

Chapter 2

HISTORY AS INTERNAL EXCLUSION: FROM 'THE (RE)COMMENCEMENT OF DIALECTICAL MATERIALISM' TO 'MARK AND LACK'

In 1969, Alain Badiou paraphrased Marx's famous words when he said, 'we pose only those questions whose answers are the pre-given conditions of the questions themselves' (1969/2007 8).¹ Speaking of theoretical, rather than political, change, it featured in his first published book of philosophy, *The Concept of Model: An Introduction to the Materialist Epistemology of Mathematics* (1969/2007). This was a text which was initially prompted by Althusser's invitation for Badiou to present on his *Cours de Philosophie pour scientifiques* at the École Normale Supérieure in 1968, but would also see him step out of the shadow of his master. It marked the end of a four-year period of intense philosophical explication, which was only broken by the 'happy interruption' of May 1968, and the successive turn towards political action this event engendered. Much of what was written in *The Concept of Model* was actually a summation of 'The (Re)commencement of Dialectical Materialism' (RM) (1967/2012), 'Infinitesimal Subversion' (1968/2012) and 'Mark and Lack' (1969/2012), which, I would argue, formed the foundations of his later thought. Bisected by the 'events of May', these three key texts were equally a validation of Althusser's thought, a critique and an outright rejection. Because of Althusser's ongoing relationship with the PCF, they were also an indirect commentary on accusations of ossification and revisionism laid at the door of Khrushchev, to which the PCF was undyingly loyal,² and which, by the mid-1960s, 'seemed mired in anachronistic debates from the 1930s' whose 'intellectual stagnation was palpable and undeniable' (Wolin, 2010: 14–15). One of the key accusations levelled at the PCF was its lack of theoretical development and critical self-reflection, and, as a prominent member, Althusser still sought to influence the party (albeit from a distance). While Badiou was never a member of the PCF, many of his early ideas were formed in Althusser's *Théorie* classes, and it is possible to trace the intersection of Althusser's subtle critiques of the PCF and Badiou's thought in the aforementioned texts. If we could group these themes, they would be the following: the role of the masses and the party in historical change, the distinction between science and ideology in theorizing these relationships, the exploration of dialectical materialism (DM) and historical materialism (HM) as the locus of

structural change in Marxist thought, and how these debates impacted on the conceptualization of the 'historical'. This final question haunted many of Althusser's theoretical promulgations and shaped Badiou's early development. Whether positioning a split between the 'humanism' of Marx's *Economic and Philosophical manuscripts of 1844* and the 'science' of *Capital* (1867) (and the implicit critique of Sartre this distinction masked), to the de-epistemologicalization of philosophy that sprang from a critique of the 'Hegel-Marxist mythology of *Aufhebung*' (Beradi, 2011: 18),³ historical change and questions of historicity permeated Althusser's work during this period and, as a consequence, became a fundamental (if equally unspoken) theme within Badiou's early texts too.

In the mid-1960s, Althusser was, according to Jacques Derrida, 'conducting a struggle against a certain hegemony which was at the same time a terrifying dogmatism or philosophical stereotypism within the Party – a struggle that seemed to me (within the limits of that context) quite necessary' (Derrida as cited in Kaplan and Springer (eds.) 1993: 188). This struggle primarily concerned itself with 'the PCF's Stalinist view of the split between proletarian and bourgeois science and the later battle over the theoretical foundations of the party (and its outcomes) during the period of de-Stalinization' (Pfeifer, 2015: 10). The origins of this position within the PCF can be dated back to the 1930s and the Soviet Union's 'Great Retreat' from the radical Bolshevik experiments of the 1920s,⁴ while its European-wide dissemination proceeded from the Cominform (Communist Information Bureau) founded two years after the war in September 1947. This was an organization headed by Andrei Zhdanov, a leading member of the Soviet Politburo and key representative of Stalinist cultural policy. As Cyrille Guiat has outlined '[i]n their early days, the French and Italian Communist parties, faithfully following the directives of the Comintern in applying the hard, conflictual "class against class" line (1928–34), were advocates of the theory of the two cultures imposed by Stalin. They claimed that there existed a bourgeois, decadent culture whose aim was to maintain and justify the existing socio-economic order' (Guiat, 2004: 58) and a revolutionary Proletarian culture that sought to further the historic cause of the working class. While initially questioning this austere definition of cultural activity, by the late 1950s and early 1960s, the PCF would champion a French version of the 'Russian model of *rabcors*, that is to say workers writing about workers, and for workers about life in the factories' (Guiat, 2004). The two cultures approach – which originally emerged from the Ukraine agronomist Trofim Lysenko's critiques of Mendelian genetics as inherently reactionary and conservative but was then expanded to all forms of scientific activity – was the shift in PCF policy that, in Derrida's words, Althusser 'struggled against'. However, it is worth noting that Althusser did not fully oppose the Zhdanovists' view 'that Marxist science is that through which one can come to separate that which is scientific and true from that which is ideological' (Pfeifer, 2015: 20). Rather, the problem, he observed, lay in the division established between Proletarian and Bourgeois science, a division which was itself, he argued, a symptom of ideology. For Althusser, 'Marxist philosophers [have] forgotten what Marx said

about dialectics, that it could become one thing or the other, could either become “critical and revolutionary”, or play the role of “glorifying the existing state of affairs” (as cited in Pfeifer, 2015: 20). That said, by the mid-1960s, the ideological line emanating from the PCF on such issues as cultural production had softened (i.e. the ‘Party would not interfere in matters of artistic/literary creation’ [Guiat, 2003: 62]), but it was not a two-way street. That is, writers and intellectuals could go about their business as long as they did ‘not contest the design or discussion of the strategy and policies of the Party’ (Guiat, 2003).

While certainly not determined by the developments within the PCF, *For Marx* and *Reading Capital* were undoubtedly, in part, Althusser’s attempt to redress the ideological manipulation of Marx by his fellow party members. It was certainly no coincidence that the political juncture which saw the obfuscation of the science-ideology dialectic within the PCF was mirrored in Althusser’s exploration of (or his perception of) Marx’s own comprehension of this distinction. Just as with the PCF, Badiou argued in his long review of these two texts – ‘The (Re)commencement of Dialectical Materialism’ (1967/2012), published in *Critique* 240 (May 1967) – that Althusser contended that this science-ideology distinction in Marx’s work was a ‘buried difference’ that required closer scrutiny. What is more, the distinction was unresolvable, with no future synthesis. In Badiou’s judgement, for Althusser to

restore the difference [between the scientific and ideological Marx] means to demonstrate that the problem of the ‘relations’ between Marx’s theoretical enterprise and Hegelian or post-Hegelian ideology is properly speaking irresolvable, that is, un-formulatable. Un-formulatable *precisely because its formulation is the gesture that covers up the difference*, which is neither a reversal, nor a conflict, nor a borrowing of method, and so on, but an epistemological *break* – that is, the rulebound construction of a new scientific object whose problematic connotations have nothing to do with Hegelian Ideology.

(1967/2012: 138–9; emphasis added)

One can detect in this passage the early influence of Lacan’s thought on Badiou, and specifically the idea of *Lack* as the Real,⁵ which is the ‘irresolvable’ or ‘un-formulatable’ ‘space’ ‘upon’ which the science-ideology problematic is ‘situated’.⁶ As Feltham has noted, for the later Badiou the ‘impossibility of certain statements ... singularizes the latter by differentiating it from the new structure that renders those statements possible’ (Feltham, 2008: 27). At this point, it is important to note that the Lacanian formulization of Freud’s theory of the Unconscious, in which the excluded returns to generate a new structure in which hitherto proscribed statements become possible, is a step towards thinking historical change as that which was once unthinkable; that is, the very ability to speak an erstwhile impossibility marks the site of a new historical position and by distinguishing this new position brings into sharp relief the former site of impossibility; that is, a break occurs. Yet, as will be seen, a recurring issue is what steps lead us to the point of ‘naming’ this impossibility, especially if

we are drawing from *before* the break to enact the actual naming?⁷ Yet, before addressing such themes, we need to engage with Badiou's early thought (via the influence of Althusser) and how it afforded the very possibility of theorizing the production of historical change.

*Theorizing change: 'The (Re)commencement of
Dialectical Materialism' (1967/2012)*

A contestation of the site of 'historical' change informs much of Badiou's RM and his analysis of Althusser's exploration of historical and dialectical materialism in the work of Marx (simply put, between actual historical change and the philosophy of change). His overall aim with this paper was not a question

of retelling its story, nor of confronting it either with existing theories or with an undifferentiated concept of the real, but rather of folding it back upon itself, introducing some play into it, qua theory, according to the meta-theoretical concepts that it produces – to investigate if this work obeys the rules whose operations it isolates as the law of construction of its objects.

(Badiou, 1967/2012: 143)

He begins his review by echoing Althusser's own condemnation of the theoretical silence in discussions of Soviet and Chinese Communism, by noting that this theoretical 'lacunae must be covered over and the whole chain of arguments must be deformed so that the signifiers of the cover-up may come to find their place' (Badiou, 1967/2012: 133). Using Althusser's own terminology, Badiou argues that 'Althusser's work is attuned to our political conjuncture, for which it provides a grid of intelligibility by indicating its own urgency therein' (Badiou, 1967/2012). By 'find their place', Badiou clearly means they are revealed as pure ideology – a revelation that is only exposed through the 'deformation' or differentiation that is brought about by the 'break'.⁸

As Althusser recognized, the movement from the humanistic form of history (i.e. the mythic narratives of the 'Great men') to the scientific theory of historical change was that the danger persists that this rupture would inexorably slide towards a pragmatic and positivist theory of history. However, for Althusser (and Badiou), there is a short-circuiting of this probability, in which the rupture between the 'early' and 'late' Marx created a historical and dialectical materialism that was not a binary but occupied the same space. The former (historical materialism), as Badiou's fellow student at the ENS Jacques Rancière has outlined, emerged in Marx's analysis in the *Theses on Feuerbach*, which essentially focused on

the fact that Feuerbach defines the essence of man by means of an atemporal relation – whether man/object, self/other, man/woman – and on the fact that, for Feuerbach, sensible experience is not historical. Marx doesn't object to the fact that Feuerbach's history has a subject; he objects to the fact that his subject has no history. If history reaches this subject, closed in as he is in the *contemplation* and

interpretation of the world, it is purely by accident. History in Feuerbach, and in the young Hegelians in general, is the history of *representations* [ideology].

