

## ON THE CONCEPT OF ECONOMIC ORDER

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**Abstract:** *The paper aims to approach the concept of the economic order as a mandatory framework inside which any economic activity can occur. To this end, after setting the definition of the economic order, a set of criteria to identify it are proposed and, based on them, a typology of the economic order is inferred. Both criteria and the typology are from the most general and abstract level, so any economic (empirical) order in the mankind history can be found. Finally, the paper proposes a protocol to reveal (that is, to observe, record, and recognize) the economic order by a generic individual.*

**Key-words:** *economy, economic order, order revealing, list of orders.*

**JEL Classification:** *B40, N00, P00.*

### 1. Preamble

The concept of order is extremely abstract and involves considerations that can range from the purest transcendentalism (such as the phenomenological one) to the most radical materialism. Of course, in this chapter, the concept of order will not be approached from these philosophical perspectives, but from a much more modest one, namely from a praxiological perspective. In general, human action is of three categories: a) theoretical action – it concerns the object/object interaction (ex: Physics or Mathematics); b) practical action – aims at the subject/subject interaction (e.g. Politics or Religion); c) praxiological action – it concerns the subject/object interaction (as the case of Economics). Of course, there are no pure "versions" of any of the three categories of action, the theoretical action involves inter-actions with the subject, the practical action involves inter-actions with the object, and the praxiological action involves both object/object interactions, as well as subject/subject inter-actions. However, the distinction between the three categories of human action can be made based on the dominance of one of the three distinct relationships that can occur between subject and object. In this conceptual context, we suggest that economic action in society is a praxiological type of human action. At least two important arguments can be made in the direction of acceptability of this suggestion:

- the economic has as a reason to be the procurement of the principles of biological existence of the individual. Although economic action has always been socially organized (for reasons of efficacy and, in the case of the current paradigm of optimality, for reasons of efficiency), its ultimate purpose has been the biological existence of the individual. The social is a gnoseological category, not an ontological one – more precisely, the social is an objectified reality (Popper's 3rd world), while the individual is an objective category (Popper's 1st world; NB: not to confuse the individual as object with the individual as subjectivity – the latter enters Popper's world 2); the actual individual is a natural individual of biological type that is connected, from an entropic perspective, with the non-anthropropic natural environment. This means that the acquisition of the principles of biological existence of the individual demands, as a crucial function, its interaction with the natural environment – be observed this is the very definition of human action of praxiological type, that is, the subject/object interaction;
- the economic implies also to construct the means of achieving the goal (in general, the procurement of neg-entropy) which involves the non-anthropropic nature. The economic inter-action of the individual generally involves two types of means:

- anthropic means – that is, inter-actions with other individuals, generated mainly by the division of labour which, in turn, necessarily leads to the exchange of activities with other individuals;
- non-anthropic means – that is, inter-actions with the non-anthropic natural environment. The category of non-anthropic means, indispensable in the economic process (at least, for the moment), therefore forms the second argument in favour of considering the economic as a praxeology. Although not necessarily from a logical perspective, as we proceed here, the suggestion that economics is a praxiological activity is not new in economic philosophy (and, more generally, in social philosophy) (Mises, 2018).

In this context, in the following, the concept of economic order will be approached under the "key" of praxeology. Of course, from the epistemological point of view, the next step is not difficult: that is, from the economic activity as a praxiological activity, to the economic discipline as a praxeology.

## 2. The concept of order

### 2.1. A common definition of the concept of order

The common language (natural or "civil"), of course, has a definition of the concept of order – this is considered a configuration, either spatial or temporal, or (most often) a combination of the two that characterizes a phenomenon and which is detectable in such a configuration, that is, it is intelligible to the empirical observer, without the latter having special powers for this observation. In other words, the "common" order is simply a pattern, static or cinematic, which the ordinary observer "throws" on a real phenomenon (either objective, subjective or objectified) and that pattern "fits" on the reality in question. Two aspects seem important in this point: a) what is the "method" by which the pattern in question is detected; b) what is the potential of truth (more concretely, of true prediction) of that pattern.

