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**Revolution: Characteristics, taxonomies and
situational causes**

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Abstract. Revolution is an historical process that generates a rapid and radical (social, economic and political) change in society. This conceptual paper shows basic characteristics, taxonomies and situational causes of revolution. Moreover, this study also suggests that a current and distinct form of revolution, not included in previous studies, is terrorism. Overall, then, it seems that terrorism has many analogies with some drivers of revolution (e.g., economic, social, political and demographic determinants) and can generate changes in society, similarly to revolutions.

Keywords. Social change, Political change, Structural change, Internal war, Rebellion, Insurrection, Coup d'État, Terrorism.

JEL. N30, O30, O31, I23.

1. Introduction

Revolution is one of the most important events in the history of human society (Amman, 1962, Pettee, 1938). Revolution is: “change, effected by the use of violence, in government, and/or regime, and/or society. By *society* is meant the consciousness and the mechanics of communal solidarity, which may be tribal, peasant, kinship, national, and so on; by *regime* is meant the constitutional structure—democracy, oligarchy, monarchy; and by *government* is meant specific political and administrative institutions” (Stone, 1966, p.159, original Italics). This definition allows to distinguish between the seizure of power that leads to a major restructuring of government or society with the replacement of the former elite by a new one, and the coup d'état involving no more than a change of ruling personnel by violence or threat of violence. In the 1960s, social scientists at Princeton University have changed the word “revolution” with the concept of “internal war” that is defined as any attempt to alter state policy, rulers, or institutions by the use of violence in society, where violent competition is not the norm and where well-defined institutional patterns exist (Paret, 1961; Rosenau, 1964).

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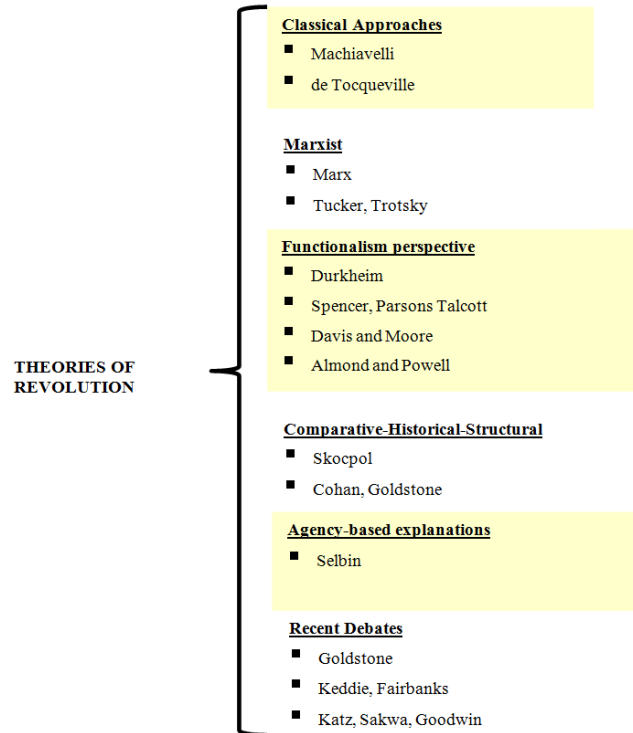


Figure 1. Classification of the theories of revolution

2. Theories, characteristics and causes of revolution

Philosophy, history and other social sciences have different approaches to explain revolution (see Figure 1). In philosophy, Hegel suggests that revolution is equated with irresistible change represented by a manifestation of the worldspirit in an unceasing quest for its own fulfillment (cf., Benhabib & Marcuse, 1987). Marx (1976, 1978, 1981) argues that revolution is a product of irresistible historical forces, which culminate in a struggle between the bourgeoisie and the proletariat. Arendt (1958, 1963) interprets the revolutionary experience as a kind of restoration, whereby the insurgents attempt to restore liberties and privileges, which were lost as the result of government's temporary lapse into despotism. Instead, de Tocqueville (1955, p.8) has defined revolution as an overthrow of the legally constituted elite, which initiated a period of intense social, political, and economic change.

