Even if much has been already done and shown about the potential of AI, very little is still to be relied upon. Many gray areas exist in the effective application of AI technologies and, simply, they are too *young* to already have reached their maximum degree. The world is still far away from a hypothetical plateau in the development of such tools. Some authors and scientists, however, argue that AI investments may result in inefficiencies in the long run; others, instead, like Geoffrey Hinton are worried about AI outsmarting humans, since in recent months AI models have become so powerful to be able to make strong powerful neural connections. Hence, they have become able to think like humans, as the same Hinton stated in a recent lecture at the University of Toronto[10].

[10] Will AI Outsmart Human Intelligence? – with "Godfather of AI" Geoffrey Hinton, https://www.youtube.com/watch?v=IkdziSLYzHw&list=LL&index=30

Further theory and prediction on artificial intelligence will be discussed in the following chapter where knowledge on AI systems will be carefully detailed and dissected.

1.4 Brief introduction to creative processes

Amabile (1996) refers to creativity as an outcome defined by the dual criteria of novelty and effectiveness (usefulness of value). Creative processes should lead to such outcomes. However, it is not easy to define creative processes. In classical literature, they are defined as linear and determined, following phase-to-phase paths starting with preparation, moving to incubation, illumination, verification, etc. But as already mentioned, every creative activity, hence every sector, has its own processes.
The study of process management is subject to sociological and organizational explanations which do not really explain the problems in a practical way. That is to be described here.

Jokiel and Jokiel (2025) came up with a non-linear model resting on three interconnected dimensions: Agility & Parallelism, Flow & Fun, and Resilience and Flexibility.
The first dimension is about creating a more relaxed way to make the job by abandoning rigid schemes and moving freely between tasks, especially when feeling stuck on a particular phase. The second focuses on playfulness and enjoyment as the motor of creativity and dynamic workplace. The third and last dimension deals with how teams react when the process goes wrong. According to case studies and inductive learning, the authors identify a number of crises occurring, such as failing to bond, not understanding the task, realizing that initial ideas are banal, panicking when deadlines approach, discovering that much work is irrelevant, and getting stuck in endless iterations. These crises might be crucial in making a quality output but can also be a defining moment if the team is resilient to push through.

Seidel (2011) argues organizations rely on a mixture of strategies. Some are

dedicated to guiding the creative process with as little disruption as possible — such as letting teams work flexibly, minimizing unnecessary approval steps, and choosing carefully where variability in outcomes is acceptable. Others depend on technology: asset management systems to help artists reuse materials, workflow tools to support the predictable parts of the job, and knowledge management systems to capture tacit knowledge so it can become usable across an organization. These systems free up time and mental space for creative work while keeping the process under control.

Chapter II – General remarks and framework in AI theory

2.1 – Basic economic aspects

In this chapter, the focus will center on some basic theory regarding the economic aspects of artificial intelligence, how it might be subject to Baumol's cost disease – the phenomenon by which some goods become cheaper over time while others do not – its implications on the macroeconomic level – by taking into account Daron Acemoglu's viewpoint – and, more generally, how sunk costs in creative industries work and how AI may help minimize them.

Artificial Intelligence, defined as a body of technologies related to computational calculation and efficiency, generates results from the training of algorithms on large sets of heterogeneous data, which function as inputs. More precisely, according to the OECD *"an AI system is a machine-based system that for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment."*. This definition formed the basis for the definition of AI systems used in the EU AI Act and the 2023 US Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence. In particular, such systems are seen as a combination of intangible inputs like software, skills, and data with substantial computing capacity and complementary technologies (e.g., robotics, biotech), while having the capacity to generate a diverse array of outputs ranging from complex analytical tasks (prediction, recommendations, optimization, etc.) and content creation to contributing to the execution of physical tasks (e.g., autonomous vehicles) [OECD, 2024]. Among other definitions, Furman and Seamans (2019) use it as "a *loose term* used to describe a range of advanced technologies that exhibit human-like

intelligence including machine learning, autonomous robotics and vehicles, computer vision, language processing, virtual agents, and neural networks". Brynjolfsson, Li and Raymond (2023) state that *"AI is an umbrella term that refers to a computer system that is able to sense, reason, or act like a human"*. Sastry et al. (2024) write *"Artificial intelligence (AI) refers to the science and engineering of building digital systems capable of performing tasks commonly thought to require intelligence, with this behavior often being learned rather than directly programmed"*.

It is safe to say that AI is going to revolutionize every aspect of our lives, both professionally and privately, and its effects are already evident. However, experts are not so optimistic about its effective diffusion in the short term. In fact, just like other precedent technologies, such as the steam engine or the internet, the positive effects of AI will be delayed due to several reasons, the first being the lack of infrastructure apt to support the technology, especially in developing countries. According to the 2024 G7 report on AI and financial policymaking, *"within G7 nations[1] and other advanced economies, shortages in digital infrastructure, human capital, and organizational readiness can lead to uneven adoption rates across regions and industries"*. Because of that, small and medium enterprises (SMEs) are often latent in implementing AI systems as opposed to larger corporations, whose financial resources and know-how play an important role in overcoming constraints and limited access to expertise. Moreover, regulatory uncertainties and concerns about data privacy and security can impede adoption in some sectors, holding back potential economic benefits. On a global scale, the challenges are even more pronounced, because, as stated earlier, developing countries rarely possess the necessary digital infrastructure, making it difficult to deploy and utilize AI technologies effectively. Additionally, research, deployment and use are made difficult due to the lack of financial assets, thus resulting in an *"artificial intelligence divide"*.

[1] Artificial Intelligence and Financial Policymaking - A High-Level Panel of Experts' Report to the G7, G7 Italy 2024.

Unfortunately, the barriers to adopting AI extend beyond infrastructure and resources but are embedded in the cultural and organizational resistance to change. Many organizations struggle to integrate AI into existing workflows and business models, requiring substantial changes in organizational structure and decision-making processes, fueling concerns about job displacement and ethical implications of AI.

The main concern regarding AI adoption regards the possible different impacts across countries and the potential to widen cross-country differences in GDP per capita. It is true that, on the one hand, there are the direct benefits of national technology development, causing concerns since AI development is heavily concentrated in a few countries (notably the United States and China). On the other hand, however, the extent to which AI will be a labor- and resource-saving technology may devalue the comparative advantage of developing countries and worsen their terms of trade (Korinek, Schindler and Stiglitz, 2021[169]) [OECD Report 2024].

How AI use will turn out and whether the world will profit from it on an economic basis is still largely debated by academicians. Some infer that AI will bring about large benefits and large costs, the latter difficult to be absorbed by society and, thus, resulting in high social costs. Others will say that AI technologies will become so ubiquitous they will make any kind of industrial process better and, theoretically, less costly. However, other argue about a possible “Baumol’s Disease”. For the sake of this chapter, the focus is put on two different views regarding the implementation of AI and its outcomes on the macroeconomic level: the Baumol’s disease, and – just like the title of his 2024 high-profile paper – the simple macroeconomics of AI by Daron Acemoglu.

2.2 – Will AI be trapped into a "cost disease"?

According to William J. Baumol[2], ever since the Industrial Revolution, automation and efficiency in production of most manufactured goods have risen at an unprecedented rate, thus making, over time, the final price of the goods lower, and expanding workers' wages. This is not the case with personal services, that is several economic activities – most notably health care and the performing arts – whose price is condemned to rise at rates significantly greater than the economy's inflation. That is because automation and labor-saving productivity improvements are slower (sometimes impossible) to take place.

To understand the cost disease, let's think of something above average. For example, in commodities, some cost way more than others. Health-care, performing arts, and education have a human component – they are produced with and by the aid provided by a physical person, who is quite unreplaceable in the production process – meanwhile in highly automated sectors, such as computer systems or the automative industry, costs tend to decline because production becomes more efficient and economies of scale are created. In fact, if wages of automotive workers increase, their effects are offset by a growth in productivity (more cars are sold), but if an artist's productivity is higher, then an increase in their wage must be as well, and vice versa. Services which require handicraft elements are, according to Baumol, stagnant services. The problem relating to these services is due to the difficulty in standardization. All these services depend on different factors related to humans, including skills, time consumed, preparation, etc. Additionally, psychological resistance to labor-saving change in personal services widens the lag in productivity growth characterizing these services, as previously seen when talking about Sigrun Sigurdadottir and Candi's Accordion Growth Model, according to which creative industries grow and shrink in time due to their necessities. The overall long-term productivity

[2] The Cost Disease. Why Computers Get Cheaper and Health Care Doesn't. – W. J. Baumol, Yale University Press, 2012.

outcomes of AI at the macroeconomic level are still uncertain, contingent on various factors such as how AI will impact market dynamism and market functioning. Critical questions are: Will productivity gains achieved by early AI adopters extend to other firms? Will AI exacerbate performance disparities and distributional divides? What will be the consequences of AI for inclusion? And, importantly, will labor reallocation, both within and across sectors, fuel sustained aggregate growth; or will it be a drag under a new form of "Baumol's disease," spurred by extensive AI driven labor automation and a large share of the workforce ending up in low-productivity activities?

In activities exposed to AI, the tasks executed by the new technology can be either complements or substitutes to labor (Susskind, 2020), with both cases leading to labor productivity increases in the affected sectors. Second, as technology evolves, new tasks and jobs are created, further sustaining aggregate productivity gains. For instance, the introduction of computers and the internet fostered the creation of high-paying occupations such as programmers, designers, etc., but future generations of AI could automate these new tasks as well, contributing again to a further shrinkage in the role of labor (Susskind, 2020). Third, higher demand due to AI-driven increases in incomes could sustain aggregate productivity growth if the increased demand is directed mainly towards labor intensive and high productivity growth sectors, such as engineering and other highly knowledge intensive professional services. Conversely, productivity growth could be further hindered if additional demand is directed toward labor intensive and low productivity growth sectors such as personal services. Moreover, many services in the digital economy have a price of zero, so they are not considered by GDP calculations.

AI is driving the emergence of entirely new economic activities and business models that do not fit neatly into existing statistical frameworks, further complicating efforts to measure its impact. Metrics such as GDP and traditional productivity indicators struggle to capture advancements in service industries, knowledge work, and quality-of-life improvements driven by AI. As a result, these measures risk underestimating AI’s effects. In the words of

Professor and Nobel Prize winner Daron Acemoglu[3], "*AI will have implications for the macroeconomy, productivity, wages and inequality, but all of them are very hard to predict. This has not stopped a series of forecasts over the last year, often centering on the productivity gains that AI will trigger".* Experts and consultants have come up with fancy technical reports and scenarios, some of which are quite optimistic, e.g. Goldman Sachs (2023) predicts a 7% increase in global GDP, equivalent to $7 trillion, and a 1.5% per annum increase in US productivity growth over a 10-year period, while McKinsey suggest that generative AI could offer a boost as large as $17.1 to $25.6 trillion to the global economy (Acemoglu, 2024). The consequent concern relates to the reliability of such figures and the predictions of the so-much-predicated benefits given by AI and automation. Although this is not the place to debate on such a delicate and complex topic, Professor Acemoglu's viewpoint is not so optimistic, but stands in the middle.

