

## **AVOIDING CONTRADICTION, ASSEMBLING AMBIVALENCE**

### **Social theory and technocratic politics**

by *Francesco Antonelli\**

#### Abstract

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The purpose of this paper is to analyse the socio-political construction of ambivalence in contemporary society, meaning for “construction” a specific strategy of the ruling classes. Since the 1980s, contemporary to the rise of post-industrial society, the concept of “contradiction” has been side-lined and several scholars, including new left intellectuals, have started to speak of complexity and ambivalence. At the centre of such a change is the problem of the nexus between technoscience and politics: technoscience has become increasingly important as both a productive force and governance apparatus. Our thesis is that ambivalence can be seen as an assembly principle of technocratic politics, useful for avoiding systematic contradiction in an ambiguous and potentially disruptive socio-political situation.

#### Keywords

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Ambivalence; contradiction; techno-science; expertise; social theory.

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## 1. INTRODUCTION

Generally speaking, we live in a time when, confronting social contradictory trends, the majority of social scientists define them in terms of social “ambivalence” rather than “systemic contradiction”. During the golden age of industrial society, between the 1950s and 1970s, the opposite occurred: very few scholars (e.g. Merton and Barber, 1976) talked about “ambivalence”, as this was typically addressed in psychology, not in sociology.

In that period, different viewpoints of sociology towards social contradictory trends are well-summarised by the debate between Karl Popper and Theodor W. Adorno during the Congress of the German Society of Sociology in 1961. Dedicated to Max Weber, it was an important step in the second positivist dispute (Keuth, 2015), incidentally: giving lectures on the logic of the social sciences, the first argues that contradiction is just a “logic problem” to solve and it is neither a methodological nor substantial element of social science explanation; while following a well-established Marxist tradition, Adorno puts contradiction at the core of both sociological method and society dynamics (Adorno *et al.*, 1969, tr. en. 1981). No-one spoke in terms of ambivalence.

Since the 1980s, this situation has changed: contemporary to the crisis of Marxism, real socialist societies and the rise of post-industrial society, the concept of “contradiction” has been side-lined and several scholars, including new left intellectuals, have started to speak of complexity and ambivalence. In other words, such concepts, implicitly or explicitly, are two key ideas within post-modernity or late modernity discourse (Antonelli, 2007).

At the centre of such a change is the problem of the nexus between technoscience and politics: in the new age, technoscience has become increasingly important as both a productive force and governance apparatus. In other words, as Foucault (2004) argued, technoscience is fundamental for power as well as, we believe, counter-power dynamics themselves. Starting from Lyotard's classical analysis, *The post-modern condition* (1979), technoscience is also recognised as a powerful “generating machine” of an increasing complexity within society; a complexity that can deconstruct the *reductio ad unum* as well as the “obsession with order”, both typical in modernity (Maffesoli, 2003; Bauman, 1989).

Three questions about such matters are at the core of this paper. The first is general and preliminary: more precisely, what is the difference between a theory that stresses the category of “contradiction” compared

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to a perspective centred on “ambivalence”? (part one). The second is more specific: in which sense has the nexus between technoscience and politics been conceptualised in terms of ambivalence within current social theory? (part two). The third is incisive: are we actually sure that ambivalence, similar to contradiction, is just a sort of “destiny” in the development of a particular kind of system, instead of the result of an active effort as well as a set of social practices in the field created by the nexus between technoscience and politics (technocratic politics)? (parts three and four). Obviously, contemporary Science and Technology Studies (STS) have stressed the role of agency in order to understand the failures and successes of a particular scientific discovery or technological device, beyond the simple production of purely scientific criteria. Nevertheless, our thesis is that the issue is not the agency but the use of contradictory trends co-present or co-generated at the crossroads between politics and technoscience: ambivalence can be seen as an assembly principle of technocratic politics, useful for avoiding systematic contradiction in a socio-political situation.

