# Society Cannot Accelerate:

## On the Logical Consistency between Sociological Systems Theory and Social Acceleration Theory

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**Abstract**: This paper seeks to examine the extent of logical consistency between Social Acceleration Theory (SAT) and Sociological Systems Theory (SST), exploring the necessary restrictions for SAT to remain consistent with SST. Specifically, two key propositions of SAT will be scrutinized:

1) The proposition of the circle of acceleration [Akzelerationszirkel], which posits social acceleration as a principle of modernization.

2) The proposition of the acceleration of the whole society [Beschleunigung der Gesellschaft], suggesting the phenomenon of the contraction of the present [Gegenwartsschrumpfung] in all social systems.

This paper first abstracts an axiomatic system from the time conception in SST. Subsequently, it examines whether the two preceding propositions can be derived from this axiomatic system, or conversely, whether contradictory propositions can arise from it.

In conclusion, it has been demonstrated that both Proposition 1) and Proposition 2) in SAT are inconsistent with SST.

1') The proposition of the circle of acceleration cannot be deduced from SST's constructionist presupposition.

2') The proposition of the acceleration of the whole society cannot be deduced from the principle of system relativity presupposed in SST:

3') The hypothesis of acceleration principle is inconsistent with SST in terms of mechanism (the circle of acceleration) and phenomenon (the acceleration of the whole society).

If SAT seeks to align with SST, it is necessary for SAT to impose the following restrictions:

1'') SAT should explain the acceleration of social change as stemming entirely from the mechanism of system differentiation.

2'') SAT should interpret time-related phenomena, such as the acceleration or deceleration of social change or the contraction of the present, as constructs of observation among systems.

3'') SAT should not regard social acceleration as a principle of modernization, but rather as a dimension or viewpoint in description.

**Keywords**: the sociology of time, social time, social acceleration, sociological systems theory, Hartmut Rosa, Niklas Luhmann

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## 1. Issues and Significance

### 1.1 Issues

This paper aims to assess the validity of the assertion of the acceleration principle in Social Acceleration Theory (SAT), as developed by Hartmut Rosa. Specifically, it seeks to investigate the logical consistency between this assertion and Sociological Systems Theory (SST), upon which SAT partially relies.

Rosa, who advocates SAT, consciously refers to this issue:

> [T]he question whether social acceleration constitutes an independent basic principle of modernization or rather merely opens up an illuminating perspective on modernity as defined by the other four processes [differentiation, individualization, rationalization and domestication: noted by the citer] and so, as it were, simply describes the temporal dimension of modernity. (Rosa 2005: 441= 2013: 287)[1]

Here, Rosa accurately identifies the most crucial theoretical problem in SAT, which this paper will address. The question at hand is whether social acceleration is a fundamental principle in modern society or simply a dimension—a viewpoint—from which modern society can be systematically described. Rosa adopts the former stance,[2] asserting the originality and superiority of his SAT. However, this paper approaches SAT with skepticism towards his position and will critically investigate SAT based on the acceleration principle.

### 1.2 Significance

This paper holds three significant implications:

1. It seeks to confirm both the possibilities and limitations of SAT concerning its consistency with SST.

2. It engages in a comparative analysis of theories that involve determinations of the concepts of social time.[3]

3. It serves as a case study within the research field of the sociological theory of time, contributing novel insights into the methodology of formalization and axiomatization in sociological theory.[4]

## 2. Assertions of Social Acceleration Theory

SAT's core hypothesis of social acceleration mainly consists of two assertions: one is the mechanism of the circle of acceleration, which makes social acceleration a principle of the modern society; the other is the acceleration of the whole society, which is one of the most characteristic phenomena of the modern society based on the principle.

### 2.1 The Circle of Acceleration

Rosa understands the circle of acceleration as a self-promoting process wherein three accelerating domains—technical acceleration, the acceleration of social change, and the acceleration of life tempo—mutually promote each other in alternation.

