Contingency in the Historical Process:
An Attempt at Explication in the Light of Idealizational Theory of Science

Krzysztof Brzechczyn

Adjunct Professor in the Chair of Epistemology and Cognitive Science,
Department of Philosophy, Adam Mickiewicz University,
Poznań, Poland.

ABSTRACT

The paper presents an extension of L. Nowak's idealization theory of science in order to explicate intuitions about unpredictability and contingency of history shared by professional historians and methodologists of history. In the first part of the paper, a critical analysis of some explications (G. Reisch, M. Shermer) of such intuitions, based on the conceptual apparatus of the chaos theory, is presented. In the second part of the paper, an original model of cascade process is elaborated that conceptualizes the contingency of history. This model is subsequently compared with M. Shermer's chaotic model of historical sequences. In third part of this paper, an application of the model of cascade process is shown in the construction of a scientific theory, historical narrative and in historical research.

1. Introduction

The methodological status of history and the types of explanations used in this field of science have always aroused spirited controversies among methodologists and philosophers of history. According to Carl G. Hempel's deductive-nomological model, an explanation is a deductive reasoning, its conclusion is a sentence – *explanandum*, and its set of premises is *explanans* that consists of laws of science and certain initial conditions (Hempel 1942/1959: 344–56, 1963/1974: 90–106). The law of science must be a strictly general sentence, which does not contain proper names and spatial-temporal parameters. But the question of the scope of application of Hempel's model of explanation in history has always aroused considerable controversies among professional historians and philosophers of history. The controversies resulted from the belief that history may be unpredictable and contingent, whereby small causes may bring about great effects. Therefore, in historical

research should be applied the modes of interpretation and explanation, distinct from those in natural sciences.[1] In this respect historians' intuitions were better shown in Hans-George Gadamer's paradox of "small causes and great effects" than in Hempel's deductive-nomological model of explanation. As Gadamer put it:

> An old principle of knowing the nature is the equality of a cause and an effect, and in experiencing history it is the opposite – small causes may bring about great effects. It is surprise that belongs to the experience of man immersed in history…. People know what has been planned, what factors have been set in motion, what is expected of them but they forget about unpredictable, unplanned, unexpected events.

> (Gadamer 1979: 81, after Polish translation)

Beliefs that history may be unpredictable have been strengthened by recent achievements of the chaos theory, which distinguishes patterns that are extremely sensitive to any change of initial conditions. Consequently, even an insignificant change of initial conditions influences in an essential way the final state of the object. George Reisch, one of supporters of the application of the chaos theory in historical studies claims that history is chaotic both on a microsocial level:

> My life – and I bet most others – has been pretty chaotic, for its present 'state' was facilitated by a particular chemistry of factors and events. And had this chemistry been just slightly different, it almost surely would have launched me down some other road. If my dormitory neighbor at college had not that day happened to mention that 'interesting, but weird' philosophy of science course she began taking, and if I had not wanted to take the ever popular abnormal psychology seminar which – my being a lowly sophomore – left me in need of a course, I would probably still be timing white mice running through mazes, or (preferably) flipping burgers, and in my case, I would now be particularly concerned about structure of historical explanation.

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[1] In analytical philosophy of history one finds the formulation of several proposals of modes of explanation used by historians in their research. E.g. according to Walsh's (1976: 59-63) the concept of colligation, an explanation of a given phenomenon relies on the inclusion in it any wider whole or historical tendency (e.g. the German aggression on Poland in 1939 is seen as a part of World War II). On the other hand, Dray (1957: 66-72) elaborates the concept of explanation by partition. It means that explanation of a given phenomenon relies on its division into several sub-phenomena. This process of partition is continued to this level of analysis until one reaches proper understanding of a phenomenon under investigation (e.g. in order to understand German attack on Poland in 1939 one should analyse motifs of Hitler, Stalin, and leadership of the Polish state).

as well as on a macrosocial level:

> Just as my history is chaotic, so too is history in general. 'For want of a nail ... the kingdom was lost' goes the familiar story of chaotic history. Consider for example what the world might look like today if person only slightly more combative than Khrushchev had been at Soviet helm during the Cuban missile crisis – certainly very different if nuclear war had ensued.

