

Introduction. The shock of deparadoxification

The topic of this article came out of an academic shock: one of those jarring halts where agreeable study is brought short by an incongruous idea or image. Such jolts can be a good thing: they force us to think anew, in the Deleuzian sense of event as a shock to thought. (Deleuze 1968) They can only occur if the underlying research is persuasive; when a convincing and absorbing flow is interrupted. The shock occurred to me during the reading of Hannah Richter's ground-breaking PhD thesis on Deleuze, Luhmann and sense. (Richter 2018)

The thesis and subsequent monograph set the scene for a Deleuze and Luhmann encounter through a dialectics of closeness and distance around shared terms: above all sense but also paradox, structure, event, time and political pragmatics. (Richter 2023) The two works are essential reading for investigations around Deleuze and Luhmann. I knew that paradox and structure, but also system, were important for work on Deleuze and Luhmann, because of an interest in Luhmann's work on autopoiesis and a hunch that this concept was as distant from Deleuze, time and politics as we could get.

Yet there is no doubting that the thinkers cover common ground and there are productive crossovers such as a situation of sense in relation to action and an understanding of the role of paradox for creativity or development. In a chapter on irony and humour, Richter shows this by drawing attention to the possibility of combining Luhmann's 'sobriety' and Deleuze's humour, and vice versa, not only for a richer interpretation, but also to arrive at more precise conceptual understanding of ideas about determinacy and contingency. (Richter 2018, 32)

It's in a discussion of sense and contingency that the shock hit me through a concept that occurs many times in Richter's analysis (17 times spread out through the work). For Richter, following Luhmann, sense 'performs its own deparadoxification.' Sense moves from the paradoxes of nonsense to the determination of sense – deparadoxification – but sense also moves towards nonsense and contingency -- paradoxification. (Richter 2018, 40)

How can Deleuze's paradoxes be removed, even within a stage, or instant, or sway in a dialectical movement? What are the implications of this new possibility? Can they be reconciled with Deleuze's wider metaphysics, as Richter does in relation to time since 'Luhmann's systems deparadoxify the tautological character of their temporal mechanisms through this displacement in time'? (Richter 2018, 134) Is the idea of deparadoxification tenable within a Deleuzian account of politics if 'in Luhmann, the political decision deparadoxifies the absence of both an ontological foundation for politics and the absence of effective, decision-making agency'? (Richter 2018, 165)

In what follows I try to work through these questions, not to deny the interest of the wider encounter between the two thinkers, even less to reject the value of Richter's dialectical enrichment of their ideas through contrasts and connections, but rather to illustrate the implications

of that single concept 'deparadoxification', or 'deparadoxization' (Seidl, Lê and Jarzabkowski 2021), when taken in conjunction with two different definitions of paradox.

Deleuze on paradoxes in *Logic of Sense*

Deleuze begins his study of paradox in the twelfth series of *The Logic of Sense* with a statement about the difficulty of 'ridding oneself' of paradox: '*on ne se débarasse pas des paradoxes*'. (Deleuze 1969, 92) He is not only addressing paradox in general but also making a claim about specific paradoxes encountered as troubling and persistent events. This latter claim takes up the major part of the series as Deleuze demonstrates the reliance of well-known logical paradoxes, such as Russell's paradox, on his novel and counter-current definitions of sense and event, themselves dependent on his metaphysics of the virtual and of time.

The series can be read as a critical deconstruction of the formal logical definition of paradox and its presuppositions about reference, manifestation and signification. For this formal definition, paradoxes are irresolvable contradictions arrived at through valid reasoning and therefore problematic for reason and definitions of truth. For instance, in the liar paradox 'This sentence is false' is false if true and true if false. (Glanzberg, 2001) In *The Logic of Sense*, these paradoxes are shown to depend on a much broader and metaphysically charged conditions about what language can refer to, how statements are said and by who, and the nature of meaning and signification.

For Deleuze, paradoxes are disturbing for reference, language-use and meaning because they reveal instabilities in them; such as multiple references, nonsensical implications and ambiguity. Furthermore, the sources of this instability follow from the paradoxical nature of actual things, words and thought. Yet this is why paradoxes are productive; disturbance opens the way for creativity. I have covered the detailed analyses of specific paradoxes from *The Logic of Sense* elsewhere. (Williams 2008). There is also a later, insightful and in-depth study, in particular of Frege, Deleuze and paradox, by Mehdi Parsa (Parsa 2023). Here, my aim is to study the wider definition of paradox in its application to Luhmann and autopoiesis.