(Rancière, 2011a: 6)⁹

The philosophical tool that enables Marx to enact this critique is that of dialectical materialism. In the 1873 German edition of *Capital*, Marx famously stated:

My dialectical method is not only different from the Hegelian, but is its direct opposite ... the ideal is nothing else than the material world reflected by the human mind, and translated into forms of thought. [...] The mystification which the dialectic suffers in Hegel's hands, by no means prevents him from being the first to present its general form of working in a comprehensive and conscious manner. With him it is standing on its head. It must be turned right side up again, if you would discover the rational kernel in the mystical shell.

(From Tucker, 1978: 301–2)

Once again, for Althusser, this secondary element marked the doubling of Marx's thought in the singularity of the epistemological break. As Feltham summarized, it was a 'cut', in which Marx's *Feuerbach* contained 'first, the new science itself, historical materialism, whose object is the history of the production of societies; second, dialectical materialism a new type of philosophy whose object is the history of theoretical production' (Feltham, 2008: 12). As Badiou observed in RM, this rupture led Althusser to the contention that ideology, as symbolized by the 'contemplative and interpretative subjects', was 'the specific *other* of science – that from which epistemology can teach us how science separates itself'. And, as he continues, 'In the *discovery* of science, we may try to map the "edge" of the break, that is, the ideological place that indicates, in the form of an answer without a question, the necessary change of terrain' (Badiou, 1967/2012: 139). This is the symptom leading to the cause, a reverse engineering of the scientific revelation that serves to reveal the ideological obfuscation. Although, as Badiou intimates, what needs to be made clear here is that Althusser did not specify a clean break between the scientific methods and the recognition of the ideological, as ideology always plays a part in the *representation* of scientific ideas (hence Badiou's tentative spatial metaphor of mapping the 'edge' of the break).¹⁰ Ideology always mediates the 'lived' relationship to objects, while science 'produces forms of knowledge, whose means of production are *concepts*' (Badiou, 1967/2012: 146). As such, it is 'the ideological immanent to science itself' (Fraser, 2007: xviii) that the break reveals. Throughout much of Badiou's early work, he holds to this view of the science-ideology relationship, and two years later in 'Mark and Lack' (1969/2012; see below), he once again 'define[s] an "a priori" science as one which has business with ideology only insofar as it is represented by the latter: science breaks incessantly with its own representation in the re-presentational space' (cited in Fraser, 2007: xxii). Although, once again, 'break' is clearly too distinct a word, as with Althusser's master Gaston Bachelard, it 'is not an instant in time but an ongoing process', as Fraser argues, 'an interminable struggle between the scientific

and the ideological at the heart of scientific practice' (Fraser, 2007: xvii). As Badiou correctly identified some years later (see Badiou/2009: 58), in such moments, we saw a gradual shift to the plane of knowledge as the site of contesting and mapping the ideology-science schism, in Althusser's words, one of substituting 'the question of the *mechanism* of the cognitive appropriation of the real object by means of the object of knowledge' (i.e. positivism) for 'the ideological question of *guarantees* of the possibility of knowledge' (Althusser, 1968/1970: 56). One of the key elements that must be understood here is that through a desire to challenge the Hegelian-Marxist conception of history – the traditional view held by such parties as the PCF that Marxism contained an inherent telos that led towards revolutionary synthesis – Althusser saw structural change as emerging from multiple contradictory determinants (practices). He grouped these contradictory elements as primary (i.e. dominant) contradictions and secondary contradictions. Feltham (2008) summarizes:

The first invariant is that any society is structured both by a dominant contradiction and by secondary contradictions. The second invariant is that the dominant contradiction is determined and conditioned by each of the secondary contradictions: this conditioning is what Althusser, after Freud, calls 'overdetermination'. These secondary contradictions may exist within the domains of religion, ideology, the judiciary, international relations and the political system. The third invariant is that the dominant contradiction is always economic and so in capitalist societies it is the contradiction between capital and labour.

(7)

In *For Marx* (1965/2005:87 – 116), Althusser contended that it is only when these contradictions coagulate that we see an epistemological break. Although, one should not confuse this coalescence as a movement towards a final unity. Rather, the process takes place within the structured whole of the contradictory invariants. For Althusser, the conclusion of such breaks is never preordained. These contradictory forces 'may either be *overdetermined* in the direction of a *historical inhibition*, a real "block" for the contradiction (for example, Wilhelmine Germany), or in the direction of *revolutionary rupture* (Russia in 1917), but in neither condition *is it ever found in the "pure" state*' (1965/2005: 106). He contended that, there was no pure distinction between dialectical materialism (the scientific theorization of dominant and secondary contradictions) and historical materialism (the *actual* structural contradictions of specific modes of production). Rather, the resolution of this condensed overdetermined dialectic was not simply a synthesis of binary forms, it was the production of new forms of knowledge that are themselves an expression of the very rupture caused by the clash of secondary and dominant contradictions. This is why Badiou notes in RM that 'the difference of DM and HM is *not distributive*. We have here a *non-differentiating difference*, which in principle is mixed: impure' (Badiou, 1967/2012: 145; emphasis added). Conversely, Badiou outlined in RM what he considered the three dominant forms of 'vulgar Marxism'

that sought to efface the difference between dialectical and historical materialism (Badiou, 1967/2012: 140). Not in the way already discussed, that is, when the relationship of HM and DM is ruptured by a fracture that collapses historical development and theoretical exploration of that development into a 'singular space' of epistemological break, but, when either DM is collapsed into HM, or when there is an 'equal balance' between the two. He grouped these into the three categories: 'fundamental Marxism', 'totalitarian Marxism' and 'analogical Marxism'.

One could read the first form as partly targeted at the stance of the PCF and its continuing support of the CCCP. As Badiou explains, this form 'takes Marx's work to be a dialectical anthropology in which historicity becomes a founding category ... By thus *undoing* the concept of history, it enlarges it to include the notional dimension of a totalizing milieu in which the *reflection* of the structures, their "interiorization", is a mediating function of the structures themselves' (Badiou, 1967/2012: 141). What is pinpointed here is the belief in a historical teleology that moves from capitalism to socialism – the sublimation of the theories of change, to an inherent process of change itself. That is, this dominance of a particular science of history overrides the multiplicity of invariants that Althusser spoke of as secondary contradictions in favour of the single dominant contradiction of the economy qua traditional Marxist analysis. This was one of the criticisms levelled at Althusser himself, that the plurality of invariants destroyed the fundamental contradiction in capitalist society that Marx outlined in *Capital*. As Roger Garaudy, one-time editor of the PCF publication *Cahiers du Communisme*, countered:

Whatever the complexity of the mediations, *human practice is one, and it is the dialectic of human practice that constitutes the motor of history*. To blur this with the (real) multiplicity of 'overdeterminations' is to obscure the essence of Marx's *Capital* which is above all a study of this major contradiction, this basic law of the development of bourgeois society. Once this is obscured, how is it possible to conceive the objective existence of a basic law of development of our own epoch, the epoch of the transition to socialism?

(As cited in Althusser, 1965/2005: 163-164 FN; emphasis added)

The conservative elements of the PCF, of which Garaudy had joined in 1933, 'accused him [Althusser] of having weakened the explanatory basis of Marxism by lapsing into an incoherent pluralism' (Dews, 1994: 114). In fact, as Feltham notes, long 'after he and Badiou parted ways, Althusser confirmed the anti-teleological import of his theory of change by explicitly embracing *contingency*, re-baptizing his philosophy an aleatory materialism' or a 'philosophy of the encounter' (Feltham, 2008: 7).

The second form of eroding difference between HM and DM, 'totalitarian Marxism', sees HM consumed by DM, where contradiction is treated 'as an abstract law' and is applied 'to any object whatsoever' (Badiou, 1967/2012: 141). As Badiou explains, '[u]nder these conditions, the procedures for the constitution

of the specific object of historical materialism end up being suppressed, and Marx's "results" incorporated into a global synthesis that could never transgress the rule that attributes to the imaginary any assumption of the Totality' (Badiou, 1967/2012). In the phrase 'the imaginary ... assumption of the Totality', the target appears to be the humanist Marxism, which transmutes Marx's theory of history into a theory of the subject's encounter, an encounter that overrides the structural invariants outlined by Althusser and gives rise to a form of idealism. As Peter Dews noted,

If historical events are only truly 'explained' by being deduced from the structure of a social formation, if there is 'no history in general, but specific structures of historicity, based in the last resort on specific structures of the different modes of production' [Althusser, 1968/1970: 108], then the totalizing ambitions of a Sartre are vain.

(Dews, 1994: 116)

As Althusser himself remarked, such approaches simply served to reinforce the Bourgeois myth of the *homo economicus*, which Marx did so much to undermine (Althusser, 1965/2005: 125). In *For Marx*, he saw Engels as the source of this position, but in *Reading Capital*, he identifies Sartre as its contemporary manifestation, who, in *Critique of Dialectical Reason* (1960/1976), 'tries to find a philosophical basis for the epistemological concepts of historical materialism' (Althusser, 1965/2005: 127). As Badiou chides, in such forms of idealism there occurs a 'strange metempsychosis,¹¹ from which Marx emerges saddled with the "cosmic" robe of Father Teilhard de Chardin' (Badiou, 1967/2012: 141).

The final category of what Badiou terms the 'purification of difference' is analogical Marxism, of which he says very little. According to Badiou, what occurs in such instances is HM and DM as 'a relation of correspondence juxtaposing two terms, with Marxist philosophy at every moment being the structural *double* of a given state of social formation, and particularly of the objective form of class relations,' which result in 'pure redundancy' of the two spheres (Badiou, 1967/2012: 142). Of the three examples (DM collapsed into HM or HM consumed by DM being the other two), this is the furthest from Badiou's theorization of Althusser's 'epistemological break'. In analogical Marxism, Badiou sees a clear separation of the philosophical analysis of science and the science of history, in which there is no 'excluded middle', no productive gap or fissure that signifies a possible rupture.

