

## 2 Interpretations and Fields of Application

### *The Multiple Faces of Power*

#### 2.1 A BACKWARD GLANCE

Over time, different definitions of power have been proposed, referring to different areas of social life. They all have something in common, in that they are specifications of the same phenomenon, but they may differ in bringing out particular aspects. The following brief overview, inevitably superficial (especially with regard to the best-known authors), serves essentially to recall the variety of positions on the subject, as the background to our own interpretation.

In the classical age of the Greek polis, between the fifth and fourth centuries BC, following Vegetti (2017, p. 17) we can identify five main ‘types of legitimation of power’: ‘1. *plethos*, the majority principle; 2. *nomos*, the principle of legality; 3. *kratos*, the principle of force; 4. *arethè*, the principle of excellence; 5. *episteme*, the principle of competence.’ Authors like Plato or Aristotle consider the problem of power as part of their analysis of forms of government. In the same vein, Cicero distinguishes between *auctoritas*, the source of legitimacy to govern, and *potestas*, the power to intervene directly in the subjective sphere of others. Thucydides is the first of a long stream of authors who utilizes the standpoint of a realist balance of power in their analyses of international relations.

In the Christian world, the supreme power is divine authority. In the first centuries, political power was recognized as a reality to submit to (‘Give to Caesar what is Caesar’s’); later, with the Church’s conquest of temporal power, the thesis of the religious origin and legitimation of political power, and therefore of the supremacy of religion over civil life, was upheld for centuries. In partly different

forms, the idea of the supremacy of religion over civil life still reigns in many Muslim countries.<sup>1</sup>

Machiavelli, with *The Prince* (1513), provided what is probably the first in-depth treatment of political power analysed in its concrete manifestation, making a clear distinction (rejected by many later authors) between this theme and the ethical problems connected with good governance.<sup>2</sup>

For Hobbes (1651), every human being is endowed by nature with absolute power over his or her own choices, but this leads to a war of all against all; the strife is settled by the constitution of an artificial authority, the absolute state (in which, however, the citizen retains freedom in everything that is not regulated by the sovereign). On the other hand, for the natural-law theorists (such as Pufendorf) and Locke, human beings retain certain natural rights – to life and liberty above all – which constitute a limit to the powers of the state. Montesquieu (1748) moves in a similar direction, favouring moderate forms of government, in which legislative, judicial and political powers are distinct and separate; the distinction of the three countervailing powers determines the degree of freedom of different countries, regardless of their constitutional form, whether republican or monarchical.

Between the sixteenth and seventeenth centuries, consultant administrators (*cameralisti*) and mercantilists considered economic relations from the point of view of the nation state, which is all the stronger the greater is the total national wealth (with gold often utilized as a proxy). Starting with Adam Smith (1776), the point of view of the welfare of citizens, identifiable with per capita income, took on increasing importance.

Karl Marx (1867–94) links power to the class structure of society: the capitalists, who control the means of production, can exploit

<sup>1</sup> Muslim countries, however, have a wide variety of forms of government, especially in relation to the dialectic between nationalism and religiosity; for a discussion of the subject see Mozaffari (1987).

<sup>2</sup> Gramsci (1975) sees a modern version of Machiavelli's *Prince* in the political party that leads the proletariat to realize the new society.

the workers, extracting surplus value from them. The 'superstructure' (culture, institutions) is influenced by the economic structure more than it influences it. Substantial changes in the social distribution of power occur, after a long preparatory phase, with the transition between successive socio-economic systems: from feudalism to capitalism and from capitalism to socialism (characterized by public ownership of the means of production).<sup>3</sup>

For the history of modern thought on power, Weber's analyses constitute a fundamental point of reference. As Pietro Rossi (2007, p. 248) points out, Weber distinguishes between power understood as capacity – generic or indefinite – to assert one's will, even in the face of opposition, and power seen as a relationship of command and obedience, with a specific content. Weber (1922b) uses different terms to designate different aspects of what we refer to more generically in these pages as power: *Herrschaft* (translated as 'dominion' in the Italian version of the most recent critical edition); and *Macht* (now translated as 'power'). Pizzorno (1963) distinguishes instead between 'power' and 'authority'.