## 2. CONTRADICTION AND AMBIVALENCE

The concept of “contradiction” is one of the most important in Marx’s theory and, in general, in the modern dialectic method. As it is well-known, such a method has been developed by Hegel, the main source of Marx who, “putting it back on its feet”, argued «What constitutes dialectical movement is the coexistence of two contradictory sides, their conflict and their fusion into a new category» (Marx and Engels, 2014: 110). Marx’s most important application of the category is to the relationship between capitalism, taken as a historical process, and some of its own subprocesses, among them its development of productive forces, the increasingly social character of its production, and the emergence of the proletariat (Marx, 2018). These structural contradictions are between the process and itself. In other words, it is internal, and it generates many new subprocesses, increasing both the complexity of the system in its own historical development, and instability, irrationality, poverty, and disorganisation. Whether, according to Max Weber (1922, tr. en. 2019), the main illness of the capitalist system is the increasing hyperorganisation that leads it towards a social world even more rigid and bureaucratic (the famous thesis of the “iron cage”), in Marx’s perspective the problem, but also the opportunity and the resource, in revolutionary terms, is the opposite: the development of productive forces generates an explosion of the system for its own dynamics, clashing with the rela-

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tions of production. Therefore, simultaneously, the more capitalism becomes “rationalised”, the more it becomes irrational. Managing this structural problem is recognised as the most important role performed by the State following the “Great Depression” (1929), according to all neo-Marxist (e.g. Gramsci, 2011) or critical theorists (e.g. Habermas, 1973, tr. en. 1976), most of whom are interested in understanding why revolution has not exploded in the West as well as by liberal intellectuals (e.g. Keynes, 1936), whose purpose is to stabilise the system. According to Streek (2013), public interventionism, the Welfare State and, above all, creating new debt, have been the “key levers” in managing the internal contradiction of capitalism and they have also generated the model of democratic capitalism in which structural contradictions are simply suspended.

Even if all these analyses are important in understanding the concept of “contradiction” in the relevant parts of modern social and political theories, they do not complete the theoretical sense of such a concept, as an essential part of the discourse of modernity: under this more general framework, it has to be recognised that the idea of “contradiction” refers to a standpoint in the social world based on the refusal of inconsistencies; and, correspondingly, the glorification of the idea of order and coherence as well as trust towards the feasibility of a society based on such values (Bauman, 1989). Marx and Engels of course trust this perspective of all people together involved in the myth of Revolution in the “Short Twentieth Century” (Hobsbawm, 1995). Contradiction is the evil; no contradiction is the good, because the first refers to an incomplete world and a system cannot manage itself. At the same time, sub-contradictory trends and processes which are made up of a structural contradiction, are due to a contingent step on the way to a “resolved world”, at the end of history; when everyone will be fully recognised within a Hegelian universal homogeneous State (Kojève, 1980; Fukuyama, 1992). In the end, contradiction is always an “objective” condition and subjects (included social classes) are *acted upon* or, at best, *had to act*, in considering it.

The discourse on “ambivalence” upsets the discourse based on “contradiction”. Merton is the precursor of the use of ambivalence in sociology. He believes it to be the product of conflicting norms and counter-norms associated with particular social positions (Merton, 1976; Merton and Barber, 1963). Nevertheless, the discourse of ambivalence as an alternative to dialectic perspective rises just when a new sensibility, new “objectives” of sociological analysis and a new social world appeared on the stage at the end of the twentieth century. As regards the first as-

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pect, starting from a critique on the obsession of modernity with “one-dimensionality”, the discourse on ambivalence rejects the image of a world and history without contradictory trends, and by extension, without cultural and personal diversities, as totalitarian (Bauman, 1991).

