# Impact or explosion?
# Technological culture and the ballistic metaphor

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**Abstract.** The term 'impact' has become the kind of word which, when it relates to the evaluation of technological advances in contemporary culture, suggests signs of erosion, debilitation and evasion. The misinformed and indiscriminate use of the term in the most varied of contexts has created an impasse in the cultural semiotic approach, where sign systems are viewed in terms of borders and relations. The objective of this article is to examine the trivialisation of the use of the ballistic metaphor in this explosive moment of the culture. For this, we will refer to the formulations presented by the semiotician, Juri Lotman, in his book, appropriately entitled *Culture and Explosion*. To what degree is the concept of explosion presented as a counterpart to the notion of impact? The desire to find answers to this question is what motivated this inquiry.

## Introduction: Technologies, degree zero

What could the ideas of the philosopher Baruch Spinoza (1632–1677) have in common with modern digital-electronic technology? Perhaps neither Marilena Chaui, the teacher of philosophy who has been studying the Spinoza's essays for many years, nor the mega-magnate, Bill Gates, could say. However, for many theoreticians or media professionals, there is at least one aspect in common between the products of technology and the work of the philosopher: both are capable of provoking an impact on the life of people, culture or society. For the journalist who announced the publication, in Brazil, of Chaui's new book dedicated to the study of the thought of Spinoza, "the objective of the work is to demonstrate the impact of the ideas of the

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Dutch philosopher on all areas of Western thought".[1] I have nothing against his evaluation. After all, if technologies can be responsible for certain impacts on the contemporary world, why can't the ideas of a philosopher have an equal impact? My inquiry is different from this.

I do not doubt that ideas are capable of forcing an action on humanity, on culture, on society. I also recognize that advances inside the world of ideas and the field of knowledge usually provoke sharp upheavals. My doubt, however, lies in the notion that 'impact' is so naturally connected to modern digital-electronic technologies so as to produce an ignominious effect on culture. Today, there is not a call for a meeting or conference, a book, an article in a scientific magazine or journalistic material on technology that does not make use of the word 'impact', thus neutralising adverse positions to an irreconcilable degree. It is possible that such a precise semantic background can define such adverse manifestations without running the risk of trivialisation?

Either the phenomenon of "impact" in fact obscures mysteries requiring a global inquiry or we are faced with a serious epistemological mistake.

The impasse tends to grow when related to an understanding of an anthropo-semiotic conception of culture; from the time that Clifford Geertz took upon himself the task of examining "the impact of the concept of culture on the concept of man" (Geertz 1989: 45–66). Could it be that the anthropologist had it in mind to situate culture outside humanity?

Whilst it is the kind of word used in contemporary culture, it is necessary to evaluate the relevance of the use of ballistic metaphor as the degree zero of the explosive movements of culture. The coherence observed in the field of anthropology, does not hold up when related to the semiotic evaluation of an event. The notion of 'impact' can, quite simply, be trivialised by the inability of the thought to reach the reality of its object. When all is said and done, such a revolutionary moment as that unleashed by digital-electronic technologies does not fit into the limits of 'impact'. On the contrary, new technologies are eruptions which arise from a gradual, slow process, created by the accumulation of continually evolving dynamic processes, between time and eternity, if we were to paraphrase Ilyá Prigogine (Prigogine,

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[1]    Article published in the newspaper *Folha de S. Paulo*, March 24, 1999 (*Ilustrada*, p. 3) on the occasion of the publication of a book by Marilena Chaui (1999).

Stengers 1988). It is something comparable to the Big-Bang, the expansion of which cannot be denied. This is the problem that needs to be examined if we are to take a path which eliminates neutralisation.