According to this wider definition, paradoxes are plural and occur to us – to groups, systems or societies – as something we are impelled to, but cannot rid ourselves of. The idea of an impossible riddance is itself unusual and significant to the encounter with Luhmann. We could think that paradoxes were something to be resolved, like a logical or mathematical problem, a question of reasoning, either generally, like pure reason or a logic assumed to be universal, or specifically, as in a branch of mathematics or a type of logic.

We could think that paradoxes were to be eliminated or curtailed, banned or outlawed, or treated as outside the bounds of a system or structure. This would not explain Deleuze's description of doomed attempts to rid ourselves of them (*se débarasser*) with its sense of something sensual and psychological, an encumbrance, annoyance and persistent obstacle, a reminder of something unwanted, an embarrassment or sign of failure, a threat or recurring challenge.

Paradoxes are in part taken to be difficult and problematic nuisances, like Thomas Becket to Henry II, a meddlesome yet concealed challenge to rule and power, a turbulent menace to a realm, and a deep physical and psychological disturbance: a severe wound or grievous insult. Becket is a haunting obsession that leaves Peter O'Toole's Henry trembling and diminished in Peter Glenville's multi-award winning film version of Jean Anouilh's *Becket ou l'honneur de Dieu*: 'Will no one rid me of this meddlesome priest?' (Glenville 1964; Anouilh 2010)

Turbulence and meddling are good concepts for understanding Deleuze's choice of words. A paradox is a disturbance setting an order into destructive and confusing motion. It ruins ordered structures and systems, or wrecks the way such structures or systems ought to be or wish to be. As ever in this period of Deleuze's work, processes work by doing and undoing, folding and unfolding, destroying and creating. Processes work in twins and paradoxes disturb destructively while setting the way for creativity. One of the key questions will then be what kind of creativity paradoxes encourage and lead to. In short and anticipating the next section on Luhmann and paradox, the contrast will be between responses that solve the paradox (Luhmann) and those that live well with its persistence and effects (Deleuze).

It is important to note how the effects that make us wish to rid ourselves of paradoxes have positive potential. Even the destructive effects – confusion, repulsion, bafflement, frustration, fear – do not set the value of paradoxes as negative within Deleuze's philosophy as developed in *The Logic of Sense*. They are taken to be difficult because this is the most prominent aspect Deleuze draws attention to -- such as alcoholism – but these challenges are not only an inevitable part of events and destinies, they are also the way to positive affirmation.

Counteracting the inescapability of paradox and of the contradictions of life, Deleuze argues for a positive role for these effects as forms of destiny, based on their sensual difficulty and physical and mental destructiveness, and on the inevitability of their historical conditions. Relatedly, he also does this for problems, themselves defined differently in his philosophy and in a way dependent on the troubling resilience of paradoxes.

Jeffrey Bell has given the most sustained explanation and study of this Deleuzian definition of the problem as two-fold and ongoing process and its relation to definitions in analytic metaphysics: 'Since problematic Ideas need to be constructed, they are not an already existent reality but a reality that is always in the process of being created and recreated.' (Bell 2022a, 122-3) Bell's insistence on two-fold construction – of the problem and of a response to the problem – is significant for the debate with Luhmann, because of the contrast between problem construction (Deleuze) and problem solving (Luhmann), where the former commits an actor to an ongoing and continuous task, where the latter involve discrete stages of obstacles and resolutions.

If we begin with the formal account, we could think that a paradox brings a system down in one go, like a flick of a switch or a logical counter-demonstration. Equally, then, a particular paradox disappears if a solution to it is found, even if other different paradoxes might occur. That's not what Deleuze means. For him, paradoxes meddle persistently; they nag, intrude, infringe, fool, mock and belittle us, by morphing and reappearing as the same all-encompassing event, the same turbulent priest in different garb.

Paradoxes don't work simply within a system or logic as an unwanted and disastrous result or implication; for instance, in the problems caused for space, time and movement by Zeno's paradoxes. (Lee 2015). They haunt the system through various iterations, wounding it deep within its senses and values, making it hard to believe, explain and understand events and processes, and hence much harder to reason with. A paradox is more like an unexpected betrayal, or a trusted component failing inexplicably, or a long passion turning to loathing, or a simmering dependency, than a proof with a disconcerting conclusion.

This contrast between a logical puzzle and existential jeopardy is why I have insisted on the effects and presuppositions of paradoxes: their genesis, as in Daniel W. Smith's account of the genesis of truth in language in *The Logic of Sense*. (Deleuze 1969, 133-49; Smith 2022) In the formal account the unsolvable contradiction at the conclusion of an argument is what matters most (the arrow should but cannot hit the target), but for Deleuze it is a question of the effects and sources of a troublesome and meddlesome intrusion into settled thought that is most significant and valuable (life should but cannot be lived without a recurring dependency).

