



# Formen des **Ganzen**

Herausgegeben von  
Eva Geulen | Claude Haas

Wallstein

## Formen des Ganzen

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# Does the Body Politic Need a New Body?

Yusko Ward-Phillips lecture, University of Notre Dame,  
3rd of November 2016

BRUNO LATOUR

On September 26th, I was in a plane to Calgary to be reunited with the team that was to perform our play *Gaia Global Circus*, when, by chance, looking at the window, somewhere above the land of Baffin, I could, for a few seconds, catch a view of sea ice. I have always battled with stewards to keep open the window shutter when I am passing over Greenland and then Canada and for several years now I have been oppressed, as I am sure you have too, not by the sublime view of those vast expanses of ice, but rather by the vague feeling of guilt that my very action of traveling by plane over Greenland had some effect, no matter how minuscule, on the disappearing ice a few kilometers below my comfortable seat. It was however the first time that I saw the face of the ice pack glaring back at me through some demented version of Munch's *Scream*. What had been a décor far away outside, had now jumped inside.

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It is a great paradox of our present political situation that just at the time when the deepening of the ecological mutations shows the limits of the notion of sovereignty as it has been exerted by nation-states, it seems that everywhere people are agitating for a return to the safety of borders – some, in this country in particular, wish to build a high wall along its southern boundary. The European Union, this most audacious, subtle, and complex set of inventions to overcome the limitations of sovereignty, is being slowly dismantled, once again, by a return to the apparent safety of strictly enforced borders. After the historical shock of the Brexit, many Europeans learned a few days ago with some dismay that there is a parliament in Wallonia that can decide upon questions of international treaties. Soon we will hear that Scotland or Catalonia have become sovereign nations or that older nations, following the example of Shrinking Britain, have decided to secede from the Union. Everywhere the reasons given for such a flight toward the safety of borders are the same: control of migrations. Although people don't seem able to feel acutely enough that all ecological questions cross boundaries, they concentrate on a proxy of this crisis: the crossing of national boundaries by growing masses of desperate populations. The rejection of traumatized migrants is how most people, in effect, translate the coming crisis of ecological mutation.

This paradox of insisting on sovereignty just at the time when it is becoming even more ill adapted than before, can be sharpened. A legitimate desire for protection and identity is being transformed into a *denial* that what allows this protection and identity actually comes from resources that exist *beyond* the apparent limits defining any given body. Nowhere is this requirement clearer than in the question of global climate

mutation: to withdraw inside the narrow limits of nation-states is the surest way to *threaten* the safety and livelihood of those same nation-states, and even, for some low lying countries, to risk their existence altogether. If we accept to define Real Politick as a selfish defense of one's own national interest, then it should be *realistic* to take into account all those external factors on which the self depends. In some ways, this is what brought the 189 nation-states to some sort of agreement in Paris in December 2015: even if they reacted much too late, it is in the name of Real Politick that they were forced to take into account the legitimate power of the climate that ignores all national boundaries but that weighs on all of them. Nations did not stop pursuing their interests, but they were forced to accept that those interests were entangled in such a way that drawing the precise limits of those interests had become impossible. Even if you suppose that hard-nose geo-politics obliges states to remain selfish, you will have to recognize how terribly difficult it is for any one of them to draw the exact boundary around the self at the time of ecological crisis.

Such is the paradox that I wish to explore with you tonight: how can we define anybody as acting selfishly if the *limits* of those selves are so confused about the fact that most resources lay *beyond* the border of its identity? Or, to put it more simply: what does it mean for anybody to have an identity if most of what makes it up resides *outside*? It is this paradox that explains what could be called the constant *surprise of identity*: you believe that you know the limit of a given self, and suddenly there appears a phenomenon that you realize retrospectively has always been necessary for sustaining the existence of this body. Once the surprise has passed, begins a complex negotiation to redraw the new boundaries of the self. Such is the process of retrospective explicitation: you render more and more explicit and you extend further and further outside that which allows you to exist inside. Or, on the contrary, you deny the existence of those elements, you withdraw behind the borders, and you progressively become irrelevant and soon disappear. Just what the Brexiters have decided to inflict on their country. Just what the climate negationists impose on their own land.

I am presenting the problem in a somewhat abstract fashion, but the oldest mythology stages it much better: you all know, I am sure, the *Fable of the Members and the Belly*, and maybe one of its best versions at the beginning of Shakespeare's *Coriolanus*.