What Badiou attempts to set out in this brief classification is a map of the post-war intellectual currents of Marxist thought. It would not be an overstatement to say that Althusser lay at the centre of the storm that swept across French intellectual culture in the second half of the 1960s. In many ways, Sartre had occupied a similar position as a recognizable public intellectual with the Algerian war, but as noted, with the growth of structuralism and the associated turn away from phenomenological idealism, his reputation had waned amongst the *normaliens* that emerged from the ENS at the beginning of the 1960s. They argued that underlying Sartre's approach was a set of assumptions about the possibility

of mass political action and the role of the subject, which Althusser's theories sought to challenge. Yet, Badiou's RM revealed that Althusser's work contained a blind spot. Simply put: if there are multiple conditions, and the economic remains both dominant *and* immanent to each of the conditions, what is the 'space' in which these conditions encounter one another? How does Althusser theorize this 'space' of overdetermination? How can the determining practice of the economic ('in the last instance') work both *within* the totality connecting the secondary contradictions and at the same time operate as the final determining practice of the totality *outside* of these specific practices?¹²

As Peter Hallward recognized, 'Badiou's main reservation regarding Althusser's effort to relaunch dialectical materialism as a general "science of the scientificity of the sciences ..." is simply a concern that the project does not go far *enough* in establishing its central concepts ("structure", "determination", "the dominant instance of a structure", etc.) on the basis of a purely "formal" and thus self-sufficient discipline' (Hallward and Peden, 2012b: 131).¹³ It was such frustrations that played a role in Badiou's 'mathematical turn' (specifically model theory), a language that is able to explore its own materiality or representational space. This was a model of mathematics personified in the work of the German mathematician David Hilbert. 'For Hilbert', Hallward notes, 'elementary geometric objects like points and lines are not ideal approximations to objects in physical space but undefined terms that conform to axiomatically asserted procedures governing their manipulation' (Hallward and Peden, 2012b: 132). As Fraser (2007) has recognized, in 'general, model theory constructs ... a logical analysis of mathematics' own "representational space", weaving together meticulously ruled systems of interpretation between formal systems and the various mathematical structures that those systems can be said to be "describing"' (xxii). Such mathematical formalizations would emerge in greater detail in 'Infinitesimal Subversion' (1968/2012), 'Mark and Lack' (1968/2012) and *Concept of Model* (1969/2007), but we do see the beginning of this move in RM, primarily around the areas of *conjuncture*, the *conjuncture effect* and, most significantly for this study, his tentative movement towards a *theory of historical sets*. Although, at this point, a focus on the themes of ideological representation does remain part of Badiou's work, he is turning towards a system that treats the materiality of DM as a history of the theory of science with no need for ideological forms of representation. 'For in truth', Badiou states, 'there is no other theory of science than the theoretical history of the sciences'. Furthermore, clarifying a common theme throughout RM, he continues, 'Epistemology is the theory of the history of the theoretical; philosophy is the "theory of the history of the production of knowledge". And this is why the revolutionary foundation of the science of history, insofar as it renders possible a scientific history of the production of scientific knowledge, *also* produces a philosophical revolution, designated by DM' (1967/2012: 145).

The first point Badiou raises regarding the issue of 'totality', which, Feltham notes, has its origins in Aristotle (2008: 10), is to explore the constituent elements of HM via DM. Unlike traditional ideas of HM, in which there exists a determinate practice, Badiou argues that DM allows us to see that HM is composed of multiple

forms of practice. So far as economic practice is concerned, you always have the 'labour force', 'the means of labour' and 'the forms of application of force to the means' (1967/2012: 153). You have the book ends of this condition (i.e. 'raw materials at the point of entry, product at the end'), but it is the relations between these elements that 'defines a practice' (1967/2012). Following Althusser, Badiou recognizes that there are other forms of practice, such as 'political practice', 'ideological practice', etc. (1967/2012). Yet, importantly, in this multiplicity of practices there is no single practice – or more specifically, '*The practice does not exist*' (1967/2012). Althusser himself makes this point in *Reading Capital* – 'there is no practice in general, but only *distinct practices*' (1968/1970: 58) – and Badiou also recalls Althusser's statement in *For Marx* that to speak of a 'totality' of practices is to speak of a 'complex unity of practices in a determinate society' (Althusser, 1965/2005: 167; as cited in Badiou, 2012a: 154). Many decades later, Badiou remarked that this was one of Althusser's key innovations; that is, to speak of a multiplicity of practices was to argue that 'historical existence in general is based upon the multiple' (Badiou, 2008/2009: 59). Once again, we see here the inception of Badiou's movement towards a mathematical formalism that would serve as a model for his ideas of the multiple in *CM* (1969/2007) and then more fully in *Being and Event* (1988/2005). Yet, at this point, Badiou continues to interrogate the philosophical space of overdetermination in Althusser's work, by questioning how the social whole (the totality, 'the sign of the One' [Badiou, 2008/2009: 60]) is articulated by the dominant economic practice? As Badiou asks in *RM*: 'What *type of unity* articulates the different practices among one another?' (Badiou, 1967/2012: 154). Unlike Althusser, who, Badiou argues, maintained the term 'contradiction' out of allegiance to both Marxist tradition and a desire to associate his work with Mao's celebrated 1937 essay,¹⁴ Badiou uses the word 'instance' to refer to those moments when a *practice* is 'articulated onto all the others' (154); that is, it becomes dominant. And it is this process of articulation, or more accurately the result of the articulation, that, following Althusser, Badiou refers to the aforementioned term 'conjuncture'. This 'determining practice' becomes 'the practice responsible for historical change', Feltham argues (2008: 10). *DM* for Badiou offered a way into theorizing Althusser's '*dominant instance*' which 'fixes the *point of departure* of the rational analysis of the whole [that is, of all other practices "under" the dominant condition]' (Badiou, 1967/2012: 155). From this, *DM* serves as an 'epistemology of *HM*' – although, as we will see, there is always the danger that this epistemology is a form of ideology – and this epistemology is composed of a 'set of instances' that 'defines a conjunctural kind of existence' (Badiou, 1967/2012). In terms of the exploration of the historical, it has been reasoned that a danger exists in such a prioritizing of *DM*. As Peter Dews argues,

Althusser's ...attempt in *Reading Capital* to force all scientific knowledge of history into a preconceived mould leads to a number of ... perverse conclusions. He suggests, for example, that the apparently "historical" pages of *Capital* dealing with "primitive accumulation", the struggle for the reduction of the working day, the transition from manufacture to industry, are merely raw materials for

a history, since these are not subsumed under formal laws of structure. On the other hand, the theoretical sections of *Capital* are more truly “historical” since they construct the theory of one region of the science of history.

(Dews, 1994: 114)

Perverse maybe, but a judgement that locates the source of a key component of Badiou’s later conceptualization of history, while partly presaging the formalization of the historian as explored in this work.

Clearly, from this it is not too much of a leap to contend that the economic is not always the final determining practice. For Badiou, ‘if a *conjunctural type* is defined by the instance that occupies “the principal role” – which is dominant – *all types are thinkable*: the conjuncture with a dominant that is political (crisis of the State), ideological (anti-religious combat, as in the eighteenth century), economic (general strike), scientific (decisive break, as in the creation of Galilean physics)’ (1967/2012: 155; emphasis added). As Feltham summarizes, ‘the dominant practice is given the role of both unifying and dictating the identity of its particular structure: for instance, the dominant practice in a given social structure might be juridical, ideological, or religious, and so this practice will give that society its particular historical identity’ (Feltham, 2008: 8).¹⁵ Though, as Althusser himself argued, it is only with the ‘economic in the last instance’, which the phrase ‘principal roles’ seems to signify, that it ‘is possible to escape the arbitrary relativism of observable displacements by giving these displacements the necessity of a function’ (Althusser, 1968/1970: 99). Nonetheless, there is still a confusion here between conjuncture as the engine of historic change *and* forming the defining element in the continuing organization and stability of the structural totality.¹⁶ DM as epistemology, Badiou notes, frequently ‘poses more problems than it solves’ (Badiou, 1967/2012: 163).

Badiou’s response to this was to develop the above-mentioned ‘theory of historical sets’, which sought to explore the dominant-secondary relationship (Badiou, 1967/2012). As he explained, his aim was to construct a ‘formal discipline ... which contains *at least* the protocols of “donation” of the pure multiples onto which the structures are progressively constructed’ (Badiou, 1967/2012). As highlighted earlier in relation to the ideological-science rupture, Badiou reached for spatial metaphors when attempting to map the articulation of the dominant on to a secondary instance. ‘Indeed’, he says, ‘we have seen that the conjuncture had to be thought as a definite system of “places” in which the instances come to articulate themselves onto one another. From this point of view, the dominant ... is essentially a *distributor of places and a definer of functions*’ (Badiou, 1967/2012: 163–4; emphasis added). This, it could be argued, is the first step towards a form of historiography which functions by naming instances of domination, a naming that emerges from the lack within science, identifying the break within the ideology-science relationship.¹⁷ This is why Badiou argues in RM that DM as a theory must be able to ‘think’ its own break (Badiou, 1967/2012: 162). This returns us to the quote by Marx referred to at the very beginning of this chapter, in which the manifestation of a new theory, political formation, etc., is itself the

'site of nomination [that is] prescribed by the very thing it is meant to be naming' (Badiou, 2008/2009, 57) and the dialectic between these two areas – that of the rupture and the naming of the rupture – serves as the dual engine of historical movement. However, if, as Badiou argues, DM is '*the formal theory of breaks*', the problem persists in distinguishing the structure from the causality of the structure; that is, how do we separate out 'an interconnected system of concepts that obey certain [structural] laws of combination' from 'forms in the order of discourse that organize the evidentiary *unfolding* of the system' (Badiou, 1967/2012: 151)? An associated point was made some years later by Honneth (1994), who argued: 'If sections of historical reality – in Althusser's terms, "concrete situations" – can only be grasped in the structuralist theory of history when integrated into the logical context of a social-structural totality, then only the already systemically organized parts of these "concrete situations" can be grasped by thought at all' (94). As Badiou continues, 'the whole problem lies in the fact that the second order by no means represents the trajectory of the first, nor its redoubling, but its *existence*, determined by the very *absence* of the system, and the immanence of this absence: its non-presence within its own existence' (1967/2012: 151–2). The danger is that if DM is the theory of HM, if, as Althusser notes, it is '*capable of accounting for itself, by taking itself as its own object*' (Althusser, 1965/2005: 39), then, as Badiou recognizes, 'DM is strongly at risk of being ... the impossible *enclosure* of the scientific opening in the illusion of closure of typical ideology. Simply put, DM risks being the *ideology of which HM is in "need"*' (Badiou, 1967/2012: 162). The 'distinction of levels of a social formation (politics, aesthetics, economics, etc.) is presupposed in the very construction of the concept of determination, since determination is *nothing else* than the structure-in-dominance defined *on* the set of instances'. Faced with this tautology, Badiou turned to the notion of '*historical sets*' as offering a workable '*collectivizing concept*' (Badiou, 1967/2012: 163).¹⁸ Moreover, if the dominant is, as noted above, a 'distributor of places', then, Badiou argues, set theory offers the possibility of establishing a formal distinction between the structure (the [empty] space of the set) and the practices or functions '*which distribute certain places to the functions themselves*' in the set (Badiou, 1967/2012: 164). That is, a language of mathematical axioms has 'no material place other than where the difference between marks is manifested' (Badiou, 1969/ 2012: 30); it is, as Badiou noted some years later in the words of John Lane Bell, '*radically undetermined*' (2018/2022: 66).