For the argument around Luhmann, Deleuze and autopoiesis, the contrast between the formal and wider, sense-based, aspect of paradoxes is critical. An autopoietic system might encounter paradoxes within its formal operating processes that lead to types of breakdown. It might then seek to resolve those paradoxes through an evolution of its processes. Logic might seek to resolve paradoxes through axiomatic alterations, such as the addition of the Separation axiom in Zermelo-Fraenkel set theory (Olkowski 2021, 45).

However, if paradoxes go beyond formal systems and apply to wider processes underlying formal symbols, definitions, axioms and deductions, then this kind of analysis is incorrect in four ways: it misunderstands the nature of paradox-based breakdowns; it has a flawed basis for pragmatic attempts to respond to those failures; it misses the deeper problem and challenges of paradoxes as pervasive and extended; and it has the wrong basis for assessing the creative value of paradoxes.

Henry II's rhetorical question about Becket had consequences. Taking the question for a command or challenge ('Are there no men left in England?') four knights gruesomely murdered Becket in Canterbury Cathedral (Grim and Staunton, 2001). They 'solved' the Becket problem. Yet, thereafter, Becket was to be elevated into a symbol of goodness whereas Henry was reviled. The knights were excommunicated. Far from eliminating the Becket paradox of an unwelcome holiness, the knights' actions constructed a harder and more powerful one that thrived on Becket's death and thanks to the myths growing out of his sanctification.

For Deleuze, paradoxes cannot be eliminated or banished, because every act we take towards them has turbulent consequences within the structure or system we seek to protect and develop. They don't reveal an eliminable system error but rather much deeper flaws that continue from development to development. Paradoxes are sensual and meaningful cracks and fissures on the surface of systems connecting to concealed and unavoidable problems. They are intimations of returning failure, rather than directly inconvenient and potentially surmountable results.

Paradoxes as defined by Deleuze should therefore be understood in terms of another series and theme from *Logic of Sense*, Series 29 'Good intentions are perforce punished' (see Williams 2008 for a discussion of the translation of the title of this Series and further analysis). The occurrence of

paradoxes isn't to be understood as the result of particular flaws in a system, but instead as a consequence of a metaphysical process connected to the disturbed and disturbing nature of time. This disturbance doesn't just come from the depths, from unseen and rejected horrors we try to think away. It comes from the surface and the heights, that is, from our highest ideals and the systems we build to achieve them.

Flaws are within thought such that the way we think ourselves out of contradictions and problems is itself a conduit for the return of the depths in surface cracks. We can think of this return of problems through examples of misguided attempts to make a situation better; like a botched mend, or the unwary use of a new material, or the pretence that a technique has banished an obsession, or doubling down on a remedy, or the use of extreme methods, or the leadership of a charlatan, or a misguided invocation, or simply giving in.

Yet Deleuze's contention is much stronger than citing our propensity to repeat mistakes. His argument is rather that failure is an inevitable property of thought: 'This crack in thought, on the incorporeal surface, is the pure line of *Aiôn* or death drive in its speculative form.' (LdS, 243) When planning new ways out of problems and contradictions, thought is undone by pure time: *Aiôn*, or the dissipation of the present into all of the past and all of the future. Just as pure moral intentions, repressing a particular complex, fall victim to a destructive death drive in the return of damaging desires in other forms, any thought is subject to the return of the pure line of time. (Freud 1919)

We can understand the abstract expression by analysing the two components of 'pure line'. Thinking has necessary weaknesses because its operation depends on a pure condition involving processes that constitute any event; not things or ideas but the infinite number of ways things and ideas can come about; such as to grow, to diminish, to thrive, to rot, to divide, to break, to fuse or to melt. Even if a course of action takes account of every 'relevant' idea and object, it is still subject to further pure processes that can undo it. Worse still, it is the whole line of time that is implicated: every potential process that has been and will be. It doesn't matter how well you plan your action, the matter and ideas developed in it are subject to processes that must transform it over time. This is why Deleuze emphasises that time returns eternally, not as the same things and objects, but as pure difference. (Deleuze 1968)

Paradoxes and the downfall they imply don't occur to some systems, they occur to all of them over time. As such, paradox is better thought as a kind of persistent series of decadent and constructive processes over time; like rotting and rebirth, cross-infection and mutual healing, intrusion and assistance, loss and rediscovery, self-destruction and collective construction.