Deutsch (1964, pp.102-104) proposes four characteristics of revolution (cf., Figure 2):

- a) degree of mass participation
- b) duration
- c) number of persons killed both during and after the revolution (a measure of intensity)
- d) intentions of the insurgents and their eventual outcome

In this context, a revolution may be due to a group of insurgents that illegally and/or forcefully challenges the governmental elite for the occupancy of roles in the structure of political authority. A successful

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revolution occurs when, as a result of a challenge to the governmental elite, insurgents are able to occupy principal roles within the structure of political authority. Moreover, if successful insurgents are ideologically committed to certain goals, then they may initiate changes in the societal structure to effect the realization of these goals. These changes in the personnel of governmental elite are often the precondition for meaningful changes in the political and social structure of nations.

		Duration			
		<i>Long</i>	<i>Moderate</i>	<i>Short</i>	<i>Very Short</i>
Mass participation / Domestic violence	<i>High</i>	Mass Revolution e.g., French 1789			
	<i>Moderate</i>		Revolutionary coup e.g., Nazi 1933		
	<i>Low</i>			Reform coup e.g., Argentinian 1955	
	<i>None</i>				Palace revolution e.g., Venezuelan 1948

Figure 2. *Types of revolution. Adapted from Tanter & Midlarsky (1967).*

Determinants of revolution can be:

- preconditions (long-run underlying causes), which create a potentially explosive situation.
- precipitants (immediate, incidental factors), which trigger the outbreak and may be nonrecurrent, personal, and accidental.

Brinton (1938) proposes a series of *universals* to explain the great Western revolutions (English, French, American, and Russian), such as: economically advancing society, growing class and status antagonisms, alienated intelligent, psychologically insecure and politically inept ruling class, and governmental financial crisis.

Eckstein (1964, 1965) argues some conditions of revolution, moving from intellectual, to economic (increasing poverty, rapid growth, imbalance between production and distribution, etc.), to social (resentment, conflict due to the rise of new social classes, etc.) and to political factors (bad government, oppressive government, etc.). Moreover, other situational factors, such as a lack of harmony between state structure and society, can affect the sources of revolution. In fact, historians argue that causes of revolution are also a lack of harmony between the social system on the one hand and the political system on the other hand. Chalmers (1964) defines this situation *dysfunction*. In most cases, dysfunction is the result of new processes. In particular, if the process of change is slow and moderate, the dysfunction may not rise to dangerous levels. However, if the change is both rapid and profound, it may cause deprivation, alienation and anomie in society, causing what Chalmers (1964) calls *multiple dysfunctions*. Hence, revolutions are due to a condition of multiple dysfunctions associated with intransigent elite.

Eckstein (1964, 1965) also suggests that each type of internal war, and each step of each type can be explained with eight variables: four *positive*

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variables (elite inefficiency, disorienting social process, subversion, and available rebel facilities) and four *negative* variables (diversionary mechanisms, available incumbent facilities, adjusted mechanisms, and effective repression).

According to the behaviorist approach, a prime factor of revolution is the emergence of an obsessive revolutionary mentality. In fact, in the behaviorist approach, causes of the alienation of revolutionaries and of the weakness of incumbent elite are economic factors. Parsons (1951) treats disaffection or "alienation" as a generalized phenomenon that may manifest itself in crime, alcoholism, drug addiction, daytime fantasies, religious enthusiasm, or serious political agitation. Marx (1976, 1978, 1981) states that popular revolution is a product of increasing misery, whereas de Tocqueville (1955) claims that revolution is a product of increasing prosperity. Olson (1963) and Lewis (1963) argue that revolutions are the product of rapid economic growth, which creates both *nouveaux riches* and *nouveaux pauvres*. The initial growth phase may cause a decline in the standard of living of the majority of people because of enormous forced savings for reinvestment. The result is a revolution that increases the gap between expectations (social and political for the new rich, economic for the new poor) and the realities of everyday life. In short, revolution creates new expectations by economic improvement, social and political reforms, followed by economic recession and governmental reaction, which widen the gap between expectations and reality (Davies, 1962).

