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# Introduction

Since the mid-2000s, and especially since the early 2010s, an “entertainment revolution” has been happening before our eyes, at a vertiginous speed. In previous decades, the Hollywood organizational system had already started to be reconfigured by repeated mergers and acquisitions and the integration of studios into vast media and communication conglomerates. The development of streaming technology allowed a few tech companies such as Amazon, Netflix, and later Apple to establish themselves at the heart of the Hollywood professional game. The changes associated with streaming were first characterized as a “distribution revolution” happening on a global scale (Curtin et al. 2014). They then led to a rearrangement of the production game itself, with the rise of new key players within the business. Indeed, the leading streaming video platforms, Netflix and Amazon Prime Video, are now also the main producers in terms of number of films made in the United States, far exceeding the volume of works produced by the traditional major studios. They occupy de facto the center of the Hollywood production game. Studies have examined how these changes have reshaped the way we consume film and television content, to the point of redefining what “television” means and the relationship we have with this medium (Caldwell 2005; Lotz 2017; Jenner 2018). As a result, the old division between media forms, which once clearly separated cinema from television, has also been subverted.

At the same time, the process of selecting or making content has drastically changed: the use of data, algorithms, and artificial intelligence (AI)

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has become central to it, in unprecedented ways. This is what this book explores. This “great transformation” (to borrow Karl Polanyi’s term) in the production of popular culture is not simply the result of the invention of new instruments and technologies: it derives from a change in the types of professionals and skills that can influence and shape the creative process. This book tells the story of the emergence of a new professional category—data specialists—whose rise in Hollywood has progressively led to the adoption of new decision-making methods for the selection of talent and creative content. Indeed, Hollywood organizations now employ thousands of data scientists and analysts. In the following pages, I describe their ascent in the industry and the decisive consequences that have come with it. I analyze their practices, their relationships with other categories of Hollywood professionals, and their growing influence on the selection of what is offered to us, audiences, on streaming platforms.

Let me clarify what will be the focus of this book, and what will remain outside its scope: this study regards companies and individuals engaged *in the professionalized production of content*, in contrast with platforms that primarily distribute user-generated content, such as YouTube or TikTok. While these platforms, and social media in general, have played a crucial role in transforming the entertainment industry in recent years (Cunningham and Craig 2019), they operate according to logics that are significantly different from those that guide streaming services whose core business is the production and distribution of professionally created films and shows. In the United States, these different types of “platforms” are not in direct competition.<sup>1</sup> Streaming services that specialize in professionally produced, carefully curated content are called “the streamers” by Hollywood professionals. Originally, this referred to three advertising- or subscription-based video-on-demand services (AVOD/SVOD)—Netflix, Hulu, and Amazon Prime Video. They were later joined by a whole series of new streamers, from Disney+ to Max, Apple TV+, Paramount+, and Peacock.

1. The “platform” category itself—with its by-products (platformization, platforming)—obscures the differences between these types of organizations and the interdependencies within which they operate. Existing studies have warned us against the pitfalls of using such catch-all notions. These include Tarleton Gillespie’s pioneering work (2010, 2017), which other studies have elaborated upon to analyze different contexts and activities (Bullich 2022). In addition to the great heterogeneity of what can be gathered under the word “platform,” these works have pointed out its lack of neutrality: it is prescriptive and normative rather than descriptive. In this book, I maintain a position of analytical vigilance with regard to this type of categorization. However, I remain attentive to the uses that Hollywood professionals can make of it—that is, to the social effects of language and categorization.

This book focuses on these Hollywood streamers, and within them, on the relationships between different categories of professionals who contribute to shaping the cultural products offered to audiences, first and foremost on the activity of the data specialists among them. As a result, I will not be looking at the topic from the perspective of platform “users.” The ways in which viewers use streaming or are influenced by recommendation algorithms designed to guide their choices have been analyzed in other studies. I will, however, examine how *users are represented by Hollywood data specialists* (in the sense of being imagined, portrayed, and spoken for): such representations are important for understanding how these professionals have established their influence on the definition of content.

The word “data” can refer to a variety of things. We may be familiar with the term, but for most of us, the reality of the activities it covers remains shrouded in the utmost vagueness. For Hollywood professionals, too, agreeing on “what [they] mean by the word ‘data’” is not always obvious, far from it: as one of my interviewees put it, “What data means to consumers versus marketers, to creators, it’s all very different.”<sup>2</sup> “Data scientists and analysts” are present in the various units and teams that make up streaming organizations, from those who decide what content to acquire or produce to those in charge of marketing, user experience, and interface, as well as the organization’s management and leadership on a more general level. As we will see, these various specialists have diverse areas of expertise and educational background. This book especially focuses on the activity of *data specialists who work on the definition, selection, and shaping of content*, who are therefore positioned “on the content side” of Hollywood organizations. The intervention of this category of professionals at the stage when decisions are made on the selection of projects and programs—the mythical moment of the “greenlight process”—was something new that gained momentum in the 2010s.

## Data Specialists on the Content Side

Unlike traditional movie studios, streaming companies are technically able to collect systematic information regarding their users’ and subscribers’ behavior on the platform. The data collected, the way it is constructed, the techniques and methods used to do so, the types of specialists at work, and

2. Data analyst, entertainment marketing company, July 2019.

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above all the objectives for which it is produced—all this has significantly changed the way quantification is used in Hollywood. This transformation intensified in the mid-2010s. Since then, “data” has been increasingly used to define content strategies, influence production choices, identify promising genres and storylines, evaluate talent, and price projects. This has been the result of the work of new categories of data specialists who sit *on the content side of Hollywood organizations*.

To better understand what these data specialists are actually doing, we need to consider two dimensions. On the one hand, as the interviewee quoted below put it, they “attempt to predict the performance of shows before [they] buy [or make] them” in order to guide decisions regarding creative choices: whether or not to acquire a film, show, or other program for distribution on the service; or whether or not to produce a project. The impact of these practices on the definition of what will be offered to consumers is therefore direct. A former Netflix employee described his work as follows:

You have  $X$  billion dollars to spend in a year and you’re getting hundreds and hundreds of potential things that you could buy. How do you optimize this process, because you can’t possibly have enough humans to [sort] all of the content that we produce? So, the essence of [what I did] was basically to say: how do you bring machine learning, AI, and data science to this problem, and try to use computers to help you filter through a vast amount of content in order to make your decisions? So, it’s a two-faced process. One is, a studio offers you hundreds of titles and says, “take thirty of these”: how do you do that? Then the other part of it is: how do you discover the story that will work? And that’s the Netflix original problem.<sup>3</sup>

On the other hand, “optimizing” this process, in the words of another interviewee, means ensuring the best possible return on investment. The “predictive modeling” work carried out by these specialists thus aims to make recommendations not only on whether or not to buy or produce something, but also on the value of this content, and therefore on its price:

We look at content efficiency models. That means, basically, how much does a show cost, and how much do we predict that will get a subscriber back, to pay either residuals or even just to make up the money through recoupment of the cost. Being able to understand all of those objectives

3. Data scientist, Netflix, November 2018.

is my job, so that, in the end, I can then report back to those people who need to make decisions and go to whomever on the showrunner side, and say: “Yeah, we’re willing to pay you  $X$  for this show.”<sup>4</sup>

By influencing this type of decision, data specialists participate behind the scenes, in a discreet way, in making the “Hollywood streaming revolution” happen. Their activity has not been studied in depth from a sociological perspective before. This is what this book sets out to do. In this way, it sheds light on *the making of a new occupational group*. Indeed, Hollywood data specialists initially came from a variety of backgrounds, with distinct experiences and skills; they engaged in different activities and with various teams within streamers and studios. The contours of this group remained fuzzy for a long time; in many ways the contours still do, as do the dividing lines within the group. “Data scientists” and “content analysts,” for example, do quite different things. In the following chapters, I explore both the variety of these activities and what has enabled these professionals to increasingly appear as part of a single group. In that regard, there is *strength in the fuzziness* of the “data” category: the plasticity of this notion, and that of “data specialist,” has made it possible to bring together, under this label, different types of practices and players. Marketers, who were not initially labeled as data producers, also came to present themselves in such terms. The spread of the data discourse gradually consolidated the influence of those who were shaping and manipulating numbers and algorithms in Hollywood.