> [I]n the modern world social acceleration has become a self-propelling process that places the

three realms of acceleration into reciprocal relationships of mutual escalation. Therefore, within this circle acceleration always and inevitably produces *more* acceleration: it becomes a self-reinforcing "feed-back system." (ibid 243=151)

Three following subprocesses can be found in the self-promoting process of the circle of acceleration. First, the technical acceleration accelerates social change.

[I]t is undeniably clear that *technical and, above all, technological acceleration serves as a powerful driver of social change.* Its empirical-historical mechanisms lead to a constant alteration of practices and action orientations, of association structures and patterns of relationship, and even of self-relations and psychophysical dispositions. [⋯] I defined the acceleration of social change as the escalation of the *tempo* at which just those structures and orientations -and social forms of life- change. (ibid 247=154)

Secondly, the acceleration of social change, typically represented as the contraction of the present, compels individual subjects living in modern society to experience an acceleration of life tempo.

[T]he acceleration of social change implies a growing separation of the space of experience and the horizon of expectation and thus the shortening of the stability of time horizon in the sense of a "contraction of the present": the circumstances of action lose their constancy and situation definitions remain valid for ever shorter intervals of time. [⋯] this leads to an existential situation characterized by the "slipping slope syndrome" not only for individual actors but also for organizations and institutions: horizons of expectation and experience must be continuously revised (ibid 248-249=154-155)

Thirdly, the acceleration of life tempo increases the demand for technical acceleration.

[I]t is apparent that the *more scarce time resources become, the greater is the need for techniques and technologies of acceleration and hence the faster the pace of life becomes too.* (ibid 244=152)

Hence, the preceding three subprocesses form a positive feedback loop within the circle of acceleration. Each subprocess has the potential to initiate the loop as the initial step. Modern individuals, influenced by the acceleration of life tempo, increasingly seek to conserve time resources and drive societal change through innovations, as seen in technical acceleration. Paradoxically, this trend ultimately results in a depletion of their time resources. The phenomenon of the circle of acceleration encompasses such a fallacy of composition.[5]

## 2.2 The Acceleration of the Whole Society
Rosa reinterprets the acceleration of social change, which constitutes the circle of acceleration, as the acceleration of the whole society, implying that the society itself is accelerating.

[About the acceleration of social change: noted by the citer] one can rightly speak of an acceleration *of* society [eine Beschleunigung *der* Gesellschaft], whereas the phenomena of technical

enhancements of speed falling under the first category of acceleration are to be understood rather as accelerations of this or that phenomenon *within* society [Beschleunigung *in der* Gesellschaft]. (ibid 133=77)

According to SAT, the acceleration of social change, viewed as the acceleration of the whole society, is primarily driven by technical acceleration within the circle of acceleration, while also being reinforced by an external promoter outside the cycle. Rosa affirms a fundamental postulate in the sociology of time, asserting that the perception and structuring of social time are shaped by the formation of societal differentiation.[6] Subsequently, he identifies functional differentiation within the societal structure as the external promoter, drawing upon SST for support.[7]

> [A]s a result of the complexity-increasing and complexity-temporalizing effect of functional differentiation, social systems (regardless of whether they are interaction systems, organizations, or societal systems) fall simultaneously under two kinds of pressure to accelerate [multiplied possibilities and postponed decisions: noted by the citer]. A compulsion to accelerate emerges *endogenously* because temporalized systems are, as Luhmann emphasizes, "immanently restless" and only stabilized *dynamically*, i.e., through ceaseless processing that forces them to permit systemic operations to be continuously linked with new operations that bring about *something else*. (ibid 298=187)

According to SST and Rosa, system differentiation, particularly functional differentiation characteristic of modern society, compels internal and external acceleration within each system. On one hand, a system is compelled to postpone tasks that it cannot simultaneously address due to increasing complexity resulting from differentiation within the system. This phenomenon is referred to as the temporalization of complexity [Temporalisierung von Komplexität] in SST.[8] On the other hand, the horizon of expectation for other systems in the environment becomes unstable due to the increasing complexity outside the system resulting from the differentiation of other systems.[9] Both processes compel various types of functionally differentiated social systems in modern society to operate ceaselessly in order to survive. Consequently, late modernity witnesses a transformation in the mode of social time itself,[10] referred to as the temporalization of time [Verzeitlichung der Zeit].