There are two ways we could read this departure from the idea of paradox as a formal logical problem inherent to particular systems. On the one hand, Deleuze could be making a claim about a different kind of paradox, using the logical term analogically or metaphorically. On the other, he could be making a claim that includes the systematic version. The second option is the right one. He follows up his statement about paradox as encumbrance with an extension from the more playful version of paradox, in Lewis Carroll, to Russell and Whitehead's *Principia Mathematica* and Russell's paradox about set membership. (Whitehead and Russell 1962) Carroll's often nonsensical paradoxes hold necessary lessons for formal ones. (Deleuze 1969)

Dorothea Olkowski tracks the legacy of this early Deleuzian approach for logic in Deleuze's later work with Félix Guattari. Her interpretation of their critique of logic can be taken as a summary of the direction of Deleuze's approach in *The Logic of Sense*: 'Logic's preoccupation with strings of linked propositions prevents it from creating and solving real philosophical problems because problems are not propositional.' (Olkowski 2021, 32) It's this extra propositional aspect that Deleuze develops most strongly in *The Logic of Sense* through the idea of the doomed struggle to rid ourselves of paradoxes. Paradoxes are sensual, aesthetic and lived; in an existential sense that can be traced back to Camus, for instance (Bell 2022b, 230-1).

A paradox is not an inevitable contradiction that might be able to work around by improving the system. Instead and in a wider sense, an inevitable contradiction is a sign of the flaws bringing a system in touch with ineluctable powers of destruction and renewal over time. That's the real paradox; the one we seek to rid ourselves of, but never can. A paradox is an existential curse, not a logical obstruction.

Deleuze is making a very bold philosophical claim here. If a formal system is independent and self-contained, then external processes and properties should not apply to it. Whatever flaws it has must be inherent to the system. Paradoxes would then be generated internally. The nonsensical, sensual and sense-based nature of more loosely defined paradoxes should have no relevance to this, as ordinary language should have no relevance to the definitions and logical implications of a formal system such as set theory.

This idea of formal independence is important for the discussion around Deleuze and Luhmann. An autopoietic system is closed and autonomous in relation to its essential processes. These may have non-essential external contacts, such as energy requirements, necessary for functioning but not for internal organisation and development. (Maturana and Varela 1980) If a system is autonomous in this way then operational paradoxes are internal to the system, generated from and solved by developments in its organisational processes. Why would such a system be vulnerable to the wider Deleuzian definition of paradoxes, since these seem to be problems that come from the outside, from extension, and hence with no relevance to an autopoietic system?

The answer concerns two related fields: language and thought. According to Deleuze paradoxes 'insist in language' (LoS 92). This is an unusual usage and puzzling turn of phrase. *Insister* has two main meanings and a secondary one: to demand strongly (*I insist that you do it*); to emphasise (*I insist on this point*) and to persist (*let me insist about this again*). Usually each of these has an object, such as a request, something underlined or a repeated task or priority, but Deleuze's sentence doesn't give an object. Language simply insists.

A preliminary answer to this question of interpretation is that the third sense of insist, to persist, is what paradoxes do. They recur and that's why they are impossible to get rid of. This usage fits in with Deleuze's appeal to other verbs with the Latin root *stare*, to stand, to stand firm, to stay, such as his inventive take-up of the verb *subsist*, in *The Logic of Sense*, after Meinong and Leibniz. (Smith 2022, 8) Paradoxes stay and stand firm. They also do this insistently.

This persistence is confirmed by the second part of Deleuze's sentence. The challenge of paradoxes in language is 'to know whether language (*le langage*) itself could function without making such entities insist'. Does the way language works necessarily imply the persistence of paradoxes? His

answer is positive. We cannot rid ourselves of paradoxes because they aren't essentially logical problems but rather an unconscious, destructive and creatively transformative feature of thought.

Language stays alive and evolves thanks to paradoxes, as defined by Deleuze, because any language has an unconscious that explains how it functions, not only by renewing itself, but also by retaining value and interest as a form of communication and interaction with the world. Deleuze defines life in terms of creative novelty and constantly renewed intensity. Both of these imply destruction and disturbance from the outside of a system through its unconscious: beyond what is currently known and said, but operating on them nonetheless. In contrast, autopoietic theory defines life in terms of independent autopoiesis: to live means to live as an autopoietic system, as self-creating and autonomous. (Maturana and Varela 1980; Thompson 2007)

By opposing Deleuze and autopoiesis on definitions of life I am rejecting their equation, as presented, for instance, by Peter M. Lang in his work on Deleuze and biosemiotics. This association is criticised more generally in my work on signs and semiology (Williams 2016). I should stress that I am not criticising Lang's precise and clear account of biosemiotics; my concern is the inclusion of Deleuze into this carefully defined discipline.