## Geertz's impact

Clifford Geertz was not without cares in announcing his concept on the impact of the concept of culture on the concept of man. Fearing that the heading of his essay could excite controversy, Geertz began by clarifying that his definition of culture is essentially semiotic: "man is an animal chained by the web of meanings he himself has conceived (Geertz 1989: 15). It is a concept which revisits the memorable sentence of the Russian, Mikhail Bakhtin: "when we study man, we search and we find signs everywhere and we try to understand their significance" (Bakhtin 1986: 114). Geertz's intention was to defend the symbolic system as a fundamental tool of culture; and this he perceived as having an impact on the concept of man. After all, neither the concept of man propagated by the Enlightenment, based on innate ability, nor the definition of man from behaviour, as became typical in the social sciences, had admitted such a possibility. "A web of meanings" is neither innate nor reproductive of concrete standards of behaviour, such as habits, customs, traditions. For Geertz, these refer to mechanisms of control aimed at governing behaviour. Such mechanisms are developed by culture. Herein lies the core element of 'impact', once the evolutionary arrow has been redirected: biological and cultural development begin to be understood as interactive rather than causal movements. On the basis of such redirection, the major element in the definition of man lies not in "the empirical trivialities of human behaviour" and still less in human innate abilities, but in the mechanisms of control without which human behaviour would be unmanageable. Geertz recognizes that his ideas are not new, however

> certain recent developments, as much in anthropology as in other sciences (cybernetics, information theory, neurology, molecular genetics) had become susceptible to a more precise affirmation, in order to afford them a certain degree of empirical support which they did not previously possess. (Geertz 1989: 57)

In this sense, culture functions as a centre of production for the mechanisms of control to directing behaviour. If it were

> not directed by cultural norms — organized systems of symbolic signs — the behaviour of the man would be virtually unmanageable, a simple, meaningless chaos of acts and emotional explosions [...]. This means that culture, rather than being added, so to speak, to a finished or virtually finished animal, is an ingredient, and an essential ingredient, in the production of exactly this animal. (Geertz 1989: 58, 59)

On the basis of this position, Geertz's intention is to show that man not only creates signs, but he is controlled by them (a position also defended by the Russian semiotician V. V. Ivanov (1977: 27–38) who defines a convergence with cybernetics, a hypothesis also considered by Geertz). The major sign systems (languages, art, myth, rituals, media and the sign systems of contemporary culture) have become systems of feedback, control and organization of the biological system. Soon, there will be no human nature without culture: "we are incomplete and unfinished animals, and are completed through culture". Culture fills the informational gap of man (Geertz 1989: 61).

The controversial position of Geertz has regard, therefore, to the interconnection between biological and cultural mechanisms through a principle of complementarity. He clearly states that human is an unfinished being, constantly developing and seeking completion. For him, "the discovery of that most of the biological changes produced by modern man, apart from man's more immediate ancestors, occurred in the central nervous system, and especially in the brain" (Geertz 1989: 58), is an undeniable sign of incompletion. Therefore, it is in the development of tools, manuals and intellect that the interconnection appears most appropriate. If it is true that man must learn in order to function, it is equally true that man needs to learn to think in order to develop. Development, here, represents completion.

The Geertzian notion of impact is, therefore, justified. It intervenes with consolidated conceptual fields, undoing beliefs and distinctions, as the polemical opposition between nature and culture.

Will this be the case of the notion of impact in the field of contemporary technological culture? This is what we will now consider.

## Semiodiversity of technological culture

Before moving on, it is necessary to make a precise determination as to whether the concept of technology represents a redirection of culture, in Geertzian terms, so that we can reflect on the issue of 'impact'. As a starting point, let us consider the definition presented by McLuhan: "Technologies", affirmed the theoretician, "are ways of translating one kind of knowledge into another" and "translation is, thus, a 'spelling-out' of forms of knowing" (McLuhan 1998: 56). Technology is explicitness. So, explicitness is a mechanism responsible for the improvement of technological tools that permit, amongst other things, the expansion of different sign systems, codes and cultures. In this sense, technologies appear as part of a gradual process, proper to all evolutionary technique, as it was conceived by Juri Lotman (1994; 1999). However, each new technology represents an explosive movement in culture, but as a crossroads rather than a causal effect. Evidential proof of this process is to be found in a currently increasing semiodiversity. When situated in the gradual scale of explicitness, that is, against the background of semiodiversity, the idea of 'impact' starts to show signals of fragility and inadequacy. So much has been said about the notion of the 'impact' of digital-electronic technologies on writing and this controversial example is as much polemic as it is enlightening; fertile ground for the current reflection.