> [T]he civically engaged university professor and father of late modernity constantly switches back and forth, in irregular sequences and intervals, between the interaction contexts of family, university, and citizen's group. He no longer allocates to any of them fixed blocks of time independent from given pending tasks. [⋯] Instead he proceeds to do his sequencing *in time itself*, something [⋯] designate[d] as the *temporalization of time*. (ibid 307=192-193)

The temporalization of time succinctly expresses the phenomenon wherein the autonomous acceleration of various differentiated social domains has led to late modernity. However, an essential issue lies between the assertion of the acceleration of the whole society and the proposition of the temporalization of time, which should not be overlooked. This issue reveals a contradiction between the theory of time in SAT based on the acceleration principle and that in SST founded on the differentiation principle. It will be further investigated in section 3.2.4.

## 3. Formalization and Investigation

In this section, the validity of two assertions concerning the acceleration principle in SAT (the circle of acceleration and the acceleration of the whole society) will be investigated. As confirmed in the previous section, SAT relies on SST to explain the mechanisms of the acceleration of social change. This paper will explore whether SAT is logically consistent with SST through formalization and comparison of their propositions concerning time conception.

### 3.1 The Formalization of the Theory of Time in Sociological Systems Theory

Social time (Sorokin & Merton 1937)[11] can be formalized as a series $T$ when a series $F$ of certain social facts is sequenced in terms of a series $T$ of other social facts. In this context, an event is to correspond an element of a series $F$ (a social fact) to an element of a series $T$ (a point of time). This correspondence can be termed as a mapping of event.[12]

The concept of time in SST, which analytically distinguishes two layers of time medium and time forms within time itself, can be interpreted as a form of social time as formalized above. Time forms (series $T$) are constructed through the mapping of events to the mapping of successors when communications, as system elements (i.e. social facts), associate with each other (series $F$).[13] The significance of this formalization lies in the recognition that an association of communication (series $F$)) constructs a time scale (series $T$). This constructionist approach to social time is stronger than the general approach, where one series serves merely as a scale to sequence and measure another (Sorokin & Merton 1937).

### 3.2 The Formalization and Investigation of Social Acceleration Theory
### 3.2.1 The circle of acceleration

Rosa defines acceleration as follows:

> Acceleration can then be defined as *an increase in quantity per unit of time* (or, logically equivalent, as a reduction of the amount of time per fixed quantity). Various things may serve as the quantity measured: distance traveled, total number of communicated messages, amount of goods produced (category 1) or the number of jobs per working lifetime or change in intimate partners per year (category 2) or action episodes per unit of time (category 3 [⋯]). (Rosa 2005: 115= 2013: 65)

First, the velocity of change in quantity, which is not addressed by Rosa,[14] should be formalized in order to establish a general definition of acceleration. Velocity $\bar{v}$ can be defined as "the amount of change in quantity per unit of time," following Rosa's definition of acceleration. And it is expressed as Formula 1.[15]

$$\bar{v} = \frac{m_2 - m_1}{t_2 - t_1} = \frac{\Delta m}{\Delta t} \text{ (Formula 1)}$$

Acceleration, as defined by Rosa, is understood to mean that the rate of change in velocity (i.e. acceleration $a$) from one point in time $t$ to another point in time $t'$ is positive. It is expressed as an inequality (Formula 2).

$$a = \frac{\bar{v}(t\prime) - \bar{v}(t)}{t' - t} = \frac{\Delta \bar{v}}{\Delta t} > 0 \text{ (Formula 2)}$$

Similarly, the technical acceleration can be formalized as $a_i = \Delta\bar{v}_i/\Delta t > 0$, the acceleration of social change as $a_s = \Delta\bar{v}_s/\Delta t > 0$, and the acceleration of life tempo as $a_l = \Delta\bar{v}_l/\Delta t > 0$.