## Scales of Change

Streaming was not the first major technological innovation that Hollywood had to face: think of the coming of sound and the end of silent cinema (Altman 2004; Gomery 2005), or the collapse of the studio system (Staiger 1995; Mann 2008; Schatz 2010). Both events changed not only Hollywood but the making of popular culture beyond that industry alone. Technical professions have long been key to Hollywood and in recent decades have been marked by the development of digital and new visual effects technologies (Pinto 2016; Rot 2019; Fleckinger et al. 2020; Marzola 2021).

And yet, Hollywood professionals have experienced the past fifteen years as a period of intense upheaval, described as unprecedented and sometimes as trying. Researchers have often also approached the development of streaming and data use in terms of a “disruption” of previous modes of

4. Data scientist, studio streamer, July 2021.

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operation in the cultural industries, beyond film and television alone, and on a global scale (Iordanova and Cunningham 2012; Salvador et al. 2019).

### HOLLYWOOD IN THE RESHAPING OF THE MEDIA LANDSCAPE

While this book focuses on the transformation of the specific professional world that is Hollywood, it is clear that this dynamic is part of a much broader change in the media landscape, and society at large. Today, the use of data, algorithms, and generative AI affects a huge number of professional spheres, including research and teaching, public policy production, healthcare, and so on. We are all experiencing it in one way or another. In many occupational sectors, these changes have been inextricably linked to transformations in economic models and valuation processes. They challenge existing work arrangements and hierarchies; some professional roles are considered in decline or obsolete, while others are emerging or being transformed. In the cultural and creative industries, the shift toward online content distribution—often referred to as “platformization”—has been extensively studied, including in terms of its cross-global development and the transnational circulation of technologies, economic models, and creative content and people that comes with it (Poell et al. 2021). While this platformization has initially been celebrated for bringing artists and audiences together directly, and thus for its “democratic” nature, it has also corresponded to the increasing subjection of creators to measurement by data and algorithms (Duffy and Meisner 2022). This is tied to the development of new forms of precarious creative labor, such as the “aspirational work” of video creators and influencers on social media platforms, often women, in which “not getting paid to do what you love” is a common situation (Duffy 2017). One of the manifestations of this is the development of an entire “intern economy,” studied by Alexandre Frenette regarding the music industry (2013), in which internships are increasingly becoming the normal path to starting a career. More generally, media industry research has highlighted the uncertainties and threats attached to “precarious creativity” in the digital age (Curtin and Sanson 2016), including the metamorphosis of work in the television industry (Mann 2014b).

Beyond the entertainment industries, comparable work transformations associated with the development of new metrics resulting from the use of algorithms have also affected other professional spheres within which symbolic goods are produced, such as the field of journalism (Petre 2021). These

transformations have involved intense struggles between new experts and the guardians of preestablished modes of professional definition, as analyzed by Angèle Christin (2020) in her exploration of the contested meanings and diversified uses of algorithms in the world of journalism. The rules of the professional game, forms of legitimacy, ways of measuring success, and more generally the power relations structuring different cultural and creative fields have all been reconfigured. In her study of online romance writers, Christine Larson (2024) shows how these creators of a despised genre have found success in the age of e-books and online fiction platforms, challenging economic and symbolic hierarchies and promoting new forms of work and new models for (self-)publishing.

This shift in the forms of creative work, tied to their algorithmic measurement, is inseparable from new ways of constructing audiences (algorithmically as well). This has been studied in particular regarding the music industry, which was impacted by the transition to streaming distribution even before such a change started to affect the Hollywood film and television industries. Online data and social media metrics have been used both to (e)valuate creators and to capture audiences in a new way (Baym 2013). Algorithm specialists have also been at work behind the scenes to produce music recommendation algorithms based on a new approach to listeners' tastes (Seaver 2022). A number of studies have focused on how the music industry has been reconfigured by streaming (including Hesmondhalgh and Meier 2017; Negus 2018; Prey 2020). My aim here is not to provide a systematic overview of the many dimensions of such reconfigurations; it would be worth devoting an entire book to the topic, but that would be a different book. I simply wish to point out that the transformation of Hollywood analyzed in detail here did not take place in a social vacuum: instead, it was embedded in a complex, broader, multifaceted process, which has simultaneously reorganized a large number of occupational worlds.

Taking stock of these overall transformations of the cultural and media industries induced by streaming, and of even broader changes derived from the grip of new modes of quantification and the use of algorithms—and therefore of the growing power of experts in their creation and manipulation—in a large number of social spheres, is not to say *how these interdependencies operate* or what holds together the rearrangement of different occupational spheres. It tells us nothing about the *causal relations* that exist between the transformations of different cultural industries. While such a causal system is not the focus of this book, this study does shed light on what links the changes in different occupational spheres *from a particular angle*: we

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will be looking at how Hollywood professionals *perceive the changes* that take place elsewhere, and how this affects their practices. In particular, do they see the reshaping of the music industry by streaming as a “precedent” for Hollywood? When Hollywood data specialists come from other professional worlds, what consequences come with these circulations and career mobilities? In the chapters that follow, I take a closer look at the effects of these relationships and circulations, examining their concrete manifestations *through the experience of participants in the Hollywood transformation* studied.

### TECHNOLOGY VERSUS HOLLYWOOD?

Another common way of thinking about Hollywood’s transformation, and relating it to another scale of change, is to consider that the worlds of entertainment have been reshaped under the conquering action of the tech sector, or even under the effect of technology itself. The explanation for Hollywood’s change is then reduced to the idea of the *intrusion of external forces* interrupting the normal functioning of the film and television industry: media evocations of the power of technology resonate here with the more sophisticated narrative of powerful Silicon Valley entrepreneurs setting out to conquer Hollywood; or, more broadly, with the idea that the tech world and GAFAM<sup>5</sup> now control the traditional entertainment sphere (Hall 2012). The latter is thought of through the opposition between declining traditional media (veteran production companies, movie theaters, so-called linear TV channels) on the one hand, and rising or already dominant new platforms on the other. However, this approach overlooks the role of the preexisting film and television players and organizations in the transformation of this sphere of activity. As we shall see, on the contrary, *Hollywood professionals have played an active and central role in this process*.

A popular theme for thinking about these mutations has been that of *streaming wars*: the new distribution channel opened by streaming technology would have formed a new territory to conquer,<sup>6</sup> the terrain of merciless economic battles pitting new platforms against old media, and then streaming services against each other, in a hyperagonistic approach to change. While the evocative expression “streaming wars” has met with considerable media popularity and been widely circulated, it conceals a much more

5. This acronym stands for the “Big Five” of the tech world: Google (Alphabet), Apple, Facebook (Meta), Amazon, and Microsoft.