However, the examples provided by Reisch are not too convincing, though. Let us discuss the microsocial level first. If we see a conversation with a dormitory neighbor as a critical factor influencing future life of the author, there is no chance to apply the chaos theory. We simply may have earlier falsely identified main factors influencing the author's biography. For it turned out that even despite his own opinions, a conversation with a dormitory neighbor was indeed the main factor rather than merely a secondary one, as he thought, influencing his professional career and personal conduct as well. On a macrosocial level, on the other hand, apart from accidental events one can also distinguish determined processes: e.g. increase in population, growth of industrialization and urbanization, development of free market and global economy, on which any number of butterflies fluttering their wings do not exert any significant influence.

The point is, I suppose, not to replace the deterministic model of explanation with the model offered by the chaos theory; it is to construe such an account of it that would integrate both perspectives: that of contingency of history and that of its regularity. One of such attempts is the so-called chaotic model of historical sequences construed by Michael Shermer (Shermer 1995: 69–73). A historical process in Shermer's model is a resultant of necessity and order as well as contingency and chaos. He sees a contingent event as "a conjuncture of events occurring without perceptible design" (ibid.: 70) and necessities as "constraining circumstances compelling a certain course of action" (ibid.: 70). The beginning of any historical sequence is bifurcation – it is a focal or trigger point at which some necessities are balanced by other necessities and agent's actions are unpredictable and subject to chaotic regularities. In the course of historical development some necessities become dominant, though. Which of them will gain predominance in it may depend on the influence of a trigger of change (trigger effect) which is insignificant under normal circumstances but which brings about great effects –

leading to a shift of direction of historical development. The sooner a trigger of change appears in a historical sequence the greater influence it exerts. The later it appears the smaller its influence is. The author assumes in his model that passages from chaos to order are common and gradual, while transformations in the opposite direction – i.e. from an ordered state to a chaotic one – are rare and sudden.

However, his proposals are imprecise and therefore arouse serious doubts. First of all, Shermer does not characterize in any detail the state of bifurcation in which some necessities are balanced by other necessities. Consequently, the role of a trigger of change is not clear: is it supposed to make transitions from the domain of order and necessity to that of contingency and chaos ("trigger of change is any stimulus that causes a shift from the dominance of necessity and order to the dominance of contingency and chaos", ibid.: 72) or only to decide in a state of bifurcation which of necessities remaining in balance will win ("trigger of change will be most effective when well-established necessities have been challenged by others so that a contingency may push the sequence in one direction or the other", ibid.: 72–3). For one thing is a shift of a type of regularity that a given phenomenon is subject to (from a regular to a chaotic one) and another thing is a shift of one necessity to another necessity within a given type of regularity – chaotic or regular one.

I would like to avoid these ambiguities in the present paper by suggesting an explication of intuitions of the coexistence of regularities and contingencies in history formulated in a conceptual apparatus of idealization theory of science.

2. Basic ideas of idealization theory of science

Let us present main ideas of this conception in a very shortened way (Nowak 1980, 1992).

Idealization: It is assumed that a number of factors influence the phenomenon under investigation. These factors can be divided into main and secondary. It is assumed by virtue of the idealization assumption $p(x) = 0$ that when the factor p equals zero it does not influence the phenomenon under investigation. Then one determines the way the phenomenon under investigation depends on its main factor H. An idealization statement takes the form of a conditional clause: in its antecedent there are counterfactual assumptions according to which all secondary factors do not exert any influence on the phenomenon under

investigation. And in its consequent the way in which the phenomenon under investigation depends on its main factor H is shown.

Concretization: The procedure consists in the gradual lifting of previously made idealization assumptions and introducing appropriate corrections to an initial formula of a statement. Owing to this procedure one can see the way in which the phenomenon under investigation depends on secondary factors. Concretization is complete the moment the factual statement in which there are no idealization assumptions is formulated.