All three subprocesses constituting the positive feedback loop of the circle of acceleration are increasing functions. The acceleration of social change is an increasing function of technical acceleration, the acceleration of life tempo is an increasing function of social change acceleration, and the technical acceleration is an increasing function of life tempo acceleration. Therefore, the loop is to be formalized as Formula 3 (*f, g, h* are increasing functions).[16]

The circle of acceleration: $a_s = f(a_i) \wedge a_l = g(a_s) \wedge a_i = h(a_l)$ (Formula 3)

It is reasonable to infer from the preceding formalizations that SAT assumes a quantitative and homogeneous time $t$ which can relate three types of acceleration with each other. If there is common time scale $t$ (unit [T]), then the unit of $a_s$ can be expressed as [S/T], and that of $a_i$ as [I/T]. Consequently, the unit of the coefficient of the function $f$ can be deduced as [S/I] because the units of $a_s$ and $a_i$ can be reduced by the common scale $t$. The same argument is valid for any subprocess included in Formula 3.

### 3.2.2 Acceleration of Social Change and Contraction of the Present

As confirmed in 1.2, SAT argues, based on SST, that system differentiation, acting as an external promotor for the circle of acceleration, brings about the acceleration of social change.[17] Therefore, before formalizing propositions concerning the acceleration of social change, it is necessary to define what "social systems accelerate" means in terms of SST. An axiom in the time conception in SST, referred to as the "relativity of system time," can be derived from the monism of system operation employed in SST. The relativity of system time implies that the same propositions in systems theory can be applicable for any time constructed within a system. Social acceleration can be defined, grounded on this relativity in SST, as a phenomenon caused by the measurement (i.e. observation) of the quantity of events in an observed social system in terms of the time scale in an observing social system.[18] Observing systems and observed systems may indeed be different systems or the same systems. For instance, systems in the present may observe themselves in the past, creating a self-referential loop within the same system. Alternatively, different systems may observe each other, leading to observations across multiple systems.

Formalization of propositions concerning the acceleration of social change is as follows:

When there is a couple of an observing system ($S_1$: $f_1$, $t_1$, $\bar{v}_1$) and an observed system ($S_2$: $f_2$, $t_2$, $\bar{v}_2$), which includes social facts ($f_1$, $f_2$) and time ($t_1$, $t_2$) as elements, and has the velocity of event occurrence (i.e. event connection) ($\bar{v}_1$, $\bar{v}_2$) respectively,

Acceleration of $S_1$ $a_1 = \dfrac{\Delta\bar{v}_1}{\Delta t_2}$ (Formula 4.1)

Acceleration of $S_2$ $a_2 = \dfrac{\Delta\bar{v}_2}{\Delta t_1}$ (Formula 4.2)

Events in an observed system are measured by the time scale constructed in an observing system. Therefore, the positive acceleration of a system means in SST that "the increasing in events included in an observed system which correspond to an event in an observing system, that is, which are constructed within the time horizon of the event." And the positive acceleration of a social system means that "the

increasing in events included in an observed social system which are treated within the time horizon constructed through a communication in an observing social system."

Positive acceleration of $S_2$ in terms of $S_1$: $a_2 - a_1 = \frac{\Delta \bar{v}_2}{\Delta t_1} - \frac{\Delta \bar{v}_1}{\Delta \bar{t}_2} > 0$ (Formula 5)

Additionally, when an observed system $S_2$ accelerates in the sense of Formula 5, the following three inequalities (Formula 6, 7, and 8) can be deduced.

