

The Bergsonian Model of Actualization

Steven Maras

SubStance, Vol. 27, No. 1, Issue 85. (1998), pp. 48-70.

Stable URL:

http://links.istor.org/sici?sici=0049-2426%281998%2927%3A1%3C48%3ATBMOA%3E2.0.CO%3B2-N

SubStance is currently published by University of Wisconsin Press.

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/about/terms.html. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/journals/uwisc.html.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

The JSTOR Archive is a trusted digital repository providing for long-term preservation and access to leading academic journals and scholarly literature from around the world. The Archive is supported by libraries, scholarly societies, publishers, and foundations. It is an initiative of JSTOR, a not-for-profit organization with a mission to help the scholarly community take advantage of advances in technology. For more information regarding JSTOR, please contact support@jstor.org.

The Bergsonian Model of Actualization

Steven Maras

Introduction

IN HIS COMMENTARIES ON BERGSON, DELEUZE REITERATES that a key task for philosophy is the stating and creation of problems (*Bergsonism* 14). In the discussion of his method, Bergson places more emphasis on finding, and positing problems, than on solving them (*Creative Mind* 51). This paper attempts to state and create the problem of "actualization" in a way that brings new insights into thinking about the virtual into contact with aspects of contemporary theory—particularly literary theory, screen theory, and consideration of the identity of the work of art. While this paper invokes the virtual, its primary aim is not to engage with a vast literature on virtual reality and its development (see Rheingold). Instead, the virtual appears here as a figure in a growing body of philosophical work examining the relationship between the virtual and the actual, or real (Heim; Massumi 34-46; Hardt 14-19; Boundas)—we shall address this slippage between the actual and the real below.

Within this field, my aim is not to offer an overview of the literature, but to offer a particular contribution. Namely, an evaluation of the Bergsonian model of actualization. "Actualization" has become a key term in evaluating Deleuze's theory of difference (Massumi 39; Hardt 15-16; Boundas 92). Yet, "actualization" itself has been left under-scrutinized, particularly its place in Bergson's philosophy. Addressing this neglect is not a simple matter of determining what actualization means when Bergson uses the word—in fact, he uses it sparingly. The term is, however, used frequently in Deleuze's writing on Bergson. My response to this paradox is to argue for the existence of a Bergsonian *model* of actualization. A model that is discernible within Bergson's method, and motivates Deleuze's engagement with it. As such, recognition of this model plays a key part in properly stating the problem of "actualization."

48 SubStance #85, 1998

Bergson and Actualization

My focus will be an article, "Intellectual Effort" (first published in 1902, and re-published in Mind-Energy), which stands as one of the clearest explications of Bergson's model of actualization. The article is presented against the background of psychology, and can be read as a highly developed example of Bergson's critique of psychology, based on the one presented six years earlier in Matter and Memory. Bergson begins the article by stressing that his problem is not attention as discussed by recent psychology, which situates attention as a fact of either "concentration" or "distraction." It is easy to confuse Bergson's position with this approach, in the sense that much of the article is concerned with how "tension" and "relaxation" represent different kinds of effort. But Bergson defines an alternative problem: namely, analysis of what he calls the "play of ideas" that occurs when the mind is engaged with an intellectual system. He writes, "in the feeling we have of this effort, does not the consciousness of a certain quite special movement of ideas count for something?" (Mind-Energy 152). Bergson sums up his line of inquiry by asking: "what is the intellectual characteristic of intellectual effort?"2

In answering his question, Bergson examines different kinds of intellectual effort, ranging from what he calls "reproduction" to "production or invention." More precisely, he deals with the effort of voluntary and instantaneous memory recall, gradual recall, the memory of chess players, mechanical interpretation (recognition), attentive interpretation (listening and hearing), learning to dance, and the effort of invention. While stepping through these varied examples, Bergson re-formulates his findings into a theory of intellectual work, which is also a theory of actualization. On a terminological note: during the article Bergson makes use of the term "plane of consciousness." This notion was made famous in *Matter and Memory*, where it refers to a section view of the "double movement of contraction and expansion by which consciousness narrows or enlarges the development of its content" (216). In Deleuze and Guattari's machinic theory of desire, it informs the idea of the "plane of consistency," and the "plane of immanence" (*Thousand Plateaus* 70-73; *What is Philosophy?* 76-77).

There are two major components to Bergson's model: "dynamic scheme" and "image." At the beginning of his developing argument, "scheme" relates to the appearance of an idea in pure perception. It is a "pre-perception," or impression, of an event that remains on the plane of sensations ("visual images," audible sensations, physical contact), that will later be materialized under different conditions (*Mind-Energy* 157). As

such, the scheme is likened to a "mental photograph" prior to its taking part in any remembrance or interpretation. As his analysis of intellectual effort widens, Bergson extends his discussion to include mnemonics. At this point in his argument, the scheme is presented as a synthetic device, as a function of real or possible images (186). Bergson suggests that the scheme exhibits relations rather than things (178).