Approximation: But in research practice final concretization is never performed; what is applied is the procedure of approximation. In concretization after the formulation of an idealization law and performance of several concretizations all idealization assumptions are lifted and a common influence of the remaining secondary factors is determined in an approximate way.

Theory structure: Idealization theory is a sequence of models differing in a number of idealization assumptions that has been taken. A basic model with k idealization assumptions describes the dependence of the phenomenon under investigation solely on its main factor. Derivative models with *k-1* simplifying assumptions describe the dependence of the phenomenon under investigation on secondary factors.

Explanation: An explanation of the behavior of a given phenomenon consists in showing the dependence of the object under investigation on the factor seen as the main factor for it. Then from an idealization law formulated in such a way one educes increasingly realistic concretizations, which results in a formulation of a factual statement. The sentence being explained results from a factual (or approximative) statement and from its initial conditions formulated on the basis of the procedure of concretization.

3. Two types of essential structures

Let me characterize two fundamental concepts of idealization theory of science useful for the purposes of the present paper: the concept of influence and that of essentiality. Each magnitude studied F has a number of determinants $\{H, p_k, \dots p_2, p_1\}$ that influence it in different ways. The influence in question can be ordered by distinguishing main and secondary factors in an essential structure of the magnitude studied F. According to this conception the influence of the magnitude H on the magnitude F occurs when the adoption of a certain value by H excludes the adoption of any value by F (Nowak 1989: 14; Paprzycka & Paprzycki

1992: 279–83). It can be said metaphorically that the magnitude F under the influence of the factor H has a restricted "choice" of intensity. The influence of one factor on the other is thus determined by a set of values $W_F(H)$ that the magnitude determined cannot adopt. The set $W_F(H)$ can also be named the level or power of influence of the factor H on the magnitude studied F. I am going to use these terms interchangeably. Such an account of influence allows also explaining the concept of being "more essential". The magnitude H is more essential to F if the power of influence of the magnitude H on F exceeds the power of influence of the factor p on F. This can be demonstrated graphically in the following way:
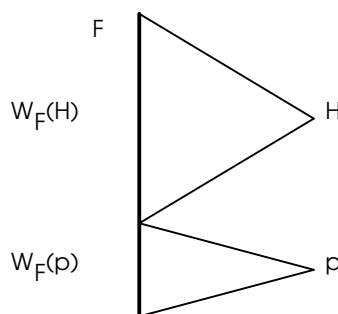

Figure 1. The power of influence of factors H and p on F. Explanations: $W_F(H)$ – the domain of influence of the factor H on F; $W_F(p)$ – the domain of influence of the factor p on F.

Thus the above figure shows the power of influence of factors H and p on the phenomenon under investigation. The power of influence of the factor H is greater than the power of influence of the factor p if the set $W_F(H)$ is composed of more elements than the set $W_F(p)$; so the factor H is more essential to the magnitude F than the factor p.

On the basis of the above distinction it is possible to distinguish between two types of essential structures: an essential structure dominated by the main factor and an essential structure dominated by a class of secondary factors. In an essential structure dominated by the main factor the power of influence exerted by it is greater than the sum of the power of influence of secondary factors. And in an essential structure dominated by secondary factors their total influence is greater than the influence exerted by the main factor, although the power of the latter influence is – by definition of an essential structure – greater than the power of influence of each secondary factor taken separately. The

two types of essential structures in question can be presented in the following way:
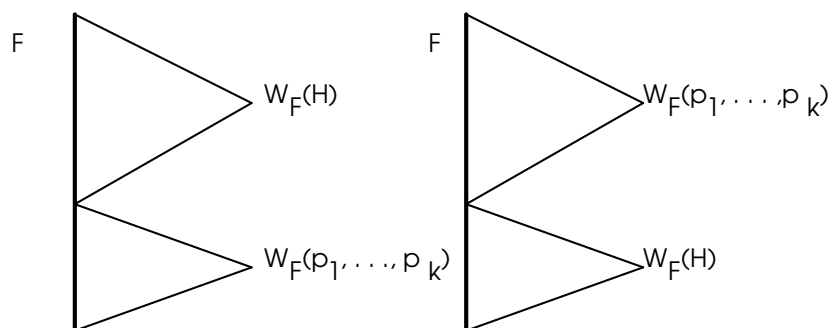

Figure 2. Two types of essential structure. On the left – an essential structure dominated by the main factor, on the right – by secondary factors.