Davies (1962) argues that the fundamental impetus towards a revolutionary situation is generated by rapid economic growth associated with a rising of the standard of living and a long-term phase of growth followed by a short-term phase of economic stagnation. In this context, Coccia (2018) also seems to reveal a sequential historical process that runs from wars between great powers occurring in phases of instability of long waves (peak and/or trough) to clusters of innovation (in the trough of long waves), which trigger the upward phase of new long waves¹.

The reference-group theory by Merton (1957) suggests that human satisfaction is related to the condition of a social group of reference against which the individual measures his current situation. Mass communications, wide diffusion of information and communication technologies even among poor people of the world and the knowledge of high consumption standards elsewhere can induce alienation, distress and psychopathology in poor society (the reference group may be other developed country, such as North African countries versus European ones). Coccia (2018c, 2018d) argues that terrorism (a distinct form of political violence with some characteristics similar to revolution) thrives in specific regions with high growth rates of population that may generate income inequality and relative deprivation of people.

Hopper (1950, pp.270-279) explains revolution with four social stages:

¹cf., Coccia, 2005a, 2015b, 2016, 2017b, 2018e, 2018f.

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1. The first is characterized by indiscriminate, uncoordinated mass unrest and dissatisfaction.

2. The next stage sees this unease beginning to coalesce into organized opposition with defined goals; an important characteristic is a shift of allegiance by the intellectuals from incumbents to dissidents. At this stage, two types of leaders emerge: the prophetsketches the shape of the new utopia upon which men's hopes can focus, and the reformer works methodically toward specific goals.

3. The third stage is the beginning of the revolution proper. Motives and objectives are clarified, organization is built up, a statesman leader emerges. Subsequently, conflicts between the left and the right of the revolutionary movement become acute, and the radicals take over from the moderates.

4. The fourth and last stage is the legalization of revolution. The administrators take over, strong central government is established, and society is reconstructed on lines that embody substantial elements of the old system.

3. Classification of different typologies of revolution

Brinton (1938, pp.3-4) suggests a differentiation of revolution in: coup d'état is a simple replacement of one elite by another, whereas major revolutions are associated with social, political, and economic change (cf., Figure 2). Blanksten (1962, p.72; 1958) also distinguishes between the coup d'état and revolutions, which have profound consequences for the structure of society. Lasswell & Kaplan (1950, p.252) present a further refinement in the classification of revolution using three categories: palace revolutions, political revolutions, and social revolutions. Lieuwen (1960, pp.22-24) constructs a similar classification with the substitution of palace revolution with caudillismo (predatory militarism), which is a common form of coup d'état in Latin America. These forms of revolution appear to generate an increasing degree of change initiated by successful insurgents and followed by increasing political and/or social change. Rosenau (1964, pp. 63-64) also suggests three categories of internal wars:

- personnel wars: goal is the occupancy of existing roles in the structure of political authority. This concept is similar to palace revolution.
- authority wars: insurgents compete for the occupancy of roles in the political structure and for their arrangement. Authority wars are struggles to replace dictatorships with democracies.
- structural wars: the goal of insurgents is the introduction of social and economic changes in society (structural wars contain elements of both personnel and authority wars).

In Rosenau's ranking, personnel wars are at the lowest rank position with regard to the degree of social change; instead, authority wars are at an intermediate rank, and structural wars should be at the highest rank in the scale of revolution.

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Huntington (1962, pp.23-24) has suggested a classification of revolution in which four categories are enumerated (cf., Figure 2): the internal war, the revolutionary coup, the reform coup, and the palace revolution. The concepts of mass revolution and palace revolution are similar to Rosenau's structural and personnel wars, while the revolutionary and reform coups can be included under the category of authority wars.

