CHAPTER 8

THE MARKET FOR CREATIVE LABOUR

Talent and Inequalities

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The many approaches to creativity in labour markets and organizations are built on a similar ground; that of one common good, be it that of knowledge and creative learning-by-doing produced and shared through networks of firms, or that of positive identification with work inside the firm, or that of creativity as a shared ethos of work and life. Yet the presumption of self-actualization at work contained in the creativity principle runs against the highly unequal chances of achievement that are observed in very creative occupations. Indeed, as the functioning of core creative worlds such as the arts and sciences shows, one crucial issue is missing in the broadened picture of creativity at work: that of the several dimensions of inequality magnified by the work system which builds on highly individualized performance ratings and selective matchings.

Ironically enough, although a majority of creative workers are prone to advocate a sustainable version of egalitarianism in society, the creative worlds have developed an insuperable engine to rank workers by quality level, reputation and market value, to select and signal the best works out of an ocean of products through winner-take-all tournaments and endless competitive comparisons, to let the whirl of fads and fashions promote or eliminate aspiring superstars, to celebrate skyrocketing and ephemeral celebrity as well as to provide civilization with Pantheons and Academies of long-lasting values.

Thus, on the one hand, creativity must been seen as a generic part of the inventiveness common to all economic activities which constantly require knowledge, its unceasing renewal and a technical approach to the production process to ensure innovation and competitiveness. On the other hand, creativity has the flavour of a scarce ability much sought-after: people well endowed with it come to be rewarded with earnings and prestige disproportionately higher than what the presumable underlying distribution of skills and abilities would command among the work-force concerned. The main determinants of creativity are somewhat obscure. The most commonly notion in use is talent, that has become

a buzzword everywhere value creation is at stake. Young managerial and professional workers are ranked according to their talent potential, as they get hired by a company, so that the best 10% or 20% be on a fast track, with a steeper learning curve, and more opportunities supplied to show inventiveness and creativity. But what does talent refer to? How is it conceivable to found huge earnings differentials on a reality that is hardly definable?

My aim in this article is to explore how talent is understood in the realms where it is obsessively sought after, those of the arts and sciences, and to find out to what extent the talent factor can help explain differences in reputation and earnings that attain extreme levels. I'll show that in creative undertakings initial education does explain far less of occupational achievement than elsewhere in the economy.

When it comes to define talent, the standard answer is cast in terms of gift and calling: talent is the expression of abilities that seem to originate in the genetic lottery, especially if they manifest themselves early in the artist's life; this genetic capital enters into a nurturing family and social environment that fosters its development. With this posited, all that has to be done is inventory the unique traits of exceptional talent and see what reactions its products elicit, thereby determining whether the creative activity of the genius in question is supported, ignored or thwarted in the world of his or her contemporaries or the most influential of them. A biographical account of this sort amounts to a narrative of the adventures and misadventures of expressions of pure talent in favourable or less-than-favourable environments. But if 'talent' is just another name for ability, as contrasted with skill, and as such represents the point of origin to which all other factors implicated in success should be tied, in accordance with a determinist schema of propulsive causality, then what remains to be explained?

And on the demand side, how are talent and its products discovered and assessed by audiences? An essentialist understanding of talent or genius would postulate that gaps in degree of material and symbolic 'consecration' (fame, recognition) in the arts and sciences are due to proportionate differences in aptitude and that the peer community (in sciences) and the varied sets of audiences (for the arts), even if imperfectly informed or unequally cultured, will necessarily recognize, sooner or later, the value of this or that work of art by producing an aggregate value judgment, thereby providing a universal foundation for that judgment and perception of difference.

But if things did in fact happen this way, the factorial breakdown of causes of inequality in artist earnings should be able to capture the influence of determinants as strong as abilities, with which individuals may be unequally endowed. As I will show, this is precisely what earnings equations fail to do. So we have to find another explanation for those inequalities.

If abilities were readily definable or observable there would be no uncertainty about success. It is precisely such uncertainty that fuels creative work, and the competition and innovation within the various art worlds. The reason those worlds proceed by ceaseless comparisons is that the wellsprings of inventiveness and originality cannot possibly be fully determined. Comparisons and tournaments, as I shall show, not only rank ordinally producers and products, but come to magnify interindividual differences that may have been tiny or large, but essentially impossible to calibrate from the outset.

Education and Earnings in Creative Work

The usual analysis of earnings may be divided into two non-exclusive categories of argument. One deals with the investments that individuals make in initial education and in subsequent forms of acquisition of knowledge and of cognitive, physical, social, and psychological resources for use in their work. The more systematic development of this analysis is derived from the economic theory of human capital (Becker, 1975<; Mincer, 1974; Rosen, 1986, 1987). The other approach comes from the sociology of job stratification, to which I'll turn in the next section. While links may be made between these two analytical frameworks, they nonetheless remain very different.

According to the human capital model, the quantity and quality of investment in education largely determine the individual's earnings prospects, and since the most desirable positions generally demand high-level skills. Yet that investment only accounts for a third of the variance in earnings, and offers no easy explanation for increasing intra-occupational inequalities, when individuals who are fairly similar in terms of human capital meet increasingly different fates. Even when factors such as sector of activity, regional location or company size are introduced into the explanatory model, the unexplained portion of these inequalities remains high.

Data from various surveys (Alper and Wassall, 2006; Menger, 2011) have shown that the number of artists has been increasing faster than that of the workforce taken as a whole, that they are younger than those workers they can be compared with in terms of education, that their educational level is above average and their self-employment rates are high. Same surveys tell us that given their level of education and social status, artists' earnings are below the average found for the occupational category they are included in. The earnings gap remains high even when controlling for several of the factors mentioned above.

As the poor fit of an earnings function signals, education has a smaller positive effect on the earnings of artists than for the general labour-force (Frey, Pommerehne, 1989). Why?

I review two candidate explanations

The first explanation lies in the art sector heterogeneity. Not all art disciplines demand the same degree of initial specialized education. Admittedly, differences between disciplines are not stable ones. The existence and content of education varies over space and over time. Moreover, dispersion cuts across artistic disciplines. Think of the stark contrast between classical and popular music.