In truth, the actual space given over to the discussion of set theories relevance to the DM/HM relationship in RM is relatively small. In all, Badiou offers just two pages of algebraic proposals in the last quarter of the essay. As highlighted, he begins by marking out two formal operators:

- a) Set P. set of places, or (empty) space of combined efficacies
- b) Set F of functions, or practices, *which distribute certain places to the functions themselves*. These functions are thus defined on a part of F and they take their values from P: they distribute-occupy certain places. We define 'practices' as assignments of places to other practices. (Badiou, 1967/2012: 164)

Following this ‘splitting’, Badiou then goes on to clarify the relationship between the two operators. First, he argues that within a set of places (P) we may have a function (f) which is delimited by another function (f'). This would be called the ‘instance of f according to f' ’, or ‘the distance of efficacy’ $f-f'$ ’ (Badiou, 1967/2012). He then asserts that, when faced with the efficacy of f according to f' , or, in his words, ‘the part of F on which f is defined contains f' ’, displayed as $(f(f'))$, one can argue that in such instances ‘this is the *representative* instance of f : the place that f assigns to itself’ (ibid.). Badiou then moves on to specify that, if we were to distinguish a ‘set of practices’ within F , that is a clear allocation of sites/places that constitute a subset H within F , then we could call this H a ‘*historically representable*’ set. Badiou then stipulates two conditions which must be met if we are to identify such a set. First, there must be a ‘*condition of determination*’ (ibid.). ‘For example’, he notes, ‘[t]here is *in H* a function $det()$ ’¹⁹ which is a bi-univocal application of H on P : $det()$ distributes therefore the practices of H on all the places of P , and in particular it distributes itself – it is *represented* in P by the instance $det(det)$ ’ (ibid.). The one-to-one coupling of $det()$ within H on P is, Badiou argues in the second condition, always ‘extremely regional’ (Badiou, 1967/2012: 165). That is ‘in the sense that the concept of structural causality that we obtained depends essentially on the type of dominance adopted’ (Badiou, 1967/2012). Yet, as Badiou argues, this second condition needs to stress ‘the conceptual difference between determination and domination’ and that ‘the representative existence of the *determining* instance cannot occupy therein the *dominant* place’ (Badiou, 1967/2012). In Badiou’s proposition, the bi-univocity of $det(det)$ ‘allows us to consider that in each place of P stands a practice (completeness of a social formation)’ (Badiou, 1967/2012) one which also introduces the determinant itself. To briefly return to Althusser’s conception of ‘practices’, we must recall that, as Althusser noted in his essay ‘What Is Practice’, when we look at any social formation we can detect a range of practices ‘the practice of production, the practice of technical and, later, scientific knowledge, political practice, ideological practice, aesthetic practice and so on’ (Althusser, 2017: 82). However, as Althusser continues, the important question is ‘less to identify and classify all the existing practices than to establish *the determinant practice in the totality of practices*’ (Althusser, 2017). While Althusser does stress that ‘Marxist theory does not ... claim to provide an exhaustive account of all the practices as a function of its topography’ (Althusser, 2017: 84) and that ‘the way we visualize the determination of the practices, which can originate in either an ideology or a science, is itself part of the practices’ itself (Althusser, 2017: 82), for Badiou, once again, there is a lack of clarity regarding Althusser’s theorization of the bi-univocity of $DM-HM$, or ‘practices as a function of its topography’ (i.e. the space in which these practices interact). As he argues, ‘the problem remains as to the “deduction” of the modes – that is, the determination of “that which” is structured by the structure from that *on the basis of which* the structure is defined’ (Badiou, 1967/2012: 163). In *RM*, Badiou continues to develop a response to this. From the bi-univocity of $det(det)$ – as outlined above, that is, the distribution of practices H on the sites of P , *and* the distribution of $det()$ itself – Badiou explains that ‘[g]iven a function of h of H , everywhere defined in H , and a place p of P , we will define $h(p)$ as being $h(h')$, with $det(h')=p$. In other words, $h(p)=h(det^{-1}(p))$: the function



takes as its argument the function that occupies the place p' (Badiou, 1967/2012.: 165). This is what in set theory is called 'endomorphism'²⁰ and which Badiou refers to as an 'endomorphism of places' (ibid.) – that is, the functions of *det()* that are a part of the set itself. Badiou is here having his logical cake and eating it! That is, his set theorization seeks to account for bi-univocity of place as both structure and structured. After this brief consideration of the operators of *determination*, Badiou then examines the formal properties of *domination*. If we recall, one of the distinctions between determination and domination is that the *determining* instance is unable to occupy the *dominant* place. So, taking the set of *dom()* 'as a function of H defined on H', Badiou argues '[w]e will define the place n -dom by recurrence'. Badiou sets this out as follows:

$1\text{-dom} = \text{det}(\text{dom})$ (instance of *dom* by the determinant)

.....

$n\text{-dom} = ((n-1)\text{-dom})$ (defined as $h(p)$ above) (Ibid.)

What Badiou argues here is that in the first element, *dom* acts on itself ($1\text{-dom} = \text{det}(\text{dom})$), and, as Badiou remarks, this is so because to have ' $2\text{-dom} = \text{dom}(\text{dom})$ ' would be to see the domination of domination. In the second operation, this becomes clearer, as 'on the function that is sent by *det* to the place, here *dom* sends itself' (1967/2012). Finally, Badiou concludes this section by saying that '[w]e will say that *dom* is in a position of *dominant* instance if, for any place p there exist a number n such that:

$n\text{-dom} = p'$ (1967/2012.: 166).

What Badiou is effectively developing here is a series of formal operations that, as Barker notes, enables him to build 'the conjuncture theoretically, axiom by axiom' (Barker, 2002: 17). As we explored, the conjuncture is defined as the dominance of one practice over others, 'a practice placing another practice' (Feltham, 2008: 9). For Badiou, such a moment marks the aforementioned subset of H within F, that is, when 'a *single* determining instance and a *single* dominant instance will be said to be *historically represented*' (Badiou, 1967/2012: 166). What we see here is Badiou's early theorization (through his use of *model*) of a conception of 'history' as an objectless subject. This was an approach that, although not in the language used above, would be further developed in his first book *Concept of Model* (1969/2007), where he noted that 'the problem is not, and cannot be, that of the representational relations between the model and the concrete, or between the formal and the models. The problem is that of *the history of formalization*. "Model" designates *the network traversed by the retroactions and anticipations* that weave this history [of science]' (1969/2007: 55; emphasis added).

However, at this stage of Badiou's work, his specific use of set theory creates two problems. First, 'the weak point of this construction is that the initiation and



intensity of change, and any possible variation in its form, cannot be theorized'. While this system accounts for historic change on a macro-level, Feltham continues, it does not 'at the level at which a militant philosophy is supposed to intervene; the level of a particular political practice' (Feltham, 2008: 9), a lack famously thrown into relief by the events of May 1968. The second issue for Feltham is that 'Badiou argues that economism ... consists in the identification of the dominant practice with the determining practice, the practice that changes a conjuncture ... Yet it is not clear how Badiou's position ... avoids economism in turn'. As Feltham concludes, ultimately, 'in this mathematical structure the order of practices is quite unified, but at the price of eradicating any possibility of the emergence of a new practice: change is theorized as the reshuffling of the same practices into a different order' (Feltham, 2008). A reshuffling that materializes from a seemingly unspoken totality, that, for Feltham, is Aristotelian, rather the Hegelian, in origin (Feltham, 2008: 10–12) (i.e. 'something has to *remain the same* during a change' otherwise one cannot speak of a change occurring *to* something' [Feltham, 2008: 11]).²¹ While in this early work Badiou avoids the reduction of the 'historically represented' to the figure of *homo economicus*, the mathematical approach does still suffer from a final totalization that presents an 'over-complete theory of change', where there is little room for 'contingency or variations in the process of change' and, finally, that 'change itself is limited to modification rather than full-scale transformation' (Feltham, 2008: 12).