Finally, Chalmers (1964) categorizes revolution in six typologies as follows:

1. the *Jacquerie* is a spontaneous mass peasant rising, usually carried out in the name of traditional authorities, Church and King, and with the limited aims of purging the local or national elites.

2. the *Millenarian Rebellion* is similar to the first but with the added feature of a utopian dream, inspired by a living messiah, such as the Florentine revolution led by Savonarola in 1494.

3. the *Anarchistic Rebellion* is the nostalgic reaction to progressive change, involving a romantic idealization of the old order, such as the Pilgrimage of Grace and the Vendee.

4. the *Jacobin Communist Revolution* is: "a sweeping fundamental change in political organization, social structure, economic property control and the predominant myth of a social order, thus indicating a major break in the continuity of development" (Sigmund Neumann as quoted in Chalmers, 1964). This type of revolution can occur only in a highly centralized state with good communications and a large capital city, and its target is government, regime, and society. The goal is the creation of a more efficient order on the ruins of the old structure of privilege, nepotism, and corruption.

5. the *Conspiratorial coup d'état* is the planned work of a tiny elite fired by an oligarchic ideology. This is a revolutionary type only if it anticipates mass movement and inaugurates social change, such as the Nasser revolution in Egypt or the Castro revolution in Cuba; it is distinguished from the palace revolt, assassination, dynastic succession-conflict, strike, banditry, and other forms of political violence, which are all under the "internal war" category.

6. the *Militarized Mass Insurrection* is a phenomenon of the twentieth century. It is a deliberately planned mass revolutionary war guided by dedicated elite. The outcome of guerrilla warfare is determined by political attitudes and rebels are dependent on popular support. This type of struggle has occurred in Yugoslavia, China, Algeria, and Vietnam.

4. Conclusion

Revolution is a systematic process in society that can generate a structural change over time and space². A current and distinct form of revolution, not included in previous studies, is terrorism: “an attractive strategy to groups of different ideological persuasions who challenge a nation's authority. ...to dramatize a cause... to gain popular support, to provoke regime violence, to inspire followers” (Crenshaw, 1981, p.389). Terrorism can be domestic and international and can be described by four characteristics, many of them are similar to aspects of revolution: violence, non-combatant targets, a desire for power, and the need to attract attention, send a message, or provoke an extreme response (Linstone, 2003, p.289). Coates (1996, p.298) claims that a terrorist threat exists when, there must be an issue, there must be some group organized and with a purpose related to that issue and the terrorist group must have the technical skills to carry out a terrorist action for a political purpose. Linstone (2007, p.115) argues that terrorism is a form of warfare that violates the conventions of conduct developed in wars between states, where warfare is conducted between uniformed armed forces only and people stay out of the way except for providing money and manpower. In short, terrorism has many analogies with revolution (e.g., economic, social, political and demographic determinants) and can generate structural change in society, such that it can be considered an additional and specific form of revolution (Coccia, 2018c, 2018d).

Overall, then, revolutions are a result of human activity in society. Revolution is a process due to manifold economic, social, psychological, anthropological, and perhaps biological factors in society. The determinants of revolution can change over time and space and are mainly linked to the question of what human beings truly need and how they seek to satisfy needs to cope with and adapt in the presence of environmental threats and changing contexts.

² For studies of structural change, cf. also Coccia, 2005, 2009, 2010, 2010a, 2010b, 2010c, 2011, 2014, 2014a, 2014b, 2014c, 2014d, 2015, 2015a, 2017, 2017a, 2018, 2018a, 2018b, Coccia & Benati, 2018; Coccia & Bellitto, 2018; Coccia & Cadario, 2014; Coccia & Rolfo, 2010; Coccia *et al.*, 2015.