Of his many publications, Bertrand Russell also devoted a book to the issue of power (Russell, 1938). His considerations are wide-ranging, dealing with psychological issues (the impulse to acquire power, relations between leaders and followers), religious and anthropological issues (the power of priests: Russell was staunchly anticlerical), political issues (the power of the sovereign, forms of government), cultural issues (the formation of opinions, conventions as sources of power) and economic issues, up to the distinction between 'power over human beings and power over dead matter or non-human forms of life' (p. 23). Russell (1938, p. 5) places great emphasis on the multidimensional nature of the concept of power: 'power, like energy, must be regarded as continually passing from any one of its forms into any other .... The attempt to isolate any

<sup>3</sup> For none of the authors mentioned in this section can these brief outlines account for their wealth of thought; on Marx, in particular, there is much lively interpretative debate and a boundless literature, not least because of the political importance of his thought.

one form of power, more especially, in our day, the economic form, has been, and still is, a source of errors of great practical importance.'

After the end of the Second World War, in the context of the confrontation between the Western bloc and the Communist bloc, the main analyses of power focused attention on the relationship between the state and individuals. Thus Friedrich von Hayek (1944) indicates as a 'road to serfdom' not only the situation in which the state has total control of the economy through public ownership of the means of production, but also any step in this direction when the state assumes some influence in the economic sphere. In a similar vein, Bertrand de Jouvenel (1945) focuses his extensive historical and philosophical examination on Power with a capital P, referring to 'the controls, both spiritual and material, which modern governments have at their disposal' (p. 3) and illustrating its growth over time. Consistent with this approach, de Jouvenel (1945, p. 18 n.) proposes as a measure of the 'extent of Power' the ratio between 'the resources at Power's disposal' and 'the resources inherent in society', which we can interpret as the share of the public sector in national income. The Power of the state is directly opposed to individual freedom: 'Every increase in the state authority must involve an immediate diminution of the liberty of each citizen' (1945, p. 157).<sup>4</sup>

Perroux (1950, p. 56) points out that economic life 'is different from a network of exchange. It is, rather, a network of forces. The economy is guided by the pursuit not only of gain, but also of power.' Perroux then considers a 'domination effect' for the analysis of economic relations, in particular between companies and states.

A similar conception of economic life as characterized by power relations is developed by Galbraith in his work. In particular, Galbraith (1952) underlines the high concentration of power in large

<sup>4</sup> If this opposition were true, the reconquest by the state of control over a territory previously dominated by the mafia would be considered a defeat of individual freedoms. The opposition thesis actually serves de Jouvenel to support another thesis, common to all neo-liberals, namely the opposition to the welfare state: 'those who seek social security find an authoritarian state' (1945, p. 351).

corporations, which favours a continuous expansion of production and living standards, but requires – and stimulates – countervailing powers: trade unions, large commercial intermediaries, various forms of regulation and public intervention.

Innis (1950) shows that the media system has a direct influence on social structures and the ways of organizing power in time and space, initiating a line of research to which we will return in Section 7.8.

A potentially quantifiable definition of the concept of power was attempted by Dahl (1957). Power is understood as a relationship between individuals: 'A has power over B to the extent that he can get B to do something that B would not otherwise do' (1957, pp. 202–3). A number of elements have to be added: the source or basis of power, the means, the extent (i.e. the set of actions that A can force/induce B to perform), the amount of power (defined as the increased probability that B will perform a certain action if A exercises his power over him), and the number of individuals over whom the power can be exercised. Dahl (1957, p. 214) acknowledges that it is difficult to use this concept operationally, but nevertheless considers it useful, as a point of reference and touchstone for empirical analysis.

This line of reasoning was then developed by Harsanyi (1962), who added a further element, the cost of exercising power. By comparing this cost with the utility of the actions whose performance becomes more probable thanks to the exercise of power, Harsanyi succeeded in bringing the issue of power choices back into a classical utilitarian scheme: agents' choices are guided by the felicific calculation of pleasures and pains, considering for each choice the utility derived from it and adopting those choices that maximize utility. We thus have a treatment of power linked to methodological individualism, that is, to the idea that in the social sciences theoretical constructions must necessarily start from the behaviour of individuals.<sup>5</sup> In principle, this approach opens the way (assuming we

<sup>5</sup> Constructing a theory concerning the behaviour of individuals, as the methodological individualism of traditional marginalist theory claims to do, is different from recognizing an autonomous decision-making capacity ('intentionality') of

have all the necessary information) to giving precise answers to the problem of accounting for agents' decisions. However, these answers concern a totally unrealistic world: non-probabilistic uncertainty is absent; individuals have a well-specified map of preferences assessed in terms of a single quantity (a one-dimensional utility), thus ruling out the possibility that individuals' actions are guided by a diversified complex of motivations (a-rational passions, such as pride or love, and interests, rationally evaluated but not confined to personal enrichment) and that there are qualitative differences that cannot be reduced to quantitative differences between the various types of pleasure. Moreover, the social relations that influence the various elements considered in this model are assumed to be given, whereas in fact they constitute the most complex and interesting aspect of the problem of power.