The second reason lies in the composition of artists' income. Investment in artistic education yields returns that cannot be apprehended very well by standard analysis of earnings factors. The relationship between education and income actually falls into two causal sequences: that between education and probability of obtaining paid

work, and that between type of work done and income level. The first is radically different from the link between educational degree and employment prospects on the classic labor market; i.e., landing a job that will involve a stable, lasting relationship with one employer. Most creative artists' work situations are characterized by numerous, often brief transactions with several different employers.

The career construction process may be described as a stochastic one: the probability of working at any given moment is determined first and foremost by the value of the performances or works the artist has been capable of in the preceding period (rather than the power of any art school degree).

Not only is an artist's activity discontinuous, but of the different jobs he or she may do, some are in art and some are not. According to a wide range of international surveys, artists come out at the top of the list of occupations whose practitioners hold multiple jobs. Yet, the employment survey data used to estimate earnings equations do not distinguish between income from creative work, from art-related activities and from non-artistic jobs.

Once multiple jobholding has been taken into account, it appears that artists' investment in education has a positive effect on expected income from non-artistic activities and arts-related activities such as teaching, but the effect is considerably weaker in relation to primary creative practice, due to the unspecified role of talent and other innate ability factors. Actually, the artist's on-the-job experience has a much greater influence on the latter income source (Throsby, 1996). Disaggregating income thus enables us to locate the main source of inter-individual inequalities. Artists' earning levels and their skewed distribution are an overall monetary expression of the risks they take, but also how they manage those risks. The income breakdowns due to multiple jobholding show that income gaps are significantly narrower for secondary employment than for the vocational work, or 'labour for love', as Freidson (1990) phrased it.

Job Stratification and the Reward of Talent

The result of this complex combination of income sources and effort as distributed among multiple jobs is itself quite simple. All national surveys without exception show that earnings inequality, income variability over time, and unemployment and under-employment rates are higher among artists than for nearly all the other occupations included in the same statistical category. Neil Alper and Greg Wassall (2006) have calculated that in the United States in the last 60 years, occupational income inequality among artists increased faster than for other categories of 'professional, technical and managerial workers'. Of a total of 123 higher occupations, nine of the 11 art occupations

figured among the 15 occupations with the highest degree of internal income variation. Among the nine, actors and musicians showed the widest variations.

Income distribution in art occupations generally follows the Pareto curve: one-tenth of professionals in the given field earn half of all annually distributed income; one-fifth earn 80%. In sum, in art there are more individuals earning nothing—or less than nothing after art-related expenses—than in any other higher occupation. At the other extreme we have the elongated tip of the distribution, signaling the presence of artists with astronomically high incomes—a level that brings to mind lottery payoff matrices. Thus, whereas the distribution of human capital factors of the sort included in earnings equations typically forms a bell curve wherein individuals of the given population are fairly symmetrically distributed around mean values and the majority of individuals are at the center of the distribution, here we have an extremely asymmetrical curve. Income distribution is structured entirely differently from the skills and qualifications distribution associated with earnings equations. To what mechanisms of the art labour market should this discrepancy and the resulting extreme inequalities be attributed?

Let's have a closer look at the multiple job holding combination. Jobs in the portfolio belong to different categories. Acccording to the theory of job stratification (Stinchcombe 1986; Jacobs 1981; Baron and Kreps 1999), each position and profession can be assigned certain characteristics and capacity requirements whose social and economic value is assessed according to their degree of scarcity and the nature of the collaboration between those working together. The degree of scarcity reflects the vertical ranking of skills and performance, which results in the qualities of the work being classified according to a scale of social prestige and economic desirability: an extraordinary talent will be admired and, where a market value exists, exploited at considerable profit, provided that it is sought after by a sufficient number of people willing to pay for it. Moreover, a talented worker may make an unusually high contribution to the success of his organization, more than proportionate to the differential between his qualities and those of his teammates. It is in these professions that competition to attract and reward individuals deemed exceptionally talented is fiercest and it is here that earnings concentration creates winner-take-all or winner-take-the-most situations (Frank, Cook, 1995). In this category, one may cite scientific research, university teaching, the entertainment industry (cinema, radio and television, concerts, shows and performances for a wide audience), sports.

Let's call these jobs 'star jobs', following Baron and Kreps' reworking of the stratification model of Stinchcombe. And let's add another important dimension: that of how good or bad a performance may affect a given activity. In star jobs, even a poor performance does not considerably hurt the organization or firm, while a good performance can win it considerable gains. In such professions, the probability of obtaining an exceptionally fine result is low and most performances produce average results. The cost for the company of hiring an average professional is low compared to the profits it will reap if it finds someone exceptional, and this leads to an employment policy or contract

relationship that brings in a great number of different individuals, the aim being to find the 'real gem'.

By stressing the horizontal dimension to the valorization of talent, we are saying that his talent is a 'complementary' factor of production, and that such talent alone can be a powerful lever for the group's success or reputation. A research laboratory employing a world-famous researcher, for example, will benefit from infinitely more development opportunities than another offering simply the sum of individual contributions from a team of excellent researchers.

In a second category of activities, even spectacularly excellent individual contributions cannot bring the organization or team any additional reputation or profit. In these 'guardian jobs', the skills required for performing the activity are an 'additive' production factor and they are more homogeneously distributed among the individuals concerned.

Lastly come 'foot-soldier jobs', where variation in individual performance has limited impact and the range of individual differences is slight. Here the success of the organization depends on the aggregation of all individual performances. Employees are hired on the basis of a simple wage negotiation: anyone who accepts the proposed wage gets hired.

Now recall the multiple job portfolio of a typical artist. We find the two or three types of job mentioned in the functional analysis:

- the creative artist (novelist, painter, composer, solo performer) is obviously the star job;
- the supplementary artistic or intellectual activity (i.e., the teaching associated with a career in painting or composing, the journalism associated with a writing career, etc.) falls into either the guardian or the foot-soldier job category;
- lastly, extra-artistic activities are usually the equivalent of foot-soldier jobs.