References

- Amman, P. (1962). Revolution: A redefinition, *Political Science Quarterly*, 77(1), 36-53.
- Arendt, H. (1958). *The Origins of Totalitarianism*. Meridian, Cleveland.
- Arendt, H. (1963). *On Revolution*. Viking, New York.
- Benhabib, S., & Marcuse, H. (1987). *Hegel's Ontology and the Theory of Historicity*. MIT Press, Cambridge, Massachusetts.
- Blanksten, G. (1958). Revolutions. In H.E.Davis (ed.), *Government and Politics in Latin America*. (pp.119-146), Ronald Press, New York.
- Blanksten, G. (1962). Latin American revolutions. In *The 1962 Carolina Symposium: Today's Revolutions*, (pp.71-79), University of North Carolina, Chapel Hill.
- Brinton, C. (1938). *The Anatomy of Revolution*. Vintage, New York.
- Chalmers, J. (1964). *Revolution and the Social System*, Hoover Institution Studies, Stanford.
- Coates, J.F. (1996). A thriving future for terrorism, *Technological Forecasting and Social Change*, 51(3), 295-299. doi. [10.1016/0040-1625\(95\)00198-0](https://doi.org/10.1016/0040-1625(95)00198-0)
- Coccia, M. (2001). Satisfaction, work involvement and R&D performance, *International Journal of Human Resources Development and Management*, 1(2-3-4), 268-282. doi. [10.1504/IJHRDM.2001.001010](https://doi.org/10.1504/IJHRDM.2001.001010)
- Coccia, M. (2005a). A Scientometric model for the assessment of scientific research performance within public institutes, *Scientometrics*, 65(3), 307-321. doi. [10.1007/s11192-005-0276-1](https://doi.org/10.1007/s11192-005-0276-1)
- Coccia, M. (2005b). Metrics to measure the technology transfer absorption: analysis of the relationship between institutes and adopters in northern Italy. *International Journal of Technology Transfer and Commercialization*, 4(4), 462-486. doi. [10.1504/IJTTC.2005.006699](https://doi.org/10.1504/IJTTC.2005.006699)
- Coccia, M. (2009). What is the optimal rate of R&D investment to maximize productivity growth?, *Technological Forecasting & Social Change*, 76(3), 433-446. doi. [10.1016/j.techfore.2008.02.008](https://doi.org/10.1016/j.techfore.2008.02.008)
- Coccia, M. (2010). Democratization is the driving force for technological and economic change, *Technological Forecasting & Social Change*, 77(2), 248-264. doi. [10.1016/j.techfore.2009.06.007](https://doi.org/10.1016/j.techfore.2009.06.007)
- Coccia, M. (2010a). The asymmetric path of economic long waves, *Technological Forecasting & Social Change*, 77(5), 730-738. doi. [10.1016/j.techfore.2010.02.003](https://doi.org/10.1016/j.techfore.2010.02.003)
- Coccia, M. (2010b). Spatial patterns of technology transfer and measurement of its friction in the geo-economic space, *International Journal of Technology Transfer and Commercialisation*, 9(3), 255-267. doi. [10.1504/IJTTC.2010.030214](https://doi.org/10.1504/IJTTC.2010.030214)
- Coccia, M. (2010c). Public and private investment in R&D: complementary effects and interaction with productivity growth, *European Review of Industrial Economics and Policy*, 1, 1-21.
- Coccia, M. (2011). The interaction between public and private R&D expenditure and national productivity. *Prometheus-Critical Studies in Innovation*, 29(2), 121-130. doi. [10.1080/08109028.2011.601079](https://doi.org/10.1080/08109028.2011.601079)
- Coccia, M. (2014). Religious culture, democratisation and patterns of technological innovation. *International Journal of Sustainable Society*, 6(4), 397-418. doi. [10.1504/IJSSOC.2014.066771](https://doi.org/10.1504/IJSSOC.2014.066771)
- Coccia, M. (2014a). Structure and organisational behaviour of public research institutions under unstable growth of human resources, *Int. J. Services Technology and Management*, 20(4/5/6), 251-266. doi. [10.1504/IJSTM.2014.068857](https://doi.org/10.1504/IJSTM.2014.068857)
- Coccia, M. (2014b). Driving forces of technological change: The relation between population growth and technological innovation-Analysis of the optimal interaction across countries, *Technological Forecasting & Social Change*, 82(2), 52-65. doi. [10.1016/j.techfore.2013.06.001](https://doi.org/10.1016/j.techfore.2013.06.001)
- Coccia, M. (2014a). Emerging technological trajectories of tissue engineering and the critical directions in cartilage regenerative medicine. *Int. J. Healthcare Technology and Management*, 14(3), 194-208. doi. [10.1504/IJHTM.2014.064247](https://doi.org/10.1504/IJHTM.2014.064247)
- Coccia, M. (2014). Socio-cultural origins of the patterns of technological innovation: What is the likely interaction among religious culture, religious plurality and innovation?