In an extensive history of social power from antiquity to the present day, Mann (1986–2012) illustrates how the four different forms into which he distinguishes the sources of social power combine over time: ideological, economic, military and political.

Bachrach and Baratz (1962, p. 8) stress that power also consists in creating 'barriers to the public airing of policy conflicts'. Developing this point, Lukes (1974) proposes a three-dimensional view of power: power as the ability to actuate a predetermined agenda, in shaping the agenda, and lastly in influencing people's minds so as to ensure consent ('in such a way that they accept their role in the existing order of things', p. 11). Nye (1990) then identifies power with the ability to make others do what one wants; on the basis of this definition, he distinguishes between *hard power* (coercion) and *soft power* (persuasion). One form of soft power is *nudge*, theorized by Thaler and Sunstein (2008) as a tool available to public authorities as an alternative to the imposition of direct constraints, to induce rational individual behaviour: a kind of compromise between paternalism and

individuals, which leads to rejecting deterministic theories (as Max Weber, 1922a, does, for example).

liberalism. Nye's soft power is an important element for a critique and reappraisal of the realist doctrine then prevailing in the analysis of international relations, stressing the importance of cultural elements in addition to the military and economic ones.

All these definitions, summarized here in basic terms, should not necessarily be considered as mutually exclusive alternatives; each of them, even if one-sided, can be useful to illustrate some aspect of a multidimensional issue like power.

## 2.2 POWER AS A DIFFERENTIAL OF POTENTIAL, AS A BARRIER TO ENTRY, AS A WEIGHT

How should power be defined in the context of our analysis? A preliminary point to be underlined is that the concept of power, in the sense considered here, is related to society – to a community of individuals – and not to the relationship between individuals, as is the case, for instance, in definitions like: 'Power as coercion consists in enforcing one's own decision *against* the will of the other' (Han, 2005, p. 2). In the relationship between individuals, the multidimensional nature of power also blurs the notion of 'coercion', to be understood rather as the power to influence the other's actions. Han himself (2005, p. 38) reminds us that 'power that works through habits is more efficient and more stable than power that gives orders or uses coercion'. More general than Han's, but still centred on the two-way relationship between those who influence and those who are influenced, is Bobbio's definition (2010, p. 6) which, again following the line of Weber, interprets 'power as the capacity of a subject to influence, condition and determine the behaviour of another subject'.

Of course, the two approaches – analysing power relations between individuals and social power relations – are not mutually exclusive; the intentionality of human action must also be kept in mind, perhaps in the background, in analyses of social power relations.

In the societal sense, power is a multi-dimensional notion; its generic sense is intuitive. However, if we try to pin it down, some

important aspect will escape us. No matter how hard we try to define them precisely, by their very nature the concepts remain somewhat indistinct; we can hope they will come into clearer focus – but it may be just the opposite – as we proceed with the analysis. An initial provisional definition can nevertheless be of help.

Let us consider three possible definitions: power as difference of potential; power as barrier to entry; power as weight. On the other hand, we will not be concerned with what we can consider power in the absolute sense: the power of humans over nature, as manifested for example in a lengthening or shortening of the average life expectancy at birth, or in the amount of goods and services available to us.

In the first case – power as a difference in potential – the concept of power indicates a relationship, not a quality intrinsic to the individual. What counts, within society, is the internal ordering of power, whereby some are ‘more powerful’ than others, on the strength of some dimension of social relations: a difference of potential in social action.