   The first type of essential structures – dominated by the main factor – seems to be characteristic of phenomena of the natural world. And the second type of essential structures – dominated by a class of secondary factors – is characteristic of phenomena of the social world. The differences between phenomena from the natural and social worlds are one of the sources of the methodological uniqueness of the humanities.

4. When a nail leads to the loss of a kingdom, or the explication of a cascade process

   In essential structures dominated by a class of secondary factors still another effect can occur. For it often happens that some phenomena that in a given period of time were subject to factors that exert main influence on it fall under the influence of different, new secondary circumstances. Initially, the influence of these co-existing, accidental factors merely modifies fundamental regularities, but then it introduces essential disturbances into them, and finally balances the influence of the main factor on the phenomenon under investigation. In the final stage the accumulation of these accidental factors that occur together may be so big that it surpasses the influence of a given regularity that so far the phenomenon under investigation was subject to. It can be said then that the influence of the main factor was overbalanced by, let us call it figuratively, a "cascade" of secondary factors the common influence of which on the phenomenon under investigation is greater than the influence of the main factor.

A simple cascade effect consists in introducing subsequent secondary factors. For an essential structure dominated in an initial stage by the main factor under the influence of a gradual occurrence of new secondary factors becomes transformed in an essential structure dominated by secondary factors. An inverted cascade effect is the disappearance of the influence of some secondary factors that brings the domination of the main factor back again. So in a simple cascade effect an essential structure of the first type becomes gradually transformed in an essential structure of the second type in which the common power of the influence of secondary factors is greater than the power of the influence of the main factor.

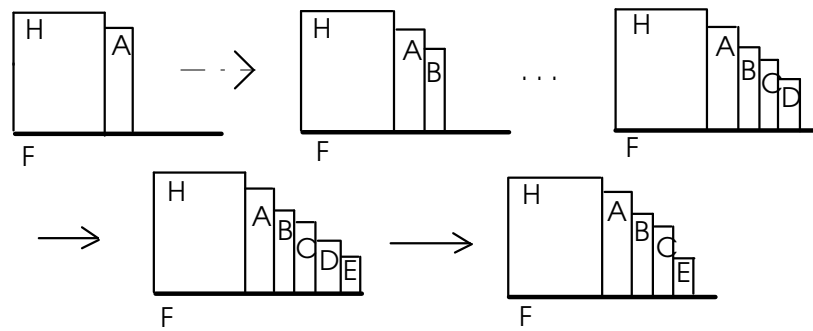This can be presented graphically in the following way:

Figure 3. A cascade process. Explanations: if in an essential structure of the magnitude *F* there appear factors *A*, *B*, and *C*, then $W_F (H) > W_F (A,B,C)$; if there appears the factor *D*, then $W_F (H) = W_F (A,B,C,D)$; and the moment the factor *E* appears – $W_F (H) < W_F (A,B,C,D,E)$; a solid-line arrow – transformations of an essential structure of the phenomenon under investigation from a structure dominated by the main factor to a structure dominated by secondary factors or the reverse; a dotted-line arrow – transformations within an essential structure dominated by the main factor.