Admittedly, Badiou was still an Althusserian with the publication of 'The (Re) commencement of Dialectic Materialism'.²² As with Althusser himself, Badiou's focus was primarily on science and ideology, that is, ideology as a form of representation and how science could circumvent it (if only temporarily) through the act of pure presentation. Yet, unlike Althusser (and with hindsight as to how Badiou's oeuvre would develop) what RM offers is the first step towards a more coherent and transparent *theorization* of conjuncture as the absent cause (i.e. 'absent' because it seeks to make sense of the already existing, but as yet untheorized, transformations of HM. That is, as Althusser himself made clear, there is always a lag between HM and DM – a lag which, Badiou felt, mathematics could address by mapping 'the abstract interval that separates, within DM, the concept of practice from the concept of articulation-unity, and to indicate the allure of its problematic filling' [Badiou, 1967/2012: 166]).²³ As already recognized by Dews, Althusser argued that this space of theorization, the space of eventual philosophical explication of the transformation in HM, is the true site of historical change. And later chapters will show the significance of this to Badiou's theorization of the Event, which would develop the idea that truth is essentially its 'non-presence within its own existence'; that is, it is the 'space' in which a pre-existing discourse is revealed as fundamentally deficient. This is partly because the Event itself is generative of a new critical language which 'speaks' the rupture. This is the materialism of DM. Still, at this point, for Althusser (and Badiou) it was the critical language itself (rather than the 'space' that *allows for the formation* of a critical language) that was the site of historical change.²⁴ And the problem

recognized by Althusser was that when seeking out a theoretical language to chart this new continent, we cannot draw from pre-existing ideological forms of representation. As Althusser notes, DM

cannot borrow its theoretical concepts from the *ideologies* occupying this “continent”, because they are profoundly distorted representations of reality. Nor can it simply “apply” to this new “continent” theoretical concepts that hold for other “continents”, since this “continent” is completely new. Finally, it cannot directly [and] immediately extract its theoretical concepts and their system from the empirical reality of its new object: that is an empiricist, ideological, and hence distorted conception of the practice and history of the sciences.

(Althusser, 1967/2003: 176)

Althusser’s response to this was to look to other scientific discourses as offering a language to ‘question the specific object of a specific discourse, and the specific relationship between this discourse and its object’ which it names (Althusser, 1968/1970: 15). Yet, there is always the danger that this imported language could clash with the new ‘continent’. There is, he detailed in *For Marx*, ‘an inevitable discordance [*écart*] between the imported concepts and their object in the field of the new science. [Still] [t]his discordance is corrected and reduced in the practice of the science as it develops: the imported concepts and their system are rectified one step at a time’ (Althusser, 1967/2003: 177). Clearly, the danger is that these scientific discourses bring with them their own ideological obfuscations, and, as Althusser himself noted, present ‘a very great risk’ where the revolutionary shift is ‘*smothered by the old world and, directly or indirectly, fall[s] back under its sway*’ (Althusser, 1967/2003: 192; emphasis added), a danger Badiou would return to in *The Immanence of Truths*.

Certainly, there is a methodological vagueness to Althusser’s solution of adopting a language which can facilitate the scientific transformation of HM in DM, which could, simply put, ‘extrapolate a general theory of history from the conceptual framework and the methodological articulation of *Capital*’ (Honneth, 1994: 87).²⁵ For Barker, unless he ‘claim[ed] to be able to produce a conjuncture practically out of thin air ... it would appear that (the absent cause of) the conjuncture depends for its existence on some kind of “*preliminary formal discipline*” where the concept of determination could be worked out’ (2002: 17). With his ‘mathematical turn’, this is what Badiou set out to do in RM.²⁶ Towards the end of this key essay, he further argued that the conceptual understanding of HM in Althusser’s work means that ‘[w]ithin DM, the moment of the “pure” theory of historically representable sets seems to me to have to take precedence over the theory of historical structures’ (Badiou, 1967/2012: 167). The ‘hyper-structuralism’ of Althusser and his circle of students, Badiou argues, is in danger of losing sight of the historical structures that DM attempts to explore. Clearly for Badiou, set theory, as utilized in the discussion explored above, offers a redress to this lack of lucidity regarding an understanding of the ‘fundamental concepts of HM (‘structure in dominance, structure of structure, determination’

[Badiou, 1967/2012]). To demonstrate his point, Badiou turns the spotlight on the political conjuncture of the period in which he was writing. His conclusion of RM begins with the reflection that

there currently exists no other resource, at least if one wants to be able to *speak* about that of which the silent reality (silent in *theory*) interpellates us and makes us the “bearers” of determinate historical functions. There exists no other resource if one wants to think what constitutes *our* political conjuncture: de-Stalinization and “pacific coexistence”, tied to that *form of regressive transition* defined by the Soviet regime; American imperialism; the Chinese revolution, which is another *species of transition*.

(Badiou, 1967/2012)

Clearly aimed at the theoretical vacuity of the PCF and the lack of clarity in Althusser's own promulgations, Badiou argues ‘[w]e owe it [“it” being a clarification of DM] to the epistemological lucidity of Marxists working around Althusser if we are capable of reflecting upon this political conjuncture *in our theoretical conjuncture*’ (Badiou, 1967/2012: 168). And if there should be any doubt as to the said target, Badiou continues that without this consideration of the theoretical perspicacity of DM, ‘we would be reduced to regurgitating the *descriptions* of vulgar Marxism and abandoning the vitality of the science, in all its aspects, to the formalist right and to the theologians of Literature’ (Badiou, 1967/2012). Badiou argues that the theoretical ‘working out’ of this political conjuncture was already underway in the work of Althusser's students. Furthermore, once again reaching for a topographic metaphor, Badiou contended that the ‘*place* for such a theory is clearly designated’ (Badiou, 1967/2012).²⁷ In one sense, this latter statement appears to contradict his accusations of ‘vulgar Marxism’ by presenting this space of theorization as a ‘place-holder’ that is kept open by a teleological imperative of working-class revolution.²⁸ Then again, immediately following this, such transcendental schemas are, according to Badiou, evidenced in Althusser's approach and are roundly criticized by him (a schema he attributes to the continued ‘tyranny of Hegel’; although, as seen above, Feltham actually aligns this with Aristotle). ‘When even to escape the empiricist “circle”, Badiou argues, ‘that endlessly confronts the subject to the object, Althusser talks about the “*mechanism* of the cognitive appropriation of the real object by means of the object of knowledge”, he is not so far from schematism, which also sidesteps the problems of the guaranteeing, of the “policing” of the true, in the direction of the positive question of the *structures of the concept's functioning*’. The outcome is a ‘multi-transcendental field without a subject’ (Badiou, 1967/2012: 169). A similar point was made by Dews (1994) when he recognized that in Althusser's framework,

if modes of production are the fundamental forms of historicity *there can be no “historical time”* in which the transition from one mode of production to another takes place ... Thus one of the ironies of Althusser's theory of history is

that it ends by reproducing that division between synchronic necessity and an untheorizable contingency which he had originally criticized in Lévi-Strauss.

(116. Emphasis added)

Badiou concludes RM that if the DM/HM relationship is to continue as a productive theoretical tool, then the juncture ‘of a regional, historical and regressive epistemology with a global theory of the effect of the structure’ (Badiou, 1967/2012: 170) needs to be critiqued more fully;²⁹ otherwise, one will do nothing but ‘sing the song of departure while staying *in the same spot*’ (1967/2012: 169.). Or, as Rancière would come to remark more acerbically, Althusser’s discourse simply ‘cloaks its consecration of the existing order in the language of revolution’ (Rancière, 2011a: 124).

*Indefectibly blank: ‘Infinitesimal Subversion’ (1968/2012)*³⁰

If, as Badiou argued in the *Concept of Model*, following the work of Bachelard (and Althusser’s perceived adoption of it), the resolution to a (scientific) problem ‘reveals’ itself within the space that allows the very problem to be posed, then one could argue that Althusser’s work was itself a manifestation (if not a resolution) of the political tensions emerging from the interpretations and applications of Marx’s work during the 1966–9 period (Badiou, 1967/2012: 138). As Feltham recognized, Althusser saw ‘his own theoretical innovations as interventions designed to clarify the confused situation of Marxism’, and ‘[e]ver since Khrushchev’s speech at the Twentieth Congress denouncing Stalin, the gulags and the cult of personality, there had been, in his eyes, a poisonous flowering of liberal-humanist interpretations of Marx [meaning the work of Sartre, Roger Garaudy, and the idea of “Marxism with a human face”]’ (2008: 4).³¹ Althusser’s aim in such texts as *For Marx* (1965/2005), and his collaborative *Reading Capital* (1968/1970), was to pinpoint the rupture or break between Marx’s scientific theorization of capitalism in *Capital* and his earlier ‘humanist’ works. As we have seen from RM, one could argue that Badiou took this impetus towards a *scientific* theorization of ideology within capitalism more seriously than Althusser himself. Utilizing mathematical axioms (and his theory of historical sets) as a response to the problematics thrown up by ‘conjuncture’ as the engine of historic change *and* as a lynch pin of structural totality, it was Badiou’s first entrée into the formalization of philosophical issues arising from Althusser’s work. In his next essay, he sought to extend this ‘scientism’, seeking to trace the unoccupied sites or ‘blind spots’ that lay within the ideological categories emergent from the economic and historical form of capitalism. IS was the first of two essays for the radical journal *Cahiers pour l’Analyse*, the second being ML, a critical response to Jacques-Alain Miller’s ‘Suture (Elements of the Logic of the Signifier)’ (1966/1977). The editorial collective of *Cahiers pour l’Analyse* came from those students attending Althusser’s classes at the ENS. Shaped by disciplines of Althusserian historical materialism and Lacanian psychoanalysis, the aim of the journal was to generate a wholesale theory of structural change that could also account for the place/role of the subject (a goal

that would have clearly appealed to an individual schooled in both Sartrean and Althusserian philosophy).

While Badiou would come to have significant reservations about Miller's work in 'Suture', IS shared its focus on the point of exclusion within the chain of representation as sustaining the very forms of representation. That is, it was focused on the idea of a 'blind spot' or 'empty place' within the structure. As with Badiou's use of mathematical axioms in RM, to grasp the relationship between the structure and the empty space of the set, and the way certain practices are assigned (and impact) within the structure, IS confronts the proposition of the 'unoccupiable place' via the language of formal axiomatics. The essay itself is divided into two parts. The first part seeks to argue for the site of an unquantifiable variable, which always remains impossible within the system it 'appears' in, but still offers a path to naming a 'fissure' in the structure (in many ways, this space, one could argue, bears an affinity to Lévi-Strauss' 'limit-form' encountered in Chapter 1). The second part of IS takes as its focus the work of the mathematician Abraham Robinson and his system of *non-standard analysis*. This later development provides Badiou with a language to '[occupy] the inoccupiable', and to enact 'an intrusion of formalisation into... [the impasse of the] real' (Fraser, in Corcoran, 2015: 138). The outcome is, once again, Badiou's development of the "subversive" i.e. revolutionary power of scientific formalisation, [specifically] its capacity to interrupt the ideological categories of continuity, quality and temporality' (Hallward, NDb). This is where we see the adoption of the concept of *forcing* (*forçage*), a key tool in offering a retroactive recognition, that also connects with an anticipated futurity, of the truth in past historical situations (events). That is, history as the naming of the point of exclusion, not as a variant of what Tho (2013a) has named as the "Atomistic strategy",³² but rather the "placing" of a generically formal point of infinity that is not 'coextensive with that for which it is "other"' (2013a: 31).