First, it is not conclusive that automation will make everyone's wages better. It is true new jobs will be born, and productivity will be undoubtedly higher, but if the case resembles the internet's arrival of the 1990s and '00s, the utmost beneficiaries will only be managers and executives, whose wages will augment extraordinarily.
Acemoglu's model is a task-based model, where the production of a unique final good requires a series of tasks to be performed, and these tasks can be allocated to either capital or labor, which have different comparative advantages. He goes on listing the factors determining AI-based productivity gains: automation, task complementarity, deepening of automation, new tasks. The following section is directly taken from the professor's paper[4]:

• Automation (or more precisely extensive-margin automation) involves AI models taking over and reducing costs in certain tasks. In the case of generative AI, various mid-level clerical functions, text summary, data classification, advanced pattern recognition, and computer vision tasks are

[3] The Simple Macroeconomics of AI, Daron Acemoglu, Massachusetts Institute of Technology (MIT), 2024.
[4] For more information, view D. Acemoglu's The Simple Macroeconomics of AI.

among those that can be profitably automated.

• Task complementarity can increase productivity in tasks that are not fully automated and may even raise the marginal product of labor. For example, workers performing certain tasks may have better information or access to other complementary inputs. Alternately, AI may automate some subtasks, while at the same time enabling workers to specialize and raise their productivity in other aspects of their job.

• Deepening of automation can take place, increasing the productivity of capital in tasks that have already been automated. For example, an already-automated IT security task may be performed more successfully by generative AI.

• New tasks may be created thanks to AI, and these tasks may impact on the productivity of the whole production process.

The following calculation on the Total Factor Productivity (TFP) - a measure of an economy's ability to generate income from inputs, primarily the labor supplied by its people ("labor" for short) and its land, machinery, and infrastructure ("capital")[5] – should be no more than 0.71% in total, approximately a 0.07% increase in TFP growth annually. What is more *the numbers may be overestimates of the aggregate productivity benefits from AI, because existing estimates of productivity gains and cost savings are in tasks that are "easy-to-learn", which then makes them easy for AI. In contrast, some of the future effects will come from "hard-to-learn" and hard for AI tasks, where there are many context-dependent factors affecting decision-making, and most learning is based on the behavior of human agents performing similar tasks (rather than objective outcome measures)* (Acemoglu, 2024).

The automation of simpler tasks frees up human labor for more complex and creative work, thereby raising overall productivity.

[5] Internation Monetary Fund (IMF), 2024.

One of the first pieces of evidence supporting this channel comes from a microeconomic study by Brynjolfsson et al. (2023). The authors analyzed the impact of generative AI on worker productivity at a U.S. customer service firm. The firm gradually introduced an AI tool that helped employees respond to customer queries through automated suggestions. The results showed a significant productivity boost: employee output increased by 14% in the first month of using an AI assistant and stabilized at around 25% after three months. Similar results have been observed in more specialized, high-skill professions. In the U.S., for instance, studies have shown that AI tools like ChatGPT can increase the productivity of consultants and managers by between 25% and 35% (Noy and Zhang, 2023; Dell'Aqua et al., 2023). This demonstrates that AI has the potential to deliver productivity gains across a wide range of occupations, both low- and high-skill. Accordingly, the WTO's Report on AI and Trade highlights that AI's most significant impact will be on services trade, driven by four factors. First, barriers to intermediate services trade are primarily technological, with minimal regulation of back-office services. Second, digital technology is rapidly lowering these barriers. Third, AI technologies, such as machine translation and upcoming speech translation, are making domestic and foreign workers more interchangeable. Finally, generative AI will accelerate this by transferring the skills of high-skilled workers from developed economies to emerging economy workers, making their output more similar.

2.3 – Sunk costs in the entertainment and creative industries

In the last two centuries, several forms of mass entertainment have become industrialized. Movies were made and automated and standardized to make tradable live performances; music became recorded and could be disposed by anyone at their favorite time. But the growing standardization and industrialization have not eradicated traditional formats. In fact, even though music is now widely available and totally accessible by just paying a subscription, vinyl records and CDs keep being produced and sold – especially the former, which have had a massive comeback in recent years,

fueling a new wave of enthusiasts and lovers of such format.

During the second half of 19th century, entertainment demand increased due to the rise of the bourgeoisie and middle-class. This promoted the birth or evolution of new artistic and entertainment domains, such as cinema, recorded music, etc. Along with this, as seen in the previous chapter, geographic position played a huge role in better connecting artists, sectoral workers and enthusiasts, all favored by the development in local transport networks as well. Early automation *resulted in low and flat marginal costs of offering additional viewings, compared to high fixed and sunk costs of making the prototype, enabling massive scale economies* (Gerben Bakker, 2012). The results of industrialization gave way to a series of creative destructions. The concept of *Creative Destruction*, first introduced by Austrian staple economist Joseph Schumpeter, can be defined as the way in which a new way of doing business and competing sweeps away all old ways and products. This concept is strictly related to dynamic efficiency, according to which *"an industry can be dynamically efficient if price equals marginal costs and if all firms use the most efficient technology available"*. By following this framework, one might be rightfully tempted to think that all antique mediums of art and entertainment products should be wiped out of the economy and remain obsolete. That is not the case with creative industries. Despite the fact recorded music – first made available with the advent of the phonograph – was present in every household, that did not eradicate live performances; or when motion pictures were introduced, theatrical plays kept being performed. The same happens today: while the average consumer has millions of songs or movies available on demand, twenty-four hours a day, cinemas keep operating and live concerts are still attended by hundreds, if not thousands, of people. To put it into simpler terms, old technology does not disappear, but it reinvents itself to suit the needs of the modern market, pursuing a survival strategy. When films were born and became the most accessible and popular way to watch stories unfold, theater moved up a segment, becoming a "high-end" luxury and artistic experience, explaining why its costs have not diminished, but rather increased. What is more, the Production Possibility

Frontier (PPF) is to be considered. First described in the 1930s by Gottfried von Haberler, the PPF shows the trade-off of a society in consuming entertainment and all other products. As Gerber Bakker says, in the last two centuries *"a series of innovations shifted the frontier outwards, followed by a series of jumps in which the industry moved closer to the frontier, but by the time it reached the new frontier, fresh innovations had shifted it outwards again. […] Likewise for music, innovations such as barrel organs, disc-based music boxes, and recorded sound shifted the frontier outwards, eventually leading to the phonograph. For videogames, exogenous technological changes such as board games, pinball machines, computer software, and microprocessors shifted the frontier outwards and enabled the introduction of arcade game machines by the late 1960s, shifting the frontier further outwards and later enabling the innovation of home video games"*. To measure dynamic efficiency, a quantitative proxy of creative destruction is the growth in TFP, for which there are little figures and data available. However, the data available tells us about an increase fivefold per annum.

What are sunk costs? Sunk costs are represented by time, money, and resources not recoupable, not even when exiting the business. In creative industries, sunk costs are the reason why variety is not infinite. The degree of variety – that is different versions of the same product – in an economy is definitionally suboptimal as it does not tailor each good or service to a specific consumer. It depends on fixed and sunk costs, and inter-temporal asymmetries: in fact, distributors do not fully know ex ante which product will sell and, therefore, need to distribute more than one product to make sure capacity is used optimally. However, as opposed to the past, there is way less variety because of standardization. It is impossible to find two consumers with the same preferences, so if every consumer could get their products tailored to their needs and tastes, companies would have to deal with enormous amounts of sunk costs and, just a small amount of fixed costs. Since the 1800s, due to the reasons already mentioned, standardization has become the prevalent business model in all production: this led to higher

quality, but less variety.

Essentially, two kinds of sunk costs are recognized, both of them related to two ways of standing out, that is to say to differentiate:

- Exogenous Sunk Costs: This is the *"entry fee"* to start a business. Before digitization of music equipment, a massive studio to record an album was needed. Today, thanks to computers, this cost has dropped significantly (anyone can record at home).
- Endogenous Sunk Costs: The *"quality race"*. Even if it is cheaper to make a movie, big companies spend large amounts of money on better CGI, famous actors, and massive marketing to make sure their blockbuster stands out, creating a gap between mass market products and niche products, usually in the interest of enthusiasts.
- Vertical Differentiation (Quality): This is when everyone agrees one thing is better than another. For example, a $200 million Hollywood film as opposed to a Bollywood one. High-quality products usually have very high sunk costs.
- Horizontal Differentiation (Variety): This is about someone's personal tastes. For instance, one might prefer a jazz record, and the other might prefer a Rock record. Neither is better, they are just different.

Gerben Bakker shows that technology changes the math of fun[6]. Back in the day, to see a story, a human would stand in front of the audience and tell it. Today, that story is automated, since the sunk cost to make the first copy is high but the cost to send it to a phone or laptop – more generally, the product's digital version – is almost zero. Moreover, to recover their costs, a producer will discriminate – that is offering different fares – the price of the good they are trying to sell. In fact, if only one price were applied, the producer would not be able to recoup the expenses made to create the product and their revenue would stay below the average cost line. Because it is in the producer's best interest to capture all the consumer's surplus, different prices will be applied to the different categories of consumers that product is

[6] Sunk Costs and the Dynamics of Creative Industries – Gerben Bakker, LSE, 2012.

directed at. In the film business, some users get the “super-fans” to pay $50 for a premiere and the “casual fans” to pay $5 for a rental months later. Bakker (2012) argues that this is a self-reinforcing cycle:

1. Price Discrimination makes more money.
2. That money is used to increase quality (better actors, effects).
3. Higher quality makes people more willing to pay premium prices.
4. This allows for even better Price Discrimination.

The evolution of the entertainment industry from household production to a centralized global powerhouse is driven by four core economic tendencies, as stated by Bakker. Understanding these principles is essential to understand why the industry looks and operates the way it does today. The already mentioned Quality Race explains why budgets keep growing. In many industries, as the market expands, it makes room for many small competitors. However, in creative industries like film and video games, market growth often triggers a quality race driven by endogenous sunk costs. Instead of sitting back, leading firms escalate their spending on production and R&D to improve the perceived quality of their "prototype”. The goal is to capture a larger market share by creating a product that is “vertically differentiated”, meaning it is clearly superior to cheaper alternatives. Secondly, the author identifies the profitability of the *“Extra Chair”*, a concept resumable like this: once the high sunk costs to make the first copy are spent, the cost of allowing one more person to consume the product is nearly zero, a just like that, every additional sale is almost pure profit. This creates a powerful incentive for vertical integration. By owning the distribution channels – such as theaters or streaming platforms – studios ensure they capture all these marginal profits rather than sharing them with middlemen.

Thirdly, entertainment products are classified as toll goods because they are *non-rivalrous but excludable*, meaning one person watching a movie does not diminish the quantity available for someone else and owners may use copyright law and physical barriers (like theater doors) to prevent

consumption until a "toll" or ticket price is paid. Lastly, as explained in the first chapter of the present work, every creative product is a unique, one-time project requiring a team of specialized diverse talents, explaining the project-based nature encouraging agglomeration, or geographic clustering. Firms and talent huddle in specific. This proximity creates a thick market for specialized inputs, fosters knowledge spillovers, and reduces costs by allowing talent to move easily between different projects. These clusters become self-reinforcing hubs of innovation and efficiency.

2.4 How can AI help here?

AI may help estimate and manage sunk costs by making the prototype-creation phase cheaper and faster. This can also be done by analyzing historical data of other competitive products in the sector studied. However, predictions can also be made onto sales and profits to be collected. One specific L.A.-based film company, Cinelytic, made predictions on revenues coming from the Barbie movie[7] screening in theaters. It is possible to predict demand, simulate price discrimination models, etc. Most importantly, given that the producer's interest is gaining the totality of consumers' surplus, AI helps recover sunk costs by identifying niche audiences who present a high willingness to pay for specific art products, differentiating between mass market and niche market interests, and since the quality spiral is changed, small players may compete in a quality race so far forbidden and reserved for huge players.