In the above figure there are the magnitude studied *F* and a number of factors that influence in various ways the phenomenon under investigation. The factor *H* is the main one among them – it exerts its influence in the whole period of time considered and its power of influence is the largest. The factor *A* already exerts secondary influence, although it acts also in the whole period of time considered. Further factors, *B* and *C*, appear later and exert the relatively smallest influence on the phenomenon under investigation. But they initiate a cascade process in which the role of the influence of the main factor changes in a

structure of influences. Although the power of influence of this factor is still the greatest, together with the occurrence of new secondary factors its dominance over remaining elements of an essential structure gradually diminishes; that is to say, the number of elements of the set $(W_F (H) – (W_F (A,B,C...))$ decreases. The occurrence of the factor D in turn "almost balances" the power of influence of the main factor with the sum of power of influences of secondary factors. When the next factor E appears, secondary factors gain dominance in an essential structure. Then also the sum of power of influences of secondary factors $A, B, C, D,$ and E is greater than the power of influence exerted by the main factor. A cascade lasts so long as secondary factors are able to maintain dominance in an essential structure. The disappearance of influence of any factor occurring in a cascade brings the domination of the main factor back again. In the above figure the factor which closes the dominance of secondary factors is D – which while disappearing brings the dominance of the main factor back. In a limit case, a factor which both closes a cascade, i.e. initiates the dominance of secondary factors in an essential structure, and closes the domination of these factors can be of one and the same magnitude.

Thus it is worthwhile to compare a model of cascade processes with M. Shermer's chaotic model of historical sequences.

1. The conception presented above can determine with greater accuracy the nature of a focus point, i.e. of a state in which, on the one hand, the power of influence of the main factor, and on the other – the sum of power of influences of a cascade of secondary factors remain in a mutual balance. This state occurs when the domain of exclusions of values of the magnitude F with respect to the main factor H is equal to the domain of exclusions of values of the magnitude F with respect to secondary factors A,B,C,D, which can be put in symbols as $W_F(H) = W_F(A,B,C,D)$. Then whether dominance in an essential structure of a given phenomenon is gained by the main factor or by a cascade of secondary factors depends on the occurrence or lack of occurrence of a factor that closes the process of a growing cascade.

2. In a model of cascade processes the function of a "trigger of change" is played by the factor E; but consequences of its actions, contrary to Shermer's model, do not "depend" on the moment of its occurrence in a cascade process, but on whether a balance of influences between the main factor and secondary ones will be reached or not.

3. The factor E on its own is not able to balance the influence of the main factor H. It merely leads – when a process of a cascade increase is advanced enough – to turning the scale of influences in favor of secondary factors. To put it in Shermer's words, a factor which closes a cascade cannot cause "a shift from the dominance of necessity and order to the dominance of contingency and chaos" but can in a determined state of bifurcation decide which of necessities remaining in balance (the main factor or a cascade of secondary factors) will dominate in an essential structure of the phenomenon under investigation.

4. As opposed to Shermer's model, a cascade process is reversible – the disappearance of the factor E or of any other factor of a similar power of influence brings the domination of the main factor back.

5. As opposed to Shermer's model, transformations within an essential structure – both a shift from the state of dominance of the main factor to that of dominance of a cascade of secondary factors, as well as an inverse shift: from the state of domination of secondary factors to that of the main factor – are of a gradual nature; the probability of their occurrence is the same.

6. As opposed to Shermer's model, the cascade effect does not occur always and anywhere. It does not occur anywhere for it can occur only in a certain type of essential structures – those which are dominated by a class of secondary factors. It does not always occur, for it occurs only when a process of cascade increase is sufficiently advanced, that is to say, when gradually accumulated secondary factors balance with its influence the influence of the main factor. It is only then that the occurrence of a "small cause" can bring about "great effects" – a dominance of a cascade of secondary factors in an essential structure of the phenomenon under investigation.

5. A cascade process and a structure of idealization theory

A cascade of factors independently of its internal structure not only influences a transformation of basic relations that the phenomenon under investigation was previously (i.e. before its occurrence) subject to, but also imposes a transformation of the way theories are formulated. Let us put ourselves in the place of a researcher who attempts to build a theory of cascade phenomena. According to idealization theory of science each theory is a sequence of models – from the most abstract to more and more realistic ones. The first model of a theory of a given phenomenon contains only the characterization of the influence of the

factor recognized as the main one for it and disregards influences of factors recognized as secondary ones. The method of idealization is thus supposed to abstract a given phenomenon from the context of accidental influences and to show its relations with factors that are the most important to it. But subsequent models of a given theory gradually introduce new secondary factors. Consequently, the very theory becomes more and more realistic – describing not only basic relations that phenomena under investigation are subject to, but also their disturbances and modifications introduced by secondary factors.