Firstly, it is worth remembering that writing as technology is a descendent of the gradual process of the explicitness of technological culture. The fact that it consisted of extremely simple codes or discreet signs did not prevent it from becoming our first technology, referred to by the anthropologist Jack Goody as: "the technology of the intellect". Its devices had already experienced diverse explicitness and expansion, most likely initiated by the Sumerians and is far from being complete. Writing has already explored diverse areas of possibility: alphabetical writing has already been handwritten, typographical and, today, it is digital-electronic. The character of explicitness is embedded in the concept of writing in such way that, naturally, it may be used for writing sign systems which are not articulated by an alphabetical code, for example, as is the case when drawing an image. Thus writing is a designation of the semiodiversity of technologies of the intellect; and is entirely in contrast to any idea of impact. However, it

has also been one of the most expressive ways of demonstrating the effect of the impact of modern technologies.

For many lauded scholars of culture, electronic technologies not only have an impact on society, they are becoming a great threat to writing!... The Brazilian linguist, Maurizzio Gnerre, leads the stream of critics who take this point of view. For him,

> writing, and the reflection of the *impact of writing* on human society, appears to be an object of interest when it, whilst being practised inside traditional forms, seems to have already reached its apogee and appears ready to become an *obsolete activity*. Whilst important decision-making centres manipulate billions of data and information through a whole range of new technologies, traditional writing is slowly losing its position — previously exclusive — in this process, it also becomes an object of reflection. (Gnerre 1991: 41–42; italics are mine — *I. M.*)

For the linguist, digital technology has nothing to do with writing; it can, therefore, threaten it and exterminate it. With this, traditional writing (*sic!*) is becoming an archaeological artefact to be examined, perhaps even relegated to visiting in major museums of the scholastic world which defined it.

Perhaps the position of the Brazilian linguist is not entirely unjustifiable. After all, we live in a country whose literary culture includes a high degree of illiteracy. In this case, one could affirm that writing in the alphabetical language runs the risk of obsolescence: not everyone who, today, manipulates a digital keyboard with great dexterity possesses the textual ability to write even the most trivial note in their mother tongue, everything is dominated by the process of typing and digitalisation. The suspicion of the writer Alberto Morávia is thus confirmed when, for sure, we can affirm that the problem of our time is that now illiterate people know how to read... A paradox that could be synthesized by the idea that we are creating the most cultured illiterates on the planet.

Whilst the exception is made, electronic technology need not proceed to lead to the obsolescence of writing. If the linguist identifies traditional writing, distinguishing it from that of modern digital writing, it is because "writing modifies itself". It has not disappeared and it has shown itself to be even more necessary. The proof of this is that the text in which he declares the obsolescence of writing was written and printed in a technological way, or better, digitised and copied by

an electronic system. Such arguments reproduce a commonality of the type of mistake that Plato fell into when condemning writing for all in a generation who could only access his ideas through a written composition.

If we recognize the interactive function as an elementary mechanism of contemporary technological culture, we cannot admit to a notion about the impact on culture which is so exaggeratedly disseminated, especially between the "written" and the "digital system". As N. Negroponte never ceases to affirm, we are talking about a "difference between atoms and bits", nothing more. There is nothing of impact, because, overall, the bit does not possess colour, size, volume, depth and, much less, weight, even so it has the capacity to travel at the speed of the light. "To be digital it is to have license to grow", to expand, to be open to possibilities and not to gravitate around any old centre (Negroponte 1997: 19, 46). Growth, however, does not appear out of nothing; it only can appear *via* atoms. Or better, in terms of an interaction between atoms and bits and also of the mixtures of bits. The bits, move in a fluid network; and this is what creates open expansion. This may also be of interest for economics or sociology [of this I have few doubts] but it is fundamental for semiotics. Without interactivity, there is no semiotic chain, much less semiosis. This did not pass unobserved by Clifford Geertz.