There was a time when all the body's members,  
Rebelle against the belly, thus accused it:  
That only like a gulf it did remain  
I'th' midst o'th' body, idle and unactive,  
Still cupboarding the viand, never bearing  
Like labour with the rest;  
where th'other instruments  
Did see and hear, devise, instruct, walk, feel,  
And, mutually participate, did minister

Unto the appetite and affection common  
Of the whole body.<sup>1</sup>

The plebs having revolted against the senate, Menenius reminds them of the story that when members had revolted and championed their identity, the belly had brought them back to their senses by telling the members:

True is it, my incorporate friends, quoth he,  
That I receive the general food at first  
Which you do live upon, and fit it is,  
Because I am the storehouse and the shop  
Of the whole body. But, if you do remember,  
I send it through the rivers of your blood  
Even to the court, the heart, to th' seat o'th' brain;  
And through the cranks and offices of man  
The strongest nerves and small inferior veins  
From me receive that natural competency  
Whereby they live. And though that all at once –<sup>2</sup>

If this oldest of fables is so important, it is because it has given a highly specific *spin* to the question of what is a political body, first, quite obviously, by comparing it to a *biological* body – the Belly is to the Members what the Senate is to the Plebs – and, second, more perversely, by implying that there is a *superior order* – natural or even divine – that has *distributed* the tasks among all the organs so that neither the Members nor the Belly may change them. If they must cooperate – which they do after the plebeian revolt has been quashed – it is because they all obey some superior injunction. This suggests that, in addition to the parts – Members as well as Belly, Plebs as well as Senate –, there exists a Whole of which they are only the obedient and functioning parts. The body politic is defined not exactly as an organism (a notion of great complexity as we shall see) but as a *super-organism* where the prefix »super« means a *Whole superior to the Parts*. Order is restored when the original intention of the super-organism is underlined again and the parts agree to play nothing more than their limited roles without looking higher or further.

Actually I could have used an equally well known fable, that of Bernard Mandeville, in which, this time, it's Bees that are used to tell another parable of biology and politics. As you all know, Mandeville's *Fable of the Bees* argued that »private vices«, that is, the selfish agitation of a swarm of bees, will end up producing »publick benefits« better than any superior authority. The more you pursue your interest, the more optimal will be the social order you will promote. Is this fable so different from the former one? Apparently yes, since there seems to be no super-organism allocating

1 William Shakespeare: *Coriolanus*, Act 1, Scene 1.

2 Ibid., Act 1, Scene 2.



roles and functions to individual parts as was the case with the *Fable of the Members and the Belly*. However, the difference is minimal, since, in the end, there is indeed a distinction between the Parts – the swarm of bees each following individually their selfish interests – and the Whole, the Publick Benefits, which in modern parlance would be called some sort of Market Optimum.

If you compare those two fables, you will realize that the only difference is that Shakespeare's tale implies an order (natural or divine) that *precedes* the distribution of roles between Members and Belly, while in Mandeville's story, the superior order *follows*, and follows *automatically*, the interplay of individual selfish agents. In both cases, you may recognize *two levels*, one for the Parts, the other for the Whole – I have called it elsewhere the two level standpoint.<sup>3</sup> Even more telling, in both cases the *Parts are blind* to the true nature of the Whole that in one case – Menenius – precedes, and in the other case – Mandeville – follows their interactions. That's the crucial point, really: parts are ignorant, they are limited in scope, they should stick inside their limited role, they are fully apart from one another. But the Whole already knows or will end up knowing what's best for them and how to assemble them. And in addition both fables are borrowing their models from biology to make a moral and political point – a biology, as we will see in a minute, that has nothing biological in it, but that borrows its models from politics and social theory!

If you consider that Menenius' tale stands for the State and Mandeville's fable stands for the Market, and that for the last three or four centuries, in all Western countries and especially in this country, the whole debate about what is the best political order has been reduced to more State intervention or more Market freedom, you will realize how impoverished we are to draw the shape of any body politic. It is barely conceivable that we take as the strongest ideological marker a nuance (is the superior order before or after?) that is so small that the only reasonable comparison is that of the struggle between Big Endians and Little Endians in Gulliver's story of Lilliput and Blefuscu. What I mean is that the gigantomachy between State and Market makes so much noise, smoke and dust that it hides the very simple fact that both camps rely on a Parts/Whole relation that is supposed to be borrowed from nature and stamped on all organisms be they humans, cells, organs, ecosystems or bees.