The second definition – power as a barrier to entry – is typical of the economic field, but can also be used for politics and culture. In each of these fields of action, society can be seen as divided into non-homogeneous domains; an ideal, perfectly egalitarian society, in which there are no differences in power, is characterized by total freedom for individuals to move between the different domains. Controlling the barriers to entry into each sphere thus constitutes an element of power for those already placed within – the insiders as opposed to the outsiders (as in the case of network power, discussed in Chapter 5). In the field of economics, as we shall see later, the dominant importance of oligopolistic market forms depends precisely on the existence of barriers to entry in the different markets. In the field of culture, the influence of each protagonist depends on the possibility they have of direct or indirect access to the main media: radio and television, newspapers, publishing houses. In the case of politics, people who have an important role (member of parliament, minister, regional or municipal councillor) have acquired over time a greater



reputation and network power than those who are at the threshold of the arena and are therefore at a disadvantage when they try to enter it. In this sense, the concept of barriers to entry is also useful to illustrate the comparative advantages of those who have some power in more than one sphere: take, for instance, the case of the economic group that can exercise indirect political power through the control of newspapers or television networks.

The third definition characterizes power as weight (or importance), in relation to the specific field under consideration: the share of votes received by a political party in the total electorate, the market share of a company, and so on.

Do we have any tools to measure power? Since, let us repeat once again, it is a multidimensional concept, we certainly cannot expect to find a single measuring rod. We can, however, suggest, not four measures, but four types of measure: indices of inequality, heights of barriers to entry, size and strength of networks, and relative weight. It will be a matter of choosing the most appropriate unit of measurement for each particular case, and then establishing an appropriate metric for the specific area under consideration.

In economics, but also in other fields, the height of the entry barrier indicates the power of the incumbent over the potential entrant. For instance, the incumbent in an oligopolistic market enjoys advantages over the potential entrant; the theory of oligopoly, which we will discuss in Section 4.3, defines the determinants of these advantages and measures them in terms of the extra profit that the incumbent is able to obtain without risking new market entry. In a number of areas, the barrier to entry is purely legal: this, for example, is the case for professional bodies, from notaries to lawyers, or for licences, as in the case of taxis, radio or TV frequency bands, and maritime oil exploration areas. Also in these cases, the presence of a barrier to entry allows the insider to gain more than the competitive level; in several cases we can have a direct measurement of the economic value of the barrier through the market value of the licence.

In a way, the network is the opposite of the barrier. In fact, it is not a matter of exclusion, but of inclusion, of linking up with others in order to combine forces: it is the main element of political power, but it is certainly not limited to this area. In this case, there are three possible measures: the size of the network (in relative rather than absolute terms, i.e. as a relative weight with respect to the sector of activity considered as a whole); the strength of the ties of connection (e.g. share of votes in the case of interlocking shareholding); and the degree of centrality within the network, which depends on the structure of the network and the position of each individual within it. In a number of cases, these elements will be difficult to define; take, for example, the case of associations like freemasonry, where the bond of membership often entails a willingness, but not an obligation, to exchange favours.

Weight is a matter of the strength of the individual's presence within the sphere of activity: the market share in the case of a company; wealth and income, intelligence and training, birth status, or even physical appearance in the case of an individual. With respect to these characteristics, we may consider the specific situation of the individual in relation to that of other individuals in his or her field of activity or turn to comparative parameters such as the mean or median value.

Analysis of power in any given situation entails consideration of a variety of elements, and thus the simultaneous use of different types of measurement. Often exact measurement, even if a suitable metric has been specified, will be difficult, and it may only be approximate. In any case, the combination of different elements and measures, which cannot be summarized in a single measure, will bring qualitative assessments to the fore. Nevertheless, even with all the limitations, cautious application of power metrics can be useful.

Democracy, which is also a very complex and multidimensional concept, can be linked to the notion of power, considering it to be more fully realized the more egalitarian the distribution of power proves to be. In this sense, the problem of defining and analysing the concept of power is equivalent to that of defining and analysing the concept of democracy; policies designed to achieve a fairer distribution of power,

in its various dimensions, are *ipso facto* designed to achieve a higher level of democracy. The quest for an 'alliance of democracies' called for in response to the war in Ukraine now involves international relations and adds urgency to the issue. Similarly, the problem of power is linked to that of justice, in particular distributive justice, which is achieved not only through an egalitarian, or less unequal, distribution of wealth and income, but must be extended to the different dimensions of power: the problem thus becomes enormously complex. But we will be returning to these issues as our argument unfolds.

### 2.3 TYPES, AREAS, INSTRUMENTS, MOTIVATIONS OF POWER

We will have to approach the subject step by step, taking the main aspects of power one by one: first the bolder colours, and only subsequently the nuances of the intersections, which constitute the dominant feature of the real world.