6. As reflected in the metaphor of the digital “Wild West” (Mann 2014a).

complex reality. First, the “streaming world” can only be considered as a juicy market to be conquered *ex post*: it was gradually constructed as such by the practices of the various players who invested in it, without any guarantee at the outset of any profitability in the gamble that this technological and economic experiment represented. In the mid-2000s, no one knew that streaming would become the “new television.” Second, traditional film and TV organizations embarked on these experiments with technology just as much as tech companies did. Finally, the metaphors of war and conquest are not always the best suited to describe the relationships that have developed between these experimenters. Putting the streaming wars approach at a distance, Ramon Lobato and Amanda Lotz (2021) have highlighted more intricate mechanisms, made up of tensions and competition but also of convergences and mutual adjustments among the different types of organizations involved. This is also what our approach reveals. In fact, if we want to study Hollywood’s digital transformation, its shift to streaming, and understand how “technology” (data, algorithms) has been changing entertainment, we need to start from the activity of the various categories of Hollywood professionals and look at the details of their day-to-day work to see *how it happened*. Indeed, this trajectory of change has been shaped by preexisting professional configurations.

Narratives of transformation are not neutral. In a period of great uncertainty, determining the meaning of what is happening and defining the probable future entail struggle. Discourses contrasting the old and the new have multiplied in the studied context. Hollywood professionals have often expressed the feeling of being part of a historic moment of transformation in the world of cinema, television, and entertainment more broadly. While they have been in a good position to describe the blurring of reference points resulting from the expansion of “streaming television,” we, also, have all experienced it. Those of us who are old enough may remember the perplexity we felt at the start of this process, when figuring out which platform(s) to subscribe to, how to search immense content libraries, or how to relate to algorithmic content recommendations associating us with genres we did not necessarily identify with (via the “because you watched . . .” or “recommended for you” functions) was quite new, and we had to learn these practices and become socialized to them before we could take them for granted. For Hollywood professionals, this experience of newness took even more radical forms: they often felt caught up in a whirlwind of change, from the mid-2010s, characterized by the rise of the streamers, to the end of the decade, marked by the COVID crisis, all this against a backdrop of

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repeated mergers and acquisitions. Participants readily confessed to a feeling of vertigo.

For traditional producers and creatives at the major studios, the fear that “streaming is killing off the movies”<sup>7</sup> was omnipresent and often verbalized. The way this change was recounted, over and over again, responded to the need to make sense of what was happening and to tame uncertainty, by situating the present into a reassuring history of change. During the 2010s and early 2020s, the period examined in this book, Hollywood professionals have reworked the narrative to introduce elements of permanence into the experience of change: they have done so, for example, by placing themselves in the immemorial history of storytelling, inherent to human nature from caveman campfires to streaming on mobile devices, or by invoking the continuing relevance of cinema in the face of past technological shifts. These narratives reveal the shared confrontation with uncertainty, constantly reactivated by the media discourse on the “streaming revolution” and its changing technologies, from data and algorithms to generative AI.

On the other hand, the heads of tech and data teams at the studios and streamers whom I interviewed often relied on narratives that made the recurrence of technological change the very nature of Hollywood and the source of the creative innovation dynamic at its heart:

The entertainment industry is really two industries intertwined, it’s both the technology industry and it’s the art industry, and there’s always something going on, right? Because it was, you know, “Okay, we’ve got black-and-white.” Then you go from black-and-white to talkies [talking pictures]: “Let’s add audio.” Then you go from audio to, “Let’s add color.” Then you go from color to, “Let’s add 3D.” Then we had James Cameron come around and say, “Let’s redo and rethink 3D,” and now we’re pushing AR, VR, MR [augmented reality, virtual reality, mixed reality]. With some of the VR experiences that are out there, they’re short films right now, but they’re making their way to becoming the new digital palettes for creative cues to create content.<sup>8</sup>

This way of interweaving art and technology helped legitimize the intervention of tech and data experts, at a time when it was often contested by Hollywood professionals, who placed themselves on the side of creation and developed discourses highly critical of “data-driven entertainment,”

7. Studio head, April 2021.

8. Head of technology, studio, August 2019.

presented as intrinsically incompatible with their vision of their activity as “art” and the pursuit of “quality.” Some of the producers I interviewed expressed with great intensity both their fear of and opposition to the intrusion of data into the realm of creation (i.e., their own realm), going so far as to say that this stance was their most important core belief and even “something they could die for.”<sup>9</sup>

As long as technological developments appeared to remain confined to the technical professions mainly associated with postproduction, they were not perceived by the professionals in charge of creative choices as a threat or an intrusion into their own sphere of activity. In this way, different lines of division came to structure the industry, opposing above-the-line versus below-the-line personnel, creatives versus business professionals, and artists versus support personnel. These dichotomies, which manifest the symbolic and economic hierarchies organizing Hollywood professionals, have been subverted by the direct influence on content definition and production that various categories of data specialists have successfully claimed in the period this book examines. This is why their rise and establishment in Hollywood involves tensions and confrontations—captured by a data analyst with the expression “the art versus the science”<sup>10</sup>—pitting these new categories of data professionals who now intervene on the content side against those who have hitherto monopolized the power to say what should be created or bought, and offered to audiences. This book explores these struggles and their effects. I approach the entertainment “industry” as a social field, a relational space that can be understood as a “field of struggles” between various groups with contrasting perceptions, beliefs, and interests (Bourdieu 1977).

## TODAY’S DATA SPECIALISTS AND THE HISTORY OF AUDIENCE MEASUREMENT

Before presenting in more detail how this book accounts for these transformative occupational struggles, we need to make one final detour to clarify how the data specialists I study here differ from the traditional audience measurement professionals who have long operated in Hollywood. Indeed, long before the streaming era, different categories of “number specialists” were already at work in Hollywood, in theatrical cinema as well as broadcast and cable television. They were usually not thought of or labeled as “data”

9. Independent producer, May 2021.

10. Content data analyst, major streamer, May 2021.

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experts, although in retrospect, we could be tempted to see them as a previous generation of data analysts. The word “data” has, over time, taken on different meanings. There is indeed a long history of audience measurement in the radio, film, and television industries. Many studies have already explored different aspects of the importance of understanding audience preferences in cultural industries, including Todd Gitlin’s (1983) and Ien Ang’s (1991) classic works. My aim here is not to give a systematic account of this history but rather to clarify what separates audience measurement at that time from the way today’s data specialists grasp “the users” and construct “user data.” As early as the 1930s and 1940s, research into the measurement of radio audiences started to flourish (and then extended to television). Very early on, the tools and protocols for capturing audiences were not limited to collecting the subjective preferences of listeners (and later, viewers); mathematical and statistical models, based on sophisticated technological devices, were also created to record listening (and viewing) *behaviors*.