I hope you now understand the title of my lecture and that the answer to the question (does the body politic needs a new body?) should be a resounding yes! How is it possible, at the time of the ecological mutation, when all the questions of borders and limits of selves are being thrown into doubt, when indeed the very notion of nature is being disputed, we still remain cornered by so primitive a definition of organisms, individuals and super-organisms? The limitation of much social and political theory is that it has lived for so long on the metaphor of the body politic, as if there existed a

3 Bruno Latour/Pablo Jensen/Tommaso Venturini/Sébastien Grauwain/Dominique Boullier: »The whole is always smaller than its parts« – a digital test of Gabriel Tarde's monads«, in: *British Journal of Sociology* 63, no. 4 (2012), pp. 591-615, <https://doi.org/10.1111/j.1468-4446.2012.01428.x>.

shared idea, in the natural or in the social sciences, of what is a body and how its boundaries should be drawn.

So my lecture will try to make two points. Can we renew the idea of the body politic when the Parts/Whole relation is replaced by the *overlapping* of its elements? Second, what happens when the borrowing from »natural« models is carefully scrutinized instead of taking for granted that bees, ants, organs, cells, and ecosystems behave like nation-states? By introducing those two changes, I hope to convince you that the body politic metaphor can be more realistically drawn, a question of no small political import at the time of the Anthropocene.

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Although it seems commonsense and ubiquitous, the concept of Parts/Whole is not actually clear at all. Its origin, at first sight, appears to be technical. It seems true that in mechanical devices everybody understands that you can easily assemble or disassemble parts. Kids learn to do that with Lego bricks and plastic scale models, and grownups continue the practice with car engines or AK rifles. Innumerable companies are manufacturing parts for some other factories where the elements are put together according to a predefined blueprint in the well known format of assembly lines.

And yet the problem with this apparently simple model is that to assemble the parts or, indeed, to devise the mechanism in the first place, you should *not* establish a clear cut distinction between the parts and the blueprint. Try for a minute to remember how you follow any instruction manual: you will agree with me that it is only at the end, after long practice, that you will be able to assemble any piece of hardware without a hitch. While you are fumbling with the manual, figuring out the diagrams, getting by with badly translated English, cursing the manufacturer, hitting your finger with a hammer, you will never succeed without constantly superposing each part to the imagined master plan and generating a plausible function for a part by re-configuring the meaning of the blueprint. In practice (I insist *in practice* and not in the *idealized* version of the diagrams) you do produce a constantly shifting overlap between parts and plan.

Such an overlap is even more visible in the engineering shop or designer studio. When the process of invention is studied in detail, it is the back and forth movement between an emerging general plan and the constant shuffling of constantly moving hypothetical parts that a possible blueprint begins to emerge. So much so that technologists will tell you that the blueprint is more like a simplified version of the interconnected elements than a Whole inside which the Parts would simply and blindly *fit*. In other words, there is nothing automatic in the setting up of any automatism. (A point that is at the core of Gilbert Simondon's philosophy of individualization.)

So, if the Parts/Whole model corresponds neither to the manufacturer's, nor to the final user's, nor to the engineer's and designer's real process, why do we take it as providing the ideal definition of a machine? Well, that's exactly my point: *it is an ideal*, and a mythical one at that, of what a mechanical device could deliver if only this ideal could be applied in practice! When we talk of Parts/Whole relations to describe any

given situation – a computer, a society, an institution, a body, a beehive, an economy or a state – we dream of being able to use a technical metaphor that does not work at all to describe any technique whatsoever!

The smooth and undisputable engagement of Parts in Whole works only once so many habits have been stabilized, so many trials and errors have been pursued, that well trained human agents become able to repeat gestures in a highly complex and well-regulated choreography. If Parts/Whole is the worst concept to understand any institution, it is because you need huge and well-functioning *institutions* to be able to imitate, for instance, in the assembly line of a factory, the ideal of what a machine would look like! A machine would appear to be made of Parts inside a Whole, only when it is drawn as what is called, in English, an *exploded view*. Exactly what Damián Ortega has been able to foreground so efficaciously with his works in his famous exploded views of the Volkswagen Beetle.