Explicitness becomes confusion in the revolution of strong impacts; whereas technology is ejected from culture as if it were a body alien to it. In such a situation the so-called ballistic metaphor of the impact on culture emerges in a huge way. It is time to approach a more declarative approximation of the word 'impact' in the domain of semantics and conceptual achievments.

## Defining ballistic metaphor

It was previously affirmed that, in any reflection on the culture of today, the word 'impact' appears as a natural appendix of technology, thus forming a basic conceptual nucleus of all that relates thereto. There are as many fervent allies of "new" technologies as there are cruel adversaries of "advance" or "impact". My doubt lies in this neutralising association of dissenters. If culture represents the collective intellect of management, gradual processes, control mechanisms, how

can we identify the linking of its learning, of its successes, if in the present moment an alien body is causing a short circuit in the flow of its development?

Advance does not necessarily imply impact which is no more than a poor metaphor. The sociologist, Pierre Lévy, has very much disqualified the metaphor of impact so naturally applied to the advance of the current technologies. For Lévy, in this metaphor where "technology [is] comparable to a projectile (rock, howitzer, missile) and culture or society to an ambulant target…", a minimum condition for the verification of the management of cultural knowledge, its discoveries and the generating tools of cultural systems do not exist. The totality of the project of propagated intelligence of cognitive ecology is engaged. And Lévy, very ironically, asks: "Could it be that these techniques come from another planet, the world of machines, cold, emotionless, stranger to all human meaning and value, as a certain intellectual tradition tends to suggest?" (Lévy 1997). Evidently not. We learnt in Lotman's (1990) studies on the semiosphere that in the semiotic space, extra-semiotic elements are carriers of translations and, between them, create border relations.

Nevertheless technologies are products of society and culture. So we have to agree with Lévy when he says,

> not only are these techniques imagined, manufactured and reinterpreted for human use, but it is the proper intensive use of tools that constitutes humanity as such (together with complex language and social institutions). It is the same humanity who speaks, buries her or his dead and cuts the stone. [In this sense,] it is not a case of evaluating impacts, but of discovering the irreversible, the uses to which they would lead. (Lévy 1997: 3)

This affirmation is sufficient to suggest that the semiodiversity of technological culture is something which it is much more important to preserve and to disseminate than the notion of impact. Thus technologies can only be considered tools through which the process of cerebral completion looks to develop its search for complementarity, so doing via notions of "interior" and "exterior" which are treated as being translators and border-generating processes.

Moreove the proper etymology of the word 'impact' precludes the misinformed use of the word, and is unsuitable for semiotic studies. Impact, a term originating from the Latin term *impactu*, as a semantic encounter entails the notion of force, and from that to the specific or

encountered domain of war, or better, the traumatic effect of a projectile, missile or bomb as it meets another body or surface. Thanks to the notion of shaking, the impact registers the resultant emotional manifestations as great traumas or disturbances. There is no other meaning for the word impact in ambient technology. In this field of research, the study of impact seeks to account for the risks and problems that a specific area may suffer if, into it, is inserted a strange, artificial element. For example: given the damage that the construction of a highway, or the installation of an industrial complex, or a dam, can cause to the environment where should they be installed? Anyone who lives in the city of Sao Paulo, in Brazil, knows very well what happened after the transformation of the nearby village of Cubatao into the biggest concentration of iron and steel industry of Latin America. Its impact on the environment (acid rains and all types of pollutant gases) was horrific for animals, plants and human beings. There was no one person who was not shocked when media tired of showing smoky images of the region, started to report on the birth of babies with bad cerebral malformation or proven cases of encephalitis. Events such as these speak radically of the nature of impact: an action directed, from one to another one, usually with harmful results. The action of impact proceeds from the exterior to the interior; there is no border capable of being translated. In this case, really, it is industrial technology whose economic purposes cause an undeniable impact not on culture, or the environment and its population, but on life. It is impossible to apply the same scale of values to the sign systems of culture.