Badiou's IS follows a similar theoretical path to Miller's 'Suture' (see below) by stating that 'what is constitutive for it [the finite] is the empty place where that inscription which lacks is possible' (1968/2012: 187; emphasis added). Clearly, what Badiou is saying here is something any young child who is trying to think of the biggest number can understand. Take any finite number, is that the largest number you can think of? Of course not. You can simply expand it by adding another number ($n+1$). However, Badiou asks, what is the *place* in which this endless inscription is inscribed? Badiou formalizes this as follows:

A number x_n is that which determines "to its right" the place of its successor: $(x_n S) \rightarrow (x_n S x_{n+1})$. To be inscribed at one of the places distributed by S is to assign to the other place [*l'autre place*] the constraining exclusivity of the blank space. The numerical effect exhausts itself in the incessant shunting along of the empty place: number is the displacement of the place where it is lacking [*où il manque*].

(1968/2012)

The question that then arises is, as Hallward posed, if 'through each operation of succession number shows itself to be "the displacement of the place where it

is lacking” ... is inscription in the place of such lack a sort of “representation” or reflection of something external to the inscription, a sort of indication whereby the lack itself might somehow be rendered “visible?” (Hallward and Peden, 2012b: 134). Badiou’s answer to this would be an irrevocable no (he does provide a greater sense of how this can be formalized as a ‘stratified space’, rather than a lack, in ML). As Hallward continues, the ‘endless generation of finite numbers through succession simply presupposes the blank or missing place required for its operation’ (Hallward and Peden, 2012b). In IS, Badiou illustrates this using the example of the Turing machine.³³ He argues that the infinite space, that is, the continual blank space of the inscribed (in Badiou’s example the blank and infinite ticker tape), is what supports the universal applicability of Turing’s postulation. This ‘ticker tape’ is the ‘infinity support’, the ‘non-markable unity of its space of inscription’ (Badiou, 1968/2012: 188). Badiou names the *infinity point* as that within a situation which marks the point of contradiction – or the real – which subsequently gives rise to a new situation. He outlines this as such:

Let us suppose that these procedures allow us to designate a place such that none of the objects that are constructible within this domain can, on pain of contradiction, be marked within it. We will call “infinity-point of the domain” the *supplementary* mark that conforms to the following conditions: a) It occupies the unoccupiable place. b) Apart from this occupation, it is governed by all the initial procedures.

(Badiou, 1968/2012)

What is important for us is that the *recognition* of this infinity point is always a retrospective action; or as Badiou notes, ‘the “potential” infinite, the indefiniteness of progression, *testifies retroactively* to the “actual” infinity of its *support*’ (Badiou, 1968/2012: 187; emphasis added). As such, in the traditional meaning of the word, there is something inherently ‘historical’ about the assessment of this action. Or rather, a historical reflexivity is central to the emergence/recognition of the new. This unoccupiable binary space could be framed as the engine of the historical, or the ‘pulsation’ between the future anterior that a new infinity point opens up and its possible retrospective recognition – a bivalent process that potentially proffers the seeds of a radical form of historiography. For Badiou, these issues manifest themselves in terms of his exploration of infinity as both immanent and external. As he explains:

This infinite [*cet infini*] has a twofold relation to the procedures of construction, since only the latter allow us to determine the unoccupiable place which the former will come to occupy, while the former enables the efficacy of the latter to recommence. But the infinite is also exterior to the domain in which those procedures are exercised – this is its supplementary – since it marks within this domain that which is averred in it only as void. We see then that the infinite closes off a domain by occluding the voids determined within it; but also that it opens up a higher domain as the first point of a second space in which the initial

procedures can be exercised. This pulsation of closure and opening defines the infinity-point: it is the zero of a higher stratum.

(Badiou, 1968/2012: 188)

As was to become customary, Badiou offers a mathematical formulation of this process. He simply states that for all $x, x < y$. In this statement ‘the variable “y” marks the place in question [the infinity point] ... no proper name of a number, can occupy this place – i.e. can be substituted for the variable “y” – without a contradiction ensuing’. x can by all means signify a number, but, Badiou notes, ‘Every number is lacking in [the] place’ of y (Badiou, 1968/2012). Simply put, ‘y’ is a variable but not a number or integer; it names but does not count. Therefore, the space of the void is ‘identified’ but not given a value. Through the act of forcing, Badiou argues, the variable as infinity point is ‘positioned’, but it is a point that is ‘disconnected’ from the system that precedes it. With his penchant for naming these processes and actions, Badiou states, ‘We will call these effects of the marking of constructible empty places a *recasting* [*refonte*]. The infinity-point of a domain is a recasting-inscription’ (Badiou, 1968/2012: 189). In a footnote, Badiou says that he ‘has taken the concept of recasting [*refonte*] from Francois Regnault’ (Regnault was a fellow member of the *Théorie* group, good friend of Badiou’s and fellow member of the UCFML). ‘He uses it’, Badiou continues, ‘to designate those great modifications whereby a science, returning to what was un-thought in its preceding epoch, carries out a global transformation of its systems of concepts – e.g. relativistic mechanics after classical mechanics’ (Badiou, 1968/2012. FN 4). Once more, we see here the future anterior-retrospective dynamic noted above. That is where the infinite calls for a finite mark that denotes an opening – a Janus-faced variable that demarcates an unoccupiable place retrospectively (one detects in such a theorization echoes of Marx’s theory of the commodity, that curious object that is both quantitative and qualitative, materialist and transcendental, the ‘*non-sensuous sensuous*’ of which *Capital* speaks; as Derrida recognized (Derrida, 1993/2006: 6)).³⁴ Within the realm of the already known, the recasting of a ‘space’ as an infinity-point ‘ensures that impossible equations are sufficiently legible to read their impossibility’ (Badiou, 1968/2012: 191). This is the materialistic element of Badiou’s thesis. The infinity point is ‘located’ within the structure but reshapes that structure as a result; to place it ‘outside’ of the structure would be to slip into the metaphysical. Ultimately, naming the impossible within the possible becomes viable with the variable.

It is implicit from the above how much Lacan and his concept of the ‘Real’ were influential on Badiou at this point. There is some confusion over when Badiou first encountered Lacan, but Badiou himself has said it was via the pages of the journal *La Psychanalyse*, specifically Vol 1. (1956), and Lacan’s celebrated ‘Actes du congrès de Rome’ in 1953, which was where he gave the lecture ‘The Function and Field of Speech and Language in Psychoanalysis’. Badiou has said he was ‘literally dazzled’ by this work. ‘I experienced a veritable textual fascination’, Badiou continues, ‘so much so that my theoretical relation to Lacan has also been mediated by his writing’ (Badiou and Roudinesco, 2014: 4). As he became more familiar with Lacan’s work, he would ‘slip references to Lacan into my own essays’ and that

his master Althusser noticed this and then took him to one of Lacan's seminars at the Sainte-Anne Hospital (Badiou and Roudinesco, 2014). Badiou further recalled that in the 1960–1 academic year, he was the first student to propose a presentation on Lacanian thought at the ENS (Badiou and Roudinesco, 2014). Like his colleagues at the *Cahiers*, he came to see Lacan as offering a formal bridge between the conceptualization of the subject and structure, or more accurately, the conceptualization of the subject *within* structure. Yet, one should not naïvely conflate Badiou's philosophical alliance with the other authors of *Cahiers* retrospectively, as it actually took the events of May 1968 to transform his approach to this component (the subject-structure relationship) and the role of Lacan's work in formalizing it. As IS (and ML) demonstrates, the mathematical was more central to his work than the formalization of the subject in this process. As Badiou himself reflected many years later, in the 1965–7 period 'I was [still] freeing myself from Sartre, existentialism and phenomenology. I would say that what first seduced me in my mathematical education was the non-subjective, the making possible of a capacity to think of all intentionality and subjectivity' (cited in Hallward and Peden, 2012b: 138). At this point, Badiou judged 'that if mathematics were to achieve the secrets of thought, it was because of its a-subjectivity. It seemed like a psychosis; that is to say, it was the automatism, a characteristic of the automatism of thought, a mechanical conception of mathematics, that I was concerned with in those days' (Hallward and Peden, 2012b). As such, IS sees Badiou applying Lacan's thought in such a way that the concept of the real is subsumed to that of the mathematical variable. While for Badiou, Lacan's real is 'for a domain of fixed proofs ... defined as [that which] is impossible', in his schema 'an axiomatic system can operate as *this* system, and can allow itself to be thought differently as the discourse of the real' (Badiou, 1968/2012: 192). However, one should not, Badiou argues, conflate the mark of the variable *as* the mark of infinity itself. Rather, the variable prepares a 'space' for multiple forms of the infinite. 'It is in this place of the impossible', Badiou continues, 'which the variable occupies *in order to designate its impossibility*, that the infinity-point will come to inscribe itself as a constant' (Badiou, 1968/2012). The variable is the 'empty-mark', or more accurately, the indicator of 'the prescribed lack of every constant' (Badiou, 1968/2012). Succinctly put, Badiou states that 'the infinity-point is the becoming-constant of a variable in the impossible place whose impossibility it indexes' (Badiou, 1968/2012). The variable does not 'fold' impossibility back into the system it marks (i.e. it does not serve as the 'Other' of the infinite array of constants that may come to occupy its place); as Badiou argues, [t]he decomposition of the continuum cannot reach an indivisible element, or even the reality of an 'infinitely small' part, any more than indivisible elements are able to compose the continuum' (Badiou, 1968/2012: 194). Further, 'if every constructible place is occupiable, the system marking neither differences nor regions, becomes an opaque body, a deregulated grammar, a discourse dense with nothingness' (Badiou, 1968/2012: 192). Rather it distributes 'as many proper impossibilities as there are constants capable of entering or not into any given relation' (Badiou, 1968/2012: 193). There is a clear tension here between the mark of the variable and the 'infinite divisibility of the continuum'

(i.e. the infinite constants that can come to occupy the 'site' of the variable). His argument is that this tension is maintained 'in the unitary space of this exclusion' (Badiou, 1968/2012) (exclusion from the system in which it is 'located'). This is why, to its surrounding system, the infinity point seems irrational, 'since in any given theoretical conjuncture rationality is defined precisely by the respect accorded these blank spaces, as the sole guarantors, variably indexed, of *real* difference for the domain' (Badiou, 1968/2012: 198). Yet, when an infinity point is forced, a 'macro-field' can ideologically close the singular point. Hallward rightly observes in his synopsis of IS that,

[a]long with revolution comes, unsurprisingly, reaction or counter-revolution. The recasting [*refonte*] of a domain which follows the inscription of an infinity-point can have literally anarchic consequences. By forcing the infinity-point of the real number system, for instance, we generate an extension or 'macro-field [*surcorps*]' of 'complex numbers' in which some basic arithmetic relations no longer apply. The structure of order itself is not valid for the remoulded domain, which thus presents a literally 'disordered' field of number.