First, since $\Delta t$ in each system is supposed to be proportional to $\Delta \bar{v}$ in terms of the constructionist principle in SST,

$\frac{\Delta t_2}{\Delta t_1} > 1$ (Formula 6)

Formula 6 means that the time scale in an observed system $S_2$ expands relatively more than that in an observing system $S_1$.

Secondly,

$\frac{\Delta \bar{v}_2}{\Delta \bar{v}_1} > 1$ (Formula 7)

Formula 7 signifies that the increasing in events included in an observed system $S_2$, which are observed in a communication in an observing system $S_1$. In other words, it indicates that the horizon of memory and expectation concerning $S_2$ contracts. This interpretation aligns with the concept of the "contraction of the present" referred to in SAT.[19]

Thirdly, Formula 8 can be deduced from Formula 5, with which Formula 6 and Formula 7 turn out to be consistent.

Negative acceleration of $S_1$ in terms of $S_2$:

$a_1 - a_2 = \frac{\Delta \bar{v}_1}{\Delta t_2} - \frac{\Delta \bar{v}_2}{\Delta \bar{t}_1} = \frac{\Delta t_1 \cdot \Delta \bar{v}_1 - \Delta t_2 \cdot \Delta \bar{v}_2}{\Delta t_1 \cdot \Delta t_2} < 0$ (Formula 8)

Formula 8 means that an observing system $S_1$ negatively accelerates (that is, decelerates) from the viewpoint of an observed system $S_2$.

### 3.2.3 The Acceleration of the Whole Society

The inter-system relationship demonstrated in 3.2.2 is indeed applicable to any inter-system relationship due to the relativity of system time.

In SST, society is defined as the set of all social systems,[20] effectively representing the universal set of social systems. Consequently, society emerges as the totality of the social environment (or, the horizon of all possible communications) for any social system within itself. In terms of the relativity of system time, it can be stated that society encompasses a variety of social systems which accelerate or decelerate relatively.

If society could accelerate as a whole, as argued by SAT,[21] then all social systems could be observed as uniformly accelerating from the viewpoint of any social system within society. If the whole society could accelerate, meaning all social systems could accelerate uniformly, then $a_1 - a_2 > 0 \land a_2 - a_1 > 0$ could be true for any $S_1$, $S_2$. However, this contradicts $a_1 - a_2 < 0 \land a_2 - a_1 > 0$, which means that Formula 8 is

deduced from Formula 5. Therefore, the assumption that the whole society accelerates is fallacious. Based on the concept of social acceleration derived from SST, it can be stated that society as a whole or as a horizon neither accelerates nor decelerates. In short, society cannot accelerate.

### 3.2.4 Is There the Time of the Whole Society?

The investigation of the consistency between SAT and SST thus far reveals that their fundamental conflicting point concerning social acceleration lies in how to position time for the social. Is there a time of the whole society (Zeit *der* Gesellschaft) that is independent of anything social? SAT, which accepts the autonomous circle of acceleration consisting of three subprocesses, must answer the question positively, whereas SST, which employs constructionist conception of time founded upon operational monism, must answer it negatively. Rosa is conscious of this difference in their conceptions of time.

> [T]he systems-theoretical conception of time appears to be rather poorly suited for the development of a theory of acceleration since the distinctions employed by it make an analysis of the diachronic change of temporal structures harder rather than easier. This is because it first constitutes time as the difference of past and future in the operations in a given system and only then grasps it chronologically through observations of that system. (ibid 97=52)

The criticism of SST's conception of time likely holds validity to a certain extent from the viewpoint of SAT, which deals with the change of time structures, distinguishing three stages of early modern, classical modern, and late modern within modernity.[22] Ironically, a similar criticism regarding the validity of time conception recurs within SAT itself. The concept of time is not directly defined in SAT, yet it appears where one of the most fundamental concepts of acceleration is defined. SAT's conception of time will not be useful for analyzing the "temporalization of time" derived from SST if a quantitative time scale common to technology, society, and the subject is assumed in the theory of the circle of acceleration, as demonstrated in 3.2.1. This approach may have less complexity compared to SST's conception of time as difference for analyzing diachronic changes of time structures.