Relative Comparison and Dynamic Amplification of Differences in Talent

Star jobs (i.e., primary creative activities) are those that earn their successful incumbents the highest rewards (monetary and non-monetary, like esteem and social recognition) and those for which cultural enterprises such as publishers, gallery owners, recording and film companies are very clearly looking for the rare gem.

How do they do that? How to detect talent? I contend that overproduction and the ensuing use of tournament-like processes of selection of artists and items in the market are rational responses to the issue of talent detection and testing.

It would be easy to evaluate artists and their work and perceive qualitative differences if everything could be assessed in absolute terms, on the basis of a univocal scale

and a stable set of perfectly unambiguous criteria. The selection process in the course of artistic education would filter the many candidates through some simple tests and contests. According to Rosen's view of ability in human capital theory (Rosen, 1987), such reasoning applies only to the first part of an occupational career: people choose to specialize their human capital investments in activities on which they get the highest return, according to what they can learn about their abilities in selecting the best occupational match. Thus, because educational and occupational choices are closely linked, the overall ability bias is likely to boil down to a selection effect and to be relatively small. Things take another course once ability is viewed as a multidimensional and mutlifactorial component. As already noted, the fundamental properties of a creative activity are unlimited differentiation of its products and originality-driven competition. Therefore, in stark contrast to a timed athletic performance or problem resolution, aesthetic originality and artistic value can only be measured in relative terms.

Now how can value be measured and rewarded in relative terms? Through rankings and remuneration scales and career advancement profiles that take the form of tournaments (competition for specific prizes in music, auditions and casting sessions for actors, literary awards, hit-parade lists, critics' evaluations, etc.) wherein assessment is based on incessant comparison. Artists work to differentiate themselves from each other on several points and this in turn sustains competition based on originality; meanwhile, critics, art world professionals and market intermediaries (producers, employers, organizers, agents) and consumers are constantly comparing and ranking them. The cultural knowledge required for appreciating and assessing art works can be defined as the sum of significant comparisons an individual is capable of making, explicitly or implicitly, for the purpose of attributing meaning and value to a work of art. In this way, works that were initially merely juxtaposed by the law of originality get hierarchically ordered by art world professionals and audiences in terms of preferences and investments, through a long, trying series of competitions and comparisons. What is called 'talent' can be defined as the quality gradient attributed to the individual artist by comparisons that cannot be supported by any absolute external reference points or touchstones. The difficulty of defining talent derives from the fact that it is not arbitrary value but rather purely differential quality.

Taken together, these three characteristics correspond to and are reflected in the way cultural entrepreneurs operate. Their strategy is entirely organized around two moves: exploiting uncertainty and reducing it.

Very little is known of the ingredients for success; uncertainty about the market potential of each work and innovation leads each company to multiply its bets on artists, and this in turn leads cultural industry entrepreneurs as a whole to offer excess supply.

As soon as the cultural entrepreneurs manage to identify an artist with 'high potential', they set about over-exposing him or her and pulling all the levers that will trigger movements of contagious imitation in the general public. They do this by exploiting the self-reinforcing dynamic that transforms an artist's success from an effect into a cause of the quality consumers attribute to him or her. They may then seek to 'develop' an artist who is enjoying early success, just as is done with scientific inventions or technical

innovations in R&D. Thus, after using uncertainty about who will come out a winner by exploiting competition through originality, they now work to reduce uncertainty about a clearly promising artist's chances of future success by transforming his or her instantaneous value into lasting value—an asset in which they can now continue to invest.

What does a career modeled on a competitive tournament look like? According to James Rosenbaum's model,[1] the tournament mechanism requires (1) substantial interindividual differences, as these justify the fact that the most deserving win out over others; (2) imperfect information on individual aptitudes, as this requires reiterated contests (to obtain the information), in contrast to activities in which aptitude seems unambiguously measurable; (3) significant past accomplishments, as this influences chances of succeeding in the present (in contrast to the door-to-door salesman in Rosenbaum's example, whose previous success rate will not really influence the chances of his succeeding with his next customer); and (4) an effective/efficient system for interpreting information on past accomplishments. These hypotheses derive from two simple observations: it is difficult or impossible to specify and directly measure the nature and exact quantity of resources (aptitudes, effort, acquired skills) individuals are using, and the value of the result or accomplishment can only be assessed through ordinal rankings.

Rosenbaum's hypotheses correspond closely to what I have been analyzing here. For example, if we postulate that there are indeed differences in artist aptitude and productivity, what characterizes those differences? The answer is valid for analysis of success not only in the arts but also the sciences, sports, politics, and business.

Certain qualities can be measured (intellectual capability, physical and psychological qualities), and they function as necessary, readily detected conditions; i.e., when competition is governed by succeeding in initial scholastic and higher education tests, since quickly achieving scholastic success means attending good schools where one will then come into contact with high-level teachers and fellow students, all of which will procure what are called cumulative advantages, examined in detail below. Other qualities can be documented through biographical exploration: quantity of work, tenacity,[2] fertility of the individual's imagination; his or her aptitude for 'divergent thinking', a wellsprings of creative invention, and individual's ability to concentrate on activities that so intensely stimulate his or her interest that intrinsic motivation functions as a kind of ideal lever for near-obsessive behavior of a sort that combines the values of work and play.[3] The hierarchy of these qualities varies by the nature of the activity under consideration. Having a substantial edge in a specific area of activity gives candidates for success in that area a means of attaining the next higher level in the competitive selection process. But from this point onward, reasoning in terms of success factors become spurious, because above and beyond a certain threshold, possessing a greater amount of one or another of these qualities and, for example, much greater intellectual capabilities than the candidates against whom one is competing, no longer really increases one's chances of succeeding in the activity in question. It is of course the *combination* of various types of qualities and skills that counts, but there is no detectable ideal formula for an optimal combination or optimal proportions of

those qualities and skills.[4] We suspect that the skewed distribution of those qualities and their indecipherable combinations may create sharp inequalities in chances of success, but it is impossible to estimate that distribution a priori. This is why people engage in relative comparison.