Carina Albrecht (2024) suggests, for instance, that an ancestor of the “Like buttons” that modern platforms invite us to click on can be found in the Lazarsfeld-Stanton Program Analyzer: this machine, invented in 1937 by pioneer sociologist Paul Lazarsfeld and his research colleague Frank Stanton (who was to serve as a top CBS executive from the 1940s to the 1970s), was designed to collect data about audience preferences through a button. The machine recorded multiple people’s reactions to a particular program in real time by having them press one of two different buttons, depending on whether they liked or disliked the program they were listening to (Fiske and Lazarsfeld 1945; Levy 1982). This type of device later continued to be used and improved by the media industries, particularly at CBS but also in other entertainment companies, through other variants and under other names. Susan Ohmer’s book on George Gallup’s career path (2006), from his early education in the advertising industry to his later work in Hollywood, also illustrates this. Ohmer shows how the Hollywood film industry used Gallup’s polling techniques in the 1940s to take the “public’s temperature” regarding certain movie stars or stories.

This history of audience data and viewer behavior measurement is inseparable from the evolution of market research and the relationship between the advertising industry and the Hollywood film and television businesses. In his famous book on “high concept” films, Justin Wyatt shows that the rise of high concept and blockbuster movies from the 1970s on is tied to the development of market research within the studios’ marketing units, and the integration of marketing and merchandising into studios’ overall

strategies for their blockbuster projects—what the author refers to as “movie making by the numbers” (Wyatt 1994, 155). With regard to television, market research, with its specific methods (including talent testing, pilot testing, series maintenance, and brand studies), also generated particular representations of the audience, thus “creating the viewer,” to borrow the title of a later book by Wyatt (2024).

Companies such as Nielsen established themselves as central players in the production of knowledge about audiences. This marketing research company, whose ratings have become synonymous with linear TV measurement, began measuring TV audiences as early as the 1950s, and defined measurement techniques and processes that became a gold standard and dominated the game for the next seventy years. These audience measurement methods especially made sense from the point of view of their relevance to advertisers keen to know who was being exposed to their ads, advertising being the main method of financing television production. Nielsen invented (and later adjusted) a measurement system based on technical devices such as the Audimeter, which recorded the programs watched on a given television set. A vast panel of participating families allowed their viewing habits to be measured, and they were expected to report their presence in front of their television; and then, at the end of the chain, measurement professionals analyzed all the data collected, processing the viewer diaries and the data from the Audimeter. This system relied primarily on viewers’ words and judgments, collected in panels, interviews, and diaries. These tools were later improved to transmit this information with ever greater precision and in real time. In more recent decades, even before studios paid attention to and marketed on social media, measurement techniques have continued to evolve with the growing use of biometrics to capture viewer behavior. As Jennifer Hessler (2019) points out, various companies, including Nielsen, developed sophisticated biometric-based behavior recording technologies as early as the 1980s (using motion detectors, body heat sensors, and face scanners). Hessler notes that these “peplemeter” methods tend to involve less and less active cooperation on the part of viewers, as the consumer’s physical body is disciplined to meet measurement needs: the body itself has become a technology in the service of the commodification process.

All the elements above illustrate Hollywood’s long and rich history of audience measurement. Accordingly, number specialists have also existed for a long time within, and in relation with, film and television organizations. Nevertheless—and this is my central point here—the data work studied in this book is not a simple extension or new development of this history of

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audience measurement. It is something else. Indeed, the number crunchers who operated in the entertainment industry traditionally belonged to the realm of marketing and distribution.<sup>11</sup> While they provided images of the audience and the market that could influence the perceptions of some studio and network executives, these marketing/distribution professionals were not directly associated with the creative process and the definition of production choices. They did not directly interfere with the greenlight process: the figures they produced could be used to *justify* the creative decision to produce a project, but they did not have a significant influence on the making of this decision itself. They intervened at a later stage of production, to test a movie or the pilot of a television series on a panel of viewers, and of course to measure audience reactions once the film or program had been released (box-office numbers, ratings, fan activity, ancillary product sales, and the like). In addition, marketing teams were often siloed within the major studios according to media and territory specialization (international theatrical, domestic theatrical, international home entertainment, domestic home entertainment, television, etc.), this fragmentation also hindering the construction of a common vision or an ability to carry weight.

On the contrary, the data specialists studied here are much earlier and more directly involved in the process of defining the streamers' content strategies. Moreover, their approach to "the user" stands in stark contrast to the way in which preexisting number specialists understood "the audience." This is because their tools, their methods, their protocols for measuring—and indissociably constructing—the viewer are also very different. They distrust the expression of subjective judgments about programs (like/dislike), preferring not only the measurement of behavior but an approach that deindividualizes practices and breaks them down into subcategories of behavior.

The behaviors measured are no longer exclusively or even primarily analyzed in relation to the broad sociodemographic divisions (age, gender, ethnicity, income, etc.) that were earlier used to segment the audience and target viewers (Turow 1997). In the past, these broad divisions often guided the composition of focus groups and panels for test screenings. These frames for interpreting behavior differ from those involved in the *algorithmic production of behavioral groups* (Netflix's famous "taste clusters"), as we shall see. New standards and metrics are attached to the use of algorithmic models. The

11. The head of a legacy studio I interviewed in April 2021 referred to the number specialists who worked for the studio in a revealing way: "It is under marketing. And it's not called data, it's really the digital department. But there are people in the digital department who work with digital data. There are more people who do that now than there would have been a few years ago, for sure."

result is profoundly different ways of segmenting the market and society. In addition, unlike the publicity that characterized the ratings of companies like Nielsen, which circulated widely in the Hollywood industry and served as common points of reference, streamers' metrics and data are kept confidential and not shared. All this, as I will show in detail, distinguishes the uses of data analytics today from the production of traditional audience figures, and the associated construction of the viewer and the market. The chapters that follow are intended to show in concrete terms what this means and implies.

### **The Transformative Effect of the Rise of a New Occupational Group**

Rather than examining these transformations from the broad perspective of socioeconomic reconfigurations, in which the unit of analysis is not primarily the activity of individuals but rather the shifting balance of power between vast media groups, here I shed light on the granular level of situated practices and relationships while also examining how these activities combine and form a wider dynamic. Many studies have tackled the subject at the company level, usually focusing on Netflix, which has come to epitomize the entire streaming transformation (including McDonald and Smith-Rowsey 2016; Jenner 2018; Lobato 2019; Lobato and Lotz 2020; Frey 2021). Taking data professionals who have established themselves in *all* Hollywood organizations as an entry point instead will enable us to observe a system of players connected beyond organizational boundaries through interactions and interdependencies, as well as caught up in partially distinct environments and constraints.

Two complementary analytical perspectives run through this book.<sup>12</sup> On the one hand, it contributes to *a sociology of Hollywood as a professional system*. It examines the (preexisting or new) categories of professionals who populate this space, their day-to-day activities, their relationships, the skills they claim, the shifting hierarchies that organize them, and the organizational structures within which they operate. On the other hand, this book develops *a sociology of Hollywood's technological mutations*: the professionals studied are technologically equipped. They speak in the name of science (and data); they mobilize techniques and instruments new to Hollywood, on which they base the legitimacy of their influence and their claim

12. I borrow here partly from a discussion of the literature published in French (Roussel 2025).

to produce a new type of knowledge and “truth” about the consumer’s needs and the future of entertainment. Let us start with this second dimension.