- it is quite obvious that, in the common acceptance of the term, the order observed at the non-specialized empirical level is of inductive type. The observer finds regularities, periodicities and other characteristics of replicability of a phenomenon and, by inductive inference, that is, by generalization, builds the order in question. Of course, inductive inference is liable to false, which is why the common concept of order is a vulnerable concept (deductive inference, to which we will refer immediately, is not less liable to false, but it is a different false, namely it is from a logical point of view. – see, here, the factual falsifiability of Popper) (Popper, 1981);
- as for the potential of allowing true predictions to be formulated, the common concept of order is extremely deficient. Of course, predictions can be made, but they are true (i.e. the previous predictive statement coincides with the later descriptive statement) only by chance. The explanation is that the generalization has an enormous probability of being local (both temporal and spatial), while the truth of a prediction is "governed" especially by the universal character of the major premise, not by its general character. Universality (at least hypothetical) is provided only by deductive inference. This is the logical difference between the inductive and the deductive truth: in the case of the inductive truth, the major premise of the syllogism is a *general* coverage law, while in the case of the deductive truth, the major premise of the syllogism is a *universal* coverage law.

Therefore, the common acceptance of the concept of order consists in considering the reality as it appears to the non-specialized observer and inferring the causality (so the pattern of order) by generalization, that is, by induction, not in its uncritical form, which we discussed above, but in the form of the *abduction* – which is the most plausible

explanation, *prima facie*, obtained inductively but subsequently subjected to the deductive mechanism).

## 2.2. *Sufficiency predicates of the concept of order*

It is obvious that, from a scientific perspective (first of all, from an epistemological perspective), we need a different examination of the concept of order. This consists in identifying the attributes (or predicates) of sufficiency that the concept of order must verify in order to qualify as such. We propose that the list of these predicates of sufficiency be as follows (NB: *SPO<sub>x</sub>* means sufficiency predicates no. x):

- (*SPO1*) *sensitive observability*: the phenomenon that will be the basis of the finding (or non-finding – from a gnoseological, but not ontological perspective!, the non-establishment of an order is equivalent to the non-existence of the order, because the order exists only associated with a subject. From such a point of view, the phenomenology is very close to the opinion expressed here) of an ordered configuration must be observable at the sensitive level, even though, of course, after this episode, the perception, conceptualization and judgment (reasoning) that ultimately lead to the formulation occur, by universalization of the order in question;
- (*SPO2*) *intellectual observability*: if *SPO1* involves the natural senses of the cognitive subject, *SPO2* involves the intellect of that subject. As we know, perception is the form that consciousness gives the sensation. For the formation of concepts and the preparation of judgments, the intellect of the subject is needed, which transforms perception into concept. Conceptualization is the crucial stage in the deductive identification of the order;
- (*SPO3*) *catalogue registration*: the application of the first two predicates of sufficiency leads only to the possibility of notifying an order. The effective notification of the order occurs only if the result of the *SPO2* application is found in the already existing catalogue of possible orders, a catalogue that is, of course, accessible to the cognitive subject in question.

We can write that order (*O*) is given by logical conjunctions of the three predicates of sufficiency:

$$O \leftarrow (SPO1) \wedge (SPO2) \wedge (SPO3).$$

A brief discussion can be useful here:

- (a) how does the cognitive subject come into possession of the catalogue containing the list of already known orders (with the basic characteristics, the defining ones, to ensure the recognizability of each one)? Obviously, only as a result of previous experience, therefore it will have to be accepted that this catalogue is a posteriori one;
- (b) how effectively is the comparison of the conceptual sketch of the new possible order with the catalogue records made? Someone might ask, here, the postulation of a fourth predicate of sufficiency that would guarantee this operational capability. We consider, however, that this predicate would be redundant, which is why we presume that the cognitive subject has this intellectual capacity in the simple basis of its quality as a cultural subject;