[It] is an ideal scheme of the whole, and this scheme is neither an extract nor a summary. It is as complete as the image will be when called up, but it contains, in the state of reciprocal implication, what the image will evolve into parts external to one another. (162)

The scheme indicates how we are to reconstruct images in perception. It is not an extract of the images, nor an abstract idea of what all the images taken together mean (160). Most importantly, however, the scheme is *dynamic*, both in its relation to images, and in relation to its own identity.

The dynamism of the scheme is one of the most difficult aspects of Bergson's model. One of the key difficulties is that it propels us into an extremely contentious area of thinking about aesthetic production, and the identity of the work of art. Namely, the supposed completeness or incompleteness of a "scheme" in relation to its performance—be it a musical score, or dramatic script, or some other form of notation. A popular strategy for simplifying this relation is to resort to a conception of script as "blueprint." I shall take up this issue in the last section. For the moment it can be said that the figuring of the scheme as a blueprint represents a "one-way" rationalization of the interaction between scheme and image, and an over-determination of the intellectual effort or play involved in construction. One of the attractions of Bergson's model is that it allows an interaction between scheme and image to be recovered, along with a more fluid notion of work or "intellectual effort." Bergson recognizes this interactivity at the heart of the scheme.

It [the scheme] consists in an expectation of images, in an intellectual attitude intended sometimes to prepare the advent of one definite image, as in the case of memory, sometimes to organize a more or less prolonged play among the images capable of inserting themselves in it, as in the case of creative imagination. The scheme is tentatively what the image is decisively. It presents in terms of *becoming*, dynamically, what the images give us statically as *already made*. Present and acting in the work of calling up images, it draws back and disappears behind the images once evoked, its work then being accomplished. The image, with its fixed outline, pictures what has been. A mind working only with images could but recommence its past or arrange the congealed elements of the past, like pieces of mosaic, in another order. But for a flexible mind, capable of utilizing its past ex-

perience by bending it back along the lines of the present, there must, besides the image, be an idea of a different kind, always capable of being realized into images, but always distinct from them. The scheme is nothing else. (186)

For Bergson, the scheme is not simply a hollow structure, or a pre-image—a blueprint for the image—but an "idea" that is different by kind and not just by degree. Further, this idea is dynamic. The interaction between scheme and image is fundamental to this dynamism.

Bergson characterizes the interaction of scheme and image using a variety of terms: "becoming" (186), "visualization" (162), "articulation" (164), "evolution" (162, 164), "embodiment" (175) and "materialization" (169, 188). This variety can in part be explained through the diverse kinds of intellectual effort Bergson considers, and all of them have their relative importance in different situations. The term that best describes the virtual interaction between scheme and image, however, is the one Deleuze promotes in *Bergsonism*, which is "actualization." Actualization plays a central role in Deleuze's defense of Bergson's method. Its utility comes from the fact that it allows the notion of the virtual scheme to remain mobile and dynamic, without fixing it to a final destination: the body, matter, the concrete.

If terms like "materialization" and "embodiment" are inexact, it is because the image is not just the image-picture of a static scheme, a resemblance (although it may be in certain instances), but is always an actualization of the scheme on a separate plane. "The effort of recall consists in converting a schematic idea, whose elements interpenetrate, into an imagined idea, the parts of which are juxtaposed" (Mind-Energy 166). To reiterate: the scheme and the image are different in kind and not just by degree (by degree of presence or absence, fullness or emptiness, completeness or incompleteness). As Deleuze writes, "it is difference that is primary in the process of actualization" (Bergsonism 97). This idea is important to an understanding of the connection between the idea of multiplicity and actualization in Deleuze's work. Deleuze writes, "In reality, duration divides up and does so constantly: that is why it is a multiplicity. But it does not divide up without changing in kind For actualization comes about through differentiation, through divergent lines, and creates so many differences in kind by virtue of its own movement" (Bergsonism 42-43). Whereas actualization is central to understanding Bergson's difference between scheme and image, Deleuze affirms this insight by stressing the differential possibilities of the movement of actualization itself.

Understanding this difference in kind is not only important to an understanding of what Bergson means by dynamism, but also "reciprocal implication." For Bergson, actualized images exist in a state of juxtaposition, externalized to each other. On the level of the schematic idea, however, these image "seeds" or "crystals" are not juxtaposed but interpenetrate. It is this unactualized state of the interpenetration of elements that Bergson has in mind when he refers to the reciprocal implication of images in the scheme. What is central to Bergson's argument about the dynamism of the scheme—as well as his own views on the role of tension and relaxation as ways of traversing different layers of consciousness—is that this reciprocal implication of images in the scheme is not localized to one plane of consciousness, but can spring across several planes. As we shall see, this mobility forms another integral part of the dynamism of the scheme.