The first claim I think finds little support in Deleuze's work is this one: 'From the perspective of biological systems theory, operational closure facilitated by a boundary or membrane produces a surplus of signification, an Umwelt, or world of meaningful interactions for the system.' (Lang 2024, 618) There is no such closure in Deleuze's account of process, but rather a continual multiplicity of processes none of which can be taken as autonomous or complete within any given boundary.

The second claim I want to question as potentially correct, but insufficient as an account of expression, is made in Lang's next two sentences: 'For Deleuze and Guattari the organism, as emergent assemblage, territorializes its world (ie. marks domains of significance). If expression is considered as continual modification of a system's interactions with an external milieu, it is fundamentally interwoven with the autopoietic notion of "effective action" or the cognitive activity inherent to living systems'. (Lang 2024, 618) The salient point is that for Deleuze and Guattari any organism territorializes *and* deterritorializes its world. Expression doesn't happen in a single direction towards an external milieu. It is bi-directional and reciprocal such that the world territorialises any being (or, more properly, any speculatively localised set of processes).

An organism deterritorializes and reterritorializes continuously, in multiple ways and in all of its aspects. Furthermore, environments do the same to each organism. The processes are reciprocal, continuous and always boundary crossing. They cannot be equated with autopoietic action that requires an autonomous organism with an autonomous system and a boundary. Any closeness between Deleuze and autopoiesis is therefore merely an appearance that belies fundamental differences. As we'll see, these fundamental differences apply to definitions of paradox, since for Luhmann paradox is internal and handled – solved – through internal developments.

Prior to studying Deleuze's ideas about thought and the unconscious in more detail, I'll draw attention to another point to sharpen up the argument with Luhmann. An autopoietic system requires an organisational language for internal communication, memory and analysis. If this communication is not autonomous then autopoiesis fails. This does not mean an autopoietic system cannot share a language with outside processes. It means that the operation of its internal language

must be autonomous -- free of outside interference (by an unconscious, for instance). Thus, if external paradoxes are internally insistent, in Deleuze's terminology and according to the problem he outlines, then autopoiesis is not possible. Whereas, if Luhmann is correct about language operating autonomously, then Deleuze's definition of paradox does not apply to it and his points about the pre-eminence of 'nonsensical' paradoxes and the subsistence of an unconscious for every language are wrong.

Deleuze starts the dense passages on thought with a connection to the idea of an 'image of thought' developed at length in *Difference and Repetition*. Philosophies, ideologies and other more everyday types of thinking generate and depend upon images of thought. These are general and impressionistic -- yet pervasive and influential -- assumptions about what thinking should be like. If it is counter to a dominant image of thought, a form of thinking or an argument is deemed to be false. Thus, when falling against an image of thought as consistent, logical and governed by principles such as the law of excluded middle, paradoxes are taken to be deeply problematic and requiring a solution.

The question 'Which logic?' has been addressed by Corry Shores in his thorough study of logic and Deleuze, [The Logic of Gilles Deleuze](#). Shores' book has the advantage of considering a wide range of logics in relation to Deleuze. His lessons concerning the closeness of the most flexible modern logics to some of Deleuze's points and about the possibility of a relative formalisation of Deleuze's arguments are significant for the study of Deleuze's philosophy of paradoxes because they avoid two mistakes.

For Shores, from a strictly formal classical logic standpoint, Deleuze advocates the informal and 'magical' logics of a 'sorcerer' (Shores 2021, 1-2), but this does not mean his arguments have no relation to formal logics, or that they can't be formalised, even if this formalisation is to be superseded and taken as limited in some ways: 'So this in fact is one way we will look for a logic in Deleuze, namely, we will ask, how might we articulate, using certain formal means, the ways that for Deleuze concepts are interrelated in their formation or creation?' (Shores 2021, 5)

This is another important point for the discussion about Deleuze, Luhmann and paradox. It is neither the case that Deleuze is not interested in the kind of paradox that Luhmann considers, nor is it the case that Deleuze's argument does not allow for the kind of formal account given by Luhmann. Instead, the deeper issue is whether Deleuze is right to claim an extension to the formal definition of paradoxes and whether this extension provides a useful, interesting or valid critical angle on Luhmann's approach to paradoxes.