- (c) if the cognitive subject does not find, in the catalogue, the order that seems to him to be identified on the basis of the first two predicates of sufficiency, how s/he will proceed? Here are two alternative options:
- (c.1) s/he "decrees" that there is no order in the phenomenon concerned; here is a type 1 error – rejecting a true hypothesis;
  - (c.2) s/he completes the catalogue with the new presumed order, with the distinguishing characteristics from those already existing in the catalogue; here is a type 2 error – admitting a false hypothesis. From a logical point of view, if we do not accept a priori nature of the order catalogue, the catalogue is formed, in time, and for each cognitive subject in part, exclusively practicing the type 2 errors;
- (d) are there catalogues of orders that are over-subject (over-individual)? The answer is, obviously, affirmative: in the society, a common catalogue (social, communitarian) of orders works (and is admitted at the level of all individuals). Their inclusion in the common catalogue is made by democratic "vote" (for example, the second law of thermodynamics, also called the entropy law, to which we'll refer later, is imposed by the "vote" of the scientific community – mostly by the qualitative theoretical physicists. Also, in Economics the same thing happens, with the distinction that, this time, we no longer expect unanimity from economists involved, but only a majority that are, in time, reversible);
- (e) both the order catalogues of individuals and those at community (social) level are, in their turn, on fields of interest or on typological fields: ontological orders, gnoseological orders, axiological orders, praxiological orders, etc.

### 2.3. A logical definition of the concept of order

Based on the three sufficiency predicates set out above, a logical definition of the concept of order can now be formulated: *order is a configuration, either spatial or temporal, or (most often) a combination between the two, which characterizes a phenomenon and is detectable as such a configuration, that is, it is intelligible to the empirical observer, cognitively and performative competent.* A summary of all the considerations regarding the concept of order from a logical perspective is provided, from a synoptic point of view, by Figure 1.

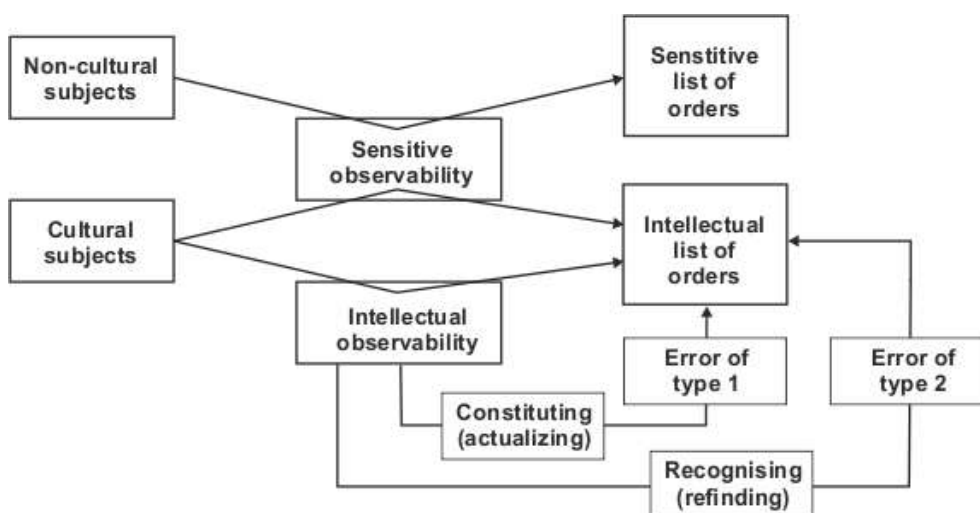


Figure 1. The mechanism of constructing the list of orders

Source: author

#### 2.4. *Revealing the order*

Revealing the order refers to the conviction, at the level of the empirical observer, that there is an order in the entity that is the object of observation. As already shown, order detection is operated by the intellectual finding of the existence of the type of order detected observationally in the pre-existing list of orders. At least two questions result from this way of defining order relevance: a) what happens if the order is not disclosed; b) what happens if the empirical observation reveals a single order; c) what happens if the empirical observation reveals more than one order. We will examine them one by one.

##### (a) *the survey does not indicate any order*

If the result of the empirical observation does not overlap with any order existing in the list of orders, the subject will "decree" that, in the observed entity (thing, phenomenon, process), there is no order. The absence of an order does not prohibit praxeology in the entity concerned, but this praxeology will either be operationalized "in the blind", or will be based on the imposition of a *sui generis* order, generated by the operationalized praxeology itself. The second alternative – the imposition of a *sui generis* order – will enter in the order list a new order, by the type 2 of error;

##### (b) *the survey indicates a single order*

This is the standard case, in which the cognitive (and praxiological) subject identifies an overlap between the empirically observed order and a record (only one) in the previous order list. This is a conservative and unproblematic case;

##### (c) *the survey indicates more than one order*

Finding multiple records in the order list following empirical observation is more problematic than the two cases discussed above, for the following reasons:

- how will the order that governs praxiological action be "chosen"? We should point out that the situation where the praxiological action will take place in two or more orders simultaneously is not acceptable, because each order has, as we have shown above, its "logic". Operating under multiple orders at the same time not only introduces inconsistencies (or even contradictions) in the action (Mises, 2018), but can even evade rationality as such, given that a certain order is univocally associated with a certain model of rationality.
- in this situation the concept of adequacy is useful. This concept has a vagueness generated by its use in the common ("civil") language, so we will have to associate it with a rigorous meaning. We propose that, by praxiological adequacy of the revealed order, we understand the property of the order in question to be located at the smallest "logical distance" from the intrinsic logic implied by the praxiological action expected (we note that the adequacy of the relevant order does not refer to the adequacy of this order for the purpose of the praxiological action involved, but for the "middle" of that action, that is, as I said, to the intrinsic logic of the action in question). It is pedantic (and useless) to formulate models of "choosing" the appropriate order, because the real actor will never use such models (either because he does not know them or because the transaction cost for their use is prohibitive). We think that each actor will notice, on an intuitive basis, but above all, using past experiences, which is the most appropriate order among the ones revealed. The question arises: will the selection of the most appropriate order between two or many of my revealed orders influence the performance of the expected praxiological action? The answer is, of course, affirmative but, in most real cases – which are non-counterfactual – one will not be able to detect the "gain" or "loss" from choosing the most appropriate order (of course, ingenious speculation, but without any psychological basis or

praxiological can be done at any time, for the purpose of writing "scientific" articles);

- could the lexicographic ordering of the pre-known orders from the list of orders available to the observer provide a criterion for choosing the most appropriate order? We think that the answer here should be negative. A lexicographic order (that is, essentially a-criterion based) will not be of any use, since each praxiological situation has its own description of the intrinsic logic that is, as proposed above, crucial in choosing the most appropriate order.

### 3. Order and entropy

The concept of entropy (εντροπία, formed from "εν" – towards, and "τροπή" - turn, return) means to move towards ..., or to transform into the direction .... Therefore, the meaning is that of a propensity needed in a non-ambiguous direction) is a concept of maximum generality, having a triple significance:

- *ontological* (more precisely, *ontic*): parameter of a real existential entity (objective or subjective);
- *epistemological*: cognitive significance for the subject (indicates the level of order of the entity);
- *methodological*: selects the procedure by which the subject "interrogates" the object.

The referent (denoted) of the entropy concept is a state of an existential entity (system, phenomenon, process). This state is of the nature of order. Entropy is a parameter that moves "inversely" proportional to the order, more precisely: the size of the entropy is inversely proportional to the degree of ordering of the entity concerned. It is worth mentioning that entropy is non-static: in a closed system (e.g. our universe) the entropy increases permanently, i.e. spontaneously, in other words, the global entropy is irreversible: in a closed system the entropy cannot decrease or remain constant (this characteristic seems to have the nature of vitalism – Boltzmann tried to introduce a reversibility of entropy in closed systems, but the question is still unresolved, including mathematically).

Among the characteristics of entropy, we mention:

- is a size (function) of state; in addition, the value of the entropy variation does not depend on the intermediate stages (of the "path" – see the concept of path dependence), but only on the initial and final point;
- is a macroscopic property; more precisely, it means a macroscopic irreversibility derived from a microscopic reversibility;
- has a statistical meaning (based on the statistical formulation of the thermodynamics); this fact justifies the appearance of probability in the analytical formula of entropy from statistical thermodynamics (because probabilities can only model the average of a population);
- is additive.

Based on the above, entropy (Sethna, 2006) can be seen as an ordinator of reality (either objective or subjective). The most effective proxy for perceiving/identifying the order of reality seems to be the structure (Cramer, 1993) of the intentionally targeted entity. There are two categories of primitive structures, of ontological order, of the order:

- *causality structure*: "responsible" for explanations/predictions and for altering the identity of the entity (the explanation and prediction are logically equivalent and chronologically substitutable);
- *coexistence structure*: "responsible" for the functions/outcomes and for preserving the identity of the entity.

The preferential sense of change in the entities of objective reality is given by necessity, which is the only "arrow" of finality. Necessity is "designed" exclusively by physical laws (biological or chemical "laws" are ultimately reduced to quantum physics considerations).