It is not the same in the case of a structure of theories of phenomena in which the cascade effect occurs. In a theory that describes such phenomena, a hierarchy of theoretical models is inverted – a basic model describes the influence of a cascade of secondary factors and it is only a derivative model that describes the influence of the main factor. A researcher introduces already in the first model of a theory all secondary factors that a cascade consists of for the sum of the power of influence of such factors is greater than the power of influence of the main factor for the phenomenon under investigation. Thus, it is already the first model of cascade phenomena that is more realistic than that of phenomena of a standard essential structure because it is composed of more factors. And the influence of the main factor that modifies only basic relations – which for the phenomena determined are influences of secondary factors occurring in a cascade – are described in a derivative model.

So the peculiarity of theories of phenomena of a cascade nature is a far-reaching transformation of its structure despite the fact that an essential structure of the phenomenon under investigation was not transformed because the power of the influence of the main factor is still higher than the power of the influence of particular secondary factors.

Therefore, what is decisive in the process of construction of a theory of phenomena in which the cascade effect occurs is the determination of a period of time in which an essential structure dominated by the main factor is transformed in an essential structure in which dominance goes to secondary factors and the identification of a factor the occurrence of which at that particular period of time brings about a cascade and a "turning of a scale of influences" in a structure in favor of a set of secondary factors.

6. A cascade process and the structure of a historical narrative

The structure of a historical narrative is a reflection of an essential structure of phenomena described (Nowakowa 1990: 31–40). The very

historical narrative consists of two layers. Its surface layer records states of phenomena under investigation. And its deep layer refers to determinants that decide about this rather than that state of it. As factors determining behavior of the magnitude studied are ordered with respect to their essentiality, a deep layer of a narrative consists of bands. The first band of a narrative describes the magnitude studied in terms of the first model of the idealization theory assumed. It describes forms of the phenomenon under investigation depending on the main factor. The second layer of a narrative contains subtler interpretations for it takes into account also the influence of a secondary factor on the phenomenon under investigation. Subsequent layers of a narrative contain still richer interpretations of subsequent states of the phenomenon under investigation for they take into account new secondary factors disregarded in initial bands of a narrative.

Thus, what is essential in a historical narrative is not so much what it exposes, but rather what it disregards. For instance, a materialist historian describing Polish history will focus on the means of production, technological progress or methods of social distribution of the revenue, etc. It is only on a further plane that he will take into account the influence of political institutions and culture. A historian of institutions, on the other hand, in his discussion will focus on transformations of a political system – the history of dynasties and monarchies. And an idealist historian in his history of Poland will focus on such events as the introduction of Christianity to Poland, Reformation and the development of Protestantism, Counter-reformation and the culture of Baroque. It is only on the second plane that the historian in question will take into account the influence of economic or political factors on Polish history.

And compared with a narrative of phenomena of an essential structure dominated by the main factor, a historical narrative of phenomena in which the cascade effect occurred has a specific peculiarity. For its structure changes despite the fact that an essential structure of the phenomenon in question has not changed. For owing to the cascade effect the first band of a narrative allows the influence of many secondary factors at the same time, and their common influence is greater than the influence of the main factor. It is only the second band of a narrative that takes into account the influence of the main factor. Thus a cascade narrative is richer and closer to the historical reality already in its initial band.

Another important problem in a narrative of historical events subject to the cascade effect is to grasp the moment of transformation of an essential structure. This is connected with a proper recognition of a type of an essential structure: does the main factor still exert the dominating influence on it or have secondary factors already dominated it? The problem is also linked to a proper identification of a particular factor that has been able "to turn the scale of influences" in a structure in favor of a cascade of secondary factors, as well as with the determination of the moment in which this happened. Therefore, errors that may occur in a narrative of such a type of historical events are of three kinds: a wrong determination of a type of an essential structure, a wrong identification of a factor that closes a cascade and, finally, a wrong determination of the moment in time in which, under the influence of a factor initiating the domination of secondary factors, there gets transformed a type of an essential structure: from a structure dominated by the main factor it gets transformed to a structure dominated by a cascade of secondary factors.