Whereas the social world in a post-industrial era is a place where conflicts and disorder are permanent conditions like they are in psychological life as well as at an existential level, and thus people must learn to live in such a complex universe. Therefore, in the newly emergent field of the sociology of emotions, the concept has been examined as an affective experience of mixed feelings or «of contradictory emotions towards the same object» (Weigert, 1991: 21). Smelser, in postulating ambivalence as «the simultaneous existence of attraction and repulsion, of love and hate» (1998: 5), has suggested that it can provide a counterapproach to the dominance of intellectual traditions of rational choice theory by enabling us to consider the «nonrational forces in individual, group, and institutional behaviour» (1998: 3). Eventually, Giddens (1990: 139) considers the “journey of modernity” as one which will inevitably entail «feelings of ontological security and existential anxiety (which) will co-exist in ambivalence», whereas Beck (1994) has argued that as high modernity «abolish[es] its own ordering categories» (1994: 33) then «irreducible ambivalences, the new disorder of risk civilisation, openly appear» (Ivi: 12).

“Structure” and “agency” have strictly linked themselves to each other within the discourse of ambivalence: ambivalence as an unsolvable co-presence of contradictory trends is a normal condition of agency in the post-industrial and post-modern era, in a structural environment based on complexity, ambiguity and multiplicity. Risk and opportunity are two dimensions omnipresent in everyday life: thus, ambivalence is the new face of the “open society” (Popper, 1945) in the contemporary world as well as the dialectic movement from contradictory to non-contradictory society, which was the main expression of the “faith in inevitable progress of mankind”, during the industrial era. Likewise, conceptualising contradictory trends in terms of “contradiction” puts radical conflicts and revolution (the “big crush”) at the centre of the history of emancipation; thinking in terms of ambivalence drives towards managing conflicts and a reformist perspective: the mission of social sciences is to highlight ambivalence in social and personal awareness in order to facilitate the adaption of oneself as well as social institutions (and in particular political institutions) to contradictory phenomena.

In this context, nowadays the relationship between technoscience and politics is one of the most important fields where ambivalence is

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growing: considering the leading contributions of Ulrich Beck and Bruno Latour helps us to understand in which way current social theory analyses and conceptualises ambivalence.

### **3. TECHNOSCIENCE IN CONTEMPORARY SOCIAL THEORY: THE LEADING CONTRIBUTIONS OF ULRICH BECK AND BRUNO LATOUR**

Although both provide a counterbalance to the postmodernist paradigm through their “constructivist” analyses, Ulrich Beck offers a standpoint based on a humanist, anthropocentric perspective which considers the contemporary age as a phase of radicalisation of modernity (Beck, 1986). While Bruno Latour (1991) works from a post-humanist and anti-anthropocentric standpoint in which the project of modernity, or its “constitution”, is opposed to the practical creations of modern society, starting at the beginning of the modern era. What makes Beck’s analyses interesting for us and representative of a more widespread attitude in current social theory is that it puts science and technology at the centre of general social theory. What must be taken into consideration in Latour’s studies is their centrality in current Science & Technology Studies (STS) which implicitly consider science and technology as the most important factors of modern society.

#### *3.1. The risk society*

According to Ulrich Beck, Anthony Giddens and Scott Lasch (1994) current reflexive modernisation or reflexive modernity is due to the success of modern ideals in the West, such as economic growth, universal suffrage and education, the welfare state, and civil and political rights. These changes mark a shift to the second modernity that is opposed to its earlier version, in the same way as the first modernity opposed feudal traditionalism. Therefore, the institutions of the first modernity are beginning to crumble in the face of economic and cultural globalisation. The state is starting to lose its importance with the rise of transnational forces (corporations, NGOs); the family is splitting apart with rising divorce rates due to the flexibility of work and women’s liberation, thus losing its supportive function in the process; religion is reduced to a cultural artifact; and traditional political action is boycotted due to a lack of identification with the parties’ goals. The old compromise between traditional institutions and the project of modernity building in industrial society is exceeded and individualisation as well as individual agency

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take centre stage. Nevertheless, late modernity is not a time of pure self-satisfaction. On the contrary, reflexive modernity calls into question modern fundamental assumptions by extending systematic doubt to the whole society (Beck, 1999).