(Hallward, NDb)

It is here that Badiou highlights how this process can be witnessed in history (in his chosen example, the history of mathematics), where for the sake of "epistemological prudence" (on the part of mathematicians)...conspire[d] with ideological "repression" (on the part of philosophers), to ensure that the infinitely small or "almost nothing" remained without a numerical mark of its own' (Hallward, NDb). By forcing an infinity point through the 'inclusion' of a variable mark, one can establish 'oneself in the constitutive silence, in the unsaid of a domainial conjuncture, one maintains the chance of producing a decisive reconfiguration' (Badiou, 1968/2012: 198). At this point in IS, he quotes the preternaturally gifted French mathematician Évariste Galois, who remarked in his posthumously published 'minor mathematical manuscripts':

It often seems that the same ideas appear at once to many people as a revelation: if one looks for the cause, it is easy to find it in the works of those which preceded, where *these ideas were prescribed unknowingly by their authors.*

(Badiou, 1968/2012: 198, original emphasis; Galois, 2011: 271)³⁵

Returning to Lacan's 'Real', Badiou reaffirms his mathematicizing of the formulation whereby what is barred from the symbolic appears in the real, as 'the excluded proper to an *already produced* mathematical structure reappears as the instigating mark of a real (historical) process of *production* of a different structure' (Badiou, 1968/2012: 199).

Badiou spends the last quarter of IS validating (in algebraic form) the theorization of the issues outlined above. In these closing statements we can often detect some of the themes that would be further addressed in ML. For example, as he has shown, the variable that 'marks' the infinity point is not the

'hidden' point from which the structure is constituted (i.e. 'lack'). Rather, 'the new system obtained by the above procedure is *the formal theory of infinity-points for the transgressive-within-the-finite relations of a given system*' (Badiou, 1968/2012: 202; original emphasis). The extension, while perceived by the system as irrational, is coherent if the system which is transgressed is also coherent. 'We are thereby authorized', Badiou concludes, 'in marking an infinity-point for every relation that is transgressive-within-the-finite: this marking conserves the formal coherence and defines a "non-standard" extension of the structure which is the "standard" (ordinary) model of the system' (Badiou, 1968/2012: 202-203). But, Badiou contends, there has often been a 'guardianship of the real' (199), 'a secret and permanent supremacy of the continuous over the discrete [the mark of the variable]' (Badiou, 1968/2012: 206). As already highlighted, it is a '*retroactive effect*' that has existed 'throughout the history of philosophy', whereby '[q]uality and continuity are mutually implicating ... and which has in part governed the *censuring of infinitesimals*' (Badiou, 1968/2012: 206; emphasis added). As such, we have two approaches: one which foregrounds 'quality, continuity, temporality and negation: the oppressive categories of ideological objectives'; the other, 'number, discreteness, space and affirmation: or better, Mark, Punctuation, Blank Space [*blanc*] and Cause: the categories of scientific processes' (Badiou, 1968/2012: 206-7). These are two approaches which, Badiou observes, 'have been in struggle, according to Lenin, since the beginnings of philosophy' (206) and 'ramified history' has long supported this 'ideality of the Whole' and negated the 'linking [*enchaîner*] [of] the infinite through them' (Badiou, 1968/2012).

*'Lacking a mark, never a mark of lack':
Mark and Lack: On Zero' (1969/2012)*

Badiou once reflected that 'in 1967, just before the political storm, my mediations were on the side of formal structures', while after 1968 his focus was 'on the side of political subjectivity' (cited in Hallward and Peden, 2012b: 127, FN. 8). While ML was published in the penultimate issue of *Cahiers* in 1969, it was actually written in January 1967, before this ontological 'breach' (Hallward and Peden, 2012b: 141). The essay, Hallward argues, 'deserves to be recognized as one of the pivotal moments in the history of French structuralism' (Hallward and Peden, 2012b: 138). Like IS, ML finds Badiou attempting to clarify the boundaries between the ideological and the scientific, once again in relation to questions of the void and the subject (which, as he was still in full Althusserian mode, he remained hostile towards). The central target of ML was the work of Jacques-Alain Miller and specifically his (subsequently) celebrated essay 'Suture (Elements of the Logic of the Signifier)' (1966/1977), which was the third work in the opening issue of the *Cahiers* (partnering Yves Duroux's paper 'Psychology and Logic'). Against Miller, Badiou's aim in ML was to 'delineat[e] the impossibility

of a logic of the Signifier that would envelop the scientific order and in which the erasure of the epistemological break would be articulated' (Badiou, 1969/2012: 160). The argument levelled at Miller was that fundamentally 'the logic of the Signifier is a metaphysics: a representation of representation, an intra-ideological process and progression' (Badiou, 1969/2012). While it is not within the scope of this work to offer a full and comprehensive analysis of Miller's text, it is worth noting some of its key elements alongside Badiou's theoretically detailed riposte.

Lacan himself never developed a theory of 'suture' (and some years later Badiou himself would eventually come to see Miller's paper as 'the first great Lacanian text not to be written by Lacan himself' [Badiou, 1990/2008: 25]), although Miller starts 'Suture' by saying he has no experience to speak about psychoanalysis. There are three sections in 'Suture', the first being 'Concept of the Logic of the Signifier'. In this segment, Miller asks the question '*what is it that functions in the series of the whole natural numbers to which we can assign their progression?*' (Miller, 1966/2012: 94). His immediate answer is that 'In the process of the series, in the genesis of progression, *the function of the subject, misrecognized, is operative*' (Miller, 1966/2012). It is in the exploration of the theorization of this 'space' that constitutes the subject and thus the structure itself that Miller turns to the work of the mathematician Gottlob Frege (1848–1925). As Tho (2013a) has recognized, 'Frege, by reasoning that there is nothing [0] that is not identical with itself, " $x \neq x$ ", identifies a concept with no extension at all, since it does not refer to anything' outside of its own non-self-referentiality (36). (This point was famously examined by Russell and Whitehead in their *Principia Mathematica* [1903].) Just to clarify, in Frege's thesis the extension of the concept 'not identical with itself' is ϕ or 'zero'. We are able to continue to extend this, in which

"One" would be the counting of this empty extension $[\{\phi\}]$, "two" would be the counting of this counted empty extension $[\{\phi, \{\phi\}\}]$, and "three" would be the counting of the counting of this empty set $[\{\phi, \{\phi\}, \{\phi, \{\phi\}\}\}]$, and so on. This iterative procedure indeed returns to satisfy the iterative or successive structure of arithmetic progression. Once in place, the expansion of this basic procedure would allow us to map the successive, or iterative structure, generating the variety of other numbers.

(Tho, 2013a)

In 'Suture', following Lacan, Miller argues that the subject is this initial barred object (ϕ). This

impossible object, which the discourse of logic summons as the not-identical with itself and then rejects as the pure negative, which it summons and rejects in order to constitute itself as that which it is, which it summons and rejects *wanting to know nothing of it*, we name this object, in so far as it functions as the excess which operates in the series of numbers, the subject.

(1966/2012: 99)

What Miller is arguing here is that any structure which presents itself as consistent does so by excluding that which is inconsistent or not equivalent ($x \neq x$). As such, it is those elements that are excluded that are constitutive of the structure, that are non-identical and which can be represented by the mathematical figure of the void (\emptyset). In Miller's analysis qua Lacan, this marks the site of the subject; that is, 'the excess of the structure, whose very content, "not identical with itself", calls upon *suture* that extra-structurally correlates subject and structure (through the impossible object)' (Tho, 2013a: 38). Yet, for Badiou, Miller's thesis is not really a *logic* of the signifier at all; rather, its movement towards the representation of lack is pure 'metaphysics'; there is no epistemological break here between science and non-science. As Tho remarked, 'Badiou contests that [Miller's adaption of] Frege's use of the non-identical ($x \neq x$) does not in any sense produce a "lack" and, in turn, there is nothing to suture' (2013a: 39). That is, correspondence without concept does not imply the lack of a concept. Ultimately, as Tho recognizes, for Badiou 'the marks that enter into scientific practice such as formal logic or mathematics are generated without any repression of a fundamental lack' (Tho, 2013a). His response is to set out the proposition of four levels which, he argues, are central to the logical process. These four 'mechanisms' are abbreviated as follows: M_1 , M_2 , M_3 and M_4 . M_1 is *Concatenation*, and it simply classifies the 'graphic marks' or 'alphabet' which constitutes the tools of logic. This is what Hallward identified as the '(neo-Hilbertian) inaugural confidence in the permanence' and 'self-identity or self-substitutability of logico-mathematical marks or graphemes' (Hallward and Peden, 2012b: 139). M_2 is *Formation*, and it operates on M_1 . As Badiou himself outlined, for a logical expression to be classified as 'well-formed and the others as "ill-formed"' in M_2 , then 'the division [should] be without remainder', meaning for any 'given inscription [in M_1] whatsoever (i.e. finite sequence of signs of the alphabet), there exists an actual procedure that permits one to determine unambiguously whether the expression does or does not conform to the rules of the syntax' (Badiou, 1969/2012: 161; FN). The third mechanism (M_3) that operates upon *Formation* is *Derivation*. Badiou notes that *Derivation* 'is set up to produce