Is this, in fact, what scholars in all areas have in mind when they refer to the impact of digital-electronic technologies on culture, on individuals, on society? I am fully convinced that we are confronted here by completely different situations, thus, we cannot mistake the issues by playing with a semantic domain which is apparently unique and neutral. It is impossible to create novel words, much less strategies of neutralisation.

Evidently the situations reported here show that it is not the semantic domain of the damage that is intended to be valued. I believe that the word impact gained ground even before understanding advanced in the domain of the object itself. The field of medical research, for example, takes us into another sphere in the use of the technology. In the same edition of the periodical which announced the

publication of the Marilena Chaui's book on Spinoza, Bill Gates, discussing medicine, confesses his admiration for the medical profession and, on a specific level, affirms: "good doctors enjoy sufficient personal and professional freedom and exert a great positive impact on the life of people" (Gates 1999: 2). What it would a "positive impact" be?

We know of the impact (in the strict sense of damage) that certain accidents, certain illnesses, provoke to the body. Thanks to equipment, rendered more perfect each time by technology, much of this damage can be repaired, so long as there is a full acceptance by the organism. It is seen, for example, in the case of human prostheses. For those whose lives are threatened by the loss of organic functions, of agency and limbs, could it be that new technologies might provoke an impact which is comparable to the damage of the accident or illness itself? It seems not. On the whole, this is due to the fact that the insertion of such devices in the body offers the only opportunity to keep on living or to carry out vital tasks. Thus, for the mutilated body, to be completed through products derived from an advance in knowledge in a given period of cultural development — such as in the case of a by-pass, a leg or a mechanical arm, a metal valve or bolt — has no impact. The device serves to repair the damage. Despite the immense emotional trauma and the strangeness of the aesthetic arrangement, the impact of the technology inserted or connected to the body is of little account in such circumstances. And what are these devices? Technologies. No more than this. They did not come from another planet, nor are they forces that seek to provoke destruction on humanity. On the contrary, they are complementary objects without which many would not have the pleasure of eating, walking, getting dressed, hearing the beat of their heart, pushing a supermarket trolley, even if it remains impossible to retrieve the warmth of an embrace... Evidently, we are talking of a technological object of the exterior world which, translated by the organism, becomes a complement to the body, a semiosphere where the interior and exterior elements of the system live on the borders, but do not suffer any type of neutralisation.

Let me talk about two particular examples. In 1998 the famous Brazilian top model Ranimiro Lotufo was seriously injured in an accident and, unfortunately, he lost one of his legs. This man would definitely have lost his career if he had not been able to remain erect and

walk, thanks to a mechanical leg. And so he did. During 'M. Officer'[2] summer fashion collection show of 99, Ranimiro appeared showing his mechanical leg in tennis shoes. Everyone who saw his photo on advertising billboards was shocked. Not much time later, the media announced the cruel accident that cut off the leg of the yachtsman Lars Grael during a competition. A few months later he could be seen walking with the aid of a mechanical leg.

Perhaps these examples are enough to show that although positive impacts exist, the inadvertent use of the word impact does not eliminate paradoxes. I believe that such use is a result of the precariousness of our understanding of cultural discoveries that complete us. From this comes the need to review concepts, to re-position the facts and, above all, to ponder the meanings of the semantic domain of the term used.