The global risk society as a result of reflexive modernisation is a hyper-technology-based society founded on the systematic relationship between production and science. On the one hand, technology and science are fundamental to producing wealth; on the other hand, however, a lot of unexpected consequences occur, affecting human health and the natural environment. In classical industrial society, a modernist view is based on the assumption of realism in science, that creates a system in which scientists work in an exclusive and inaccessible realm: unexpected effects are ban. In the risk society the authority of science is questioned but this critique, that is the basis of several social conflicts and movements, is often based on science: it is fundamental to highlight social risks as well as offering an alternative point of view on specific economic processes or public policies (Beck, 1986). In general, science and technology utilised by both big companies and conflictual actors, is part of a wider sub-politics. It is a decision-making system where decisions are based on a non-political method and it is made up of non-political actors (scientists, managers, experts, civil society and so forth). Traditionally democratic political institutions, such as parliaments and political parties, react to the inputs from such a system rather than acting. In addition, sub-politics becomes more and more important, subtracting sovereignty from the State.

In sum, according to Beck in late modernity the ambivalence of science and technology is *structural* and is due to an emergent reflective effect of reflexive modernity: science and technology are both the problem and the solution within the risk society. That said, such an ambivalence is allocated just at the level of sub-politics whereas the official, democratic politics, is linearly connected to science and technology: the first is subordinated to the second. The civil society, including the techno-economic system as well as counter-power dynamics (Beck, 2006), takes priority over official democratic politics.

However, is the ambivalence of the relationship between science/technology and politics so limited? Furthermore, how is this relationship constructed overall concerning both its ambivalent and non-ambivalent aspects?

### 3.2. *Reassembling the social*

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The answer to these questions is at the centre of Latour's research. Similarly, to all theorists of complexity, such as Edgar Morin or Gregory Bateson, Bruno Latour (1991) takes leave of all unilateralistic forms of the critiques: naturalisation, socialisation and deconstruction. Within the first, subjects vanish to Nature; within the second, science, technology and nature are replaced by human power; while in the third, everything becomes language and symbols. Each form cannot possibly combine with another. The result is a partial view of the world. By contrast, Latour argues that we need a social theory that develops a new kind of critique as well as a new method capable of going beyond these limitations which are based on the constitution of modernity.

According to Latour (2005), the traditional methodological discourse of social sciences has posited the existence of a specific sort of phenomenon called "society" or "social structure", meant as independent sets of variables to explain non-social phenomena, including individual behaviours. However, we would need to develop a new approach that considers social aggregates in order to explain: *focus should be on the different kinds of connections between heterogeneous things that are not in themselves social*, taking into consideration the relationship among different "operating principles" of such things. Agency is present in the world, although it is not individual but rather actor-network-based. The problem is to understand the *assembling dynamics* that establish these networks called "society".

Within such a framework, Latour claims that *We have never been modern* (1991) because if modern societies have produced, ever since the beginning, several hybrid networks defined by "imbroglios" or "mix" of politics, religion, law, fiction, technology, including human and nonhuman actors, the discourse of modernity has denied this reality. Ambivalence is the normal product of modernity in action, but simplification and separation (the obsession of order) are the main missions of a modern constitution. The main artificial separation is between "nature" and "culture" and, correspondently, between "technoscience" (a category that Latour introduced in 1987) and "politics". According to the constitution of modernity, the representation of natural things in the laboratory is forever separated from the representation of humans by social contracts, public institutions and, in general, politics; a politics that is just for humans. Although recognising the hybridised reality created by modern society implies refuting the modern discourse based on institutional separation and conceptual depuration of fields, objects, phenomena, and actors. Politics and technoscience are obviously connected in present-day society: without technoscience politics is an "empty con-

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tainer”, lacking means and power; and conversely without politics technoscience is irrelevant. In addition, confronting climate change, the nexus between society and technoscience, culture and nature, experts and political leaders, human and non-human actors, is the fundamental characteristic of our current politics (Latour, 2017). Thus, to recognise this ambivalence and re-think social and political institutions, which would enrich our democracy with new subjects and representative dynamics, is the greatest challenge of the present day (Latour, 2017).