7. An application of a cascade process in historical researches

The cascade process can serve as theoretical tool in the explanation of historical processes that resulted from multifactor influence. One of these processes was an economic dualism in the XVIth century Europe.

In the XIIIth – XVth centuries societies of Western and East-Central Europe developed according to analogous mechanisms: towns were expanding, cash economy prevailed over traditional forms of natural economy, compulsory service was being exchanged for rent, the feudal control upon peasantry lessened. Since the turn of the XV/XVIth century, however, developmental differences gradually increased – in comparison with Western Europe – among East-Central European countries. The borderline of both economic zones became the river of Elbe. To the west of this river towns, as well as craft and manufactured production vigorously expanded, while peasants gained freedom from feudal dependencies. Social balance between the townspeople and nobility enabled the state to rise in power and transform in the modern period from the estate into absolutist monarchy. In turn, to the east of the Elbe River the towns in all countries of that region witnessed clearly the crisis – the decrease in population and craftsmen's production. In the rural sphere of economy the development of the manorial-serf economy superseded the prior cash economy. That process was accompanied by the growth of compulsory labour imposed by the lords over the peasantry and introduction of the second serfdom. Economic superiority of the nobility was also strengthened in

the political life – in all societies of East-Central Europe the townspeople in comparison to its counterpart in Western Europe exerted minor influence upon social life, whereas the state was subordinated to the vital interests of the nobility. The rise and development of the manorial-serf economy, which enhanced exploitation of the peasantry, led to the formation of two economical zones in modern Europe.

During the long-lasted scientific discussion there emerged two basic theoretical orientations. According to the first stand, economic and social backwardness of East-Central Europe was a result of external factors like unequal exchange between East-Central and Western part of Europe (Małowist 1966) or emergence of the world-economy in which East-Central Europe begun to occupy the place of the periphery (Wallerstein 1974). According to the second stand (Blum 1957; Brenner 1976, 1982; Topolski 1968, 1974, 1994), the backwardness of East-Central Europe was a result of the impact of internal factors like the domination of the nobility, the weakness of townspeople, low intensity of class struggle or shortage of manpower enforcing the nobles to introduce serfdom.

The novelty in explanation offered by the model of cascade process is based on the conviction that it is impossible to distinguish any single factor or a set of factors solely responsible for the evolution of East-Central Europe. Backwardness of this part of Europe relied upon many insignificant factors which joint influence outweighed the impact of developmental regularities according to which societies in Western Europe evolved. For example, in the opinion of Peter Longworth, economical dualism was the result of:

> … A plethora of others factors which intervened at various points with varying intensity to influence the course things took. Linguistic differences, for example, some times fed into religious and political struggles; and social classes sometimes gained and lost constitutional rights according to the religion they embraced at particular moment. Low population density in Poland-Lithuania contributed to the enserfment of the peasant; … The Baltic grain boom had helped to promote serfdom, yet the end of the boom around the turn of the century served not to remove serfdom but entrench it…. The interactions of circumstances and catalysts that shaped Eastern Europe in the period from 1526 to 1648 far exceeded in complexity the most complicated transmutation process in any alchemist's laboratory.

(Longworth 1992: 183)

Let us systematize the influence of these factors in a more precise way.[2] Shortage of manpower was the factor triggering the divergence of development between Central Europe and Western Europe. It worked in two ways. On the one hand low density of population coupled with the weakening of the power of the state forced the feudal landlords to improve the situation of peasants. The improvement of the economic situation in the villages – as a result of colonization on the so-called 'German law' – limited the scope of peasant migration to the cities. Consequently, the cities in Central Europe were less numerous than in Western Europe. The underdevelopment of the urban component in the united kingdoms of Central Europe disturbed the balance between the king, the burghers and the nobility. As long as the estate of nobles was week, the economic development of the cities and the peasantry could continue unobstructed.