## 4. Conclusion and Recommendations

### 4.1 Conclusion

The investigation into the consistency between SST and SAT thus far has led to the following conclusions regarding the circle of acceleration, the acceleration of the whole society, and the acceleration principle:

Conclusion 1: The proposition of the circle of acceleration cannot be deduced from SST's constructionist presupposition. The proposition, which assumes a time scale common to technology, society, and the subject, is not consistent with SST's conception of time, wherein social time is considered to be constructed through the difference between the past and the future in each social system.

Conclusion 2: The proposition of the acceleration of the whole society cannot be deduced from the principle of system relativity presupposed in SST. Since acceleration is generated through relationships of observation among systems according to SST, the whole society, which is the universal set of all social systems, neither accelerates nor decelerates.

Conclusion 3: It can be deduced from the above two conclusions that the hypothesis of the acceleration principle is inconsistent with SST in terms of mechanism (the circle of acceleration) and phenomenon (acceleration of the whole society).

## 4.2 Recommendations

If SAT seeks to rely on SST, it is necessary for SAT to restrict or reject its assertions as follows:

Recommendation 1: SAT should explain the acceleration of social change from the mechanism of system differentiation and should refrain from assuming the quantitative time scale common to the three subprocesses in the circle of acceleration: technical acceleration, the acceleration of social change, and the acceleration of life tempo.

Recommendation 2: SAT should understand time-related phenomena such as the acceleration or deceleration of social change or the contraction of the present relationally as constructs of observation among systems. Furthermore, it should reject the assertion of the acceleration of the whole society.

Recommendation 3: SAT should not perceive social acceleration as a principle of modernization but rather as a dimension (or a viewpoint in the description).

### Notes

1) The translation is primarily based on existing English translations, with modifications by the author where necessary. All emphasis is in the original text.

2) "I do indeed defend the thesis that social acceleration should be understood as an *irreducible* and tendentially *dominant basic principle* of both modernity and modernization [⋯]." (Rosa 2005: 441=2013: 287)

3) See Adam (1990), Nassehi (1993), Šubrt (2021), comparative studies of the sociological theories of time.

4) See Takahashi (2020) and Takahashi (2024) which adopt the same methodology, and Fararo (2002) which attempts formalization and axiomatization in sociology.

5) "The circle of acceleration is thus a good example of the divergence of individual and collective rationality: what appears to be a solution to the problem of time scarcity from a microsocial perspective -the technical acceleration of goal-directed processes- proves to be an essential element of its causation at the macrosocial level." (Rosa 2005: 251=2013: 156)

6) "The idea that the nature of social time, i.e. the perception and structuring of time, is determined by given forms of social structure is a fundamental postulate of the sociology of time. The question that concerns us here is to what extent the principle of *functional differentiation* [⋯] *in and of itself*, i.e., according to its own unfolding logic, leads to or necessarily brings about an acceleration of social processes." (ibid 295=185)

7) "[I]t was left to Niklas Luhmann and representatives of the systems theory he developed to analyze the temporal consequences of functional differentiation and to indicate the systematic internal connection of processes of differentiation and acceleration. According to Luhmann, system structures and temporal structures are tightly correlated, such that the differentiation of modern functional systems also involves the differentiation of their time structures as well as the past and future time horizons they involve." (ibid 95=51)

8) "Conversely, however, this form of differentiation also leads to an *increasing scarcity* of time because it enormously heightens complexity (this is a basic postulate of systems theory) and because growth in complexity  [⋯] can be understood as an essential source of time scarcity [⋯] According to Luhmann, the multiplication of distinct possibilities and the need to select among them as well as the requirement of synchronization compel the *temporalization* of complexity: unrealized possibilities are 'suspended but

preserved' (*aufgehoben*) for the future and held open for a possible later actualization. Options for selection are thus ordered along a time axis projected into the future" (ibid 296–297=186–187)