As for the areas of power, the economic, political and cultural spheres seem to predominate. The military and technological areas can either be treated separately or included, as instruments of power acquisition and defence, in the political and economic areas respectively. (Technology plays a decisive direct role with respect to 'absolute' power in the sense indicated above, i.e. the relationship of human beings to nature). As for the instruments, we may list some examples: newspapers, television networks, content distribution platforms, universities and publishing houses for culture; shareholding and networks of business and financial alliances, entry barriers and antitrust rules for the economy; political parties, associations and networks of financial support for politics.

As for motivations, we should reject the utilitarian tradition centred on the maximization of utility (in Bentham's felicific calculus, the algebraic sum of the pleasures and pains resulting from each action) by each subject. This tradition has the apparent advantage of giving precise answers, but it requires such drastic simplifications as to distort the problems it is meant to address. Instead, we can

resort to the distinction between passions and interests: the former are a-rational, not necessarily irrational (e.g. love, pride, lust); the latter are susceptible to rational analysis (e.g. the quest for wealth and income, but also for knowledge or justice, fame or prestige). Motivations concern individuals, but in a climate of sufficient cultural affinity they can also be applied to groups of individuals.

Power types are a very useful analytical tool, as Weber shows with his notion of 'ideal types' – indeed, the only one available to the researcher to avoid getting lost in a myriad of case observations – but a delicate one. They are creations of our minds and not factual realities, even though we have to refer to actual facts to construct them. Weber considers them in the context of macro-social analyses; however, there is no reason why they should not be used, with the necessary caution, for more specific analyses as well. To give just a couple of examples that we will be coming back to later, the power of money managers in the contemporary finance-dominated economy is different from that of corporate executives in the age of managerial capitalism; the cultural hegemony of traditional societies centred on religious practices and traditional rites is different from that of the age of mass media (radio and TV), just as the latter is different from that of the digital age based on social media (WhatsApp, Twitter, Facebook, Instagram and the like).

To put it simply, we can focus on three ideal types of power: charismatic, traditional and legal. In other words: the dominant personality of a leader, the force of tradition to which the behaviour of the members of a society conforms and the set of legal norms that organize social coexistence.<sup>6</sup>

If we try to put together the classifications by area and type of power, we get a  $3 \times 3$  table. Each box can help us isolate an aspect of a multiform reality. Thus, we can try to describe the state of a society from the point of view of the theme of power at a given moment in its history by attributing a low or high value (from 1 to 3, for example) to each box.

<sup>6</sup> See Weber (1922b) for an in-depth discussion of the three concepts and their interrelationships.

For instance, in a society like that of Italy today we may perhaps attribute a low – but not zero – value to charisma in the economy, medium in politics and high in the cultural field; the role of the forces of tradition can be considered medium in the economy (due to the hereditary transmission of assets and control of companies, tempered especially in periods of rapid technological change by the emergence of new agents), medium in politics and medium in the cultural field; the legal rules of the game will be of high value in the economy, medium in politics (which can change them, albeit – revolutionary leaps aside – following well-specified formal procedures), and low value in culture.

Power type			
Area of power	Charismatic	Traditional	Legal
Economy	1	2	3
Politics	2	2	2
Culture	3	2	1

A similar table can be constructed to represent, in stylized form, the transition between different historical stages. For example, in the transition from feudalism to capitalism, charismatic and traditional power decrease, while legal power increases; in the transition from the age of the press to that of the Internet, charismatic power increases and traditional power decreases; and so on.

Weber proposed a historical sequence in the relevance of the three types of power, with the predominance of charismatic power in primitive societies, traditional power for a long subsequent phase, and finally legal power for the modern age, but always recognizing the possible coexistence of the three (also due to the importance, in each social order, of the legacy of the past). The double classification proposed here, by types and areas of power, complicates the picture, though never enough given the unclearly defined nature of the triads of categories used; but it can be useful in highlighting the profoundly

differentiated nature (the rainbow) of power. To the two-dimensional classification (by types and by areas) we can then add other dimensions: such as that of motivations (passions and interests) or that of the instruments of power mentioned above.