[7] It is fair to say now, that the predictions made were undermined. In fact, the total revenues coming from Barbie were much higher than expected.

Chapter III – Framework-blending: How AI may be applied to CCIs

Having explored the foundational concepts and economic implications of cultural and creative industries (CCIs) and artificial intelligence (AI), the aim of the present chapter is to acknowledge how the two frameworks can be integrated into business practice. Moreover, it is crucial to define the possible outcomes regarding copyright law, since most AI applications in the creative industries not only relate to business processes, but also to the end product, that is the artistic object which would normally be made by human intervention only.

All through the discussion so far held, it has been reminded oftentimes that AI is to be tied to decision making and process management in order to contain costs and obtain a more valuable artistic product. Even though it is still uncertain whether AI will effectively, and eventually, disrupt the world[1] – or whether it will be a normal general-purpose technology (Narayanan & Kapoor, 2025) – evidence from the CCIs shows such technologies are already being significantly utilized: in the film making industry, for instance, advanced computational technologies and visual effects (VFX) are used to make actors look younger than they actually are (de-ageing) (Rosati, 2025). Furthermore, advanced methods, such as Deepfake technology, in cinematic production are used to turn drawings into actual motion pictures, as is the case with the 2019 movie *The Lion King*, where all the animals look real (Xue, 2024). In the music industry as well, about which the next chapter focuses on, Deepfakes can mimic a singer's voice and singing technique flawlessly, like in the 2023 case about a piece of music featuring AI-made Drake's vocals. The questions arising from situations alike concern the copyrightability of such works, since part or the entirety of them is created through the aid of technology fed with algorithms and already-existing output.

[1] Academicians are divided into two big areas: the first being the pessimists, who are concerned with the near-total wipe-out and automation of the workforce; the second, less present and heard, are the optimists who argue about a possible tendency in AI becoming a normal technology, just like other previous GPTs (General Purpose Technologies) did.

On top of that, the use of copyrighted works to train AI models is deemed unlawful if not explicitly permitted by copyright holders (however, exceptions are allowed according to European TDM law).
In the following section two recent academic contributions on copyright law are taken into account: the first[2] investigates on the future of the movie industry and copyright law in the UK and the US; the second[3] focuses on the Chinese copyright law system and how it is increasingly positioning AI-generated works under copyright law.

3.1 Copyright issues

Copyright frameworks in both the UK and the US emphasize human agency as a prerequisite for protection. In accordance with the UK's Copyright, Designs and Patents Act (CDPA), the author is defined as *"the person who creates the work"*. Instead, the US Compendium of US Copyright Office Practices is more explicit, mandating that authorship must be human, and therefore registration of works realized by software systems or other kinds of machine lacking creative input from a human creator is denied.
Consequently, the legal determination hinges on the function played by AI, whether it is functioning merely as an assisting instrument or functioning as the element of creative expression, that is to say subject matter for copyright protection (Rosati, 2025). This nuance was highlighted in the refusal of copyright for Dr. Stephen Thaler's *Creativity Machine.*
The ruling clarified that while the author must be a human being, this requirement does not categorically ban AI in the creative process. Rather, it distinguishes between unprotected works *created by* AI and protected works created by humans *with the assistance of* AI.
It is on these premises that the Chinese judicial law on AI-created works of art can apply for copyright protection. To understand why, it is useful to take

[2] *The future of the movie industry in the wake of generative AI: A perspective under EU and UK copyright law*, Computer Law & Security Review: The International Journal of Technology Law and Practice, Eleonora Rosati, Stockholm University, 2025.
[3] *The copyrightability of AI-generated content: A doctrinal exploration of the pioneering Chinese judicial practice*, Computer Law & Security Review: The International Journal of Technology Law and Practice, Shujie Feng, School of Law, Tsinghua University, Beijing, China, 2025.

a comparative look at copyright law in China.

Unlike the rigid adherence to human spirit often found in Western jurisprudence, China has adopted a pragmatic approach towards Artificial Intelligence Generated Content (AIGC). This approach is not a rejection of tradition, but an adaptation of it to serve the possible utility of such works. In fact, Chinese copyright law, in many judicial cases considers AIGC suitable for protection because it may foster innovation in this technological domain. Hence Chinese jurisprudence satisfies a *utilitarian approach*.
The rationale is purely economic: Chinese courts have adopted a cost versus benefit framework. Copyright is granted not just to reward authorship, but to secure the investments made in the AI value chain. The shift is driven by the limits of the *droit d'auteur* system, typical of continental Europe, and more generally of Western copyright (and patent law) systems. Traditional tests for originality fail when born on modern industrial outputs.
In a handful of cases AIGC has been judged protectable (to view more on this topic, Feng, 2025), even though its total adoption is likely going to be gradual. One thing for sure is that China is now exceeding and revolutionizing copyright law, and such cases have certainly sparked interest in updating current laws dealing with authorship and derived rights.

This former reason is crucial to acknowledge today's positions towards AI adoption. Narayanan & Kapoor (2025) state AI innovation is ongoing, but it still lags decades behind. A major reason is safety: when models are more complex and less intelligible, it is hard to anticipate all possible deployment conditions in the testing and validation process […] Consider recommender systems on social media: they are powered by (increasingly general) machine learning models, but this has not obviated the need for manual coding of the business logic, the frontend, and other components which, together, can comprise on the order of a million lines of code (Narayanan & Kapoor, 2025). The contrast with copious literature in economics, sociology and law is certainly stark (in the previous chapter Acemoglu's theories on the macroeconomic effects of AI have been laid out).

Notwithstanding, professional consultancies, and national and supranational institutions have published innumerable reports about future scenarios. One deserving attention is the G7 report on AI. The report describes three scenarios (here reported as written therein), and how they may turn out:

1. *Conventional Wisdom Scenario*: this scenario aligns with the view that technological change is always gradual, and AI will follow a similar trajectory to earlier general-purpose technologies. Under this scenario, AI may lead to a modest increase in productivity growth, perhaps in a similar range to the computer and internet boom of 1995-2024 but would not cause radical disruption to existing economic structures. The development and deployment of AI capabilities continue at a steady but manageable pace, allowing for gradual adaptation of workforce skills and business models.

2. *Intermediate AGI Scenario*: this scenario incorporates predictions of AGI[4] and transformative change, but on a more extended timeline of approximately 20 years, which was the upper bound of Hinton's[5] prediction. In this future, we see a progressive advancement of AI capabilities across domains, gradually approaching human-level performance in increasing tasks. This scenario allows for more time to adapt economic policies and social structures but may still generate significant challenges by the 2040s.

3. *Accelerated AGI Scenario*: this scenario envisions the development of AGI within a 3 to 5-year timeframe (2027 to 2029), reflecting the most optimistic predictions from the Silicon Valley community […] as well as the lower bound of Hinton's time frame. This rapid progress could be driven by breakthrough algorithms, exponential increases in computing power, or unexpected synergies between existing AI technologies. Under this scenario, we would see a swift and dramatic transformation of the economy, with AI systems quickly matching or surpassing human capabilities across a wide range of cognitive tasks. This could lead to unprecedented productivity gains but also pose significant challenges for labor markets and economic and

[4] Artificial General Intelligence.
[5] Geoffrey Hinton, Emeritus Professor in Computer Science, University of Toronto.

social stability. While the "Accelerated AGI" scenario may seem unlikely to some, the potential magnitude of its impact makes it crucial to consider it in our planning. Optimal preparedness requires us to take seriously even scenarios that some consider low probability but that would have extreme consequences.

Considering now such mixed and contradictory events, it is challenging to grasp how actually will CCIs be affected. What is more, the influence of ML-based software in CCIs also depends on how artists and consumers, and even companies, react to content made that way. Recently, music distribution platform Bandcamp banned AIGC to favor creativity by real musicians, stating *that the human connection found through music is a vital part of our society and culture, and that music is much more than a product to be consumed. It's the result of a human cultural dialog stretching back before the written word*[6][7].

In accordance with Valiati's (2025) standpoint, the path forward for creative industries should take into consideration some elements such as:

- *Digital transformation*: Balancing between the opportunities to express more of oneself, but fighting against oversaturation and shorter attention spans
- *Cultural protectionism*: Since nations are increasingly turning protectionist, creatives need to seek unconventional ways to get exposed to global cultural contents.
- *Adaptation to geopolitical realities*: Redefining supply chains, collaboration between countries, dialog and diplomacy.
- *Post-pandemic resilience*: Developing hybrid models enabling users to experience physical and digital events.
- *Inequality*: Here, the need goes in the direction of more diverse storytelling and inclusion and remembering that any social and cultural activity is the result of a long-standing interweaving of human people and their beliefs.

[6] Keeping Bandcamp Human: https://blog.bandcamp.com/2026/01/13/keeping-bandcamp-human/
[7] More on the Bandcamp case and use of AI in music are discussed in Chapter 4.

- *Sustainability and ethics*: Not only making their production processes environmentally sustainable but also realizing works conveying social solutions.
- *Balancing AI and human creativity*: As said up to now, deploying AI but maintaining the core human creativity behind creative production.
- *New business models*: Being able to foresee and anticipate new business models to gain a lasting competitive advantage.

In the next chapter, among pivotal cases stemming from the music industry, different possible viewpoints on AIGC distribution by platforms will be considered as well. However, it is so far statable that AIGC is not always appreciated by consumers. (Jia, Yin, Li, 2026) surveyed Chinese customers' perception towards art made in part or entirely with AI assistance and, surprisingly, most turned out to be reluctant to it. Additionally, this feeling seems weird because ever since the Internet came about, various forms of digital art have been conceived and, in recent years, digital art selling has been marked by the rise and gone hype towards NFTs, which are pieces of digital code related to art content and more. The main difference between AIGC and all that came earlier lies in the nature of the former. It is undiscussable that since the 1980s, when digitization/digitalization of analog products became increasing, people had now a chance of making artistic outputs without necessarily necessitating any formal training or skills. Again, the music industry of the time is a clear example: after the introduction of drum machines, such as the Roland TR-808 or sequencers, people could make, modify and cut music as they liked in their homes. Recording studios and the aid of live musicians were not so crucial anymore, and the skills required to make an entire album were by now far lower.

Changes and innovations in CCIs are the outcome of the intersection between cultural, economic, and social factors (Cunnigham & Potts, 2008) and, usually, they involved artistic creativity and entrepreneurial skills (Howkins, 2002). Though the most evident innovations happen in the product realms, processes are not immune to them. In fact, it is probably the process of creating that

generates newer and fresher products, since technology itself is a driver and an independent variable in product conception and creation. This aligns with the Schumpeterian theory about the *Innovating Entrepreneur* who takes advantage of the latest technologies available to create new markets and new customer segments. McCraw (2007) recalls Schumpeter's idea that such actor in the economy is responsible for enabling the capitalist engine to work properly, and that creative destruction "incessantly revolutionizes the economic structure from within, destroying the old one and creating a new one" (Schumpeter, 1942)[8].

However, it is useful to note that, unlike other sectors, in CCIs innovation is slower and takes way longer to be applied. Technology may not be that crucial of a factor in determining – in the short term – the fate of creative professionals and that the change in tastes and ideas may be only apparent (Potts & Cunningham, 2008) (see digital music reproduction technologies in the following chapter).

To foster good and adaptive policies, economists and policymakers should understand the process of creative destruction (Valiati, 2025) and support creative entrepreneurs and innovators who drive the process of creative destruction, providing them with the skills and opportunities they need to bring their ideas to life (Florida, 2002).