Nonetheless, Bruno Latour’s perspective underlines the close interconnection between technoscience and politics, going beyond the classical methodological alternative between individual agency and structuralism in a convincing way, and situating ambivalence at the level of such a connection – are we really sure that’s all? On the contrary, should we not recognise that the nexus between politics and technoscience is producing a new kind of “structure” where ambivalence plays a strategic and specific role? We will confront these questions in the next parts.

#### **4. TECHNOCRATIC POLITICS: POLITICISATION OF SCIENCE AND SCIENTISATION OF POLITICS**

Although Latour’s and Beck’s standpoints are very different in many respects, they seem to share two important conclusions: considering the relationship between politics and technoscience, ambivalence is always an emergent and unwanted consequence of social processes; second, ambivalence must be managed by actors, but it does not perform a specific role or function in a particular field created by the nexus between politics and technoscience as well as by their actors. Ambivalence is conceptualised as a sort of destiny in contemporary society, and is not considered a key theoretical matter: why are contradictory trends not recognised as “contradiction” by actors and observers? Why do contradictory trends produce ambivalence and not contradiction? Which kind of latent function can we recognise in this situation? Three simplistic answers are possible: because the Marxist paradigm has fallen into disgrace and contemporary scholars tend not to utilise its categories with a light heart. Secondly, the social world has changed and old categories (like contradiction) are unable to analyse it efficiently. Thirdly, ambivalence exists; it is a fact and the contemporary social world is chaotic by definition. So, we might conclude that the reason is in the observer’s bias as well as in the structure of reality. Nevertheless, all these answers circumvent the problem: not considering the results of political or eco-

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conomic sociology concerning the relationship between technoscience and politics, not going beyond the disciplinary niche and such answers do not recognise that a new field has appeared: *technocratic politics*.

#### 4.1. *Technocratic politics and democracy*

Technocratic politics is a politics based on various types of decision-making involving high-level bureaucrats, members of executive branches (e.g. ministries) and experts, seeking through the authority of technoscience both the content and legitimation of specific policies.

Technocracy is not a specific political system or regime, but a relatively coherent set of structures and techniques (socio-technique system) based on the authority of expertise whose official function is to improve the efficiency and effectiveness of: 1) public decision-making, 2) implementation of policies and 3) ruling class recruitment and selection at various levels (Antonelli, 2019). The first and second aspects particularly concern Western countries, the third (under the name and ideology of “meritocratic system”) is also an important element in countries such as the People’s Republic of China, Singapore and Taiwan (Bell, 2015). In addition, technocracy is a means of constructing hegemony in society (Gramsci, 2011); its most important latent function. So, technocratic politics is a way of arranging different human (experts) and non-human actors (public statistics, artificial intelligence, computers, big data and so forth) that have come from outside traditional politics with other human (politicians, bureaucrats) and non-human (weapons, laws, public institutions and so forth) actors more typically found in the field of politics. Although the role of technoscience is important for social movement actors as well as in social conflicts (counter-power dynamics), for example, as Ulrich Beck (1986) or Alain Touraine (1978) have underlined in their research, technocratic politics concerns itself with the problem of governance *over* and within society.