In this context, artists' careers can be analyzed as a stochastic process: young artists themselves are uncertain about the quality of their work, and their exhibitions, publications, performances or concerts constitute a series of assessment ordeals and tests. If initial evaluations by peers, critics and members of their reference group are favourable, they will choose to pursue the profession. Artists who do not succeed in this first career phase are exposed to a cumulative disadvantage mechanism. Whether an artist stays in the career in the hopes of overcoming the negative effects of a poor debut depends on his or her available resources for managing occupational risk (multiactivity, unemployment insurance coverage when one is underemployed, diversifying areas of activity in which to acquire visibility, entrepreneurial initiatives, public subsidies) and the value he or she attributes to the non-monetary gratifications of the activity compared to that of alternative activities that he or she would be more likely to succeed in.

If we consider the reputation hierarchy at a given moment, it appears to display substantial differences in quality as revealed through a series of consecutive comparisons and competitions. But as Rosenbaum (1989) points out, comparison and rankings do not merely reveal unequally distributed qualities nor select individuals on this basis. These competitions cause contestants' careers to diverge despite the fact that their aptitudes may be similar or, according to radically relativist reasoning, equivalent. The fact that earnings and reputation get concentrated on a very small number of individuals thus means differences in success that are wildly disproportionate to aptitude or 'talent' gaps. The signal emitted by winning a competition or contest works as the lever in a process of reputation accumulation. But does such reputation intensification correspond to a 'plus' in intrinsic quality that would necessarily have become obvious and 'grown'? Or does the reputation of an artist who has become famous have the effect of positively skewing perception of his or her quality compared to his or her competitors?

Star Jobs

In his oft-cited article, Rosen (1981) examined the phenomenon of superstars in art, sports and the liberal professions, activity sectors that typically encompass what he calls *star jobs*, characterized by the fact that the perceived talent of those who hold them is considered scarce and highly desirable. Sherwin Rosen's model has two properties: it posits difference in degree of talent and demand sensitivity to that difference. His explanation is therefore close to the essentialist understanding mentioned in my introduction, wherein talent is an exogenous factor. But it also differs from that approach in that

it shows how differences in artist remuneration can be extremely disproportionate to differences in artist talent. Rosen's initial distinction is quite simple:

> Some tasks are so routine and so circumscribed by existing practice that nearly any competent person achieves about the same outcome. Others are more difficult, more uncertain, and, this being so, allow greater possibilities for alternative courses of action and decision. Such tasks offer greater scope for superior talent to stand out and make its mark. More capable physicians spend smaller fractions of their time on routine cases and larger fractions on difficult ones than do physicians of more modest ability.
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> (Rosen, 1983: 455)

In the latter type of occupation, goods and services are highly differentiated, expertise and originality highly valued, and perceived differences in quality are of decisive importance in orienting consumer preferences. At a given price for a good or service, a consumer's utility will be greater if she chooses a professional who is considered more talented than another. A surgeon with a 10% greater ability to save lives than others will be in great demand and his fees will exceed those of his colleagues by much more than 10%: his total earnings will thus be highly disproportionate to the quality gap distinguishing him from them. Professionals of superior talent are therefore able to sell their services at a higher price as well as work more to meet demand—as long as they can find a means of meeting relatively intense demand without sacrificing the quality of the good or service they're selling. In this model, performance quality difference amounts to an intrinsic value: it can be perceived without bias.

In the case of art commodities, the mechanism that concentrates earnings on a professional elite is of course also activated by consumer perception of quality difference. That perception orients demand toward artists deemed to have superior talent.

If the commodity can be reproduced (book, CD, film, video, etc.), artist and the production company can simultaneously serve much greater markets. Highly reputed artists make intensive use of joint consumption technology. Classical means for physically duplicating commodities, audiovisual diffusion, and the cascade of innovations resulting from digitization and the development of trading networks of all sizes allowing for instantaneous exchange of digitized content mean that artists in these areas too can now serve a market that encompasses the entire planet.

> The superstar is someone whose audience is enormous relative to the scale on which most of us operate. Personal markets of that magnitude are almost exclusively sustained by use of media as a cooperating resource. These markets represent technologies that, in effect, allow a person to clone himself at little cost. More precisely, costs do not increase nearly in proportion to market size; … Once an author delivers a manuscript to a publisher, it can be duplicated at small expense practically indefinitely. A television or radio program is communicated virtually costlessly and identically to whomever happens to tune in. The performer or author puts out more or less the same effort whether one thousand or one million people show up to listen to the concert or buy the book.[5]

And even if the commodity in question cannot be reproduced, as in the case of a painting, or if the service or performance can only be realized live, as in musical or theatrical performances, current developments in information systems and artist mobility have swollen these artists' potential market to planetary proportions: the demand for fine arts, and classical and lyric music performances at the world-wide scale is concentrated on a small number of artists, giving extraordinary leverage to their reputations and careers.

The second essential point in Rosen's model is talent's power to attract demand. Obviously, in contrast to the surgeon, artist and art commodity quality of artists represents subjective utility, but a quality difference that will yield greater subjective utility is an inherent feature of the service demanded by the audience—it's precisely what the consumer is looking for. Without the hypothesis that quality differences play a fundamental role in orienting consumer preferences, we could not understand why there is competition among artists. For, as in the case of the superior surgeon who saves more lives than another (but with much less dramatic consequences), an artist deemed superior is much more desirable than an artist of inferior quality, and this holds without consumers being subjected to any kind of external influence. Two concerts, exhibitions or films of moderate quality will not give me as much satisfaction as one high-quality concert, exhibition or film. The quality perceived as superior is powerful enough to trigger demand concentration and therefore celebrity and great wealth for those artists reputed have the greatest talent.