3.2 The Solow-Swan Growth Model

One particularly practical model to understand the growth rate of a sector is the Solow-Swan Model, proposed by Robert Solow and Trevor Swan in 1956. The starting point of this model starts with the equation

$$Y = F(K, L, A)$$

where Y represents the total output, K is capital, A represents technology. The model's focus on capital accumulation and technological change aligns well with the innovation-driven nature of creative sectors (Valiati, 2025). Furthermore, this model can directly be linked to the concept of Total Factor

[8] Schumpeter's American period.

Productivity (TFP) given the fact it offers a valuable insight into intangible assets and externalities. It is important to consider, however, that this model does not take into account human capital as a distinctive input (differently from the consequent model idealized by Mankiw-Romer-Weil). As Valiati states, the distinction is determining because workforce, talent, knowledge and know-how are a factor in growth and value creation.

The Solow-Swan Model stands on a handful of fundamental assumptions:

1. Constant returns to scale: The production function exhibits constant returns to scale, meaning doubling all inputs will double output.
2. Diminishing marginal returns: Each additional unit of capital or labor yields a more minor increase in output than the previous unit.
3. Constant savings rate: A fixed proportion of output is saved and invested.
4. Closed economy: There is no international trade or capital flows.
5. Total employment: All available labor and capital are fully utilized.
6. Perfect competition: All markets are perfectly competitive.

If the former formula *Y = F (K, L, A)* is rewritten into a Cobb-Douglas function, the result is

$$Y = A * K^{\alpha} * L^{(1-\alpha)}$$

where α and $(1 - \alpha)$ represent the share of output that goes to capital and labor, respectively.

Nonetheless, the model presents a few limitations due to the inconsideration of human capital and the fact that technology is seen as an exogenous factor simply affecting the economy. This leads to thinking about long-term growth as the result of mere technological progress, somehow independent from the overall economic situation. Since technological progress is exogenous, policies can only affect the level of output, not its long-term rate. In the next chapter, entirely dedicated to studying the music industry, a case study by Valiati shows how the limitations of this model applied to the music industry.

Chapter IV – Focus on the music industry as a major force in CCIs

"Music is at once the most wonderful, the most alive of all the arts, and the most sensual."

Susan Sontag

4.1 – On the definition of music

The present chapter focuses on the music industry as one of the main facets of CCIs according to the DMCA definition[1]. But what is music?

Defining music is a demanding endeavor, depending on the function served and the lens through which it is observed. It might be studied from a sociological standpoint, or an operational, or structural one. Philosophers, musicians, aestheticians, pedagogues, and physicists alike have struggled for centuries to come to a unanimous definition of music. Music is ancient, pancultural, and, given the spontaneous emergence of song in children, virtually universal (Davies, 2012).
It is likely impossible *(or pointless)* to define music in a schematic and precise way, because music, unlike hard sciences – like math or biology –, corresponds to emotions proper of the musical individual. Moreover, sometimes musical functions are directed to the self (self-expression), to intimates (lullabies, love songs), and to the group (national anthems) or even to the enemy (war chants) (Davies, 2012).

The simplest and to-bone-stripped definition of music is (probably) the following: Music is one the fine arts and is born from the combination of its constitutive elements: sound and duration (Murcia, 1979). Levinson (1990) proposes that music is *"sounds*

[1] See chapter 1.

temporally organized by a person for the purpose of enriching or intensifying experience through active engagement (e.g., listening, dancing, performing) with the sounds regarded primarily, or in significant measure as sounds".

Philosophically, the most transcendental and renowned definition of music, as art and more, was provided by Arthur Schopenhauer in his widely known and essential work, *The World as Will and Representation* (1818), where he defines music as so:

Music stands quite apart from all the other arts. In it we do not recognize the copy, the repetition, of any Idea of the inner nature of the world. Yet it is such a great and exceedingly fine art, its effect on man's innermost nature is so powerful, and it is so completely and profoundly understood by him in his innermost being as an entirely universal language, whose distinctness surpasses even that of the world of perception itself, that in it we certainly have to look for more than that exercitium arithmeticae occultum nescientis se numerare animi ["an unconscious exercise in arithmetic in which the mind does not know it is counting"] which Leibniz took it to be… We must attribute to music a far more serious and profound significance that refers to the innermost being of the world and of our own self.

Nowadays, musical thought relates mostly to sound, but in ancient Greece, the word *Mousiké* (μουσική) translated literally as *"the art of the muses"*, the nine muses of knowledge and practice in arts and science. They were Calliope, the muse of epic poetry; Clio, the muse of history; Euterpe, of double-pipes and music; Erato, of love poetry and lyric poetry; Melpomene, the muse of tragedy; Polyhymnia, of hymns and sacred poetry; Terpsichore, the muse of dance; Thalia, of comedy and pastoral poetry; and Urania, of astronomy.

Due to times changing and technology becoming more productive and ground-breaking, even music perception changes altogether. Nonetheless, the basic function of music is bringing people together and making them feel part of a community. In the following section, the focus will be on technological change and how it functions as a driver in musical innovation, artistically and economically.

4.2 – The bound between music and technology

The history of the music industry, as we know it today, dates back to the late 19th century when inventions like the phonogram, and successfully the gramophone, came about and were to enter every household in the Western world. For the first time, people were not supposed to go towards music by attending parties or balls; instead, music went directly to their homes, and so was born the record business. Moreover, the experience of music enjoyment was no longer reserved for the wealthy but became possible for the middle class and bourgeoisie as well.

It is no coincidence these events took place during the aforementioned period, marked by the continuous search for scientific progress and overall optimism. Technology turned out to be one of the main drivers in music composing and innovation, so much that in the second half of the 20th century American composer Charles Ives created a symphony to be played by synthesizing and regulating radio frequencies (Bernstein, 1961). The industry was profoundly affected by technological changes, such as the advent of radio, TV, record albums, cassette tapes, CDs, MP3 players, the Internet, etc. Thus, popular music provides an unusual setting to understand how rapid technological change affects an industry (Krueger, 2005). Nevertheless, technological progress in music had never been well received and it usually took time to really settle in such artistic and conservative domain. This is the case even today.

In the 1980s and '90s major technological contributions saw light, and among the most important were drum machines, samplers and sequencers. This kind of equipment revolutionized music production, posing a threat to recording studios and individual musicians, since anyone was now capable of creating music just by taking chunks of other records *(sampling)* and rework them to their liking or making an elaborate drum line by using a drum machine (such as Roland's TB-808 or TR-909). It is during this proficient time in history, starting in the United States, that *Hip Hop* and, later, *House Music* were born. Even though both genres had – and still do have – fond communities of followers and enthusiasts, classically trained musician were skeptical about the potential of digital machines in music production, fearing their livelihoods could be severely damaged and

so be put out of market. Anyhow, reality has looked very different as opposed to musicians' pessimistic views back then[2], because even though it is true digitalization enabled more people to create music without a proper training, it is also true that musicians continued to thrive since untrained producers could not – *in the classical training conception* – make too technically advanced tracks[3].

DJs too proved to be reluctant about technological advancement. Compact discs (CDs) were invented and marketed already in the1980s and in 1983 the first ever CD player for DJs was introduced by Technics, the same company renowned for making and selling world-standard DJ turntables *Technics SL-1200 MK2* which are still at the forefront of vinyl DJ'ing. However, the Technics CD players were quickly discontinued since their arrival on the market was too long anticipated, at a time when not only DJs but the average listener would purchase wax records to enjoy music.

It would be in the 1990s when people started changing mediums of reproduction from vinyl to CDs, the latter seen as more practical and cheaper. In 1992, in fact, Japanese company Pioneer, forming later on Pioneer DJ (renamed AlphaTeta in 2023), released the first ever *CDJs*, nothing more than a simple CD player embodying all technicalities proper of DJ turntables, but also introducing loop buttons and *Master Tempo*, a novel function locking the tonality of a song while changing the pitch to *beatmatch*[4] tracks. Nonetheless, the almost total adoption of digital mediums in DJ'ing occurred only in the early 2000s, precisely in 2003, when by now most DJ's played CDs instead of actual wax records[5], wreaking havoc in the vinyl market from production to distribution. It was during the same period that illegal music sharing platforms like Napster and E-mule were coming along as well, plunging the entire music business to an all-time low on sales and revenues, which long-term effects are still evident today.

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[2] In an interview, Prince condemned sampling, stating it is not an art form but rather theft, also arguing about the fact that someday sampling would be so common that producers would start sampling the sample, losing trace of the original track it came from.

[3] This statement is clearly a provocation. In fact, many producers from that era made amazing pieces of music that are still relevant today and marked a new generation of music makers. Among them, just to name a few Afrika Bambaataa, Lil' Louis, and The Egyptian Lover.

[4] Beatmatching is the practice according to which two records are synchronized together. While one is playing on the outer sound system (Record A), the DJ needs to cue up the other (Record B) and find the exact matching tempo of the first record, all in their headphones.

[5] It is important to note, however, that many underground DJ's also started experimenting by delivering hybrid DJ sets and so creating more nuanced soundscapes. One of them is Italian legend Francesco Farfa.

Record labels were struggling to sell and recoup their investments, which were now all transposed onto the final consumer. Since piracy hit the music business so strongly, most chart-topping artists started charging twice or three times more their live concert ticket prices, their merchandise and even the few records they continued to release in physical format (Krueger, 2019). In 2003 the total value of recording sales (including CDs, singles, LPs, etc.) in the U.S. was $11.8 billion according to IFPI[6] (2004), while the total value of concert ticket sales was $2.1 billion according to our tabulations (Krueger,2005). In 2024, according to *Pollstar's 2024 Year End Report*, the average price for ticket concerts amounted to $135.94 and the 100 most influential American acts generated revenues of $6.1 billion. Thus, from the consumers' perspective, recordings are a much larger market, but from the artists' perspective, concerts represent a much more important income source (Krueger, 2005). Additionally, rising prices in ticket sales reflect the already mentioned Cost Disease envisioned by Baumol. Organizing a music event, like a concert or a festival, involves high workforce employment and remuneration and, since music event production jobs cannot be automated, these services are destined to increase in price. In some respects, popular music concerts are a slow productivity growth sector: it takes just as long and about as many people to perform a concert today as it did 20 years ago (Kreuger, 2005). Even David Bowie envisioned such scenario: event production cost and the plummeting sales in recorded music would result in higher fares for concert goers. This is known as the *Bowie Theory*, which according to David Bowie himself, all left to do for musicians is touring to earn money and compensate for missing royalties.