Clearly, the classifications are complex and at least in part arbitrary; it is better not to justify them *a priori*, but to see how they work in practice. We can only add, as a general rule, that extreme choices should be avoided: on the one hand, simple dichotomies would make us lose sight of important phenomena while, on the other hand, too many categories would get in the way of reaching useful conclusions for interpretation and action. For example, in the analysis of social classes Sylos Labini (1974) taught us that, compared to the simple dichotomy between capitalists and proletarians or to considering  $n$  social groups with practically no limit to  $n$ , an intermediate level of abstraction/simplification suitable for the purpose at hand – in his case critique of the Italian Communist Party strategy of messianic expectation of the growth of the proletariat – is preferable, adding to the binary bourgeois-proletarian classification a single category defined as the middle classes (within which further distinctions can then be introduced if and when they prove useful to deepen the analysis). Similarly, when considering market forms, faced with the simple competition-monopoly dichotomy or, at the other extreme, the idea that each market constitutes a case in itself, it may be useful to introduce the category of oligopoly, which in turn may be subject to further subdivisions (concentrated, differentiated, mixed oligopoly). The classifications must have concrete foundations, but they are still creations of the researcher, made (and justified) insofar as they are useful for interpretation of the phenomenon under analysis.

#### 2.4 CUMULATIVE PROCESSES AND BALANCING PROCESSES

In the analysis of power, static vision and dynamic vision (considering the structure at a given moment or its evolution over time) are complementary. The static vision, as understood here, does not

imply the idea of a situation in equilibrium but more simply a 'snapshot' of the situation at a given moment, useful for grasping its structure, regardless of postulating its stability or persistence over time. The issues analysed so far essentially concern the static vision; but in the case of power the evolutionary potentialities inherent in the different situations are important.

For this aspect, we can distinguish two main cases (together with a reference case, namely static processes in which the situation tends to remain unchanged or to follow a constant trend over time): cumulative processes and balancing processes.

In the first case, a process characterized by a progressive acceleration of change is set in motion. For example, a position of political power can be used to boost economic power, which in turn feeds back into strengthening the political position, in a self-fulfilling spiral. Again, a strong economic position can be exploited to gain cultural hegemony (e.g. through ownership of newspapers or television networks or subsidizing them through advertising, or through the use of paid trolls on social media), which opens the way to gaining political strength, which in turn can be used to strengthen the economic position yet further.

A special case of cumulative processes is lock-in. This is the case of the QWERTY typewriter keyboard, still utilized though not the most ergonomic one, discussed by David (1985), or the case of the petrol versus the electric car recalled by Nelson (1995): at the beginning of the twentieth century, the petrol car and the electric car had equivalent costs (and advantages and disadvantages of use); however, when one of the two technologies – in our case, the petrol car – gained a slight advantage, albeit for contingent reasons, there was a tendency to invest more in that technology, which favoured its improvement (cost reduction, qualitative advances); thus a cumulative process took place which became stronger as the cumulative advantage grew, until switching to the other technology was practically impossible. Today we can see that the problem was not one of insurmountable technological difficulties: under the impetus of

environmental concerns, incentives for the electric car were adopted, which were strong enough to allow the initial disadvantages to be progressively offset. Breaking lock-in positions is not impossible, but it is so difficult that exogenous interventions (such as strong public incentives) are needed to get round the lock-in situation.

In the case of balancing processes, reaction to a dominant position sets in motion mechanisms that tend to limit it. For example, the rise of a firm within a market may stimulate alliances between competitors, or the adoption of anti-trust measures. At least from Montesquieu (1748) on, if not before, institutional rules ensuring the presence of countervailing powers have been considered the main element that can act as a brake on absolutist tendencies.

In actual games of power, cumulative processes and balancing processes overlap. In general, the former are stronger than the latter. Appropriate institutional rules are therefore needed to facilitate balancing processes so as to achieve a distribution of power that does not tend to become increasingly unequal.

At any given time, we may speak of an equilibrium, determined by balancing processes, with respect to certain aspects considered in isolation. However, these equilibria will always be local and unstable, due to the simultaneous action, in areas related to the one under consideration, of cumulative processes that come into play systematically as elements that break the equilibria. The result is a complex dynamic of social systems that is generally non-linear, periods of relative stability alternating with phases of rapid and drastic change. The constant evolution of technology may well be the main systemic source of change, with cumulative effects that make reversal impossible. Currently, for example, new information technologies have entailed revolutionary changes in the political field and in the competition to emerge and gain a footing in the field of culture.

Both the difficulty and, often, the impossibility of predicting technological change and the overlapping of cumulative and balancing processes are constitutive elements of the uncertainty inherent in social evolution.