I agree that it is shocking to discover that so convenient a scheme has actually no use at all except when *everything else* is in place, everything else that the Parts/Whole scheme does not take into account and that technical drawings leave as blank space on the page. And yet it does not require great ability to see what has been missing from the seemingly technical ideal of the machine: *living forms* have intervened at every step: humans are everywhere in technology, to conceive, to manufacture, to survey and to use. If it is never possible to use the mechanical metaphor to describe living forms, it is because they are everywhere at work in the elaboration and sustainment of machines. We have to conclude that the very idea of two levels, one for the blind Parts, the other one for the Whole, does not come from technology but from a certain idea of political order which has been applied to the complex socio-technical domain just as roughly as it has been on the Roman plebs or the English beehives. I hope you understand that if I criticize the machine metaphor it is not because it is too mechanical and lifeless, but because it is too political (without for all of that defining politics either). The Parts/Whole scheme is a certain conception of political order that has been transferred to describe the Ideal of the Machine. And if it does not work for machines, there is not a chance, as we shall see, that it would work for life forms either.

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Even if you agree with me, you might object that all of that is fine but that there exists no clear-cut alternative to the idea of Parts sitting shoulder to shoulder with other Parts before they are »put together« by a more encompassing Whole (before or after, I hope you admit, does not make that big a difference). Is this not the way in which we *draw* technical blueprints, and also the way states are being *drawn* on any colored geographical map, as if they were tiles side by side? Old philosophers use the Latin expression *partes extra partes* to describe such contiguity. Drawing parts, by definition, is drawings things apart, tile after tile. This side by side is at the origin of any idea of boundary, border, and sovereignty and what justifies the apparent commonsense idea that each entity is impenetrable to others. Even though we know that the Parts/Whole does not correspond to practice, we have no other solution except *drawing* entities *as*

if they could be described *partes extra partes*. The alternative would be to consider that entities overlap one another in such a way that, in effect, their insides are fully penetrable by the outsides. But we don't know how to draw it. So here we are faced with a major quandary: we are able to give shape to what does not exist, but for what exists in practice we have no tool!

Fortunately, the by now totally common experience of *web search* has somewhat modified this situation: I am sure you have been puzzled by the apparently counter-intuitive experience that the more you expand the search through the use of any browser, the more precise is the result. Or maybe this is so trivial that you might not even have noticed it. You begin with a name you don't know, you click, you get a more or less long list of instances in which this name has been employed, and the longer the list, the more satisfied you are with the definition you got. You have moved from uncertainty about what this word means to a greater level of certainty. By focusing on the word itself? No, by extending the network that defines it. *Individualizing* any entity means *extending* its network. Note that this is exactly the opposite of what is implied by the individual/society or the Parts/Whole scheme.

This is of course the corner stone of actor-network theory, but it is also a powerful way of rendering the experience of overlapping entities common enough. Why? Because the more you extend a network of relations to individualize any entity, the more you are going to encounter on the way entities which are parts of a network identifying *other* entities as well. If I wish to know who is professor X, I might find that my comprehension of her career is made more specific when I learn she has studied chemistry in Notre Dame and that she was class of 1975, but this 1975 class will also be present in the CV of professor Y, who studied philosophy in Notre Dame. The more I search, the more »class of 1975 at Notre Dame« will appear not as a Whole »inside« which professor X and Y are being the Parts, but as the *overlay* of all the co-participants, each deploying their networks as far *and* as individually as possible. If you insist and follow such a web search experience long enough, you will begin to realize that you can rid yourself of the idea of atomic Parts as much as of the idea of an overarching superior Whole inside which they would fit. In practice, we never experience two levels, one for the individuals, the other for society. (This is by the way the main discovery of the French founder of alternative sociology, Gabriel Tarde – a discovery whose import has been delayed by lack of a search engine ubiquitous and powerful enough.)

If you accept to give some weight to this totally common and now trivial experience of web search, you might understand my point: it might be convenient as a kind of shorthand to talk of individuals as members of a society as if they were Parts in a Whole superior to them, but this is no longer to be confused with what organizations are and how organisms really function. A change in information techniques may help us change our social theory as well. The idea of overlapping entities could become the default position, while the notion of atomic Parts and coherent Wholes slowly fades away – or, more exactly, become *provisional pauses in the new experience of search*. To define the body politic, what should be center stage now is the *trajectory* of such an

experience – the successive steps in what I have called earlier the surprise of identity. While it is probably impossible to *picture* the overlapping entities without adding fuzzy boundaries to fuzzy boundaries, it should be possible to *navigate* through them by making full use of new digital landscapes.