One of the most prevalent misunderstandings is considering technocracy in opposition to politics: a widespread attitude initially supported by Habermas (1973, tr. en. 1976) and other scholars such as Putnam (1977), Fischer (1990) and Esmark (2017). According to Habermas, the Second World War period saw a “new or second phase in the rationalization process” which Max Weber had already comprehended as the basis for bureaucratic domination, defined by the “scientization of politics”. In this technocratic model, the relationship between the professional expert and the politician appears to have effectively “reversed itself”, making the latter «a mere agent of a scientific intelligentsia,

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which, in concrete circumstances, elaborates the objective implications and requirements of available techniques and resources as well as optimal strategies and rules of control» (Habermas, 1969, tr. en. 1971: 63). Starting from such a perspective the “thesis of depoliticization” began to prevail in technocracy studies. Esmark, quoting Putnam’s research, sums up the essence of depoliticization in six guiding principles:

- 1) The idea that the replacement of politics with technicians provides experts and professionals with an essentially apolitical role.
- 2) Scepticism and even hostility towards politicians and political institutions.
- 3) A more or less blatant disregard for the openness and equality of political democracy tending towards authoritarianism and absolutism.
- 4) The belief that social and political conflict is misguided or even contrived.
- 5) The interpretation of effective policy as a question of pragmatics, not ideology nor morality.
- 6) The notion that technological progress is good, and questions of social justice are unimportant (Esmark, 2017: 5).

Such a depoliticization logic is also recognised by other researchers as a crucially dynamic inherent in the transformation from government to governance in a globalised era (Hay, 2007; Stoker, 2006).

However, all these positions are not fully acceptable. Evidently, they seem to be based on a double misunderstanding: first, considering experts more powerful than they actually are; second, considering “politics” as a synonym of “democracy”. Relative to Western societies, technocratic politics can surely be recognised as a means of reducing, limiting, or even eliminating the substantial role of representative institutions in public decision-making. Consequently, technocracy is not in opposition to politics on the whole, but it is in conflict with democratic politics, if democracy is defined as formal and representative as well as based on the centrality of mass political parties and their typical kinds of mediation and participation (Antonelli, 2019). The result is the formation of a post-democratic scenario (Crouch, 2000). In addition, as a category, technocratic politics allows us to go beyond the classic discourse on technocracy: starting from lucubration by Saint-Simon (2012) and Comte (1851-54) in the nineteenth century, passing to Veblen (1914; 1919), Scott (Segal, 2005) and Burnham (1941) in the first half of the twentieth century, Galbraith (1967), Bell (1973) and Khanna (2017) between the “Thirty Glorious Years” and global society, technocracy has been represented as the rise of a new subject based on more universal attitudes in governance than the “traditional” bourgeoisie or traditional political classes. However, even if technoscience has been systematically included in State and politics during all of those periods,

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it has never taken the place of the bourgeoisie and, above all, political leaders: as technocratic politics, technoscience and its actors have systematically helped to manage both society and social problems.

In this respect, it is no longer possible to consider ambivalence as a merely emergent effect produced by the nexus between technoscience and politics. Nor can the contradiction be seen as a residue of our past. Our thesis is that *ambivalence is a specific rule to assemble technocratic politics and its own contradictory trends in late modernity, with the function of avoiding the production of contradictions in the relationship between politics and society.*

#### 4.2. Politicisation of science, scientisation of politics

In general, the relationship between politics and technoscience is not technical but normative: the struggle is around what kind of norms and values prevail as a guide for decision-making.

When technoscience is actually involved in politics, the “sphere of means” is not only in question as the classic Weberian perspective argues (Weber, 1921); but also, the “sphere of aims” because each “scientific” data, theory, suggestion, advice as well as algorithm brings with it a specific vision of the world (Antonelli, 2019; Numerico, 2021). Particularly, if we consider social sciences: is contemporary economics detachable from its liberalist and individualistic premises? Is a market-based society just a more rational and efficient society in economics terms or is it also thought of as a more ethical society? Foucault (2004) as well as several other scholars interested in technological artefacts and politics (e.g. Winner, 1980) or data and politics (e.g. Supiot, 2017) have shown this absolute separation between “instrumental rationality” and “substantial rationality” to be misleading. So, technocratic politics is the field of a negotiation between actors from different worlds (politics and technoscience) concerning the *means and aims* of public policies as well as public agencies that must manage a particular set of them – as the quoted theory of de-politicisation argues (see above). The result is a doubly contradictory possibility in order to take into consideration a public issue: “politicisation of technoscience” and “scientization of politics” (Eyal, 2019). The first is a decision-making process in which technoscience standards are shaped to a political will; the second is a decision-making process in which technoscience standards prevail over political consideration. In the Covid pandemic crisis, the continuous changing of age groups to which the vaccine Vaxzevria (formerly COVID-19 Vaccine AstraZeneca) should be injected seems to be an ex-