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- Towards a theory of socio-cultural drivers of the patterns of technological innovation, *Technology in Society*, 36(1), 13-25. doi. [10.23760/2421-7158.2017.004](https://doi.org/10.23760/2421-7158.2017.004)
- Coccia, M. (2015). The Nexus between technological performances of countries and incidence of cancers in society. *Technology in Society*, 42, 61-70. doi. [10.1016/j.techsoc.2015.02.003](https://doi.org/10.1016/j.techsoc.2015.02.003)
- Coccia, M. (2015a). Patterns of innovative outputs across climate zones: the geography of innovation, *Prometheus. Critical Studies in Innovation*, 33(2), 165-186. doi. [10.1080/08109028.2015.1095979](https://doi.org/10.1080/08109028.2015.1095979)
- Coccia, M. (2015b). Technological paradigms and trajectories as determinants of the R&D corporate change in drug discovery industry. *International Journal Knowledge and Learning*, 10(1), 29-43. doi. [10.1504/IJKL.2015.071052](https://doi.org/10.1504/IJKL.2015.071052)
- Coccia, M. (2016). Problem-driven innovations in drug discovery: co-evolution of radical innovation with the evolution of problems, *Health Policy and Technology*, 5(2), 143-155. doi. [10.1016/j.hlpt.2016.02.003](https://doi.org/10.1016/j.hlpt.2016.02.003)
- Coccia, M. (2017). Sources of technological innovation: Radical and incremental innovation problem-driven to support competitive advantage of firms. *Technology Analysis & Strategic Management*, 29(9), 1048-1061. doi. [10.1080/09537325.2016.1268682](https://doi.org/10.1080/09537325.2016.1268682)
- Coccia, M. (2017a). The source and nature of general purpose technologies for supporting next K-waves: Global leadership and the case study of the U.S. Navy's Mobile User Objective System, *Technological Forecasting & Social Change*, 116, 331-339. doi. [10.1016/j.techfore.2016.05.019](https://doi.org/10.1016/j.techfore.2016.05.019)
- Coccia, M. (2017b). Asymmetric paths of public debts and of general government deficits across countries within and outside the European monetary unification and economic policy of debt dissolution, *The Journal of Economic Asymmetries*, 15, 17-31. doi. [10.1016/j.jeca.2016.10.003](https://doi.org/10.1016/j.jeca.2016.10.003)
- Coccia, M. (2018). A theory of the general causes of long waves: War, general purpose technologies, and economic change. *Technological Forecasting & Social Change*, 128, 287-295. [10.1016/j.techfore.2017.11.013](https://doi.org/10.1016/j.techfore.2017.11.013)
- Coccia, M. (2018a). The relation between terrorism and high population growth, *Journal of Economics and Political Economy*, 5(1), 84-104.
- Coccia, M. (2018c). Violent crime driven by income Inequality between countries, *Turkish Economic Review*, 5(1), 33-55.
- Coccia, M. (2018d). The origins of the economics of innovation, *Journal of Economic and Social Thought*, 5(1), 9-28.
- Coccia, M. (2018e). Theorem of not independence of any technological innovation, *Journal of Economics Bibliography*, 5(1), 29-35.
- Coccia, M. (2018e). Theorem of not independence of any technological innovation, *Journal of Social and Administrative Sciences*, 5(1), 15-33.
- Coccia, M. (2018f). Classification of innovation considering technological interaction, *Journal of Economics Bibliography*, 5(2), 76-93.
- Coccia, M. (2018g). An introduction to the methods of inquiry in social sciences, *Journal of Social and Administrative Sciences*, 5(2), 116-126.
- Coccia, M. (2018h). Growth rate of population associated with high terrorism incidents in society, *Journal of Economics Bibliography*, 5(3), 142-158.
- Coccia, M. (2018i). Measurement and assessment of the evolution of technology with a simple biological model, *Turkish Economic Review*, 5(3), 263-284.
- Coccia, M. (2018j). Functionality development of product innovation: An empirical analysis of the technological trajectories of smartphone, *Journal of Economics Library*, 5(3), 241-258.
- Coccia, M. (2018k). World-System Theory: A socio political approach to explain World economic development in a capitalistic, *Journal of Economics and Political Economy*, 5(4), 459-465.
- Coccia, M. (2018l). An introduction to the theories of institutional change, *Journal of Economics Library*, 5(4), 337-344.
- Coccia, M. (2018m). An introduction to the theories of national and regional economic development, *Turkish Economic Review*, 5(4), 241-255.