### DEFETISHIZING TECHNOLOGY

In recent years, many of the debates surrounding the expansion of video streaming services have focused on their use of data, algorithms, and, more recently, generative artificial intelligence. Content recommendation systems have been at the heart of both scientific and media controversies.<sup>13</sup> Just as Ted Striphas (2015) deplores the fact that, in recent decades, the “work of culture” has been increasingly delegated to computational processes, leading to the emergence of an “algorithmic culture” that is increasingly privatized, elitist, and profitable for GAFAM, other scholars have pointed to forms of behavioral control via technical devices based on the capture of users’ behavior data. Stephen Shapiro speaks of the advent of “algorithmic television” (2020), of which Netflix is paradigmatic. This author describes a “datalogic turn” in the film and television industry, analyzed with reference to a neo-Foucauldian approach to disciplinary power in the digital age (Zuboff 2019; Lyon 2018). Shapiro’s conclusions resonate with critiques of “algorithmic governmentality” (Rouvroy and Berns 2011) and its discriminatory or oppressive effects (Noble 2018). The algorithmic creation of “taste clusters” by streaming services (these “taste groups” referring to the categorization of users according to content viewed thanks to the collection of behavioral data) manifests and amplifies, for Shapiro, the neoliberal logic of discipline and control. He sees this as disempowering users, who are unaware of the links made between their individual viewing decisions and those of others with whom they are grouped. In the same vein, David Beer emphasizes the agentivity of algorithms that manipulate users and alter popular culture, contributing to the emergence of a “new ontology of taste formation” imposed on audiences (2013a, 99). This reference to an inherent power of instruments—data, algorithms, computational systems, AI—can echo the perception that nonspecialists have of them as magical and mysterious. It is

13. The streamers themselves have contributed to accrediting the idea that their power rests on algorithms and the control of users’ behavior via algorithmic models. This is particularly true of Netflix, as illustrated by the Netflix Prize competition: from 2006 to 2009, the company held a public challenge to the research community with a \$1 million reward for the team that could improve the accuracy of its movie recommendation system by 10 percent (Hallinan and Striphas 2016). In the process, they shaped their brand image through rhetoric about the effectiveness of their algorithms.

because most of us do not understand these instruments or master their use that we can imagine algorithms capable of acting “on their own.”

The power of algorithms is thus often attributed to their opacity and unknowability, as well as to the secrecy that surrounds them (Pasquale 2015): in this sense, for Malte Ziewitz, algorithms have developed into “a modern myth” whose alleged obscurity and inscrutability would allow these mysterious entities to govern and control our lives. These assumptions create what this author calls an “algorithmic drama” (Ziewitz 2016, 5). Only by examining those who shape, manipulate, and interpret these tools can we open up the algorithmic “black box.” Other recent works have similarly emphasized the importance of shedding light on how algorithms are made, consolidated, and put to work, whether by highlighting the little-known activities of the people and teams who make them (Cardon 2015; Denis 2018; Seaver 2022) or by focusing on the assemblages between humans and machines involved in these operations (Mackenzie 2017; Anthony et al. 2023). While calls to set up research programs shedding light on “the work of data and the role data workers play in it” (Bastard et al. 2014, 135, my translation) have multiplied, empirical sociological investigations focusing on *the people behind data and algorithms*, those who work to produce and use them, remain few and far between.

This book aligns with Dominique Cardon’s recommendation to “avoid the imputations of intentionality that we sometimes address to algorithms” (Cardon 2018, 68, my translation): to do so, we need to understand who gives life and meaning to these instruments, who mobilizes them, and who possibly diverts them from their initial destination, but we also need to identify the situations in which these uses produce specific effects. The people behind data and algorithms can be diverse. In the wake of studies that highlighted the variety of possible receptions of television products (Ang 1982; Pasquier 2021), recent research has explored the ability of platform users to also make varied uses of content recommendation devices (Dessinges and Perticoz 2021; Delaporte and Mazel 2021; Frey 2021). This book is in line with these approaches, focusing on *the uses of technology* from the perspective of those who construct the data, produce the algorithmic tools, make sense of them, and thus participate in making them effective. As a result, I do not approach algorithms or data as if they were actors (or “actants,” to use the terminology of actor-network theory; see Akrich et al. 2006): lending agentivity to algorithms would lead us to conceal part of the work of their producers and the activity of those who use them. Focusing on *the work of data and algorithms* rather than on their intrinsic power allows us to shed

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light on the varied relationships to these algorithmic tools that characterize different types of participants in Hollywood production processes, and how their beliefs and perceptions shape what they do with these tools and what they make them do.

This book thus examines the effects of technical equipment on practices and relationships in particular occupational configurations, and in organizational contexts within them, capturing these effects as products of the work of particular categories of participants. In this, it joins research that, in different theoretical traditions and in other fields, has grasped *algorithms as practices* based on empirically grounded investigations (Christin 2017; Thomas et al. 2018). The practices at the heart of this exploration are those of a very particular set of professionals: Hollywood data specialists.

### DATA-MAKERS AT WORK

By analyzing the emergence of data specialists at the heart of Hollywood's dream factory, and how their activity affects the definition of production choices, this book belongs to the vast field of the sociology of work and occupations. In particular, it examines the jurisdictional struggles that oppose these specialists to other categories of Hollywood professionals over the definition of their respective territories (Abbott 1986, 1988). I want to point out that the preexisting professional group of "data scientists" is much larger than that of Hollywood data specialists studied here; it is also in part structured differently. In analyzing the emergence of this new category of Hollywood specialists, I am deliberately moving away from the question of what would, or would not, make them a "real" professional group—often thought of in terms of the existence of a professional association and forms of recognition by the state or other institutions, which contribute to the institutionalization of specialized forms of knowledge (Freidson 1986). Here, I examine the rise of new players in Hollywood who perceive and refer to themselves as belonging to the same category of (data) specialists, even though among them are professionals from a variety of educational backgrounds and initial career paths, only some of whom are unquestionably part of the "data science" group proper. This is why I will be using the word "data specialists" (and not "data scientists") to refer to the composite group studied here.

In particular, I will be following in the footsteps of authors who have studied statisticians or technical professionals and have highlighted the

transformative effects of their ascent within institutions and organizations that, in various respects, govern our conduct and influence our representations (Desrosières 2011; Porter 1995). These and subsequent works (e.g., Didier 2020; Bigo 2020) have largely focused on how these professionals and their quantification tools have taken hold at the heart of state bureaucracies, and thus of public life and public policies. Here, we turn our attention to a different social game and to other types of organizations.

Positioned between content producers and consumers, Hollywood data professionals can be characterized as occupying *a position as market intermediaries*. The advent of digital technologies and streaming was first celebrated as lowering the barriers to entry into the creative world—thanks to more accessible and less costly tools, greater permeability between media categories, and direct distribution and broadcasting modes intended to bring artists closer to their audiences—and presented as heralding the end of intermediaries acting as gatekeepers. The reality, however, is far more complex. Far from making intermediaries disappear, the “digital revolution” has seen not only their persistence (Hracs 2013; Khitrov 2020) but the emergence of new categories of organizations and personnel at the interface between creators and audiences (Lobato 2016; Bishop 2020; Siciliano 2023). New categories of professionals supporting creation and production are indeed working behind the scenes. The data specialists studied here are intermediaries in this sense: they are part of increasingly complex chains of cooperation for the production and dissemination of works, which technological changes have rearranged.