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ample of the first kind of process, while the lockdown or stay-at-home policy is an example of the latter. Both are ambivalent processes: a political decision is also a scientific decision and vice versa even if to varying degrees.

At the *time of ideology*, in other words during the twentieth century, all historical political ideologies, such as Fascism or Stalinism, incorporated some scientific elements or scientific presumptions: is Nazi racism and anti-Semitism thinkable without a reference to the biology of its time? Is it possible to imagine Stalinism without the claim of new social sciences to understand deep laws of history and society? Pseudo-science was the product of these embeddings, as Karl Bracher (1982) argues. So, ideological politics is used to subordinate science.

Nowadays, the borderline between a post-ideological and post-democratic politics, on the one side, and technoscience on the other, is intentionally unclear: “politicisation of politics” and “scientization of politics” are two possible mixes of norms and values, useful for claiming the production of more effective policies in a complex world; but also, legitimation for public decisions in a reflexive modernity: in a volatile scenario, such as contemporary society, politics is weak and it needs to be mixed with technoscience. At the same time, such a mix does not have to be “peaceful” and “definitive” in its solutions or public representations. Instead, it must be open-ended in order to maintain the possibility of an “exit-strategy” for political leaders.

## 5. AMBIVALENCE, EXPERTISE AND TECHNOCRATIC POLITICS

So far, we have talked about technoscience as an impersonal actor. However, it is impossible to understand the role of ambivalence in contemporary technocratic politics if we do not take into consideration the key function which supports the whole system: the expertise. The relationship between politics and technoscience is actually not based on a direct nexus between scientists and politicians. Such a relationship is mediated by a specific figure: the expert – an educated person who is embedded in the decision-making based on their scientific reputation and status in a technical agency. In addition, sometimes such a person must share the same political orientation of the political leader who engaged them.

Several studies and typologies are focused on expert and expertise (e.g. Caselli, 2020; Robey and Marcus, 1984; Busso, 2011; Feldman and March, 1993; Weiss, 1979; Pielke, 2007; Osborne, 2004; Pellizzoni, 2003; 2011). Nonetheless, in our opinion the most important study in

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order to understand the role of ambivalence in technocratic politics is by Gil Eyal (2019). According to him, nowadays and, in particular, during the Covid-19 pandemic crisis, while experts have never been more in demand they are now also less credible than ever before. The two relations, dependence and distrust, feed off and amplify one another, generating an ambivalent situation. There are multiple processes and factors contributing to this dynamic:

- 1) *The intensification of jurisdictional struggles among experts*: in confronting a social problem, who is really an expert? What kind of expertise is necessary? Generally speaking, more answers are possible. So, turning to experts to imply conflicts of legitimation and visibility among different kinds of possible experts occurs (Abbott, 1988)
  - 2) *The dynamic of “overflowing” of economic and technological risks*: the concept of overflowing introduced by Michel Callon in 1998, refers to the intrinsic difficulty an “expert” has in responding to a social problem because in late modernity society technology changes very fast. Consequently, as Ulrich Beck (1986) argued, nobody is really an expert on a particular set of problems.
  - 3) *The legitimation crisis of the capitalist state*: dealing with a complex society, in which many social claims from several different social groups, whose interests are contrasting, turn to politics, the legitimation of the state becomes increasingly weaker. Consequently, the state turns to other social external fields, experts and technoscience, but in doing so prolongs its legitimation crisis
  - 4) *The growth of regulatory science*: regulatory science is halfway between the fast time of law and politics, as decisions must be made quickly, and the long-time of science, necessary to argue and accurately test its hypotheses. Regulatory science, the domain of experts, connects the first to the second dimension, suggesting decisions that are not completely confirmed by science, lie in a context of uncertainty.
  - 5) *The temporal dynamics of trust*: trust is always a lacking resource, particularly in the late modernity. So, experts must win the trust of politicians and citizens, but it is always “until further notice”.
  - 6) *The interplay between competing strategies for making the future present*: all advice by experts is a sentence like this:
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“if...then”. It is funded on scenarios and previsions that presume to make the “future present”. The conflict among different kinds of experts around actualising alternative futures is one of the most pertinent of all.