## Impact or explosion?

The notion of impact is applied to products which are so heterogeneous that instead of generating meaning they empty the object of any sense related to it. If it is true that the cultural development of man follows the path of a gradual process, tied to cerebral improvement, a new tool or technology cannot so much be considered from the perspective of its immediate effect. To classify a tool in positive terms can be interesting, but it does not take into account of the irreversibility that its growth causes. Its significance lies in the process of cultural conquests. To achieve such an understanding it is necessary to change the method of discussion.

In studies dedicated to culture and its semiosphere or, alternatively, its semiodiversity, the Russian semiotician, Juri Lotman, provides for the concept of the border and the dynamic transformations of cultural processes where the products are the result of what are defined as explosive moments which take place in the interior of gradual processes of development. The Lotmanian notion of explosion is the counterpart of the notion of impact. In it, it is possible to consider some technologies semiotically, as part of the semiosphere, or alternatively, as part of the semiotic space where different sign systems

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2    *M. Officer. Summer 99. Catalogue,* vol 7, no. 10. See also www.ranimiro.com.

occupy the borders and, what is more important, where the various extra-systemic constituents can be translated by that which is inside without the use of force. This is because semiotic translation does not occur through impact, but through explosion.

Before moving on, it is necessary to clarify the fact that the explosion conceived of by Lotman is a philosophical concept and not a physical phenomenon, even though so much has been formulated on the latter in the light of the great explosion provoked by the Big-Bang, a landmark of the expansion of the universe. In fact, it is not so much the phenomenon as the process that lies at the origin of the Lotmanian concept. An explosive moment, once it has occurred, is completely ignorant of the chain of events. We are talking about a timeless and plurisecular moment, a time in which the present 'snapshot' emerges from the past, whilst containing all the possibilities of future development.

> The moment of explosion interrupts the chain of cause and effect and projects onto the surface a space of equally probable events, from which it is impossible, in principle, to say which will be fulfilled. The moment of explosion locates itself in the intersection of the past with the future in an almost timeless dimension. (Lotman 1994: 35)

None of this is confused with impact because explosion implies, more than anything, interactivity.

Lotman probably considered that his way of thinking went developed against the flow of some generalisations on culture.

> At the present moment, European civilisation (including American and Russian) is experiencing a period of general discredit against the very idea of explosion. Humanity lived through a period between the 18th and 20th centuries which may be described as the realisation of a metaphor: socio-cultural processes found themselves under the influence of the image of explosion not as a philosophical construct, but rather in terms of its vulgar relationship with gunpowder, dynamite and nuclear fission. Explosion as a phenomenon of physics, transferable to other processes only in the metaphorical sense has, to the contemporary man, come to be associated with ideas of devastation and has turned into a symbol of destruction. But if, at the core of our representations of today, there lies the kinds of associations that existed during periods of great openness, such as the Renaissance or art in general, then our understanding of the concept of explosion would evoke in us such phenomena as the birth of a new living creature or any another creative transformation of the structure of life. (Lotman 1999: 22–23)

Herein resides the core argument which separates impact from explosion. If, by explosion we are considering the physical phenomenon, invested with atomic power, then we will be dealing in this case with the idea of impact and the ballistic metaphor suggested by it. However, if the explosion is an overlapping expansion of a gradual process and is, therefore, capable of dialogue with each one of the links of the chain without reproducing any of them, then we will be approaching culturally explosive processes. Impact expresses the vulgar side that trivialises all objects in the vicinity, whether this be a powerful complement to life, such as is the case with human prostheses, or a projectile, or even an intellectual tool such as digital-alphabetical writing.