Deleuze disagrees with the dismissal of paradoxes on the grounds that they give an 'unrealistic and unnecessarily complicated' image. The reason he gives for defending this complexity and unreasonable reality is surprising and hard to relate to formal models, logical reasoning and mechanistic accounts of cognition (now outdated with the advent of modern computing and cognition with many-valued logics). The truly realistic idea of thought, the one consistent with Deleuze's definition of paradox, 'puts into play all the powers of the unconscious, and of nonsense in the unconscious.' (Świątkowski 2015)

Two points add to this statement and help to explain it. First, there is seriousness to paradoxes, they aren't amusing exercises but rather something that happens to thought, 'the passion' of thought, in

the sense of an intense passivity to positive and negative influences. A paradox is a disturbing and important intrusion into thought, even when it is manifested in a playful and apparently unserious manner.

Second, this intrusion can only be thought and spoken in new ways; that is, it cannot be said in a language catering only for that which is actually established or taken for granted as logical and common sense. It is an intrusion of radical novelty and nonsensical imagination, like an artistic or scientific revolution. This nonsensical intrusiveness explains the dual shock of paradoxes, since they disturb what we take to be right thinking and they introduce new potentials and forms.

Luhmann and paradox

Prior to a closer study of Luhmann's work on paradox, I will respond to two objections to the way I have begun the presentation of his work through Deleuze, since there is always some prejudice implied by letting one thinker or another set the scene. The first objection is that for Luhmann systems aren't closed, but rather in touch with and dependent on an environment. That's true, but it does not address my point. Though systems are open, for Luhmann and for autopoietic theory more generally, there must be an autonomous core that is distinguished from, reacts to and acts upon environmental changes through internal developments. Deleuze and Luhmann have environments in their theories, but the interaction with those environments is different.

The second objection is that, like Deleuze, the emphasis in Luhmann's theory is on difference and creative actions responsive to changes in an open system. (Richter 2018 and 2023) There is no essential core to the system since it is merely posited on difference and self-reflective adaptive change based on that difference: 'What has been added, in my opinion, is the possibility of a more radical formulation of the system definition. Now one can say the system *is* the difference between system and environment.' (Luhmann 2013, 44) This passage should be read as saying that the system is only the difference, in the sense that there is nothing essential to the system other than how it maintains distinction from an environment while changing.

There are two flaws in drawing this parallel between the two philosophies of difference. First, regarding Deleuze, it is difficult to equate his concept of difference with a distinction, in the sense in which Luhmann uses it: 'What I mean is that a system can distinguish itself from its environment. Its operation *qua* operation produces the difference.' (Luhmann 2013, 55) The whole point of Deleuze's definition of difference is to avoid oppositions, negations, distinctions, boundaries and identities of this kind. On the contrary, for him, difference is a process of differential multiplicity: not distinctions but continuities of variations, not negations but intensities, not oppositions but reciprocal conditions, not boundaries but series of shared processes, not identities but differential processes.

Second, regarding Luhmann, Deleuze's concept of creation as the event of the new is not a responsive act caused by an environmental or internal alteration leading to internal change. On the contrary, the event of the new brings about a passive and revolutionary change such that systems, series, actualities and identities are fully transformed. (Smith 2012) The new, for Deleuze in Difference and Repetition, is a break or caesura and not an adaptation by a system that transforms

itself and acts upon new information. (Deleuze 1968; Williams 2011) This Deleuzian condition cannot be applied consistently to Luhmann's ideas about systematic change, since they undermine its dependence on the self-reference of a system, its positive acts responding to new information, its internal timeline of change, and its systematic identity over time as an adaptive system.

Belying the superficial similarities in vocabulary, these points apply directly to the different concepts of paradox in Deleuze and Luhmann. They demonstrate not only that the conceptual systems are different and inconsistent but that the bases they form for pragmatics are also entirely different. In *Essays on Self-Reference*, Luhmann describes the paradox of pragmatism as its theoretical rejection of circularity yet practical acceptance of it in defining truth as determined by the practical results of knowledge. (Luhmann 1990) Circularity is a logical flaw that renders an argument invalid by assuming the conclusion, but it is a practical necessity for pragmatism because it must assume that truth is determined by its practical uses in order to arrive at such truths.

Luhmann's discussion of paradox depends on two versions of paradox maintained at the same time. On the one hand, paradox is defined in a strong version, where the same proposition is and is not true, or where an argument is viciously circular. On the other, in a weaker version, paradox is summed up by a problematic question of the form 'How can this system overcome this particular problem?' Paradoxes are described and recognised through contradictions, but they are resolved as more practical obstacles.