- 7) *The collapse of academic and media gatekeepers*: the disintermediation of communication due to the rise and widespread use of digital technologies and the 2.0 web causes the crisis of prestige and authority of intellectuals and their respective institutions (e.g. university, newspaper and so forth). Consequently, experts, who based our prestige on such institutions, have seen their authority diminish.
- 8) *The rise of lay expertise*: “lay expertise” is due to an increasing level of education among the population as well as greater social democratisation. Thus, “self-advocacy” is increasing, which means that people take positions against the pastoral power (Foucault, 2004) of experts and technoscience.

The analysis of Guy Eyal brings to light the core of our problem: the capacity to produce hegemony, legitimisation and decisions by democratic politics is increasingly reduced. Turning to technoscience is represented as a means of going beyond such limits. That said, when it is included in a political system, through expertise, it also becomes ever weaker as a political actor. What Eyal’s analysis cannot see is technocratic politics: although fragile, the combination of technoscience and politics is not a limitation but rather a fundamental resource for power. Producing ambivalence, being founded on ambivalence, technocratic politics is able to play on ambiguity and execute public policies that would not be acceptable without the presence of expertise: in other words, ambivalence reduces the cost of accountability for political leaders and the ruling classes, thanks to actors who are not threatening to them. In this way both internal and external clashes that could lead to systematic contradictions are also avoided.

## 6. CONCLUSION

There are two main conclusions in this paper: the first, which is more specific, is that ambivalence at the crossroads between technoscience and politics is not just an emergent effect of unconnected processes, as Ulrich Beck argued. Rather, it is an operating principle of technocratic politics and a way of assembling heterogeneous elements with the latent function of managing ambiguity and complexity in the relationship be-

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tween society and politics. It enables a response to the chronic crisis of legitimation, effectiveness, and efficiency of democratic politics, paradoxically using the weakness of technoscience in politics as a symbolic and political resource; a point undervalued by Bruno Latour.

Hypothetically, we can assume a more general second conclusion: in the contemporary world contradictory trends are incorporated within different sub-systems in order to expand the response capacity of structures. In modernity, if contradictory trends are thought of as a source of irrationality and de-stabilisation, in late modernity they can be considered and constructed as a source of stabilisation. Therefore, in general, ambivalence is the art of making contradictory trends co-exist, in order to use the resulting ambiguity as a resource, which is particularly useful for every social power to blend in and reduce the pressure of omnipresent accountability. In this scenario, has contradiction disappeared? Should we agree with the mainstream opinion and talk just in terms of ambivalence, encountering contradictory trends within a specific social field? In both cases the answer is no. Logically and factually speaking, in late modernity ambivalence is a cognitive and practical dispositive so widespread in society and in institutions, precisely because the possibility of “contradiction” as a clash between opposite trends is always an opportunity lying in wait. More precisely, ambivalence is reproduced in order to avoid contradiction; avoiding contradictory trends could produce instability in a world so complex to be characterised by a deluge of them. Ultimately, we argue that for social theory and social research, in a given situation, the challenge is to recognise when we are confronted with an “ambivalence” or a “contradiction” (releasing it from a specific philosophy of history) as well as their factual and logical relationships.

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