## Conclusion

To consider contemporary culture as an explosive moment is to traverse "the great time of cultures" as conceived by M. Bakhtin (1986), as soon as digital-electronic technologies create dialogic relations with the past, they point to future possibilities. Just as, in the heat of the dazzlingly wonderful accomplishments of the computer and of its networks, speculations about life in the next millennium grow at a dizzying pace. Future conquests and possibilities inhabit the same semiotic space. The future becomes a phenomenon of the extra-system which can be translated by the constituent elements of the system. Past, present and future live on the borders. In the semiosphere, there is not the least risk that an extra-systemic element can attack the interior. It is not for nothing that Lotman appealed to the mathematical theory of sets to elaborate his concept of the border. Thus, in the semiosphere, the border corresponds to a modelling process of that which lies in the exterior and, therefore, can be translated by that which is interior and vice versa (Lotman 1993: 125).

So far as the border in the semiotics of culture is concerned, the main consequence of explosion is the decentralisation between systems and the redistribution of the borders that exist between them. In this sense, Lotman sees explosion as a key to understanding culture from a global perspective. In the notion of culture as text, that is, as a dynamic system capable of multiplying itself in multiple semiotic systems it becomes fundamental. Explosion as an accelerator of the development of systems hides the radical transformations that occur in

the interior of culture in the form of a chain which promotes the expansion of systems rather than their destruction.

What we see in technological culture is the agency of electronic objects and something similar to the explosion which Lotman speaks of is anchored in the discoveries of Prigogine. In this sense, writing would be the most explosive component of the system. If, in culture, the scholar explodes orally, in eras of electronic information, writing expanded in notational and numerical systems, in the case of digitalisation. As the anthropologist and poet, Antonio Risério confirms:

> writing is born in one factor that is already human: graphology. A graphical foundation does not exist in the world external to humans — the scribbles of monkeys are linked to a potentiality which we only see occurring in captivity, with monkeys being submitted to special training [...]. And as with *homo sapiens*, it is risk that converts this into a symbol. The set of traces is in the brain. But, in order for it to materialise elsewhere, it requires that the hand be put in motion — and that the hand in motion dominates not only its own rhythm, but also the technique through which it inscribes. (Risério 1998: 50–51)

The movement of the system is always explosive: "the sudden expansion" happens in the interior of a compressed space, a force, which, here, is not a gas, but rather the explosive movement of intelligence. Something like the dynamic of the Big-Bang which imprinted on culture the paradigm of explosive manifestation.

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**Столкновение или взрыв?**
**Технологическая культура и баллистическая метафора**

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Термин "столкновение, воздействие" (*impact*) стало словом, которое при использовании его в связи с оценкой технологических достижений в современной культуре означает эрозию, ослабление и уклонение. Такое неразборчивое употребление этого термина в самых разных контекстах привело к необходимости использовать подход семиотики культуры, где знаковые системы рассматриваются в терминах границ и отношений. Цель настоящей статьи — анализировать тривиализацию использования этой баллистической метафоры в момент культурного взрыва. Для этого обратимся к формулировкам, представленным Юрием Лотманом в его книге "Культура и взрыв". В какой мере понятие взрыва противопоставлено понятию столкновения? На этот вопрос пытается ответить данная статья.

## Kokkupõrge või plahvatus? Tehnoloogiline kultuur ja ballistiline metafoor

Termin 'kokkupõrge, mõju' (*impact*) on saanud sõnaks, mis, kui ta käib tehnoloogiliste saavutuste väärtustamise kohta tänapäeva kultuuris, märgib erosiooni, nõtrust ja kõrvalehoidmist. Selle mõistmatu ja hoolimatu kasutamine kõige erinevamates kontekstides on loonud tarviduse kultuuri-semiootilise lähenemise järele, kus märgisüsteeme vaadeldakse piiride ja suhete termineis. Käesoleva artikli eesmärk on analüüsida ballistilise metafoori kasutuse trivialiseerumist kultuurilise plahvatuse käigus. Selleks pöördume semiootik Juri Lotmani poolt tema raamatus *Kultuur ja plahvatus* esitatud sõnastuste poole. Mil määral on plahvatuse mõiste esitatud kokkupõrke mõiste vastandina? Püüd vastata sellele küsimusele on motiveerinud käesolevat uurimust.