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You remember that the great authority gained by the *Fable of the Members and the Belly* as well as by Mandeville's *Fable of the Bees* is that they drew on natural organisms to render plausible that there exist two levels, one for blind individual identities – the members in one case, the atomic selfish individuals in the other – and a second higher level for the Sum supposed superior to the Parts – the Belly or the Market. But drawing from nature is not without danger because you never know what you will get. The lessons from biology are so counterintuitive that we should borrow from ecologists the slogan »protect nature!«, meaning here, protect natural templates from being kidnapped by political definitions of how social order should be maintained.

If we have to be so careful, it is because it turns out that there is nothing obvious about biological organisms and that biology is just as confused about the limits of the self and the identity of the parts as are engineers, social scientists, politicians or ecologists. Contrary to Mandeville's premise, if you were to follow individual bees, you would quickly realize that in the same way as the actor-networks traced by the web searches I just mentioned, none of the bees plays the role of a Part inside a higher super-organism like the beehive, but that none of them is a selfish individual with a clearly bounded self either ... Rather, the expression »beehive« occupies exactly the same ambiguous position as »class of 1975 in Notre Dame«: it points out a *moment* in the search for an accurate description where all the bees, each individualized *because* they extend further out, are *momentarily* overlapping.

Careful here, I am not saying that there exist *individual* atomic bees, that *then* enter in relations, which *then* result in the emergence of a superior Whole. No, I am saying that bees are superimposed and entangled in such a way that each defines an individualized way *to define* the beehive. Atomic individuals and elements individualized by the extending network are two entirely different things. Overall, the scheme atomic-parts-then-relations-then-emerging-group is less realistic than the overlapping of extended selves. In effect, the Whole is not superior to the Parts, but there are many wholes, each being a provisional way to point at the overlapping elements in the course of a search. Such a view, no doubt, would have complicated the tense negotiation between Menenius and the Plebs, but isn't this just the point? Complicating power relations by redrawing boundaries between inside and outside, that's the name of the game!

Actually, we get a beautiful illustration of this overlap when Deborah Gordon, from Stanford, in a work not on bees but on ants, attempts to define the identity of a colony vis à vis other colonies. (I am admittedly biased in the favor of ants being myself a specialist of ANT ...) To engage in such a geopolitics of ants she has devised one essential new tool: she has managed to track individual ants – that is ants indivi-

dualized by the extent of their continuing contacts with other ants. Thanks to this, she manages to give a visual display of such an overlap without imposing two levels and without conjuring the specter of the ant-colony that would be superior to the interacting elements.<sup>4</sup> Contrary to the meanders of E. O. Wilson, the father of socio-biology, going from super-organisms then to selfish individuals and back to super-organisms, Gordon shows that it is feasible and empirically accurate to *abstain* from using either of those two poles. These poles are in no way necessary for biology to function, but come straight from political theory, just as in the days of Menenius or those of Mandeville.

As the French philosopher Raymond Ruyer has argued, by definition life forms (I use this term to avoid the loaded version of organisms) cannot be understood using the Parts/Whole scheme.<sup>5</sup> Something else is going on that requires concepts that should not be coming from law, politics, or social theory but instead should be as home grown as possible in the fertile soil of biology itself. This is the source of my interest in the enigmatic figure of Gaia that redefines all boundaries and all notions of sovereignty.<sup>6</sup> It's especially relevant that the two inventors of the Gaia theory, Lynn Margulis and James Lovelock, have each disputed the boundaries of the self at two opposite scales – Margulis at the level of the microorganisms, Lovelock at the level of the Earth system. And that both have tried to resist the two level standpoint that their colleagues tried to impose on them in obstinately misunderstanding their respective contributions.

There is no question that »surprise of identity« defines Lovelock fairly accurately. His discovery is that living forms and what was said to be »around« them – called for this reason their »environment« – is not all the décor inside which they reside and struggle for survival but the unintended *outcome* of that struggle for survival. The balance of gases in the air is not what surrounds plants and life forms but one of their by-products. Life forms are not inside an environment; environment is what each life form has done to modify the others for its benefit; each might be as selfish as requested by Darwin's theory, yes, but the limits of the self have become impossible to trace since what each body does to the others, the others do to it as well. Lovelock expressed for the Earth system the same surprise that Alexander Humboldt felt when realizing that forests were not residing *inside* some climate exterior to them but that forests were in part producing their own climates – to the point that if you get rid of the trees, the soil would vanish and the climate would dry up forever. Here again, what does it mean to defend selfishly the borders of the self if the self is partially generated by what is beside the surface of its skin? What does it mean to defend any land if the climate is inside it as well? This is what I mean by the expression New Climatic Regime.