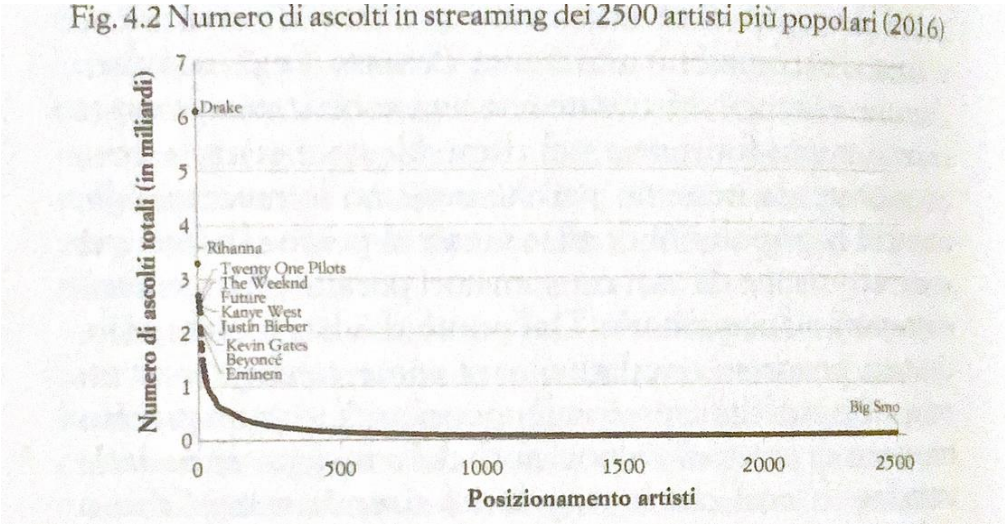
Major record labels would also sign deals with music selling platforms and, more recently, with music streaming platforms such as Spotify or Apple Music to feature their artists in most mainstream playlists, making sure they would be listened to oftentimes and, therefore, making more money out of them. The situation represents a modern-day Payola mechanism (Payola payments were outlawed in the early 1960s), by which large record labels pay high amounts of money to radio stations and streaming platforms to place artists in high reproduction playlists and make their songs appear more while on shuffle mode.

This has led, according to Alan B. Kreuger in his book *Rockonomics*, to a long tail

[6] International Federation of the Phonographic Industry.

condition in the music industry. The long tail theory is the one according to which a few big players gain almost the total revenue and profits in a specific market – and therefore increase their market share – where most little and medium players gain very little or zero.

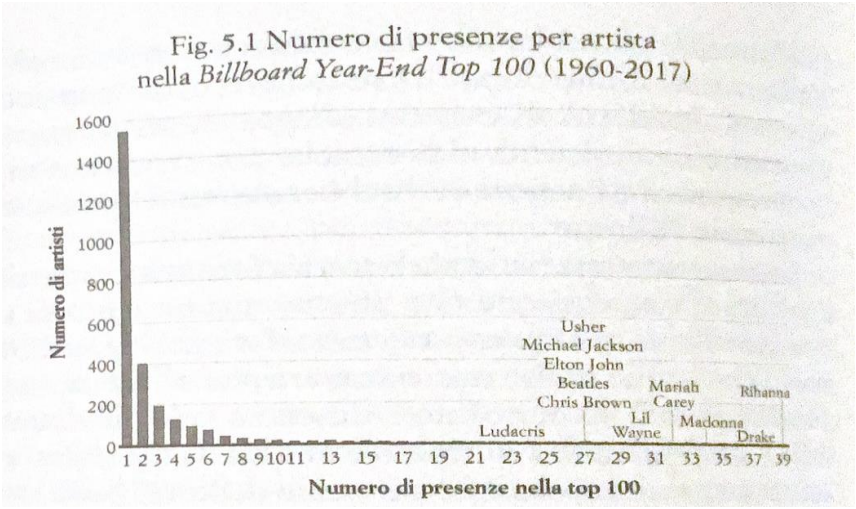
Figure 4.1 Number of streaming plays of the 2500 most popular artists (2016)



Source: Rockonomics, Alan B. Krueger (Italian Edition, 2019).

In the music industry, the same happens: Just a handful of major label-backed artists are featured everywhere on the platform and so earn the most in royalty payments and the vast majority of little and (often) independent musicians do not make enough and fall into oblivion or, conversely, are rediscovered and appreciated in niche markets. The more an artist is featured and listened to, the more they sell, and consequently they also chart more on international charts, like the world-best-known *Billboard Hot 100.*

Figure 4.2 Number of presences per artist on the Billboard Year-End Top 100 (1960-2017)



Source: Rockonomics, Alan B. Krueger (Italian Edition, 2019).

Spotify is one emblematic case. The Swedish huge music streaming service has highly and fiercely been criticized for not paying royalties to artists uploading their music onto the platform, so enriching the catalog available. There is more to this. Not only do artists not appear in most playlists and get enough streams, but also, they are overshadowed because of the so-called *Superstar effect*. Originally theorized by Alfred Marshall and later developed by Rosen, the Superstar effect explains why some artists are not substitutable with others: *at the heart of the imperfect substitution of performers is the notion of quality, or talent, of a performer. As Rosen (1981) puts it, "Lesser talent often is a poor substitute for greater talent. The worse it is the larger the sustainable rent accruing to higher quality sellers because demand for the better sellers increases more than proportionately: hearing a succession of mediocre singers does not add up to a single outstanding performance."* Nevertheless, what makes one musician more talented than another is not easily determinable and quantifiable. There are not enough persuasive empirical models to answer that question, since talent is made up of many factors proper of the individual, such as upbringing, product quality, general appeal[7].

What about AI then? In the words of DJ/Producer Harold Heath, in his book *Long*

[7] Some measures are exposed in Krueger and Connolly's Rockonomics: The Economics of Popular Music.

Relationships: My Incredible Journey from Unknown DJ to Small-time DJ, the music world is at the same time progressive and very conservative, where artists and fans always think back to the great past revolving around music, places and communities[8]. Rightly so: algorithms could pollute the music industry more than it already has been and AI-generated music (AIGM) would damage music professionals, from producers to engineers, wiping away a large part of them out of the music sector. But it is noteworthy that AI applications in music composing and learning span over seventy decades, precisely commencing in 1951, when mathematician and computer scientist Alan B. Turing created the first ever computerized piece of melody, a version of the *God Save the King* tune. Ever since, experiments in mixing both fields together have continued until present day, sparking great debate on whether AI is to be used in producing music.

As of now, the world looks like it did in the ‘80s and ‘90s where most musicians and other music professionals were skeptical and averse towards drum machines, but a an increasing amount of them is already speaking up in defense of AI as a *tool and a new cornerstone of music making* and that AI usage boils down to an artist's end goal. Dave Stewart of Eurythmics called them an “unstoppable force” and said musicians should, begrudgingly or enthusiastically, embrace them (The Guardian, 2025).

Quite recently, in a Resident Advisor article about the aforesaid Bandcamp ban on AIGM, Holly Herndon, avant-garde composer and Ph.D. from Stanford University's Center for Computer Research in Music and Acoustics, described why it is important to distinguish between AI-related issues. In her words, *“when they say that music 'generated wholly or in substantial part by AI' is not welcome, that is understandable in the case of a bot posting 1,000 generic songs a day”*, and that the problem should be addressed on the legitimacy of artists using AI models to make music, that is, the actual intended use they make of the technology.

She then traces two possible scenarios:

Example A: “I wrote a song all by myself but want to pass it through a model trained on my own work as a production layer. It will have the same artifacts [i.e. AI output] as any

[8] More precisely, Harold Heath calls on this concept in relation to underground electronic music, though it can be extended to all of music in general.

slop but will undeniably be my own creative work." Example B: "Someone generates a generic pop song on Suno and gets someone to re-record it, applying a human filter to that song." "The first song will contain artifacts; the second will not. Which song is more human?" (Holly Herdon on RA, February 2026).

She then goes on saying, in an X post:

I understand why Bandcamp is taking this measure but it's a tourniquet. The human / AI binary is not going to hold and will become a matter of superficial optics. I already have more authorship in my models than most pop stars do in their songs. People will already be using models to generate songs they then put a human filter on. Artists will integrate generated passages into works they orchestrate and will soon train their own models. Another protection might be to flag accounts that post an inhuman amount of content, but that too may seem retrograde We live with infinite media now.

A user of the same platform later responded that *"throwing the word ban towards one of the only companies that at least occasionally looks out for artists is kinda goofy"*. This stance shares the line of thought of many interviewees in the presented case studies. One interviewee when asked about the future possibility of integrating AI in cost planning and event production – (important: *not music production*) – simply responded: *"No. What would we be doing then?"*. Another said: *"We are not currently using AI in any of our activities but never say never"*. Only when asked about his opinion on AIGM he replied: *"It is simply disgusting"*.

To understand the impact AIGM is having on the music industry and on copyright and other intellectual property rights (IPRs) the case of Gen AI music company Suno is noteworthy.

Launched in 2024, CEO and co-founder Mikey Shulman argues that the future of music is a *format you play with, not just play*, and because of that he envisions a shift from passive listening to active creation, comparing the future of music to the interactivity of video games. The company created a piece of software enabling people with mediocre music skills to make advanced music, to gift them with the joy of creation that would otherwise be proper of highly trained musicians. Therefore, it somehow acted as a *democratic force* of creative experience. This move caused significant backlash by the

likes of professional and amateur musicians, major labels and the RIAA (*Recording Industry Association of America*) and the GEMA (*Gesellschaft für Musikalische Aufführungs*) filing for lawsuit on copyright infringement.

Even though lawsuits followed, investors were not scared off, leading to a total company valuation of $2.45 billion. This is due to the fact that, right now, AI innovation represents a gold rush everyone is striving for in Silicon Valley and investors only needed to be persuaded enough to invest in a music company. In the words of Shulman *"the thing that investors needed help realizing, is how important music is in the world. Once you show them, their minds are changed and they realize that much, much more is possible."*

Suno, just like the two other big names in AIGM companies (Klay and Udio), made a deal with a major label – Warner Music Group (WMG) – to access their catalog and train its algorithms. Moreover, AI-powered music is flooding streaming services: Deezer says more than a third of music delivered to it each day is AI (equal to 50,000 tracks), and 70% of streams of AI music on Deezer are fraudulent (scammers get cheaply made AI tracks on to such services, then use bots to manipulate streams at scale in order to get royalty payments, although services tend to be increasingly attentive about this). The company has started tagging AI tracks to alert users (The Guardian, 2026). Additionally, Shulman states that the success of Suno is related to the digital, social, and interactive aspect of music making, stating that *"it should be social, meaning you're doing it with other people. What we are doing is building the best digital version of that".* However, according to the results found, this is not entirely true. The music scene, especially the one related to underground electronic music, has already witnessed this aspect of interaction and community, given that music is first of all a passion bringing together people from different social backgrounds. Plus, following Florida's (2002) views, the birth and success of creative companies happen to greater extent in geographical zones where artists and creatives tend to gather. Because of the internet such distances have virtually reduced, enabling creatives to sell and showcase their art through social media, so AIGM does not really add anything new to the picture. What is more, investors in companies like Suno do not care about the faith music and music creatives are facing but are rather concerned about their wallets. In the January 31, 2026, issue of The Economist, AI investors are simply portrayed as mere and simple capitalists.

What impact might AI have on consumer behavior when it comes to music? Researchers report that people seem to be reluctant and worried about AIGM, convinced it encroaches a human-only activity, that is making music. Arenal, Aguado, Armuña, Ramos, Feijoo (2026) drawing on Amabile's framework, studied people's perceptions toward AIGM considering four important dimensions[9]:

1. The *cognitive/sensitive dimension*, which encompasses insights related to the experience of creating, interpreting, and listening to music, including aspects such as meaning, emotions, feelings, and sensations, as well as technique, skills, and aesthetics.

2. The *structural dimension*, concerning the arrangement of the musical experience, whether through listening or creation/interpretation. It features elements such as scenery, rituals, symbolism, tools, actions, and routines.

3. The *functional dimension*, examining the operational consequences of GenAI's use in relation to other players in the value chain.

4. The *relational dimension*, focusing on the societal perspectives that participants provide regarding their experiences of music listening and creation in the context of GenAI.