By examining their activity, this book contributes to *a sociology of cultural intermediaries* (Bourdieu 1984), brokers, and middlemen (Bielby and Bielby 1999), which has developed in recent years, highlighting the key role of hitherto neglected participants in the processes of defining careers and artistic projects (Lizé et al. 2014; Jeanpierre and Roueff 2014; Negus 2002; Grindstaff and Mayer 2015; Roussel 2017b; Thompson 2010). My study contributes to challenging the opposition between creators and artists on the one hand, versus purely technical or commercial staff—or support personnel, to use Howard Becker’s (1982) term—on the other. Not only is this division not as clear-cut as it seems, but the use of digital technologies also accentuates the blurring of the boundary between these categories and upsets established role divisions: because data specialists now guide the definition of content strategies for studios and platforms, the work of these “intermediaries” affects creation, from the selection and manufacture of works to the definition of their value (including artistic value). The professionals studied

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here are at the heart of the processes by which “television” and “cinema” are being reinvented today.

These new data and algorithm specialists who operate on the content side of Hollywood are quantification specialists from backgrounds very different from those of traditional Hollywood professionals. They are closer to the “coding elite” conceptualized by Jenna Burrell and Marion Fourcade (2021)<sup>14</sup> than to the “cybertariat,” or to “click workers” often located in countries of the Global South, studied by Antonio Casilli (2019). This is not to say that Hollywood is not a stratified world with its own hierarchy of positions, including within data departments. Data specialists have had to fight to impose themselves *against* other types of Hollywood professionals; they have taken part in power struggles over the capacity to influence creative decisions. The content measurement and evaluation tools that they work with have sometimes been pinpointed as contributing to the growing precariousness of creative labor in the film and TV worlds. The strikes launched in May 2023 by the Writers Guild of America (WGA) and then the Screen Actors Guild–American Federation of Television and Radio Artists (SAG-AFTRA) have given visibility to the fear expressed by these organizations of seeing entire professions disappear, and the rapid impoverishment of professionals whose activities may be wholly or partly carried out by generative AI, or whose performances may be re-created via technologies. For certain categories of Hollywood professionals, “spec work”—based on free labor or even personal financial investment on the part of creators as a prerequisite to the possibility of accessing paid work and becoming professionalized—is becoming the norm, to such an extent that John Caldwell (2023) sees it as the production regime most characteristic of the contemporary entertainment industry. The use of new algorithmic models and tools studied here must be considered in the context of this wider transformation that has been reshaping Hollywood as a professional system—destabilizing existing fields of activity with the creation of new roles and changing the value attributed to different types of skills and expertise, and their associated hierarchies.

In this way, the rise and establishment of data specialists in Hollywood has to do with changing power relations in this space. However, we should not be too quick to conclude that these specialists are part of a single

14. According to Burrell and Fourcade, we live in “a society of algorithms” within which the rise of “a new occupational class” has formed what they call the “coding elite.” This group has technical control over the digital means of production and can extract labor from a newly marginalized or unpaid workforce, “the cybertariat.” New forms of “algorithmic dominion,” which affect how people interact, associate, and think, are therefore at play.

“professional class,” a “code elite” that has come to rule us all. As the chapters of this book unfold, I will show that these professionals moved forward in scattered order; they did not immediately and spontaneously recognize themselves as part of the same group. This book sheds light on *the process by which they came to form an occupational group*—a group, moreover, whose demarcation lines increasingly identify with those structuring Hollywood.

### **In the Field with Hollywood Data Specialists**

My approach to Hollywood data specialists at work has entailed positioning myself *at the granular level of their daily perceptions and activities*, in the tradition of relational ethnographic studies of this industry (Powdermaker 1979; Bechky 2002). It has involved gaining an understanding of how they read the world around them, and how they make meaning based on that reading and based on their interactions with others: for instance, how they relate to “the market” and their colleagues in other organizations, to creatives and production professionals who are their work counterparts in the same company, but also to their own team and their own instruments; and how they envision their role and imagine their future. Understanding all of this has been key to making sense of how these specialists behave in various contexts, and how they have contributed, as a result, to shaping the larger transformation process at play.

This approach dictated the use of qualitative methods to shed light on these actors and their practices. I carried out fieldwork over a period of seven years (2017–2023), from the rapid mutations in the world of streaming television in the mid- and late 2010s to the shock of the COVID pandemic, which disrupted the game, and its aftermath. I was thus able to follow the rise and legitimization of this occupational group in Hollywood during a tumultuous period marking a key moment in the transformation of the Hollywood industry. The successive upheavals of this period also led to trials and tribulations in my ability to conduct fieldwork.

### **ENTERING THE FORTRESS**

One of the first challenges for anyone wishing to conduct a sociological study of this kind is the supposedly impenetrable nature of data teams, in a professional world—that of Hollywood—already known to be difficult to investigate, particularly when it comes to its business side. While these difficulties are real, they above all require the sociologist to understand the

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logics of this space in order to navigate it. The relationships I had already established through previous investigations in the worlds of artist representation and production (Roussel 2017b) enabled me to open up the terrain of Hollywood streamers.

I conducted seventy-five in-depth interviews from 2017 to 2023, in person in Los Angeles or by videoconference (during the health crisis period), with different categories of data specialists—working or having worked for streamers, studios, independent production companies, companies specializing in data analysis concerning film and television content, and talent agencies—as well as with some of their direct counterparts on the production side. The data specialists I met held a variety of positions and roles in Hollywood organizations: most of them were data scientists, engineers, technicians in data science teams, or content analysts and strategists, all operating on the content side; and to a lesser extent, specialists in marketing and people working in research/consumer insights departments. This diversity of backgrounds, which translates into different ways of looking at one's job, is analyzed in the following chapters.

I often spoke with a given professional on several occasions, for periods ranging from one to more than three hours. The ties I created with several of the interviewees over time enabled me to follow the evolution of their activity, their perceptions, and their working environment, allowing me to stay in touch when they changed position and sometimes employer. The relationships of trust thus forged and nurtured enabled me to gain access to confidential information and areas generally inaccessible to the researcher.

As a result, I was also able to conduct two in situ observations in Los Angeles, one in March–April 2022, as part of a team carrying out data analysis to evaluate projects (mainly series) and recommend inflections to their content, and the other with a data specialist working for one of the leading streaming services, whose activities I followed on several occasions between spring 2021 and summer 2022. These irreplaceable moments of observation gave me access to what interviews can never fully describe, no matter how well intentioned the interviewee: all the gestures, the body language, what the spatial organization of work expresses, what is said in off moments, between two meetings over a coffee, or after work. They enabled me to acquire a more “organic” kind of familiarity with the professional world under study, and to see the day-to-day arrangement of relationships and the interactions (with or without verbal exchange) that are difficult to recount in interviews. This gave a new depth to the relational nature of my approach. This also enabled me to witness tensions and controversies within the data

teams themselves (frictions that had never been mentioned during the interviews) around the right ways to tell stories with data, stories intended for producers and creatives within the company itself or for external clients.

During the COVID crisis, as face-to-face interactions and the presence of professionals on company premises were impossible, I conducted online interviews in the particular format of “calendar comment”: this meant asking my interviewees to look back at their work calendar, which keeps track of all their daily activities, meetings, and appointments, in order to systematically discuss their activity of the previous week, going back over all these interactions, practices, and experiences in great detail. These lengthy interviews enabled me to gain a better understanding, through the words of the interviewees, of the rapidly changing environment in which their work was taking place, in both its organizational and relational dimensions.