4 Fernando Esponda/Deborah M. Gordon: »Distributed Nestmate Recognition in Ants«, in: *Proceedings of the Royal Society B* 282 (2015), <https://doi.org/10.1098/rspb.2014.2838>.

5 Raymond Ruyer: *Neofinalism*, transl. by Alyosha Edlebi, Minneapolis 2016.

6 Bruno Latour: *Facing Gaia. Eight Lectures on the New Climatic Regime*, transl. by Cathy Porter, London 2017.

If you have followed me you will not be surprised to learn that readers of Lovelock jumped to the conclusion that if life forms were not *in* an environment but were generating their conditions of existence, this meant that some Second Level, some super-organism, has rendered the Earth suitable for life. And indeed, this is most often how Lovelock's argument is being summarized: a huge thermostat must operate to keep the temperature of the planet within bounds. Here we see clearly the limits and the dangers of the Parts/Whole metaphor. This scheme is so limitative that if someone redraws the borders of the self, immediately the only possible branch of the alternative is that there exists a Whole superior to its Parts. At once, Gaia becomes the synonym for a sort of Providential Goddess lording over life forms.

But as I have shown at length, Gaia is not a God of Totality.<sup>7</sup> What Lovelock does is to follow the trajectory of the search so as to avoid the super-organism metaphor *as well as* the implausible idea that life forms would sit, side by side, *partes extra partes*, without overlapping one another as if they were the pieces of one single huge mechanism. For him the Earth cannot possibly be a Machine for the excellent reason that machines need a maker, that is, another life form of higher order, able to make good sense of the necessary overlapping of elements. If there is one metaphor for Earth that does not work it is that of a Spaceship – there has been neither a Cape Kennedy, nor a Houston, Pasadena, or Baikonur to launch it and no God to fix it – no matter if this divinity is conceived in the guise of the Providential God of Intelligent Design or in that of »the Blind Watchmaker« of antireligious campaigns. Earth is not a watch, nor is it designed by anybody. There is no Earth superior to its Parts. And there are no Parts either. The complete misunderstanding of the Gaia theory is really telling. Menenius is never far away when some agitator breaks the consensus and pushes elements to strike in revolt for the definition of what is a whole and what is a part. But don't count on Lovelock to submit to the imperious voice of the Senator! And if you wish to maintain the old order, don't count on the arch contrarian Lynn Margulis either!

I consider the collaboration of Lovelock and Margulis in the 1970s a crucial turn in the history of science. If you want someone to illustrate the surprise of identity, it is Margulis showing that what were considered as united, well rounded and identifiable cells and species, should be construed as assemblages of many different and at first completely alien co-participants. I think you will agree that is not the same thing to consider, for instance, mitochondria as parts playing a role in the *mechanism* of a cell, and the same mitochondria as foreign bacteria coopted and absorbed by the *collecting* activity of a cell, whose trajectory results in successive enrolments of foreign entities – a discovery summarized in the title of a well-known paper by Gilbert, Sapp, and Tauber, subtitled: »We have never been individuals!«<sup>8</sup> Why? Because even if you take

7 Bruno Latour: »Why Gaia Is Not a God of Totality«, in: *Theory, Culture and Society* 34, no. 3-4 (2016), pp. 61-81, <https://doi.org/10.1177/0263276416652700>.