But how much 'greater' than other artists' talent does a given artist's talent have to be to garner demand in this way? Referring to classical musicians, Rosen notes: 'Interestingly, income differences between first-rank and second-rank performers are substantial, even though, in a blind hearing, an infinitesimal portion of the audience could detect more than minor differences among them'.[6] His model goes further than claiming that returns to talent are increased by larger markets, themselves the result of media and communication technologies, professionals' and consumers' spatial mobility, and the globalization of trade and elite careers. He also claims, and seeks to explain, how minimal differences in talent among professionals can suffice to concentrate disproportionate demand on those deemed either significantly or slightly more talented than others and to win them a reputation and opportunities for working that will greatly enhance and bolster their competitive edge for an indeterminate length of time.

If we decide that difference in artist talent is exogenous and that it is decisive when it comes to income gaps, then it is logical to assume that the value of an artist's talent will be a function of the intensity of demand for that artist. Consumers, then, are sensitive to differences in artist quality. But what accounts for their perception of such differences, even minimal ones? Direct experience? Acceptance of professional critics' evaluations? Informal evaluations exchanged in social circles (word-of-mouth)? Imitative contagion? Information and cultural industry marketing pitches? All of the above, or some combination of it (depending on commodity and audience)? Some combination of signals (see Menger, 2009, ch. 6, for a detailed discussion of this issue)?

It is possible to establish a graduated scale of consumption behavior. At one end of the spectrum, a consumer who lacks direct information on the presumed value of available supply and lets himself be guided by others' choices in a situation of weakly informative mimetism; at the other, an expert consumer who invests in knowledge of artistic production (a given artist, period, genre, etc.) and converses with other cultured individuals. Between the two, extremely various intermediary situations and variability in individual consumer behavior.

Consumers have preferences that are situated within a triangular forcefield: they both benefit from the extreme variety of supply and reduce that variety by the information they acquire from observing others' behavior and conversing with others, all the while converting experiences into investments that structure a space within which to make choices.

Note that in Rosen's model, the entire analytic dynamic is on the demand side in that what accounts for successes disproportionate to relative differences in quality is the way demand behaves, specifically, whether or not it increases. Changes in demand cannot be understood if we do not see that consumers learn, seek information, talk to each other, imitate each other. But how can we describe artists' behaviour? We cannot simply assume that they have gotten through competitive tests and ordeals that enable them to attain vast markets, with the understanding that they have been endowed from the outset with talent and that that talent need only be expressed in order for them to succeed. What do *they* learn in the course of those competitive career ordeals that then enables them to affect the course of events? What mechanism offers a convincing explanation for artists' behavioural dynamic?

Cumulative Advantage and its Mechanics

The cumulative advantage model allows for analyzing social inequalities as the product of a dynamic of increasing divergence between trajectories that originated in a situation of nearly equal opportunity. The argument is as follows: An individual, a group, a company whose characteristics are all quite close to those of their competitors manages to obtain a minimal advantage over them. This advantage may consist in a particular aptitude, an investment opportunity, the good fortune of having invented something, or the intervention of chance pure and simple. At first it only puts them in a slightly better position, but that situation will then improve and their advantage will increase to the point of causing considerable inequality in the distribution of benefits (income, profits, prestige, market clout).

This model, known as the Matthew Effect (Merton, 1968, 1988), comes to us from sociology of science. Merton began with the hypothesis that considerable inequality in success and reputation in scientific careers as measured by impact, monetary and non

monetary reward, access to high status positions, prestige and social recognition can very well result from an initially insignificant difference in the intrinsic quality of the individuals in question. The hypothesis does not put all possible candidates for a career in the sciences (or the arts, or any world that values individual creativity) on the same starting line; the point rather is to compare the professional trajectories of individuals endowed with equivalent education, skills, and economic and social resources.

This way of describing the action system and actor behaviour leads to the following explanation of how the gap between two scientists tends to increase with time. A researcher who has called attention to himself by producing high-quality studies early in the career will have readier access to work resources and an easier time publishing, and his works will be cited more frequently (than a researcher displaying none of these characteristics). Overall, what he produces will benefit from a kind of halo effect, brought about by the reputation acquired with his most important productions (Cole and Cole, 1973: 220–221). His advantage is twofold. First, for a given study, the chances of obtaining rewards (additional resources, a more competitive research team, stronger market power in the competition for the best academic positions) is greater for a researcher of higher status, and this holds even for research of a quality no higher than the average produced by his colleagues. Because even if the work of a less renowned colleague is of comparable quality, as can readily be imagined for article co-authors, for example, the more prestigious author will get more recognition. Second, as Joel Podolny (2005) notes in his commentary on Merton's model, it is easier—i.e., less costly—for a high-status researcher to produce work of a given quality level. He is more likely to be invited to present his work at high-level institutions, and he can hope to improve his work through more fruitful exchanges. In the stratified academic world, his value gives him market clout that will help in getting him hired at a strong, renowned university and negotiating a better ratio than elsewhere of teaching hours to research time. He is more likely to develop collaborative projects with scientists at his own level or higher, and to attract brilliant students who will invest themselves heavily in their doctoral studies, which in turn will lead to later collaborations with them, of which he will reap most of the benefits (Podolny, 2005: 26–27).

As Thomas DiPrete and Gregory Eirich (2006) point out, Merton's cumulative advantage model leaves open the question of differences in talent. There is no reason not to assume there could be real differences in talent or aptitude, but the cause of increasing inequality may be purely random as well.

Let's go back to the start of the fame accumulation process. Can reputation be entirely disconnected from talent? The cumulative advantage mechanism kicks in as soon as a gap in the performances of a set of candidates for success appears and one young scientist takes the lead. The explanation lies in the self-reinforcement mechanism: the scientist who got himself noticed due to a remarkable performance early in his career then attracts the attention of his peers and receives the support of mentors and colleagues further along in their careers. They enable him to lower the cost at which he produces quality research and to increase his chances of enlarging his audience.