Overall, the empirical work for this book is rooted in the local and *physical space* of the Hollywood industry (Scott 2004). California, mostly Los Angeles, remains the primary reference space for the professionals I studied: this is the place where the data teams working on content are based, where the interactions and relationships that matter to these professionals mostly take place. Nevertheless, what these data specialists do in California goes far beyond this physical location and the limits of the domestic market. Their work has an impact on what streamers do in the international “territories” they have penetrated. In this way, data specialists are involved with the new paths of “Hollywood globalization,” which they help to define. Taking their activity into account is thus also useful for grasping how geographies matter for understanding changing cultural production (Lobato and Lotz 2021).

## FROM SILENCE TO “CODE WORDS”

During fieldwork, I regularly came up against the issue of secrecy surrounding data and the activities of data departments. The data specialists I contacted for interviews systematically insisted, even when they agreed to talk to me, on the confidential and proprietary nature of the information they held. To protect my interviewees, I have anonymized the quotations throughout my work.<sup>15</sup> However, guaranteeing their anonymity was not

15. To guarantee their anonymity, I have not always named the company my interviewees (had) worked for. The characterization chosen then depends on what is most important for the point under discussion: the size and place of the company in the game (majors vs. others); the trajectory of the organization (original streamers vs. more recently launched ones); the professional field from which they originate (tech streamers vs. Hollywood-born streamers [referred to as

always sufficient to reassure the participants: some interviewees expressed the fear of being caught in the act of talking to someone from outside the company, especially in organizations that have a centralized electronic system for managing entry to their building (or lot) and room reservation, features likely to betray the fact that we were meeting: a department manager could see, via such a system, the name of the person who had invited me in, as well as the date, time, and exact location of our meeting. As a result, many interviews took place in public places such as cafés. The COVID pandemic changed the framework of activities during that period and, paradoxically, led to a relaxation of these surveillance mechanisms, as the professionals I interviewed worked from home and were therefore removed from the visibility of colleagues or supervisors, which sometimes had the unexpected effect of freeing their speech, compared to interviews conducted in person in the workplace.

The issue of data confidentiality is not just a matter of formal rules. It weighs particularly heavily on employees lower down in the job hierarchy, and on those whose situation is precarious for other reasons and who worry about how they will be judged by their boss (a company like Netflix, for example, is known for its rapid turnover, with people who no longer arouse the enthusiasm of their department head at risk of being “let go”). One studio-turned-streamer data team leader I interviewed had to contend with the presence of the company’s corporate communications manager during our conversation, which marked the sensitive nature, in the eyes of the organization, of anything that has remotely to do with data. This is why most of the interviewees decided to talk to me “under the radar,” making sure their participation went unnoticed. In this context, obtaining referrals could prove complicated, since by recommending me to a colleague, the interviewee would at the same time designate him- or herself as having spoken to me. Some respondents agreed to pass on the contact details of other potential interviewees, adding that, if I could avoid “drop[ping] their name” when I talked to these people, it would be better.

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“studio streamers”] and legacy studios). For the same reason, precisely defining the position (and title) held by the interviewees (especially when they were head of a department or vice president) while correlating it with their company’s name has often not been possible, as it would have meant pointing to a specific person. In the interviewees’ characterization, “independent producer” refers to a position external to legacy studios and streamers, although interviewees in this category often handled projects with fairly large budgets and distribution scope. To protect anonymity, I have also had, in rare cases, to change the gender of the interviewee whose words I have quoted.

Nevertheless, thanks to the repetition of interactions that helped build relationships of trust with participants over time, my contacts with other data specialists and recommendations multiplied. As the rapid movement of data specialists between different streamers is a common feature of their career development, these circulations and the relationships each respondent had developed in other companies enabled me to diversify the panel of my interviewees. This also allowed me to track the gradual emergence of interconnection networks between these players, whose paths and careers I watched evolve over the time period I was studying. Through these individual trajectories, it was the overall trajectory of the occupational group that I saw taking shape.

While they often started from a cautious stance, saying that they could not tell me much because everything to do with data was strategic for the organization, the interviewees nevertheless ended up sharing, often generously, at length, repeatedly and in detail, many dimensions of their work and experience. What is more, several of them also agreed to let me conduct in situ observations of their activities. There are several possible explanations for this. On the one hand, as with the talent agents I had previously studied, being able to showcase an activity that receives little attention in a Hollywood world that is otherwise always under the spotlight may have played a role, especially as I offered guarantees of academic rigor and protection of participants' anonymity. Speaking to me meant allowing one's professional category to be heard and participating in telling the story of the industry's transformation *from their point of view*: "There's a proprietary element and I don't want to say, like, trade secrets, but, you know, [ . . . ] I think it's really important and helpful to know that it's all anonymous and that it'll be just part of the larger story that you're telling about the industry, which is great."<sup>16</sup>

On the other hand, the educational background of some of the data specialists I interviewed, similar to that of academics, created a form of elective affinity and a feeling of closeness: several interviewees held PhDs, some had been research assistants at a university at the start of their career, and a few had even considered an academic career before turning away. In all cases, the common reference to science and research helped us establish a shared language, facilitating initial exchanges. My interactions with the interviewees also sometimes revealed their strategies for forging alliances with the academic world in the hope of bolstering a fragile legitimacy within

16. Content data analyst, studio streamer, June 2021.

the studio or streamer employing them, or more simply, for exchanging information with me, using my familiarity with Hollywood to deepen their own understanding of talent agencies or the production world—a part of their own professional world whose workings they had difficulty grasping, as chapter 3 of this book will explain. My access to the interviewees thus sometimes took on a transactional aspect. As a data scientist put it: “The big agency part of it feels like me getting information from you. You can get information from me, and we can make it an exchange.”<sup>17</sup>

I would like to add an important element with regard to the secrecy attached to data and the activities of data departments. Indeed, what my entry into the field and familiarization with this world has also enabled me to see is that the best-kept secret of data teams may be the pitfalls they encounter, the “dirty” nature of the data, the fear of falling “behind” in fierce competition with other departments in the same organization and with other companies, and above all the fear that these weaknesses will become visible beyond the limits of their own team. It is often these very prosaic dimensions of uncertainty, of trial and error, contrary to the mythology of algorithmic omnipotence and data magic, that the secrecy surrounding their activities aims to protect, just as much as the details of the strategies, models, tools, and technical devices themselves. This is why one interviewee, who I eventually discovered was not a direct keeper of data-related information or a member of a data team, and moreover who worked in an organization that was at that time not very advanced in the development of these tools, could tell me in the very first minutes of our interview: “To be honest, it’s pretty confidential, so I can’t get into any of the other specifics surrounding data and metrics or anything like that.”<sup>18</sup> What this comment expresses is the importance of *discursively constructing the magic of data*, whether or not there are actual secrets to protect. The function of secrecy and its staging is decisive in understanding the symbolic dimension of the power of data. This staging of the power of data through the exhibition of confidentiality is not only observable in organizations that have a lot to hide; it is also found in those that (at an earlier stage in the development of their data teams) may have much less to conceal. Producing and maintaining this “secrecy” is part of the job of data specialists.

The question of speech and language is also that of “code words,” the specialized vocabulary specific to this space: beyond the technical terms

17. Data scientist, Netflix, November 2018.

18. Producer, studio streamer, April 2021.

of the data analytics field, some words have become shared categories with reference to which the specificity of this particular group has been built, and through the use of which data specialists recognize each other as belonging to the same group, facing the same “problems.” This sharing of a specialized vocabulary is a common feature of occupational groups. Having been able to follow the emergence of such a group *as it was forming*, I was in a privileged position to observe the gradual construction of a vocabulary, and to understand that the common use of a term did not necessarily mean the existence of a clear, shared definition of that word. This conversation with a junior content analyst illustrates this:

INTERVIEWEE: Most of my time goes to content behavior analysis. Like, comedy watchers: what do they do, how often are they engaged, what do they watch, what do they [not] like, are they healthy, are they not healthy? Those kind of content behavioral projects.