Results expose AI-generated music faces a major challenge in establishing emotional resonance with listeners. Even when consumers recognize AI-produced music as technically proficient, many highlight the absence of a 'human touch'—a quality traditionally associated with musical artistry (Oksanen et al., 2023), even if it becomes increasingly difficult to identify such a difference unless the AI-based content is labelled as such (Arenal, Aguado, Armuña, Ramos, Feijoo, 2026). AIGM is thought to be devoid of human feelings and touch, it is based on data mining, and it could affect cultural diversity. Consequently, hyper-personalization poses a risk to the diversity of music discovery: *"You lose the magic of music; it gives you everything pre-packaged, and you discover nothing, nor do you identify with an artist or with other people"* a participant stated. Participants further express concerns about overreliance on AI-driven content curation and its potential impact on cultural diversity, noting that *"everything sounds*

[9] Taken directly from their study.

similar. It's so easy to anticipate" (Arenal, Aguado, Armuña, Ramos, Feijoo, 2026). Furthermore, another worrying factor relates to non-human-agency and the fact that AI-generated content is phantom-like. Participants claim: *"I can't become a fan of something that doesn't exist",* or *"I lose interaction with people (...) and that isolates me more";* and *"I lose contact with the musical culture"*. The authors conclude saying *"The emotional connection between the artist and the audience, a fundamental element of the musical experience, is perceived as diminished in AI-generated works. Additionally, oversupply and competition within current distribution models are closely linked to growing challenges in content discovery. The indiscriminate upload of AI-generated tracks, often not identified as such, further complicates content discovery for consumers and inventory management for streaming platforms (Artists Rights Alliance, 2024; Kjus, 2021). This challenge raises governance concerns, particularly regarding platforms' evolving criteria for content discoverability. Moreover, it impacts the core value proposition of streaming platforms, as AI-powered personalization becomes an increasingly distinctive feature, shifting value from artistic creation to technological optimization"*. Finally, a sort of dualism persists. On the one hand, AI can make tasks easier and time-efficient and can unleash amazing opportunities to explore new territories in music production and really democratize music production. On the other hand, however, doubts on the proper use of such technology remain, and the fear of losing touch with one's humanity is dreadful. Reasons for such fears are not merely rational but stem from much more profound preoccupations concerning physiological traits and regarding society's anthropocentric view of the world, according to which humans are far superior to any other entity or being on Planet Earth. Dunham, van Kleef, Stamkou (2025) claim *"This perspective reflects the embodied threat account, which argues that unfavorable responses to AI-attributed music arise from more deeply engrained, automatic reactions — reflecting anxiety that creative AI is going to threaten human livelihoods and undermine the very definition of what it means to be human"*. These findings are in line with the stances interviewees in the present work showed[10].

[10] It is useful to notice, however, that another recent study criticizes literature building upon the notion that humans reject AIGC in the first place. Professors Chia, Hartanto, Tong (2025) believe that the problem should be address on the premise of authorship, and claim their results witness the prevalence of positive feelings toward AIGM. However, they also claim that the sample of participants surveyed consisted of university students only – who are more open-minded to accepting technological change – and that the music pieces provided were Pop Music only, being this easily enjoyable. Moreover, LLM

4.2.1 The Solow-Swan Model in the music industry

Before venturing into the case studies this work is built upon, the following section draws from Valiati's framework on economic policy in CCIs and presents his own application of the Solow-Swan Model to music streaming[11].

The Solow-Swan Model is an economic growth model used to empirically estimate TFP (Total Factor Productivity), and normally considers three main factors of production, being capital (K), labor (L), and technology (A). The aggregate production is then represented as a Cobb-Douglas function:

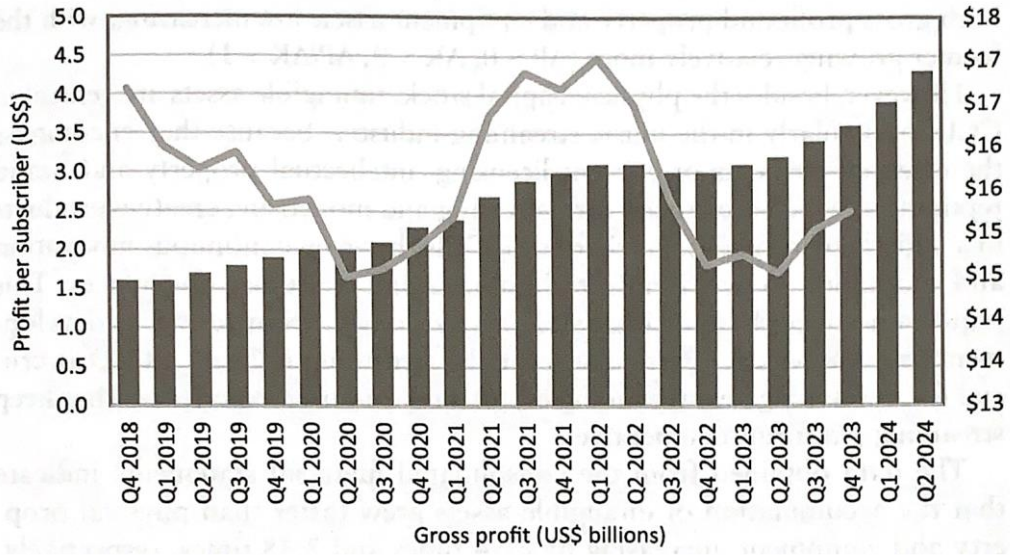
$$Y_t = A_t K_t^{\alpha} L_t^{(1-\alpha)}$$

where α represents the output elasticity of capital, measuring the responsiveness of output to changes in capital. 1-α represents the output elasticity to labor, measuring the responsiveness to changes in labor.
Without technological change, economic growth is constrained to the mere reproduction of a stationary equilibrium (Valiati, 2025). But since technological progress is treated as an exogenous force, the model does not fully explain how sustained growth works. This is the significant limitation of this model. What is more, the traditional Solow-Swan Model assumes constant returns to scale. In the case of streaming platforms, goods – the music listened to – are non-rivalrous, meaning that the consumption of such good by one individual does not decrease the quantity of the good available, as opposed to, for example, physical mediums like vinyl or CDs. This makes returns to scales highly plausible, not constant. In fact, in the case of Spotify, despite increasing growth in subscriber base, the profit per subscriber shows varied trends. Additionally, Valiati states that constant returns to scale are typical of physical goods, and since returns to capital stock can be only plausible, great attention is put into intangible assets. Particularly R&D in technological advancement in order to keep the platform competitive.

software can produce almost state of the art Pop songs because of the large amount of Pop Music data uploaded a mined.

[11] Theoretical foundations of the Solow-Swan Model are presented in Chapter 3.

Figure 4.3 Spotify gross profit and profit per subscriber (2018-2024)



Source: The Political Economy of Creative and Cultral Industries, L. Valiati (2025)

4.3 Case studies

The cases presented in this chapter, for the most part, focus on the electronic music realm (Outcast Torino, Sorgente Sonora, theBasement, Jooice, Movement Entertainment)

whereas only one can relate to a more mainstream counterpart (Sony Music Italy) and a couple come from the classical music realm (Teatro Alla Scala, Giovine Orchestra Genovese). Interviewees were contacted through institutional e-mails or Instagram DMs, and phone calls or Google Meet videocalls were later conducted.

4.3.1 Methodology and Results

Participants were asked a set of three prepared questions, along with others asked during the conversation, creating a mixed interview. The questions are here reported:

Q1: Growth: Has your growth strategy followed an organic path or an accordion path, meaning you've alternated between phases of growth and degrowth (or standstill) to best suit your needs?

Q2: Synergies: Do you think synergies are important in the music business? How significantly have they helped?

Q3: Future scenarios: Recently the world has been witnessing a growing hype toward AI and has been questioning its potential benefits and drawbacks. In the music industry, the prevailing effects of AI are found in the artistic process (music production) while in the business side of things, they are generally neglected. Do you think you'll ever employ AI as an assisting tool in cost planning and event production?

Even though the sample is too little to make generalist assumptions, answers followed a fragmentation trend, meaning no clear path among music organizations was delineated. In fact, when asked about their growth strategies, respondents gave mixed answers, where the majority claimed they experienced organic (constant) growth over time – these being Teatro Alla Scala, Outcast Torino, theBasement, Sony Music Italy. Two – Sorgente Sonora and Gog Giovine Orchestra Genovese –, instead, said their growth path resembled more an accordion-based model. Two more, - Movement Entertainment and Jooice Music – however, said it was a mix between the two (organic in one phase, accordion-like in the

other).

On Q2, five respondents – namely Teatro Alla Scala, Movement Entertainment, theBasement, Sony, and GoG – claimed synergies have been fundamental in their strategies. Three, all Electronic Music representatives Outcast, Jooice, and Sorgente Sonora, said they were more *self-centered*, but they nonetheless created strong communities and a sense of belonging among internal collaborators. So, synergies might be external (in the case of the five) and internal (three).

On Q3, focusing entirely on AI and its eventual applications, results have turned out mixed: three respondents said they're already using it in their managerial operations (Teatro Alla Scala, Jooice, Movement); two said they do not use it at all and are not planning to (GoG, Sorgente Sonora); two more said they don't know yet and that maybe they might someday (Outcast, theBasement); only one (Sony Music Italy) is currently working on how to apply it efficiently.

Following what results provided, no clear homogenous path is present, but rather fragmented and patchy. What is more, organizations in the same sector do not follow the same strategies at all. For instance, The Scala is using AI in organizational operations, whereas GoG does not. Holes and incoherence in research outcomes are also due to little knowledge of such technology, resistance to change, and the precocious and disruptive effects manifested.

4.3.2 *Teatro Alla Scala*

Milan was left without an opera theatre on the night of 25th February 1776, when the Teatro Regio Ducale was destroyed by fire in mysterious circumstances. The empress, Maria Theresa of Austria, appointed the architect, Giuseppe Piermarini, to build a new theatre. The site chosen was the degraded area of the Church of Santa Maria della Scala, so named in honor of Beatrice Regina della Scala, the wife of Bernabò Visconti. The work was completed in just two years – from 1776 to 1778. And so began the story of the Teatro Grande alla Scala, destined to become one of the most important focal points for both Italian and European culture. On the night between 15th and 16th August 1943, the Theatre suffered considerable damage during air raids carried out by the Royal Air Force. Reconstruction began with an unusual concert amidst the wreckage, the orchestra seated in front of the curtain and the audience on ordinary chairs. The Teatro alla Scala was rapidly rebuilt and on 11th May 1946 it reopened in all its original splendor with a memorable concert conducted by Arturo Toscanini. Between January 2002 and December 2004, Mario Botta carried out the most profound work of restoration and modernization seen at La Scala since the end of the Second World War. The fly tower and the oval tower, which can be seen from the outside of the building, stand as a testament to this renovation.

This reads the history page dedicated to the Teatro Alla Scala, one of the world's leading institutions in classical music, and the most sought-after and dreamed stage by concert performers.

Interview with superintendent Fortunato Ortombina focused mainly on organizational and administrative aspects, referring to the reported questions at the beginning of this paragraph.