The cumulative advantage mechanism requires the existence of an initial difference to be set in motion. It is in this initial phase that competitive tests and trials (publishing, obtaining grant and job applications) lead every time to judgments of who does best, before enabling those thus identified to move upward at an accelerated pace and attain greater opportunities for accumulating accomplishments in the stratified competition system. But what explains why someone 'does better' from the very start?

The result predicted by Merton's model is that inequalities in researcher productivity within a given cohort do increase. To obtain this result, we have to introduce interindividual heterogeneity (Allison, Long and Krauze, 1982). All researchers, then, do not start out with the same propensity to publish. And all researchers, after their first publication, do not receive an additional leg-up to publish at an increasingly fast rate: only those whose articles are deemed good or remarkable are encouraged to produce more. In sum, to explain increasing inequalities, we have to go beyond the hypothesis that all competitors have the same initial capacity to produce. A heterogeneity or qualitative difference coefficient has to be introduced from the outset to account for inequalities in success, as those inequalities amount, in the end and first and foremost, to unequal abilities to produce high-quality results.

Another way to make the point is to turn the argument around. Suppose the initial edge has only to do with chance. The chance issue is worth elaborating on since it plays plays a particular role in the arts.

The 'chance' coefficient is usually used to explain the unpredictability of discovery and original novelty. The high value placed on creativity in the science and art professions corresponds to the component of chance in the very nature of creative work, a characteristic indicated by descriptions of the discovery process as a sequence of distinct phases: intensive labour, subconscious rumination, unpredictable unconscious connecting of heretofore disconnected ideas, emergence of the discovery, scrupulous weighing of the value of the new idea, communication of it to the public.[7]

Work organization may be the cause of increased variability and uncertainty coefficients. Once again, in contrast to science, competition and success in most art professions are not at all closely correlated to initial education. The importance of 'on the job' learning is explained by the heavy exposure of an individual's work to the uncertainty of an extremely turbulent environment; i.e., organization on a project basis and the variable degree of control that the individual has over the result of team work. A successful career can be likened to a gradual increase in artist's control over the relatively variable dimensions of her activity and over relations with her environment, in a world where stratification by reputation—unlike in the sciences—is disconnected from stable work organization. It is the very system of artistic labour that creates conditions allowing chance to intervene. Art careers are constructed from one project to the next, and not all projects are equally likely to be successful. Moreover, the individual work's work is usually immersed in a collective undertaking whose chances of success are imperfectly correlated with the quality of each team member. The skill or talent of an actress evaluated in terms of personal performance are do not fundamentally differ, of course, by whether the film she plays in is a success or failure,

but her visibility and the likelihood that she will be involved in more or less promising projects later on depend in large part on the film's success.[8] Organizing work on a project basis introduces strong variability into professional activity and multiplies possible bifurcation points; e.g., being called in at a moment's notice to replace the star opera singer, who has caught cold; discovering just the right information on a future project or employment opportunity; landing a role in which, against all expectations, one can reveal one's aptitudes without having ever been cast in that job category before.[9] Project complexity increases the role of chance and in some cases the sequence in which good or bad luck strikes. Moreover, there are few occupations whose practitioners make such frequent recourse to superstitious practices and rituals, the counterpart to that other essential behaviour mechanism characteristic of the art world: excessive self-valuing.

But here as in Allison's analysis cited above, we have to acknowledge that the individuals are not equally capable of exploiting the opportunies they have, even those provided by chance. Analyzing the extreme inequalities generated by uncertainty about success in the film industry, Arthur De Vany (2004: 239–242) raised the question of what degree of success was to be attributed to luck and what to talent. Suppose that for a director or actress the film they make can be either a success or a failure. If the film succeeds they can continue; if it fails they have to stop and do something else (television work, another audiovisual occupation) or else leave the sector entirely. If luck governs the entire process, then the distribution follows a binomial law as in a game of heads or tails: the probability of making two films is 0.5. According to this hypothesis, half of debuting actors and directors will not make more than one film; the probability of making three is 0.25, of making four is 0.125, etc. What do we learn from De Vany's data on distribution of number of films by actor and director in North American cinema from 1982 to 2001? That distribution follows the binomial law curve; in other words, that playing at heads or tails is a fine way of determining the probability of my making another film or not. However, 'beyond 7 movies, the odds depart from pure chance' and the probability of continuing is higher than random selection of one of two possible results. Other factors affect career chances, and the study brings to light a threshold effect illustrating Pareto's law:

> The high odds ratios for the most prolific directors suggests there is something beyond luck in determining how many movies a director will make. In seeking to further draw the line between luck and talent, we rely on the remarkable property of the Paretian distribution. A merely lucky director would find that the probability of succeeding with her next film is 0.5. And this would be the same for each film, no matter how many the director made. That is to say, the probability of success is not altered with experience as measured by the number of successful films made. If talent, skill, or learning have anything to do with success, then the probability of success should not remain constant; it ought to increase with the number of successes realized. And this is just what the Pareto distribution implies.
>
> (De Vany, 2004: 241)

The lesson to be learned here is that making a career implies getting through elimination tournament stages (here represented roughly by heads or tails) and that getting through those stages means beating chance. The forward progress of a career works to reveal underlying the individual's qualities and strengths (those that enabled him or her to get through the stages), qualities and strengths that are unequally distributed among individuals. An individual who succeeds in developing her career in the project-by-project context can enjoy the benefits of a well-established reputation, padding her relational network with contacts that will convey information and work offers through which to increase her skills. This dynamic is particularly influential in occupations where on-the-job learning plays an important role and where the reputation signal is a highly functional means of passing on information in professional network exchanges when it comes to organizing projects.

Talent Seeks Talent

In the models discussed thus far, spectacular inequalities in success primarily concern artists, or professionals with valued expertise, who are competing individually, and through direct interaction with the market, to capture demand. Those individuals do not seem to have any partners. In reality, however, in order to work, in order to make or diffuse their products, cultural sector professionals usually come together in a permanent or temporary organization (orchestra, theater company, film production crew) or contract with an organization that acts as an intermediary (publishing house, recording company, art gallery) to materially realize copies of reproducible commodities or put non-reproducible works into circulation and onto the market. It is during this process that another inequality lever comes into play: selective or 'assortative' matching. Introducing assortative matching into the overall model makes it possible to resolve some of the difficulties encountered in Rosen's and Merton's versions of it.