9) "[T]here enter a further, system-*exogenous* accelerating factor that stems from the structural conditions of functionally differentiated societies. […] the *future*, as a *horizon of expectation*, serves […] as a way to deal with surplus possibilities and to delay the need to select among options. Yet, […] functionally differentiated societies ineradicably tend to make this horizon of expectation more and more unstable, and hence the future, so to speak, 'ever shorter.' This is an inevitable side effect of the endogenously induced heightening of the tempo with which each respective system processes the *other* systems in its own environment." (ibid 301=189)

10) "flexible time arrangements that […] involve microtemporal oscillation between the demands of distinct functional spheres that are all running as 'non-stop' enterprises" (ibid 307=192)

11) "[S]ocial time expresses the change or movement of social phenomena in terms of other social phenomena taken as points of reference" (Sorokin & Merton 1937: 618).

12) This conception of social time can be interpreted as an axiomatic system consisting of the set of time $T$, the mapping of successor $suc$, the set of social facts $F$, and the mapping of event $e$ (Takahashi 2020).

13) See Takahashi (2024), a more detailed essay on this axiomatization.

14) Rosa refers to the concept of velocity only when he introduces the physical definition of acceleration (Rosa 2005: 112–113= 2013: 63). He criticizes this definition as "narrow" due to its limited application to the amount of distance. However, physics and chemistry adopt the concepts of "velocity" and "acceleration" to express changes in quantities other than movement (e.g., reaction velocity). Rosa's definition of acceleration is essentially no different from that in physics, but its originality lies in its expansion of application to social phenomena.

15) The quantities and time assumed in this paper are indeed sociological variables, not necessarily continuous or differentiable. This point is presumed to apply similarly to SAT. In sociological contexts, variables such as social change, events, and time are often discrete and may not exhibit continuous or differentiable characteristics as in physical systems.

16) It can indeed be deduced from Formula 3 that a deceleration cycle may emerge when one of the three types of acceleration becomes negative due to any cause.

17) To reiterate, the technical acceleration is the main internal factor for the acceleration of social change within the circle of acceleration.

18) In accordance with Rosa's definition of acceleration, this paper presupposes that events (or communications) can be treated as quantities also in SST. This presupposition raises a question regarding the counting of the number of events (or communications). If this question could not be resolved affirmatively, SAT could not be founded upon SST from the outset. Therefore, a critical investigation of SAT in terms of SST enables SST to incorporate the presupposition of the countability of events.

19) Formula 7 signifies the increase in the number of events in the observed system that correspond to an event in the observing system. This has two aspects. On one side, the stable horizons of memory and expectation in the present of the observing system contract because observed events increase. On the other side, the temporal range of observed events in the present of the observing system extends. The former can be interpreted as the "contraction of the present," while the latter can be seen as the "extension of the present." See the following comment by Rosa. "[T]he phenomenon of the future becoming contingent and uncertain can be apprehended under the concept of the contraction of the present [Erstreckung der Gegenwart] (Lübbe) as well as the 'extension of the present' (Nowotny)" (ibid 449–450= 293). "[T]he need for planning in late modernity increases to the same extent that the range of what can be planned decreases. […] the limit of the foreseeable moves steadily closer to the present, and politics has to shift over to a mode of muddling through

where the urgency of the fixed-term reigns and temporary and provisional solutions take the place of larger political designs [Gestaltungsentwürfe]." (ibid 410=264)

20) "Accordingly, society is the all-encompassing social system that includes everything that is social and therefore does not admit a social environment" (Luhmann 1984: 555= 408). "The social" means communication in SST.