According to the superintendent's views, growth has always been constant because of environmental aspects and how the environment intervened both directly and indirectly in the operational decisions regarding the theater's life. Furthermore, Teatro Alla Scala is the first Italian theater to have obtained the qualification as *autonomous entity*, meaning theater employees sell ownership of the theater to the local council and this, together with the State, and both create an institution dedicated to music performance. After Milan, this happened all over Italy. In this sense, synergies have been absolutely fundamental, even because the Scala, as opposed to other theaters, suffered from blockages in programming and activity due to the historical happenings between the two wars. In fact, during World War II, bombings on city of Milan targeted the Scala as well, and it was as soon as the war ended that reconstructions began, leading to the reopening of the theater on May 11th, 1946. This was an enormous symbol for all the country, reaffirming Milan as an attractive hub for talents – for instance Giuseppe Verdi was not from Milan, as Toscanini was not and, just like them Giorgio Armani. These considerations are useful to understand and envision how Florida's theories on artistic clusters prove true.

When talking about Artificial Intelligence (AI) and its adoption in organizational and managerial aspects, as opposed to the Giovine Orchestra Genovese – described on paragraph 4.3.8 – superintendent Ortombina feels comfortable in saying it is useful to define a process and that they use AI largely in project management, calculations, or workforce optimization. He goes on saying "*even experiments*[12] *by the RAI's Studio di Fonologia Acustica in electronic music were perceived as AI. Nonetheless, it is essential to know how far it is possible and humanely feasible to push ourselves, because creativity still remains central.*" He concludes by saying that "*I'm not even worried about work positions. It is true some jobs will be sacrificed, but if we think about the First Industrial Revolution when people occasionally burned factories to still do their jobs by hand, I think it's good if ever since, some risky jobs are not performed by people anymore.*"

[12] Directed by Bruno Maderna and Luciano Berio.

4.3.3 *Outcast Torino*

Hailing from the city of Turin, just like the name conveys, Outcast Torino is the embodiment of an empire. Starting their journey in 2013 and affirming their presence as one of today's leading collectives in the underground electronic music panorama, their events showcase the best DJs and producers from the Italian and international scenes.

Founder and Owner Salvatore Ficara, after being contacted privately, responded to the questions reported in the previous section through phone call.

When asked about the growth strategy perceived by Outcast, Salvatore said it all started as a little party at Club Gamma in Turin, later changing location because of capacity issues. What is distinctive is not just creating a party calling people's attention, but rather a party *that is there to stay*. Challenges faced concerned the generational change Outcast experienced overtime, and the fact that emerging in the Turin scene back in the days was harder, since already present big names could overshadow smaller players in the city[13]. Older generations were relatively reluctant to help each other and help between collectives was not so common. However, mutual support, especially among members of the collective, has always been at the core of Outcast's work. In a T-mag interview, Salvatore stressed the fact that everyone, when one of their residents is playing somewhere else, the whole crew is present, and in Trommel's TROI Documentary series, he stated that, even to this day *"the thing that satisfies me the most is to see that we have*

[13] It is important to note, anyway, that the strength of Turin's as a cluster for nightlife in Italy, lies in the club city history and the desire of locals to do and experience new things.

remained nonetheless a group of friends. It's not business. We're all friends and we have a lot of dreams". Additionally, *"our strength is that most of us have been friends since we were little, so we have common dreams, and we all pushed each other toward the same direction, and I think that's what made the difference"*.

Not only is Outcast's expansion due to being a collective where talented DJ residents and guests share the booth, but also to collaborations – such as the notorious one with Loud Contact, which resulted in last year's *Outloud Festival*, on September 20, 2025 – and the fact that each resident has founded a label showcasing and proposing a personal musical view. Among these, Radici – run by Cristian Sarde and Salvatore Ficara -, Coordinate Records – founded by Denaila and Alex Dima -, and Odd One Tape – Munir Nadir's label. Moreover, together with Outcast's own music label Outcast Planet, all these factors together make up for the cultural importance the collective represents, and to further extend and build their presence, they also founded *Oscillate Agency*, a booking agency with a notable artist portfolio, from Outcast's own residents to internationally renowned names.

When discussing about AI implementation in business and organizational processes, at the time of writing, it is not considered, but as Salvatore puts it *"never say never"*. It is important to remember that to keep track of everything in the industry, organizers need to find a way to implement new technologies, otherwise risking being left behind. However, artistically speaking, residents are not interested in using it, now or ever, claiming that making a track out of prompts is simply disgusting.

4.3.4 *Sorgente Sonora*

From the origin of vibration, movement awakens, unfolding into waves that cross the air. These waves carry the essence of music: a universal force that transcends borders, shaping spaces where sound expands and humanity connects. Sorgente Sonora is the pulse of this journey - a source that resonates, spreads, and transforms into a collective state of unity.

Founded in 2012 after the blending of collectives Frames and Subculture, Sorgente Sonora has been one of the main and best-recognized parties from the city of Milan, always featuring exceptional musical talents from the worldwide underground scene.

Based on his own experience, Founder Dario Lem responded by stating they experienced gradual growth in the beginning. However, high and low phases alternated – meaning their growth has been significantly accordion-driven – because of old friends and collaborators departing from the organization, and the COVID-19 pandemic, which forced all entertainment sectors to shut down for a couple years. In fact, as of now Sorgente Sonora is living a new life, restarting their new team, involving younger talents, and curating their artistic program and residency at DKR Club in Milan. Thanks to these factors, their parties are boasting. Moreover, the public is changing, stressing the fact that *"now more people are coming just to have fun, and it is not like it was a few years ago, when only enthusiasts would come. Back then, it was really a niche"*. Additionally, *"more collectives are now coming along as opposed to the time we started"*.

Synergies are also important. Collaborations are useful not only strategically, but also as source for new stimuli and communication between people in the same network. Plus, mutual support reinforces the concepts theorized by Florida[14], that is creating a

[14] See chapter 1.

geographically stimulating and supportive network where many professionals gather.

When questions about AI adoption were brought up, concerns arose. The right usage of AI tools can be tolerated as long as it relates to graphic work, where efficiency and effectiveness can be achieved in a short time. But club programming and communication are to be done by a physical human being. Since this is a job of musical and artistic research, nothing can be delegated to AI systems.

4.3.5 *theBasement*

theBasement™

TheBasement is a project created in 2013 by a group of restless minds born in the 80s wanting to offer a new approach to events in their hometown of Valencia (NIGHTMAG, 2019). Since its inception, the collective has promoted House Music in a country where people generally tend to stick to harder sounds. Not only a collective group throwing parties, but also a record label (theBasement Discos)[15] and festival organizers, and a bunch of friends who joined forces to create a community revolving around House sounds. theBasement are the minds behind renowned Días de Campo Festival as well, active since 2017 in the village of Montanejos – just an hour northwest of Valencia – but also other formats such as Días de Parque, and Días de Cavas. Even though they represent an institution in the House scene, it is fairly important to note that the music they have been proposing was not always present in Spain, especially in the region of Valencia, usually overshadowed by Madrid and Barcelona's. As one of the organizers behind the project, Carlos Alandí – also known by his stage name Whatever Charles – puts it *"At the time there was nowhere to experience house music in the city, and this pushed us to fulfill this niche in Valencia. Good music, friends and fun. Nothing else. So simple yet so complex."* Given these premises, their growth has been totally organic rather than accordion-driven, since they started out by throwing small parties of around 300 people up to those – like Días de Campo – attended by 3000.

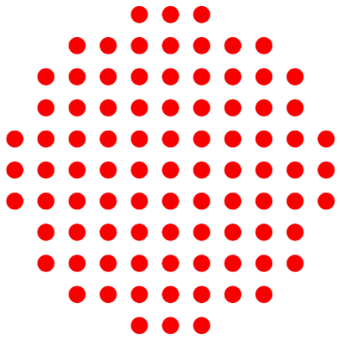
In general, synergies between entities composing the group have been crucial given they enhanced internationalization. By focusing on a diverse musical offer, risks related to

[15] More precisely, the group holds three labels: theBasement Discos, Miura Records, Días de Campo Records.

cannibalism between labels and festivals are minimized, since every label and every festival promotes different styles.

When talking about AI use, just like all the cases here presented, the impact it is having on the collective's operations is quite limited, barely helping at all. Contrary to expectations, however, is Carlos' stance on AI used in music production: *"AI is an avalanche, it is going to impact anyone, and to deny it is being ignorant"*. By developing on his point, he states that the same happened when drum machines came about: in the beginning they were heavily frowned upon, but eventually they entered even the major recording studios in the world. Nonetheless, the use of AI to make exceptionally good music, he continues, will not be pursued by mediocre artists, but rather skilled and experienced ones, who know how to really program such systems. He also shared appreciation in the case of the Bandcamp ban towards AIGM, but also clearly stated his doubts, pointing to the difficulty for today's software to really recognize AIGM.

4.3.6 *Sony Music Italy*



SONY MUSIC

The history of Sony Music begins in 1929 America through the conception of the American Record Corporation (ARC), later acquired by the Columbia Recording System (CBS), renamed Columbia Records in 1947. In the late 1980s Sony entered the picture, purchasing Columbia's catalog and renaming the label Sony Music Entertainment (SME). After another handful of important acquisitions, Sony Music Group was born, an umbrella name housing SME and Sony Music Publishing.
In Italy, Sony's presence dates back to the 1950s when RCA Italy was first created, and again through a continuous process of mergers and acquisitions, Sony Music Italy – run by Andrea Rosi – sees light in 2004. Nowadays, three important labels are part of Sony Music Italy's roster: Columbia, Epic, and Numero Uno. Additionally, Sony is currently building partnerships with independent labels and other multinational enterprises. Among these, Sony owns 100% of stocks of The Orchard – the most important distribution platform in the world – Altafonte – operating mostly in Latin America and Spain – and AWAL – an English platform distributing independent artists.

Because of all of the above said, Sony's growth model is complex to describe. The most important thing to consider is that today's Sony Music comes as the result of a series of fusions and incorporations in the last 15 years. This is also due to the crisis in the music sector, due to piracy. In the 2000's the Italian market suffered layoffs of 80% of operators. Investments started rising again in the last ten years, and later, overall market growth is

foreseen to be growing at unprecedented rates, as reported by important financial institutions like Goldman Sachs.

When speaking about AI, Doctor Andrea Rosi, recalls how the music industry was the first ever industry in entertainment to be impacted by digital technologies. Because of the unawareness of digital impacts a few decades back, crises related to low-to-no sales in physical records and piracy followed. Due to these bitter lessons from the past, Sony Music, just like other major labels, are significantly limiting the use of AI in music production and, especially, in the making of artificially created artists. The only use of AI in the music industry right now is enclosed in the enhancement of some creative parts, such as castings or music videos adjustments. However, as Andrea Rosi claims, it is still too early to foresee how the industry will effectively impact the industry, considering also that the public will be the one entity deciding how AIGM will eventually be received/perceived. Music platforms are very receptive and are eager at finding agreements with labels.

4.3.7 *Movement Entertainment*

Movement Entertainment is the Turin-based company owning a portfolio of world-famous electronic music festival, one being Movement Festival – the European counterpart of Detroit Electronic Music Festival[16] - and the other KappaFutur Festival – taking place every year at Parco Dora in the summer – recently nominated number one Italian festival and sixth most important electronic music festival in the world by DJ Mag.

Movement represents a very interesting case study due to their business proposition in the electronic music industry. That is, the company's motto: *Clever Entertainment*. Clever Entertainment – in the words of CEO Maurizio Vitale – simply means *"having fun and respecting everyone and everything around you."* It also is a tool to better connect with suppliers and other entities in the territory they are located in, to qualify culture and value industrial relations. This is pivotal to understanding Movement's growth strategy, which tends to be accordion-based, alternating phases of great expansions and others of decline. According to Maurizio, their growth model represents a "*pretty entrepreneurial model, where you do everything to grow your business. Plus, growing in dimension does not necessarily mean you are earning more.*" Contrary to expectations, the COVID-19 pandemic did not hit too hard on Movement Entertainment, as opposed to other years, because "*revenues from KappaFutur Festival ticket sales were going really well and we had enough financial assets to repay all our suppliers.*" Continuing the conversation, synergies with all the entities the company works with have been fundamental. They embed the core of the strategies Movement is following. Their professional attitudes are so well-proven that the company is now heightening their presence in the world market by announcing the first Mexican edition of KappaFutur happening in 2026[17].