Assortative matching refers to the multiplicative nature of the production function in artistic work. As in the case of the scientist in Merton's cumulative advantage model, it is in a creator's interest to associate with professionals whose quality in his own area or each of their own areas is reputed to be equal to or greater than his own. For a promising artist to have the best chances of developing her talent, it is important for her to associate and work with professionals of comparable value in the other occupations required for producing and circulating her works. A highly reputed director will look to work on films where the key filmmaking jobs (director of photography, scriptwriter, editor, costume designer, etc.) are occupied by top-notch professionals. The head of a publishing house will want her most seasoned editor to handle work relations with the house's most talented or promising writers.

Indeed in the very early stage of the artist's or scientist's career, both formal education and later on-the-job learning are heavily determined by association with experienced

partners who provide the individual who is in the process of becoming a professional with improved opportunities for developing his skills by enabling him to work on demanding projects with partners who have themselves been selected as a function of their potential.

We readily see the connection between the assortative matching argument and the analysis holding that careers in art and science advance by way of tournament competition and cumulative advantage. In the course of their early, formative experiences, would-be artists manifest capacities in ways and degrees that vary by individual. The nature of what kind of difference in talent exists between creators who will succeed (more or less lastingly) and others who will not come out as well remains undetermined. Expressed in terms of probability of succeeding, the benefit that hoped-for talent provides early in an artist's career may be weak, but it will be enough to create a small, or not-so-small and in any case perceptible difference with each competitive comparison test, and this in turn will polarize the investments and 'wagers' of system actors (artists themselves, trainers, professionals, patrons, entrepreneurs, critics, consumers). The intrinsic learning content of work/work situations is of a similar origin. There is an optimal profile for increasing one's skills: it is a function of the number and variety of work experiences an artist has and the quality of the collaboration networks she can mobilize as she moves from project to project.

How to Solve the Talent Puzzle? A Summary

The whole formed by the different pieces of the analytic puzzle I have laid down in this article in order to explore the question of talent and inequalities in the arts is actually more simple than it may appear. It is similar to a model developed by Roger Gould (2002) to explain the emergence of social hierarchies. The four components of Gould' theoretical model as presented by DiPrete and Eirich (2006: 290ff) are as follows. First, there are intrinsic differences in quality by individual when it comes to performing activities that generate hierarchical rankings and segmentations by status. The differences (or the distribution of quality that they reflect) are an exogenous characteristic of the action system. Their magnitude cannot be determined with precision, but their existence is revealed by relative comparison. This point emerged in our analysis when I examined the scope of two models of disproportionate reward amplification: Rosen's model and Merton's cumulative advantage model.

Second, the differences in quality that underlie gaps in success are not fully observable. The power of the relative comparison mechanism lies in the fact that the personal factors implicated in success, or at least how those factors are combined, are unobservable. And the incomplete observability of difference in quality serves a major function. It actually creates a veil of ignorance, thereby allowing a high number of would-be

artists to nourish the hope of making a career in the invention and creation occupations and professions, despite the iron law symbolized by the sharply asymmetrical Pareto distribution of chances of success. Each candidate will assume that success is the result of a combination of work factors, chance and intrinsic aptitude; meanwhile, the highly imperfect specification of those factors and their proportions leads each to overestimate his or her chances of success. The benefit of this indeterminacy for the individual lies in what she may acquire through the experience of on-the-job learning. Her loss in the matter may be measured in terms of the squandering of strengths that could be better used in other ways. Artist and scientist careers need to be tightly fastened to a constellation of adjacent professional roles (teaching, entrepreneuring, management) that offer resources for managing the uncertainty attaching to the most attractive role, that of creator—that provides a narrow minority of professionals with abnormally high reputation and rewards.

Third, it is from the attention that others pay to an individual that we infer that individual's quality. Winning other's attention also means entering a situation in which one is judged by and compared to others. With this in mind we can readily understand how the cumulative advantage dynamic gets triggered by selective attention to individuals and works in a professional community or from an audience. Attention from others is a signal transmitted to other others; operating through interpersonal relationship networks, it can quickly lead to rational contagion of an increasing number of individuals. The status granted the individual who succeeds particularly well in concentrating attention on himself and his work wins that individual a disproportionate reward (Gould, 2002: 1146–1147).

Fourth, I have emphasized the assortative matching dynamic. Assortative matchings boost the operation of the cumulative advantage mechanism. Their specific characteristic is to win 'matched' individuals higher returns on their respective aptitudes than what they would get in the case of random matching. Talent association has a multiplicative effect. This is particularly so when work is organized on a project basis, as is so often the case in the arts. In organization of this kind, where teams and crews are incessantly being assembled and disassembled, the individuals who form them are selected and matched on the basis of their reputation and value.

The assortative matching analysis bolsters the stratification-by-status argument for the highly competitive worlds of the arts and sciences. Whenever individuals' qualities and strengths are not fully observable, reputation reduces uncertainty about individual value, and, as Podolny explains, the status that comes from a given position in professional-world structure strengthens the credibility of the information that reputation represents. But assortative matching does not amount to an iron law of success. There are two contradictory forces in operation. Competition mechanisms wherein uncertainty is used to fuel innovation foster reputation rankings whose 'memory' is not very deep: an artist ranked by means of these mechanisms is worth what his latest performances or works are worth. Meanwhile, crew composition should achieve a balance between the value of matched members' reputations and the quest for new talents that would also 'match' with the given project. But artistic work is also organized

into careers, and this reduces excessive reputation volatility: an artist has intrinsic value, attested to by the cumulative dynamic of her career, and this value affects how new creations by her are perceived.