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- Coccia, M. (2018n). What are the characteristics of revolution and evolution?, *Journal of Economic and Social Thought*, 5(4), 288-294.
- Coccia, M. (2018o). Motivation and theory of self-determination: Some management implications in organizations, Growth rate of population associated with high terrorism incidents in society, *Journal of Economics Bibliography*, 5(4), 223-230.
- Coccia, M. (2018p). Superpowers and conflict development: Is it a possible relation for supporting human progress?, *Journal of Social and Administrative Sciences*, 5(4), 274-281.
- Coccia, M. (2018r). A theory of classification and evolution of technologies within a generalized Darwinism, *Technology Analysis & Strategic Management*, doi. [10.1080/09537325.2018.1523385](https://doi.org/10.1080/09537325.2018.1523385)
- Coccia, M. (2018s). Optimization in R&D intensity and tax on corporate profits for supporting labor productivity of nations, *The Journal of Technology Transfer*, 43(3), 792-814. doi. [10.1007/s10961-017-9572-1](https://doi.org/10.1007/s10961-017-9572-1)
- Coccia, M., & Bellitto, M. (2018). Human progress and its socioeconomic effects in society, *Journal of Economic and Social Thought*, 5(2), 160-178.
- Coccia, M., & Igor, M. (2018). Rewards in public administration: a proposed classification, *Journal of Social and Administrative Sciences*, 5(2), 68-80.
- Coccia, M., & Cadario, E. (2014). Organisational (un)learning of public research labs in turbulent context, *International Journal of Innovation and Learning*, 15(2), 115-129. doi. [10.1504/IJIL.2014.059756](https://doi.org/10.1504/IJIL.2014.059756)
- Coccia, M., Falavigna, G., & Manello, A. (2015). The impact of hybrid public and market-oriented financing mechanisms on scientific portfolio and performances of public research labs: a scientometric analysis, *Scientometrics*, 102(1), 151-168. doi. [10.1007/s11192-014-1427-z](https://doi.org/10.1007/s11192-014-1427-z)
- Coccia, M., & Rolfo, S. (2010). New entrepreneurial behaviour of public research organizations: opportunities and threats of technological services supply, *International Journal of Services Technology and Management*, 13(1/2), 134-151. doi. [10.1504/IJSTM.2010.029674](https://doi.org/10.1504/IJSTM.2010.029674)
- Crenshaw, M. (1981). The causes of terrorism. *Comparative Politics*, 13(4), 379-399. doi. [10.2307/421717](https://doi.org/10.2307/421717)
- Davies, J.C. (1962). Toward a theory of revolution, *The American Sociological Review*, 27(1), 5-13. doi. [10.2307/2089714](https://doi.org/10.2307/2089714)
- De Tocqueville, A. (1955). *The Old Regime and the French Revolution*. Doubleday, New York.
- Deutsch, K.W. (1964). External involvement in internal wars. In H. Eckstein (ed.), *Internal War: Problems and Approaches*, (pp.100-110), Free Press of Glencoe, NY.
- Eckstein, H. (1964). *Internal War: Problems and Approaches*, Free Press of Glencoe, NY.
- Eckstein, H. (1965). On the etiology of internal war, *History and Theory*, 4(2), 133-163. doi. [10.2307/2504149](https://doi.org/10.2307/2504149)
- Gottschalk, L. (1944). Causes of revolution, *American Journal of Sociology*, 50(1), 1-8. doi. [10.1086/219493](https://doi.org/10.1086/219493)
- Hopper, R.D. (1950). The revolutionary process, *Social Forces*, 28(3), 270-279. doi. [10.2307/2572010](https://doi.org/10.2307/2572010)
- Huntington, S. (1962). Patterns of violence in world politics. In S. Huntington (ed.), *Changing Patterns of Military Politics*. (pp.17-50), Free Press, New York.
- Lasswell, H., & Kaplan, A. (1950). *Power and Society*. Yale University Press, New Haven.
- Lewis, W.A. (1963). Commonwealth address, in *Conference Across a Continent* (pp.46-60), Toronto.
- Lieuwen, E. (1960). *Arms and Politics in Latin America*. Praeger, New York.
- Linstone, H.A. (2003). The 21st century: Everyman as Faust — Technology, terrorism, and the multiple perspective approach. *Technological Forecasting and Social Change*, 70(3), 283-296. doi. [10.1016/S0040-1625\(02\)00395-5](https://doi.org/10.1016/S0040-1625(02)00395-5)
- Linstone, H.A. (2007). Warfare and world security, Kondratieff waves, in T.C. Devezas (Ed.), 2006, IOS Press, Amsterdam. *Technological Forecasting and Social Change*, 74(1), 113-116. doi. [10.1016/j.techfore.2006.08.009](https://doi.org/10.1016/j.techfore.2006.08.009)
- Marx, K. [1976(1867)]. *Capital, vol. 1*. Vintage, New York.
- Marx, K. [1978(1865-70)]. *Capital, vol. 2*. Vintage, New York.