1. A perfect dichotomy between Theses (or derivable statements) and non-Theses (non-derivable statements).
2. A certain type of functional relation between these two divided halves' (Badiou, 1969/2012: 162)

There is no 'excluded middle' in this analysis: 'a functional relation ... sends each statement to its negation ($t \dots \sim t$). There is no effective dichotomy [i.e. third position that "oversees" these positions] that cuts through *all* of those relations' (Badiou, 1969/2012: 163). Ultimately, it is not a lack that breaks the dichotomy, rather, 'the undecidable is not the saturation of lack, but the *foreclosure of what is lacking* through the failure to produce, within what is derivable, the whole of the non-derivable as negated' (Badiou, 1969/2012: 164). As Hallward rightly notes, in Miller's thesis, " x is unequal to x " [only

if x necessarily remains the “same” x in both instances’ (Hallward and Peden, 2012b: 140). That is, ‘we can formulate logically coherent statements of non-self-equality (on the model $(x \neq x)$ *only if we first exclude all that is “scripturally non-self-identical...”*’ (Hallward and Peden, 2012b; emphasis added). For Badiou, the scriptural nature of mathematical language ‘allows of no exceptions and tolerates no evocation of what evades it, not even in the form of rejection. What is not suitable-for-itself is something radically unthought, of which the logical mechanism *bears no trace*. It is impossible to turn it into an evanescence, a shimmering oscillation ... What is not substitutable-for-itself is foreclosed without appeal or mark’ (Badiou, 1969/2012: 166). In response to the issue of how to respond to the situating of a zero, Badiou introduces the fourth mechanism (M_4). If, at M_3 , we have $I(x, x)$ and $\sim I(x, x)$, the latter “negation” marks nothing but the rejection of (or presence in) the other division (that of non-theses)... No absence [i.e. Lack] is convoked here that would be anything but the allocation to one class rather than to its complement – according to the positive rules of a mechanism – of what this mechanism receives from the productions of another’ (ibid.: 168). M_4 for Badiou is ‘the logical system that adds to M_3 the predicative constant (the proper name) 0, as it has been defined [via M_1, M_2, M_3] ...’ (ibid.: 170). The zero of M_4 is effectively identifying the zero of M_2 , which becomes discernible in M_3 (ibid.: 171). Ultimately, Badiou notes, ‘The scientific signifier is neither sutured nor split, but stratified’ (ibid.).

What Badiou is building here is a critique of Miller’s concept of Suture as one that emerges from a totalizing hypothesis of structure in which the void is ‘outside’. As Tho highlights, for Miller ‘the reason why the indeterminate is understood as inconsistency results *only* from the prior assumption that the determinate organization of structure is founded on a closed circulation of terms. This quasi-totalizing representation of structure naturally leads to the privileging of the void as its supposed “indeterminate”’ (Tho, 2013a: 46). In Badiou’s schema, the layering of the mechanisms of logic means that the ‘system of differences between systems, [is] ruled by substitutions, equivalences, and withdrawals’ where the site of a zero may be lacking a mark but is never the mark of lack (Badiou, 1969/2012: 171). ‘[S]cience is pure space [*l’espace pure*]’; it has no blind-spot; there is no barred subject, Badiou concludes (Badiou, 1969/2012: 171–2).

In ML, Badiou is chiefly critiquing the *Cahiers* project (i.e. the weaving of structure and subject, Althusser and Lacan into one). As he says, ‘when Historical Materialism claims to be able to elucidate subjective enslavement to ideologies on its own, or when psychoanalysis effaces the specificity of the place where it must uncover the mark of lack in the generality of a logic of the signifier, then these disciplines are collapsed and reduced to one another. They become un-stratified: un-scientific’ (Badiou, 1969/2012: 172). The importance of ML for this work is that although Badiou would come to revise some of the more austere elements of this essay, its basic premise, that of the void as *within* rather than *Other* or *without*, has remained constant in his work right up to *The Immanence of Truths* (2018/2022), and presents a vital tool in exploring the relationship ‘between’

historical structures and the emergence of new forms within these structures (often seen as indeterminate, irrational or inconsistent). As Tho summarized, Badiou's

formalist path, in eschewing such systematic totalization, is nothing less than the rejection of such prior assumptions of "completeness" ... As such, *the singular is always the inscription of a new and positive formalization* that, though indeterminate insofar as it has no determinate status within the strata of determinations that constitute a structure, is not the failure of the structure but only the *failure of the representation of the structure as total or complete*.

(Tho, 2013a: 46–7; emphasis added)

In some readings of Badiou's work (see Ruti, 2012), this distinction between lack as the 'Other' of the structure, that which sustains the structure through its omission, and lack as the *positive inscription* within the structure via a stratified order of logic, is confused. Via his critique of Miller's essay, ML reveals Badiou's unique reading of Lacan, where the 'hypostatization of the void as the repository of the contingent and singular' (Tho, 2013a: 47–8) is challenged via a mathematical encounter that seeks out radical omissions 'within' the representations of the structure. Badiou grounds the void firmly within the inchoate being of the structure itself. In Tho's conclusion, he argues that this formalist "subtraction" from the closed circuit of the everything-something-nothing allows us to think the indeterminate singular as a self-grounding multiplicity, a radical cut from the co-extensiveness of structure and its (supposed) gaps' (Tho, 2013a).

Once again, while in his ontological treatises of the 1980s Badiou would significantly revise many of the ideas expressed in ML, the critique of the 'occultation of the void' (Tho, 2013a), or the perception of the void as the external repository for a structure's contingency, would continue to remain a critical target of his writings (and consequently set him apart from such contemporaries as Žižek and Rancière). ML offers us the beginnings of a reading of the void as a mathematical limit-form, and Badiou returned to ML four decades later, affirming that many of the proposals in this important essay continue to direct his work. He reiterated that

[i]n Miller's text, suture designates the point of absolute lack which accommodates the heterogeneity of the subject... For me suture designates a juncture between ontology and its "object". To hold mathematics as ontology, the very limits of being as such will be touched by the void. But, as such, the void is not the point where we discern subjective heterogeneity. The void is the point on which we found the constructible sets which allow us to unfold the characteristics of pure being.

(Badiou, 2007b: 99)

Yet, the disagreement as to the immutability of mathematics (whether it is 'out there' to be discovered or a construction) is a persistent question that haunts Badiou's schema. As Cheryl Misak recognized in her biography of the mathematician Frank

Ramsey, one only needs to look at Euclidean geometry, which had ‘long seemed to have provided the fundamental moorings, [then] alternative axioms had been discovered during the 1800s, giving rise to non-Euclidian geometries’. From this, Misak concludes, questions clearly arise concerning ‘the essential nature of mathematics? Is it a discipline that deals with necessarily true propositions? Or is it a product of the human mind, only as good as we can deliver? The Germans had a word for the debate: *Grundlagenstreit*, or the dispute about foundations’ (2020: 65). For Badiou, there is no dispute; mathematics remains scriptural; it’s a grapheme that, as Tho states, ‘lacks nothing that it does not produce’ (2007: 98). And ‘it organizes these lacks according to a process of stratification, and therefore never encounters the sort of uncontrolled lack such as Miller posits in “Suture” (2007). What is more, the logic of stratification, of the void as ‘within’ and the interruption of the structure via the positioning of the ϕ , all lay the groundwork for Badiou’s subsequent introduction of the subject. If examined in detail, ML reveals the mature Badiou, the ‘perspective that understands reality or “what there is” in such a way that for something new or true to happen it must happen *to it*’ (Hallward and Peden, 2012b: 125).

As noted at the beginning of this chapter, theorizing change via critiques of historicity were a key element of Louis Althusser’s work during the 1960s, and ineludibly became an important (if frequently unspoken) element within Badiou’s first critical essays. Badiou’s movement from a Sartrean conception of individual historical agency, to a structural (Althusserian) understanding of historical change, and finally to a uniquely axiomatic formalization of the Althusserian-Lacanian theorization in the *Cahiers* project instituted many of the key themes that he would develop in his philosophical works. Crucial to this work is how Badiou’s ‘mathematicisation of change’ supported a material naming of impossibilities, how this opened a site *within* a structure that reveals the limitations of that structure, and subsequently transforms it from the interior. Echoing the point made by Dews above, regarding Althusser’s ‘perverse’ location of history *in* ideas over the specific historicity of those ‘ideas’, it is at this point in Badiou’s oeuvre that history is the ‘history of formalization’ (Badiou, 1969/2007). As highlighted in the Introduction, we see here the source of what philosopher Quentin Meillassoux termed Badiou’s ‘history of the eternal’ (Meillassoux, 2011: 1); the contention that ‘there is *only* a history of truths insofar as all truth is strictly *eternal* and impossible to reduce to any relativism’ (Meillassoux, 2011). As RM, IS and ML reveal, Badiou’s early work already offers the opportunity to rethink what we mean by history and historiographic methodologies, albeit with one major omission: the subject. As we will see, ‘the time that passes between “Mark and Lack” and *Being and Event* [see Chapter 5] finds Badiou rejecting the machinic universalism espoused in the former and struggling to articulate a universalism founded in disciplined subjective fidelity’ (Fraser, 2007: xlix). In the spring of 1968, it was the very absence of this latter category that, as Hallward has acknowledged, made it all the ‘more remarkable, that even before [ML] was published ... [it] had already been interrupted ... by nothing other than an intrusion of the subject, sparked by a revolutionary though evanescent upsurge of the masses’ (2012b: 141). In his

own words, Badiou was 'at the extreme point of a strict formalism' (cited in 2012b: 126) on the eve of the 'events of May', and 'the gap between objective science and subjective commitment (the gap between Althusser and Sartre)' (2012b: 145) was about to be overcome with a 'reorientation from scientific closure to a *philosophy* of perseverance', which 'involve[d] an affirmation of the subject in precisely the place where science had excluded it' (2012b: 141). It was a time when, to paraphrase Mao, revolt itself became reason.