Conclusion

Things would be simple if artists could form correct expectations about their chances of success or at least about their odds of decent living within the occupational sphere they choose to enter. Competition would seem to be less wasteful, failures and occupation switching less frequent if not marginal, misallocation of talents due to excessive lure of stardom or of self-achievement promises wouldn't hamper the development of other occupational worlds that might be short of such diverted abilities, training systems wouldn't favour wasted investments, risky occupational wouldn't claim public support at the expense of other economic sectors, and competition might gain in fairness, since artists would have enough time to prove themselves.

Yet, the risk of failure is a built-in characteristic of artistic undertakings. Moreover, failure or success does not merely depend on the creators' own appraisal of their work, unless their art world forms a community of producers who have no interest in others' production or in anyone's consumption. Individuation through creative work, which greatly accounts for the admiration of artists, requires that others have an interest in one's work and consequently that some competitive comparison occurs. Thus, artistic individualism could hardly be equated with an intrinsic, competition-free striving towards self-expression and self-actualization. Individualism, apart from characterizing a lifestyle and referring to a loosely structured occupational community, may signal the tension between a strong sense of personal achievement experienced in absolute terms, and the way one's creative work unavoidably involves relative comparison with others. Overconfidence and optimistic excess entry in a business may be due to the fact that people neglect the reference group of competitors, each one estimating they are skilled enough to succeed. Relative skill perception may entail miscalculation of one's chances especially when the skill requirements are underspecified, when the performance feedback needed to adjust one's level of aspiration is fairly noisy, and when the employment system magnifies heterogeneity among the workforce.

The creative worker may be portrayed neither as a conventional rational actor well-equipped to survive in an ever more competitive market, nor as a myopic one induced to take occupational risks only because she forms probabilistic miscalculations of her chances of success or because she was programmed by her initial socialization to enter an artistic occupation. Rather, she may be portrayed as an imperfect Bayesian actor gathering information; learning by doing; revising her skills, expectations and conception of herself; building networks in order to widen her range of experiences; and acting without knowing her initial endowment of ability and talent or what she may be able to express over the course of her loosely patterned career.

Notes

1. See Rosenbaum (1979, 1984). His studies focus primarily on career management in organizations, showing how tournament mechanisms and eliminatory contests are implicated in organizing upward mobility in organizations that value the non-objectifiable productivity factors called talent and potential; i.e., just those quality differentials that are visible only through relative-comparison tournament mechanisms. For a generalization, see Rosen's model of prizes and incentives in elimination tournaments (1986).
2. Huber (2001) considers talent (manifested by productivity over a given period—e.g., a year) and tenacity (manifested by length of time during which the individual is productive) to be the two decisive criteria for success in a scientific career and hypothesizes that continuous distribution of these two qualities in a population of scholars or scientists is highly skewed, creating the observed Pareto inequalities. Lamont and her colleagues conducted studies on peer review of social science grant applications. Here the originality criterion plays an important role. But can it be universalized in keeping with Merton's ideal? These authors argue that multiple psychological, moral and cultural considerations are implicated in evaluation and work to define a given grant project's degree of originality. See Guetzkow, Lamont and Mallard (2004) and Lamont, Fournier, Guetzkow, Mallard and Bernier (2006).
3. See studies edited by Sternberg (1999) and Csikszentmihalyi (1991).
4. It is in the United States that we find the most abundant supply of literature—scientific studies but also introductory works for a broad readership and best-sellers—on creativity, geniuses and exceptionally gifted persons. The high degree of American tolerance for inequality (relative to the French) and American readiness to value spectacular success are anchored in meritocratic individualism, which chooses to see exceptional talent as an illustration of the ultimate indeterminateness of success. Simultaneously, establishing a list of separate success factors provides criteria on the basis of which to select talent, develop creativity and search for signs of being 'chosen' for an uncommon destiny. For an attractive presentation of this analysis of 'ingredients' for success see Gladwell (2008)—a book that itself became a best-seller.
5. Ibid., p. 455. Rosen's model has been applied to various areas of activity. Among the recent applications is an ingenious study by Gabaix and Landier (2008) on pay for American CEOs. The authors demonstrate that though CEOs are ranked by talent, hiring the CEO in 250th position instead of CEO number 1 would result in a mere 0.016% loss of company value, whereas CEO number 1 is paid five times as much as CEO number 250. The explanation lies in demand intensity from companies looking to hire a CEO.
6. Rosen (1983), 453.
7. In line with Poincaré's (1947) phase model of scientific discovery and Donald Campbell's evolutionist epistemology (1960), Simonton (1988) conceives of genius as a powerful 'mechanism by which chance permutations can be generated' of ordered combinations of previously unrelated ideas, a small number of which prove capable of surviving a selection process in which the idea's fruitfulness is tested and of forming stable configurations that are then further elaborated, and ultimately communicated to the scientific community so that it can conduct one last selection process, in which some of those ideas are accepted. In this model, chance is at the core of inventive combinations and genius manifests itself by high volume of ideas it produces and then sets in motion to bring about unpredictable associations and collisions from which a discovery emerges. See also Merton and Barber's

book (2006) on 'serendipity', a mixture of inspiration, tenacity, and good fortune or lucky chance.

8. Robert Faulkner's study of Hollywood movie music composers (1983) and William and Denise Bielby's study of film and television scriptwriters (1999) show how sensitive reputation is to the effect of immediately preceding successes or failure; also, counterintuitively, how participation in a series of successful projects over several years may become a negative signal in an industry whose genre and content renewal cycle is very short.
9. For an analysis of the role of luck in careers of women orchestra conductors see Diaz de Chumaceiro (2004). For an analysis of women's musical careers that reveals the dark side of chance—in this case, discrimination against women in symphonic orchestra hiring—see Goldin and Rouse's highly original, methodologically impeccable study (2000). The use of screens to conceal candidate's identity during hiring auditions has led to increased hiring of women musicians. Here the point was to eliminate a 'chance' factor, discriminatory gender bias of hirer evaluators, which varies by orchestra and may be extremely entrenched, as in the case of the Vienna Philharmonic Orchestra, one of the most reputed in the world but also the last great orchestra to start admitting women.

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