[16] Also known as Movement Detroit Music Festival or, simply, as Movement Detroit.
[17] Announcement dates to February 19th, 2026.

When talking about Artificial Intelligence adoption, Maurizio shows enthusiastic about it, stating they are currently utilizing it in Data Analysis, especially on ticketing and cashless sales – in order to better define and segment their customers' base, and so, maintain an extraordinary competitive advantage. *"Opportunities are endless: we are using it in contracts, on texts, and it can be used in financials and balance sheets, and other technical and logistical, computational aspects and whatnot to support us and our environment. However, it is always important to remember that to make a great technology and really take advantage of it, people must be educated on how to properly use it."* Additionally, in the 2025 edition of KappaFutur Festival, finalists of the Reply-AI Music Contest, a contest focusing on AIGM, performed live and this year the contest is taking place again, with applications for the 2026 edition already open. The February 2026 Movement Business Update Bulletin reads *"The initiative is dedicated to young artists developing immersive experiences through AI applications in music, visual arts, and audience interaction. Finalists will get the chance to play KFF."* In an article published on Billboard Italia, new opportunities related to AIGM were defined, stating that *"The five finalists effectively covered a vast range of styles, especially considering that the artists' submissions were required to include both a musical and a visual performance. In this sense, the Reply AI Music Contest has shone a spotlight on the new and stimulating opportunities offered by AI, contributing to the reduction of skepticism from those who fear that the progressive democratization of creation via AI could lead to a standardization of the musical landscape.* […] *"I see AI as an evolved paintbrush, a tool that allows us to push past known boundaries and open doors for new creatives, in music as in other sectors," says Di Cera* – one of the finalists – *on the subject. Skeptics point to the risk that AI could reach a point where it replaces the flesh-and-blood artist, leading us to idolize projects where human contribution is minimal. Is this a founded fear? Not according to Di Cera, who believes that "human contribution will always be fundamental in distinguishing the quality of one performance from another."*

4.3.8 *Giovine Orchestra Genovese (GoG)*

The GOG Giovine Orchestra Genovese[18] was born in Genoa in 1912 as a hub for young musicians performing in orchestral settings. Ever since, its activities have been focused on organizing and proposing classical music concerts, which repertoire spans from Baroque Chamber Music to contemporary classical.

According to the GoG's website *"The founding act of the GOG dates to Friday, January 5, 1912, through the work of Father Giovanni Semeria and the young composer Mario Barbieri (a pupil of Giuseppe Martucci), with an inaugural concert at the Davide Chiossone Institute for the Blind. Father Semeria intended to create an association made up of supporting members, many of whom were active performers in the orchestra. Over the years, however, the orchestra's own activity gradually diminished in favor of organizing concerts featuring guest artists.*
In 1921, Arturo Toscanini assumed the honorary presidency of the GOG. Since resuming its activities in 1945—starting with a recital by Arturo Benedetti Michelangeli—the GOG has evolved into a musical event organization. It has produced nearly 2,000 concerts in Genoa, ranging from traditional chamber music to folk and jazz. More broadly, it has covered the most significant musical phenomena which, while perhaps not "classical" in the traditional sense, are certainly classics of their genre: from Ravi Shankar to Bruce Springsteen".

General Coordinator Alessia Donati answered the questions regarding this investigation spontaneously and with the utmost availability. As the history of the orchestra might convey, growth has clearly been accordion-driven, when only during the war and COVID

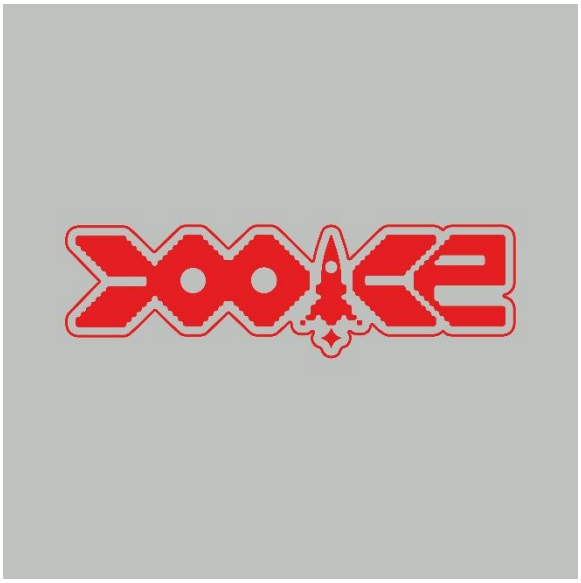
[18] For more details on GoG's activities, see GoG Bilancio Sociale 2024.

periods was the orchestra forced to inactivity. The latter period also led to streaming concerts, precisely six of them, therefore not really signaling a total stop. However, after post-pandemic restrictions were canceled, return to normality has been quite difficult.

Nevertheless, synergies with territorial entities have been fundamental. Donati claimed *"Synergies with public entities come first and foremost, even if these also extend to local institutions, such as the partnership with Palazzo Ducale Fondazione per la Cultura, or with other musical and cultural associations - for instance, the Associazione Amici del Teatro Carlo Felice e del Conservatorio N. Paganini, Teatro Akropolis, and Teatro Ipotesi"*. Moreover, not only is the GoG organizing and planning music events, but also it strives to foster musical education among the younger generations. How so? By conducting programs with schools and by curating the *Rassegna di Teatro Musicale per Ragazzi*, with morning shows dedicated to primary and secondary school kids.

In line with each of the respondents, AI will not be of use: *I sincerely see no advantage in using it to curate our seasonal program* (Donati, 2026).

4.3.9 *Jooice*



Jooice: a collective, a party, a record label.

Hailing from the city of Rome, Jooice represents one of the most genuine realties of the Italian underground. It all started as a party between friends in a basement in the Italian capital, and – as Arianna De Filippis, one of the founders – it went so well *"we decided to keep going"*. Because of that reason, Jooice has never been relegated to just the roman nightlife, but rather it took on traveling, and that is what made it strong. By being always around the world *"we would find cool places to play, make friends, and improve not just our sound influences, but also us as people."* However, scenarios have varied over time. In fact, the history of Jooice can be split into two main eras: pre-pandemic and post-pandemic. The former phase was characterized by a slow but constant growth, when events would be cadenced bimonthly, meetings were held weekly, and everyone in the team would share their opinions and visions. Then, COVID hit. Clubs and cultural spaces were closing down – for instance, Jooice's long-date home Rashomon Club – and to make up for such losses, the decision to become a *traveling party* came about, but of course restrictions had impacted on locations significantly. It was also around the same time, right after the pandemic, that resident and founder Gabbs really invested all his time and resources in his DJ career. So, a new format, again, was born and it is the renowned Jooice Birthday Party, an annual event taking place in January[19], where *"everything is taken care of in every tiny detail, to create a unique atmosphere"*. In general, growth has both been constant and accordion-like, with ebb-and-flows alternating. What is more, even if they are based in one of the most important cities in the world, the team experienced rough paths where competition was fierce and breaking through was, especially back in the day, harder due to being overshadowed by other big names in the scene. Even today, things have not gotten better because of the already

[19] On January 24th, 2026, the Jooice Birthday Party turned ten years old.

mentioned club crisis started by the pandemic. In her Mixmag interview, Arianna claimed "*This is also one of the reasons why we decided to change direction with Jooice: there were no longer suitable places to organize the kind of parties we had in mind. I believe Rome has a huge need for clubs, for spaces where people can meet and, above all, listen to music, something that lately has become genuinely difficult. Some of my most beautiful memories are linked to Rashomon Club, the place where I practically grew up and where Gabriele and I met eleven years ago: I worked there and he played. Those were incredible years. We had an amazing time. And that's exactly what I think is missing the most today: real gathering points. If I had a magic wand, I would go back in time to when Via Libetta in Rome was the most fun place in the world, and I would reopen all the clubs just to hear the music the way we used to*".

When talking about synergies and mutual support between collectives and other entities in the city, these have never been central and are not easy to initiate. Nonetheless, respect towards other local and national collectives is utmost. However, what makes the difference in the Jooice case is the big community and following they have built over the years: "*In our dancefloors you see people from all over the world – from Italy to Germany, passing from South America and more – and the language you always hear is English.*"

Continuing the conversation and embarking on AI related talks, Arianna states she actually uses it in organizational and managerial aspects – from budgets to collecting data and information, or checklists – like she does in her everyday job as a project manager. She also stressed the fact that it might be a great tool, but it is necessary to know how to use it and to be careful not to abuse it.

4.4 Concluding remarks

Research and results obtained through interviews are mixed and to answer the original Research Question (*How have business processes changed in creative industries changed in recent years due to advent of Artificial Intelligence?*) proves extremely demanding due to fragmentation. Moreover, results correlate with company dimension and expertise. Further supporting these outcomes, small and medium realities struggle to incorporate AI in their processes and prove also reluctant to do it, fearing it could damage their artistic core. Since art and music are human activities, the assistance of AI systems tends to be marginalized, if not altogether uncredited. Maybe, like some interviewees suggested, it is too soon to really view how processes *have changed*, but certainly it is possible to *suppose* the direction they are heading in. Nevertheless, one thing is for sure: once again it is proved how uneasily disruptive technologies are accepted and adopted by CCIs. Copious literature has already shown how CCIs tend to put a stop to technological invasiveness, fearing it could damage the work and creativity in these industries. What is curious is the fact that the same preoccupations stem from the younger generations as well, when these have always been accustomed to using the Internet for promotional purposes, learning, and creating works of art with the least amount of effort as opposed to the pre-Internet and digital era, when art and music were, in the most part, relegated to institutions specifically dedicated to teaching them or to one's own personal financial income. On one hand, drum machines, sequencers, and synthesizers paved the way for democratization in music production and the making of records, but still, they could cost a lot of money, and not everyone could afford them[20]. Furthermore, discussions held with interviewees proved how consolidated literature might be inconsistent. In the music industry, collectives situated in big cities, like Rome in the case of Jooice, do not thrive particularly, even though the city home to them is a big one. Despite the size of the sample presented, results show that Florida's views can be true, but that each singular geographic location and sector should be taken into account and studied thoroughly to verify their veracity. For instance, Florence has a big community of artists flocking to the city to learn about and study absolute masterpieces in painting, sculpture or architecture, but not about

[20] It is curious to remember that Chicago House pioneers would often borrow machines from other producers (sometimes the borrower would even lend them again without even asking the owner) to make their tracks.

music, since the music scene there tends to be more restricted (also due to the club crisis hitting hard in recent years). Just a few cities in the world have the privilege of being a hub for every kind of artistic form, such as London, New York, Tokyo, Milan, Paris, Rio de Janeiro.

As stated in the introduction of the present writing, the aim is not to provide hard rock results and theories but rather throw in foundational concepts and viewpoints to keep studying creative industries with the right theoretical framework and essential tools to grasp the meaning behind them and foresee how change is shaping their future. Therefore, this work can be labeled as *far from done*, but as a *starting point* in the brave new world of creativity.

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