VR: *What does “healthy” mean?*

INTERVIEWEE: [Laughter] Yeah, exactly . . . I mean, no one . . . I mean, everyone has their way . . . I mean, the most important one is probably churn. Everyone, I think, every company in the streaming business looks at these code words, looks at their own segmentation, and then [tries to find out] how they churn.<sup>19</sup>

In this way, while the question of “churn” (when customers stop watching a program or using a service) has been a priority issue for streamers with subscription-based business models, the question of what constitutes “*healthy* watchers” or “*clean* (enough) data,” for example, remains a concern that is both shared and enduringly vague. The indefiniteness of these notions is linked to the jealously guarded secrets of each streaming service—that is, the data it actually holds and the actual performance of its models. This leads all participants to move in a (semi-)blind competition, aimed at adjusting to what one *imagines* to be the other’s situation.

This book pays particular attention to the symbolic power of language, in a Hollywood world where performance and make-believe are key dimensions of the participants’ work, and in a configuration marked by uncertainty and recurrent upheavals—all of which accentuate the importance of belief effects. Instead of imposing my own definitions on the words used by Hollywood professionals, I have followed the changing uses the various

19. Content data analyst, studio streamer, May 2022.

participants have made of them, starting with the word “data.” In this way, I intend to shed light on *the terms of their struggles*, their clashes over the “right categories” and classification systems, how the words that count changed over the short time of the transformation studied, and how shared meanings came to prevail within this group in the making, helping to shape it.

### **The Story This Book Tells**

In sum, this book sheds light on the transformation of creative decision making within the world’s leading entertainment industry: Hollywood. It tells this story from a particular angle, that of the emergence of a new category of professionals armed with new instruments: data specialists. Their rise has led to the rearrangement of power relations among Hollywood occupational groups, power relations that determine the ability to define what is to be created and offered to audiences. Their presence and the recognition of their expertise “on the content side” of Hollywood was not self-evident and did not happen overnight: their influence did not automatically derive from some intrinsic strength of technology, or the irresistible legitimacy of algorithmic models and tools. Far from the imagery of Hollywood’s sudden technological disruption, this book examines, at close quarters with the practices and relationships of the participants, the mechanisms through which the work of these new specialists has gradually taken hold, setting up a new norm for the evaluation of content. It sheds light on the “Hollywood streaming revolution” from the angle of the processes of formation and legitimization of an occupational group within a transforming professional system.

While we will be looking at invisible key players in this transformation process, we shall steer clear of a conspiratorial vision of the transformations, which would see a few data scientists as puppeteers capable of controlling the process and manipulating its participants, primarily the viewers who are the source of the data. Certainly, data specialists, like all the professionals at work (and like all of us), can develop strategies and pursue their own interests. Some of them have been assigned the task of imagining strategies for their company and mapping out the future. Prediction is indeed at the heart of their activity, as we shall see. Nevertheless, the transformation process under study involves interactions and interdependencies such that no one could have controlled its development. The professionals studied here have had to navigate successive upheavals, operating by trial and error, within organizations that are often structured in silos, with very limited knowledge

of what is being done elsewhere. As a result, the story of how the use of data came to be enshrined in the definition of content and production choices cannot be told in the form of a “History of a Few Great Men” who changed the game, even though the participants may be able to throw in “big names” (such as Jason Kilar at Hulu, then Amazon and WarnerMedia; Bob Iger at Disney; or Reed Hastings at Netflix) and sometimes point to them as models or inspirations. It is a *process without heroes*, yet a collective journey whose *participants* need to be examined.

As a result, my preoccupation has not been to create a metanarrative of the transformation but instead to examine it at the micro level of the daily activities and relationships of the professionals at work, as well as the meso level of the organizations in which they operate, from which they draw resources and inherit constraints and counterparts. The challenge has been to avoid simplifying, overrationalizing, or unifying their perceptions and practices (in varied positions and organizations, and at different moments of the process) while, at the same time, explaining how these multiple, even contradictory activities and dynamics have responded to each other, intertwined, and formed a system, leading to the outcome we know today: the decisive influence of data on the definition of film and television content. This book sheds light on *the work behind this power of data and algorithms*, and the activity of those who helped shape Hollywood’s digital transformation behind the scenes.

The book is divided into five chapters. The first chapter sets the scene and provides the background for the practices studied. It places them in the context of changes in the entertainment industry that started before the 2010s—the decade from which our study begins. It offers an overview of the transformation process that derived from the emergence of streamers and their positioning at a central place in Hollywood, a place once occupied by the major studios.

The second chapter zooms in to examine what has been happening within streaming organizations, and Hollywood organizations more generally: it shows how the roles of data specialists have gradually been created and consolidated in the units in charge of content definition and production. It explores the organizational framework of data specialists’ power, and the way in which these professionals struggled to carve out a place for themselves, assert their role and push back its limits, establish the value of their skills and tools, and cope with the repeated restructurings of these organizations. This chapter also examines how they forged objective alliances with other categories of quantification professionals.

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The third chapter looks at data specialists' social characteristics and career paths to make sense of their perceptions of their job and their visions of the Hollywood industry, into which they often arrived from the world of tech or Silicon Valley. These elements enable us to analyze the gap in perceptions that separated them from the traditional production professionals with whom they nonetheless interacted, and whose creative decisions they aimed to guide. This chapter focuses on the relationships and jurisdictional conflicts between these two categories of participants, whose areas of legitimate intervention have been interdependently redefined. It sheds light on the emergence of a new narrative of production, which competes with the monopoly of creative decision-making power granted to the artist-producer team, and which places the data specialist in a position to say, on behalf of the consumer, what should be acquired or produced by the streamers. This is how data specialists have become stakeholders in the professional circles within which the economic and artistic value of projects and talents is negotiated.

The fourth chapter focuses on data specialists' instruments: the models, systems, methods, and tools they build, mobilize, and make talk. It shows that working with data has largely taken the form of experimentation and tinkering. The construction of their professional legitimacy has gone hand in hand with the establishment of a set of tools and devices whose use was gradually routinized. This chapter looks at how these instruments construct projects and audiences: "content" is captured through a new system of categorization while, inseparably, "users" are approached through the segmentation of their behavior into "taste clusters." This chapter sheds light on the effects of the use of these instruments on the definition of what is to be created. It also looks at the changing definition of the value of talent and projects associated with this use.

The final chapter returns to the analytical level of Hollywood's transformation process with which the book started, but this time to take stock of the situation in the mid-2020s. I describe the "oracle function" that Hollywood data specialists have come to assume. I show how the new approach to audiences and demand promoted by these professionals contributes directly to market-making mechanisms. I shed light on the extension of the predictive role assigned to these specialists, questioning the conditions under which the future they imagine can become a self-fulfilling prophecy.

Ultimately, this book is about the *professional logics driving the transformation of a cultural industry*. It reveals the ongoing process of redefining professional territories between "old" and "new" professions in cinema and television. It sheds light on variations in the relative weight of different

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