Increasing global entropy is a macro-necessity (wrapping necessity), which is fuelled by local needs (including those in dissipative systems), although here a problem arises: even if we admit the comparability of static structures with each other, how can we compare a static structure? (a spatial configuration) with a functional structure, to decide on the order level?

Based on the concept of entropy and the entropic mechanism, let us examine the relationships that may exist between it and the concept of order. The following suggestions seem relevant to us:

- according to its significance from thermodynamics (the only "legal" meaning, although, especially economists but also researchers from other social fields, have demonetised the concept, as they usually do also, with other concepts taken from the natural sciences), entropy signifies a tendency towards homogeneity, to non-differentiation, of a process or system. In this sense, the idea that increasing entropy indicates an increase in disorder is wrong – any spatial-temporal, causal or functional configuration can mean an order. For example, financial stability is perceived as signifying a high degree of economic order, although it is characterized by a greater homogeneity of the financial process (by reducing the number or amplitude of the monetary shocks);
- in our opinion, the use of the entropy concept for identifying, "measuring" or evaluating the order must be done with great caution. We consider that, from a performative point of view, this concept does not bring much added value to the debate on the concept of order;
- in the case of dissipative systems (as in the case of economic systems) the concept of entropy can play a role but probably only under the aspect of an exotic label for phenomena/events that already either have their own associated terms, or can be called without calling the entropy term.

#### **4. The concept of economic order**

##### **4.1. *The additional sufficiency predicates for the concept of economic order***

We have seen the predicates of sufficiency that ensure the identification of an order in general: a) (*SPO1*) sensitive observability; b) (*SPO2*) intellectual observability; c) (*SPO3*) catalogue registration. For the order notified on the basis of these sufficiency predicates to be an economic type order, the order in question must verify two more sufficiency predicates, namely:

(d)(*SPO4*) *social nature of the phenomenon*: the phenomenon in question must be a

phenomenon that does not exist (does not occur) else than through social inter-action. As it is known, social "objects" exist only if and insofar as they represent artifacts, that is, are results of the action (more precisely, of the inter-action) of the individuals. A social "object" disappears if the social inter-action that gave rise to it ceases;

(e)(*SPO5*) *the entropic nature of the social phenomenon*: as it is known, the

economic property refers to the property of entropic exchange between the individual (or groups, considered as a set of individuals) and the non-artefactual nature. Although the economic, on the line indicated by Lionel Robbins, is still

considered to be that property related to the scarcity of resources in relation to the needs (on this line developing the ridiculous neoclassical economic quantitative modelling and not only), the definition of the economic must be restricted to the entropic processes (Georgescu Roegen, 1996).

Therefore, in order to have an economic order, the five sufficiency predicates must be checked simultaneously (Figure 2 summarizes the emergence of the concept of economic order).

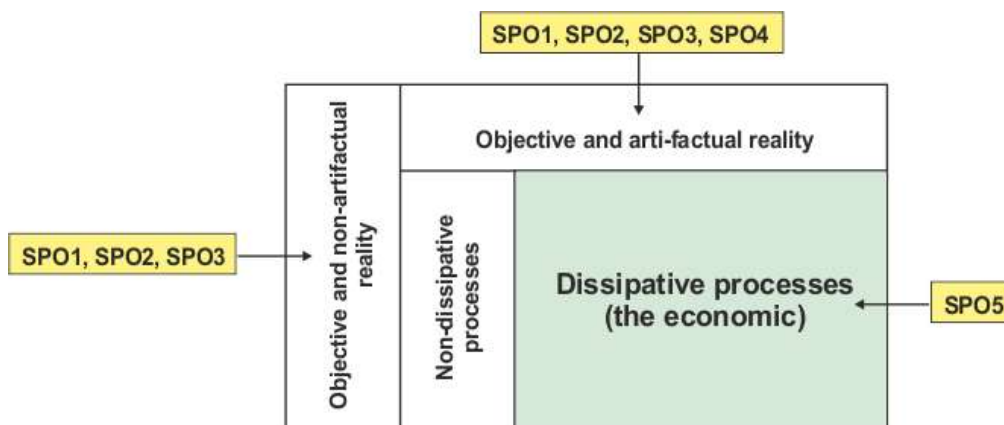


Figure 2. Logical genesis of the economic order

Source: author

From a formal point of view, the economic order ( $EO$ ) is given by the following logical relation:

$$EO \leftarrow (O) \wedge (SPO4) \wedge (SPO5)$$

#### 4.2. Revealing the economic order

Applying to an economic "object" (we have seen that an economic "object" is a social "object" that has a dissipative nature, i.e. entropic exchange between the individual and the non-artefactual nature), the relevance of the economic order is subject to the same commands to which a certain order is revealed. We would like to add here the idea that, in principle, there can be three types of economic order revealing:

- (a) *anamnesic revealing*: the observer finds that the economic entity of interest is subsumed to an economic order that already exists in its list of economic orders;
- (b) *projective revealing*: the observer, which is always theoretically loaded (even if this load is, for example, of the type of prejudgment), is therefore prepared and has the propensity to identify in the examined reality the order that it envisages as "necessary". The overlap between the intellectual desirability of the observer and the spatial-temporal configuration of the economic reality examined leads to the inclusion in the list of economic orders of an economic order – the one "just discovered";
- (c) *the fantasy revealing*: the observer does not find, between the economic reality examined, and his/her list of orders no overlap and, at the same time, his intellectual baggage (his theoretical loading) does not lead him to the identification of an economic order. In this case, the observer can imagine an economic order either according to the wishes or according to a certain interest. For example, dictatorships are very inclined to disregard reality as it is (often aided by the obedient bureaucracy in this direction) and then imagine their economic order closest to their wishes or interests, and decisions made for the



economy are subsumed by the economic order imagined, and not by the real economic order (the notorious cases in recent history refer to the communist dictatorships).

### 5. Economic order and economic entropy

Economic "objects" (phenomena, events, processes, systems) are dissipative objects, that is, objects that at least maintain (or even decrease) their entropy on account of the entropic exchange with the non-artefactual environment – the dissipative objects extract from the non-artefactual low entropy environment, or free energy (also called negentropy) and eliminates in the non-artefactual environment high entropy or bound energy. The standard case, which sends directly to thermodynamics (as it is, in our opinion, correct, as said before) is the increase of the entropy of the non-artefactual environment by converting the free energy (for example, the energy stored in oil) into heat. It is worth mentioning that, always, the high entropy eliminated in the environment is higher than the low entropy extracted from the environment, which leads to the idea of accelerating the entropization of the Universe (which is a closed system) in the presence of dissipative systems (the most "entropic active" dissipative systems are living systems).

It seems, therefore, that, as far as the economic order is concerned, the connection with entropy is much more obvious and, it seems, logically necessary. In this regard, we will keep the following considerations:

- in the economic field, the concept of entropy should refer to the degree to which economic freedom is self-testable (the closest proxy here seems to be the free functioning of the market). By economic self-testability we propose to understand the self-regulation of the economic system without generating in society (Marro , 2014) negative non-treatable externalities (either in nature, or in terms of quantity or in terms of their production speed) or treatable with unacceptable costs that can cause unsustainable situations (the so-called social cost of Ronald Coase);
- therefore, no matter the volatility, disorganization or the like, which the half-learned economists introduce with enthusiasm under the entropy label (especially in the financial field);
- it turns out that, from the perspective of economic policy, a government intervention must necessarily occur whenever economic freedom becomes entropic above a certain degree. This intervention will provide exactly those "ingredients", which take the form of mandatory rules, which will help the economic system (market) to reduce its production of negative externalities beyond the allowable limit for sustainability;
- of course, such a concept of economic entropy must simply be developed from the beginning (from „zero”), and not necessarily based on a simple instrumental perspective, but on a much broader and more substantiated one – that is, from the perspective of social philosophy.

### References

1. Cramer, F., 1993. *Chaos and Order: The Complex Structure of Living Systems*. Wiley - VCH.
2. Georgescu Roegen, N., 1996. *Legea entropiei și procesul economic* (ed. second edition). Bucharest: Expert Publishing House.
3. Marro , J., 201). *Physics, Nature and Society. A Guide to Order and Complexity in our World*.
4. Mises, L., 2018. *Acțiunea umană. Tratat de teorie economică*. București: Ludwig von Mises Institute.

5. Popper, K., 1981. *Logica cercetării*. Editura Științifică și Enciclopedică.
6. Sethna, J., 2006. *Entropy, Order Parameters, and Complexity*. Oxford: Clarendon Press.