8 Scott Gilbert/Jan Sapp/Alfred Tauber: »A Symbiotic View of Life: We Have Never Been Individuals«, in: *The Quarterly Review of Biology* 87, no. 4 (2012), pp. 325-41, <https://doi.org/10.1086/668166>.

every life form as pursuing its own selfish interest, its own telos, what has become impossible is to draw clear cut boundaries around their frontiers. Here is how the authors summarize the situation:

We report here that the zoological sciences are also finding that animals are composites of many species living, developing, and evolving together. The discovery of symbiosis throughout the animal kingdom is fundamentally transforming the classical conception of an insular individuality into one in which interactive relationships among species blurs the boundaries of the organism and obscures the notion of essential identity.<sup>9</sup>

Now imagine Menenius trying to control the crowd of Rome or Mandeville trying to convert the authorities of England to the free market: if the authors are right, how could they appeal to the authority of natural templates! Belly and Bees would protest as loudly as Organs and would begin to chant: »Cells without borders!« And yet, Margulis' argument has been plagued by the same problem of interpretation as Lovelock's, even though the scale is entirely different. Whenever you begin to doubt the sanctity of bounded individuals, the temptation is to shift to a higher order, and to wheel in a Second Level in charge of distributing roles and functions. And it is true that words like »symbiosis«, or even the idea of »holobionts« (from the Greek words for »life« and »whole«) or »emergent properties« seem to go the same way as the providential version of Gaia: that is, some sort of super-organism. In both cases and at all scales, the same question arises: can we search for the true shape of the Body Politic without jumping to another level, keeping the activity of collecting co-participants as continuous as possible? I agree that picturing overlapping entities is difficult, but it is certainly a more realistic avenue for research than imagining Parts sitting side by side before being mysteriously organized by some superior structure.

The philosophical concept proposed by Leibniz and commented at length by philosophers of biology and by Gilles Deleuze is that of *fold*: living forms are folded many times over because they have engulfed the outside world inside the provisional border of their selves. Fold is another name for overlap. No matter how complex a piece of technology is, no matter how many transistors you manage to put on a chip, a mechanism may have many pieces *superimposed* on one another, but they don't overlap. Conversely, as soon as you misrepresent a life form as an object sitting side by side with another one, you are sure to misrepresent its internal composition as well as its outside. My friend Michael Flower from Oregon has illustrated this for you with an amusing simile: if you transform an average human body into an ensemble of Parts and you make each Part sit side by side, just as Damián Ortega has done with the Volkswagen Beetle, that is, if you are unfolding and literally *flattening* a human body so as to obtain a one cell layer without any overlap whatsoever, you will obtain a

9 Ibid., p. 326.



pancake which will stretch a surface as big as the Notre Dame football stadium!<sup>10</sup> As Flower would say, such a flattening gives you a picturesque idea of how much of the outside world has been *enfolded* in a tightly packed human body. What we take for the border of any entity – nation-state, ecosystem, bee or beehive, ant or ant colony, cells or organism – never recognizes the limit between inside and outside, self and non self, identity and alien, but the brim between *several ways* of overlapping with all the other beings necessary for the continuous sustenance of any being. If there is one thing that is not going to disappear, it is the continuous surprise of identity. And for that, biology offers as many surprises as politics. As the poet Rimbaud said: »*Je est un autre*« (»I is another«).

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To conclude, let me go back to the paradox I started with: how come that just at the moment when the notion of sovereignty is being rendered totally obsolete by the New Climatic Regime, people everywhere are clamoring for a return to national, provincial and ethnic boundaries? Well, I was probably wrong to call it a paradox. I should have said that it is *because* nature has stopped being the outside décor of human history, that people everywhere feel that there is something deeply wrong with the way they are told to picture identity, protection, immunity, and selves. The reaction against migrations is a subset of a general reaction against the weakening of any boundary. With the disappearance of nature as a décor has also vanished the resource to ground politics by appealing to natural templates – no matter if they come from wolves, sheep, bees, organs, cells, DNA or ecosystems. The pathetic attempt at grounding solidarity within natural boundaries – blood, soil, and genes – is bound to fail. But so are the attempts at politicizing natural entities – blood, soil, and genes. What is needed is a new Body Politic precisely because the conceptions of bodies, of natures, and of politics are everywhere transformed. This is just the time to be extremely vigilant on how every field borrows the metaphors of the other fields. What is sure is that if Menenius and Mandeville today were trying to call their respective crowds to order by asking each individual to be blind to the common good they would be booed off the stage. After all, there is another name for overlap, another name for fold, another name for enfolding, and that is *Commons*. A New Climatic Regime requires a new Body Politick.

10 The 37.4 trillion cell human would flatten to 74.8 billion square mm or (rounding up) 75,000 square meters. That is, if we imagined a single flattened human as a »pancake«, it would be roughly 210 meters in diameter (689 feet or about the length of two U.S. football fields, including the end zones) (Michael Flower personal communication).