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- Marx, K. [1981(1863–65)]. *Capital*, vol. 3. Vintage, New York.
- Merton, R. (1957). *Social Theory and Social Structure*, Free Press of Glencoe, NY.
- Olson, M. (1963). Rapid growth as a destabilizing force, *Journal of Economic History*, 23, 529-552. doi. [10.1017/S0022050700109210](https://doi.org/10.1017/S0022050700109210)
- Paret, P. (1961). *Internal War and Pacification: The Vendée, 1793-96*, Princeton University, Princeton, NJ.
- Parsons, T. (1951). *The Social System*, Free Press of Glencoe, NY.
- Pettee, G.S. (1938). *The Process of Revolution*, Harper & Bros. Pierson. New York.
- Rosenau, J.N. (1964). Internal war as an international event. In J.N. Rosenau (ed.), *International Aspects of Civil Strife*, (pp.45-91), Princeton University Press, Princeton, NJ.
- Stone, L. (1966). Theories of revolution, *World Politics*, 18(2), 159-176. doi. [10.2307/2009694](https://doi.org/10.2307/2009694)
- Tanter, R., & Midlarsky, M. (1967). A Theory of revolution, *Conflict Resolution*, 11(3), 264-280. doi. [10.1177/002200276701100302](https://doi.org/10.1177/002200276701100302)



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