For instance, one of the paradoxes of law for Luhmann is that a universal declaration must be made by a subset of humanity, leading to the contradiction that the original signatories are both a particular group and speaking for everyone. (Luhmann 2022) However, stated as the practical problem 'How can a subgroup best represent humanity?' the paradox becomes solvable through various attempts at the most accurate representation. Furthermore, that looser version of the paradox becomes a driver for improvements in legal and political systems; for example, through the inclusion of groups formally banned from voting (Free 2015), or through technological advancements (Saltman 2006), or in debates about extending suffrage to groups formally thought ill-suited to voting rights, such as children. (Pearse 2024)

This means a paradox does not constitute a final obstacle to practice, but rather each paradox emphasises the need to find practical solutions to overcome specific temporary contradictions in a system. These solutions involve change in the systems' internal processes such that self-reference leads to a change in identity – a reformed legal or voting system, for instance -- yet the system retains a higher level identity even as it changes, as the combination of self-reference and the management of change. Paradox then becomes significant due to positive practical solutions to the problems it raises.

As shown in the essays in the detailed collection [Deleuze and Pragmatism](#) (Bignall, Bowden and Patton, 2014) Deleuze's approach to pragmatics does not involve a direct connection between practice and paradox of the type recommended by Luhmann. Instead, that relation is mediated through other concepts, most notably, sign, event, apprenticeship and counter-effectuation or counter-actualisation. (Deleuze 1969) This differs from Luhmann's theory, where practice seeks a direct resolution to a particular problem. The latter is a utility-based approach, such that the value of a paradox is in the generation of successful solutions, the former involves an art of living with persistent paradoxes and problems, as indicated in the idea of apprenticeship and accompanying

ideas of learning how to respond well to events and signs, rather than attempting to solve or eliminate them. (Flanagan 2015)

At this point another objection can be responded to. Even if there are major divergences between Luhmann's and Deleuze's definitions of difference and paradox, aren't their philosophies often similar in their emphasis on pragmatics and refusal of essential characteristics defining particular systems? Don't they advocate change as the major principle of any system and don't they defend similar accounts of flexible systems that are bound to evolve?

The answer to these remarks is that different metaphysics, ideologies, theories and principles can lead to similar practical action based on general ideas about change and transience. However, any likeness is time-bound and dissolves when conditions change, because each conceptual structure provides different reasons for action and these reasons can lead to different outcomes under altered circumstances. For instance, a Deleuzian apprentice might resemble a Luhmannian developing system as they adapt to an event, but the apprentice is learning how to coordinate a series of signs and singularities, whereas the system is solving a practical problem. (Borum 2017) As signs change continuously for Deleuze, the apprentice will have to adapt continuously, but for Luhmann the system will only have to develop if a new paradox arises.

In his lectures on systems theory and the work of George Spencer Brown, Luhmann makes a series of statements about paradox based on the paradoxes stemming from 're-entry' as defined by Spencer Brown in his influential book *Laws of Form*. (Spencer Brown 1969, 97-99) Luhmann is less interested in a full interpretation of Spencer Brown's ideas than connecting concepts of self-reference and hetero-reference as joint features of communication: '[...] a social system that works with the operator "communication" always already includes the operator "re-entry" and could not function otherwise. An internal reference or self-reference and an external or hetero-reference are processed more or less simultaneously.' (Luhmann 2013, 56)

The reason Luhmann makes this connection is to show how the re-entry of self-reference, or the treatment of a self-reference as a hetero-reference, leads to a paradox in the classical sense of a necessary contradiction. Like reading oneself, the re-entered self-reference is both a self-reference and a hetero-reference. The self-reflective question 'Why did we do that?' is a good way of understanding what Luhmann is getting at. An organisation might act in a certain way internally when prompted by (but not controlled by) an external change. The action is based on self-reference (what we'll do) but later, when reviewed, it becomes a hetero-reference from the point of view of the new self-reference (that's what we did but we need to analyse why and correct it).