However, the basic feature of political systems in Hungary, Bohemia and Poland was the domination of nobility in parliamentary institutions. That advantage gave the nobility the necessary influence to enact law and control the activity of the state, which served the interests of the predominant social class. As early as the second half of the XVth century – in 1437 in Bohemia, in 1496 in Poland and in 1514 in Hungary they issued law acts against the migration of peasants. Owing to its almost complete control of the state, the estate of nobility could limit the development of the competitive urban economy and take over the prerogatives of the state towards the peasantry. Consequently, this social class could introduce unobstructed the so-called secondary serfdom which made possible the increase of manorial service. These social processes were accompanied by the increase of demand for agricultural products in Western Europe. Above-mentioned factors occurred in all East-Central European societies. Apart from them, it is possible to distinguish factors characteristic only for the developmental paths of particular societies of this region. Their presence led to an uneven development of the manorial-serf economy in these societies. In Poland, manorial-serf economy appeared in the course of the XVIth century, in Hungary in the first half of the XVIth century and in Bohemia in the XVIIth century.

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[2] The full presentation was published in Polish (Brzechczyn 1998: 193–253) and its shortened version in Italian (Brzechczyn 2004: 179–237)

8. Conclusions

It has appeared in the light of a model of the cascade process that historians' idiographic inclinations are not the result of methodological backwardness – in comparison with natural sciences – of the science of history but these are rooted in ontological differences between the humanities and the science, namely, the phenomena in the natural world have essential structure dominated by the main factor. It means – let us remind once again – that the power of influence of the main factor is greater than the sum of the power of influences of all secondary factors. The phenomena in the social world possess essential structures dominated by the class of secondary factors. It means that the sum of the power of influence of all secondary factors overcomes the power of the influence of the main factor although the power of its influence is greater than influence of any secondary factors taken separately.

Therefore, spontaneously adopted research attitude of historians characterized by the focus on details and not ignoring the influence of even secondary factors in scientific analysis find some rational justification. For as we have seen, each cascade is an unrepeatable and unique web of factors that very rarely occur in the same configuration. Even if a given configuration of cascade factors occurs again, they may still differ in the speed of accumulation of secondary factors and in the components of it that initiate and close a cascade. So in practice, each cascade is a unique web of factors. This state has some methodological consequences. For the theory of phenomena subject to cascade factors differs from the theory of phenomena dependent on the influence of the main factor. The theory describing the latter type of phenomena presents the influence of the main factor in its first model, and the influence of secondary factors is shown in its derivative models. The reverse is the case for the theory explaining phenomena subject to the influence of cascade factors. In this case, the first model of such a theory contains the description of the influence of secondary factors, and it is only a derivative model that accounts for the influence of the main factor. Similar changes occur in a structure of a historical narrative. The first band of a narrative of phenomena subject to the cascade effect presents the influence of secondary factors. The influence of the main factor is presented in the second band.

But the extent of this idiographic research attitude is not unlimited. Despite the fact that particular configurations of cascade factors are unique, they can be subsumed to a general type – precisely the type of cascade. Furthermore, the effect can appear only in particular kind of

essential structures – namely in those in which the sum of power of influence of secondary factors is greater than the power of influence of the main factor. Thus, intuitions of the idiographic methodological position are restricted only to phenomena of such a type of essential structure. And this becomes clear only from a theoretical perspective which precisely in its first account assumes a nomothetical approach to history.

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ABOUT THE AUTHOR

Historian and philosopher, **Krzysztof Brzechczyn** holds a Ph.D in Humanities (Philosophy). Author of following books (in Polish): *The Troubles with Poland. Selected Political Essays*, Poznań 1998, *The Historical Distinctiveness of Central Europe. A Methodological Study*, Poznań 1998, *On the Multitude of Developmental Roads in Historical Process. An Attempt of Interpretation of Evolution of Mexican Society*, Poznań 2004; brzech@amu.edu.pl; http://main.amu.edu.pl/~brzech/