21) Rosa distinguishes an "acceleration of (the whole) society" from accelerations "within society" (Rosa 2005: 133= 2013: 77), although the concept of "society" that Rosa refers to does not precisely correspond to that in SST. Consequently, it can be allowed that the conception of society as a universal set in SST is applied to the concept of society in SAT in order to compare both theories.

22) "The thesis of a progressive acceleration of social change in the course of the modernization process can thus be formulated in a sharper way as follows: the tempo of this transformation has been heightened from an *intergenerational* speed of change in early modernity through a phase of approximate synchronization with the sequence of generations in 'classical modernity' to a tendency toward an *intragenerational* tempo in late modernity." (ibid 178=110)

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# 社会は加速できない
## 社会学的システム理論と社会的加速理論の両立可能性について

### 高橋　顕也 [i]

【背景】H. ローザの社会的加速理論（SAT: Social Acceleration Theory）に拠れば，社会的加速は，技術的加速，社会変動の加速，および生活テンポの加速の3つの要素から成る。そして，技術的加速は社会変動の加速を，社会変動の加速は生活テンポの加速を，生活テンポの加速は技術的加速を，それぞれ現実に誘発し続けている。生活を加速させることで時間をより効率的に活用したいという個々人の欲望がイノベーションを介して社会の変化を加速させるために，人々からますます時間が奪われる。端的に言えば，時間資源について合成の誤謬が生じている。したがって，近現代社会においては，これら3種の加速の間で「加速循環」というポジティヴ・フィードバック・ループが形成されているのであり，いわば，加速がさらなる加速を生み出している。そうであれば，社会的加速というプロセスは，他の近代化の原理（例えば，合理化，分化，個人化，あるいは自然のドメスティケーション）の従属変数としてだけでは捉え切れないのであり，それ自体も1つの独立変数（＝原理）として把握しなければならない。他方，社会変動の加速に対して（加速循環の外部から作用する）駆動因として社会の機能分化も指摘される。その際にSATが依拠するのが，N. ルーマンによる社会学的システム理論（SST: Sociological Systems Theory）である。【目的】本稿は両者の理論の間でどの程度の整合性が認められるのか，換言すれば，システム理論と両立可能であるために加速理論の主張にはどのような制限が必要なのかを検証する。とりわけ，加速理論における次の2つの主張が検証対象となる。1）加速循環［Akzelerationszirkel］説。ないしは，近代化の一原理としての加速という主張。2）社会そのものの加速［Beschleunigung der Gesellschaft］説。システム理論的に表現するなら，あらゆる社会的システムおいて現在の収縮［Gegenwartsschrumpfung］が生じているという主張。【方法】システム理論の時間論から公理系を抽出し，そこから上記の2つの命題が演繹できるか（あるいは，それらと矛盾する命題を演繹できるか）を論証する。【結論】加速理論が主張する1）および2）どちらの命題も，システム理論とは矛盾する。1'）加速循環説は，システム理論の拠って立つ構成主義的前提のために導かれえない。2'）社会そのものの加速説は，システム理論の拠って立つある種の相対性原理のために導かれえない。2'-1）システム理論の立場では加速はシステム間の観察という関係から生じる。2'-2）すべての社会的システムの集合である社会そのもの［Gesellschaft］は，加速も減速もしない。したがって，3'）加速原理仮説はメカニズム（加速循環）の点でも現象（社会そのものの加速）の点でもSSTと両立しない。以上より，加速理論がシステム理論に整合的に依拠するためには，以下のような制限が必要である。1"）社会的加速をシステム分化のメカニズムから説明する。2"）社会変動における加速／減速，あるいは現在の収縮といった諸現象を観察の産物として関係論的に捉え直す。3"）社会的加速を近代化の原理ではなく，あくまで次元（ないし，記述の観点）として捉え直す。

キーワード：時間の社会学，社会的時間，社会的加速，社会学的システム理論，ハルトムート・ローザ，ニクラス・ルーマン

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