This re-entry of self-reference forms a classical paradox, because an act and thought process is both subject and object, both self and other. Furthermore, these contradictions are problematic because they lead to an endless recurrence that is troublesome for every occurrence of self-reference, since each one can be taken instantly as a hetero-reference by the system and since this sets off an endless *mise en abîme* of self and hetero-references with no ground in a final secure self-reference: a nightmare of spiralling otherness maddening the Cartesian cogito. (Foucault 1963)

For Luhmann this paradox is significant and productive in four ways. First, it moves away from an unchanging internal core towards system developments, since the key feature of the system is a paradoxical self-reference generating a need to reinvent itself. Second, it defines and explains

paradoxes in terms of the following characteristics: system breakdown; conflicts and conflict resolution (this is contra Habermas, see Luhmann 1990, 14 and Richter 2018); internal/external distinctions; and 're-entry' leading to contradiction. Third, paradoxes are taken as solvable as aspects of system development. Fourth, significant system change occurs through paradox solving; in social and legal systems (Luhmann 1990, 15-16) and for autopoietic systems more generally (Luhmann 2012, 78).

The paradoxes of re-entry and their consequences for the understanding of systems have direct connections to Luhmann's studies of autopoiesis. Re-entry is a property of autopoietic systems because only such systems combine internal autonomy and unity with the re-entry of self-reference as external. Once we take account of the effects of re-entry, autopoietic systems become complex and multiple thereby leading to the paradox of a complex unity that Luhmann describes as typical of autopoiesis in Theory of Society. An autopoietic system is both complex and unified. Furthermore, complexity is the unity of the system. (Luhmann 2012, 78) A system is defined by its complex autonomous development through successive iterations and not by any single instance or state.

Mention of the paradoxes of autopoiesis is an opportunity to set aside a possible distinction between Luhmann and Deleuze whereby the former escapes the paradox of pure difference. If a system is purely difference, then it has no identity that can support this pure difference, but if it has such an identity, then it cannot be pure difference. The same paradox applies to autopoietic systems as they evolve in response to paradoxes by solving them since, if the system is just difference, in the sense of self-change, then it too cannot be identified without raising the paradox of pure difference. This paradox is raised by Pier Luigi Luisi in relation to autopoiesis and cells: 'And here we are faced with a paradox: despite all these changes, the cell maintains its individuality -- a liver cell remains a liver cell, an amoeba remains an amoeba, and so on.' (Luisi 2020, 51)

The combination of system improvement and rectification in response to paradox has become an influential part of Luhmann's legacy in many fields. It is summed up by Dong-hyu Kim in relation to standards and technological innovation: 'Understanding the complex relationship between technological standards and innovation through the lens of Luhmann's theory provides a comprehensive framework for managing the paradox of stability and change. By embracing both dynamic stability and stylisation, systems can navigate this paradox effectively, ensuring sustainable growth and adaptation in an ever-changing environment. (Kim 2024, 9)

There are similar adoptions of the theory in communication theory (Nöth, 2023) and more broadly in Critical Theory (Overwijk 2021). Some of the approaches use the concept of deparadoxification to describe development movements; for instance, in curriculum design in education (Hilt and Riese 2022) or the development of social policy (Sevelsted 2022). In each of these cases, the paradigm comes from Luhmann's combination of paradox and its solution by a system change: 'As is typical of paradoxes, this one, too, can be dissolved. In fact, a paradoxical formulation does not make much sense if one does not also possess a transformative formula, a formula that can dissolve the paradox.' (Luhmann 2013, 60) Will no one rid me of this meddlesome paradox?

Conclusion. A violent opposition

Deleuze's and Luhmann's concepts of paradox are different and at odds with one another. Furthermore, these differences lead to stark oppositions for pragmatic action and for the concepts of system, language and problem. Above all, for ideas of the existence and function of systems in relation to paradox, there is a violent difference between the two, since Luhmann defines systems as paradox solving whereas, for Deleuze, aggregates of processes live well or badly with the continuation of paradoxes and what they reveal for existence.

Why do I say violent? It is because the difference implies opposed and inimical ways of thinking about living together. If a system exists under siege and autonomously, evolving to survive within its boundaries, it cannot avoid living against its surroundings, viewing them as threats, even viewing its previous iterations as failures and dangers. The paradox solving model encourages the kinds of paranoia we encounter in firms, disciplines, societies and individuals that privilege their autonomy and their latest future-bound state as highest values, since for them life is autopoietic autonomy. 'Don't be evil' does not stand up to the injunction 'Do the right thing' when rightness lies in the growth of a privileged system under external threat.

However, if a system is defined by a cosmic and unsolvable paradox, one that is recurrent and that concentrates everything within the system as wounds, destiny and occasions for intense counter-affirmations, then dreams of autonomy, safety within secure boundaries and self-generated development will always be doubly mistaken, by denying the infinite extension of events and by cutting us off from the only way to live with them well; that is, by taking them with us in new ways. Autopoietic autonomy, self-reflection and stage-wise development are the epitome of these mistakes.

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