Concretization Theory

Actualization is by no means an exclusively Bergsonian concern. In literary studies it is present in the work of Mukarovsky, Riffaterre, Fish, and reception theory. Against this background, Bergson's model of actualization should be differentiated from an approach I shall call "concretization theory." As the main focus of this paper is the problem of actualization, a detailed examination of this approach, and its manifestations in literary theory, will be left for another occasion. On my reading, concretization theory includes Roman Ingarden's *Literary Work of Art*, Wolfgang Iser's *Act of Reading*, and David Bordwell's *Narration in The Fiction Film*. It should be noted, however, that while each of these works can be placed in concretization theory, both Iser's and Bordwell's work can be read as standing in a critical relation to Ingarden's work, and thus constitute attempts to renovate concretization theory from within. Stanley Fish's *Is There A Text in This Class?* can be considered as another text that enacts a renovation of concretization theory.

In concretization theory, the literary work is conceived of as a fundamentally *schematic* formation. The scheme is an "objectivity in itself" or an ideal that functions as the essential anatomy of a work of art prior to the aesthetic consideration of the work by the reader (Ingarden 331). This formation is actualized in the course of reading, with the latter envisaged as a single uniform operation or act constitutive of the work of art as a whole. It is important that as a schematic formation, the work remains

separate from the individual concretizations that arise in individual readings (265). While readers may generate spurious actualizations quite specific to themselves, these are quite separate from actualizations that form part of the concretization of the scheme during the process of reading. How legitimate and illegitimate actualizations are distinguished is one of the more contentious areas of concretization theory. Suffice it to say that, in Ingarden's case, concretization is linked to the *visualization* of "aspects" of the work; and thus proper actualizations contribute to a construction of a fully functional image or picture of the scheme. A concretization is "precisely what is constituted during the reading and what, in a manner of speaking, forms the mode of appearance of the work, the concrete form in which the work is apprehended" (332).

Iser's critique of Ingarden is partly based on the idea that Ingarden's visualization is governed by a classical aesthetic of the work (Iser 178). Iser thus proposes a productive questioning of the role of the picturing picture or image in concretization. However, this questioning opens up a broader critique of concretization theory to do with the status of the picturing picture, and the teleology it introduces. In this context, Bergson's appeal is that he supplies tools to contest this teleology or picturing of the work, through a dynamic theory of image formation. Bergson describes intellectual effort as an important "intermediate," emphasizing middles more than ends. "Between impulsion and attraction . . . there is, I hold, something intermediate, a form of activity from which philosophers have drawn, by way of impoverishment and dissociation, in passing to the two opposite and extreme limits, the idea of efficient cause on the one hand and final cause on the other" (Mind-Energy 188).

While concretization theory incorporates a theory of actualization, it is based on a static conception of the scheme. Emptied of its own materiality or play, the scheme is the mould within which the work is made concrete or material by the reader. The scheme is a mere blueprint for the concretization of the work, or in Iser's terms, the image-building of the reader. Absent from concretization theory is the dynamic relation between scheme and image found in Bergson. In concretization theory, the scheme is a kind of virtual *gestalt* of the images, gradually granted a material form during the process of reading. The scheme and image are not different in kind but merely different by degree of concreteness or intentionality—although the scheme is granted an "ontic autonomy" (Ingarden 10). Within concretization theory, actualization is presupposed by concretization of the work; the play of ideas overdetermined by the task of building. The identity of the work is thereby delimited by a model of construction for which the ques-

tion of non-identity can only be posed in terms of a threat: particularly the threat of subjectivism, and of illegitimate individual readings.

In concretization theory, image-building tends to take place on a single plane of consciousness, and perception is internalized in this one perspective. By contrast, Bergson opens construction and "perception" up to multiple planes of consciousness. The process of actualization is not contained within a singular operation or perspective (visualization), nor limited to the realization of fixed aspects of the work of art.

Although actualization is a core concern of concretization theory, its engagement with it is limited. Deleuze's work on the cinema provides a useful example to demonstrate the importance of questioning concretization theory as an apparatus for textual construction, and of differentiating between concretization theory and its others. The Bergsonian model has important links to Deleuze's theory. The latter can be considered both an example and extension of the former. Deleuze refers directly to the "Intellectual Effort" article when he introduces the concept of "planes" (Cinema 2 44, N. 1). The concept of actualization plays a key role in Deleuze's discussion of cinema: on the level of the movement-image and its three varieties, and on the level of the time-image. Throughout his discussion of these images, Deleuze relies on Bergson's account of the reciprocal implication between scheme and image to describe the "movement of ideas" in the images.

Even during a preliminary evaluation of Deleuze's use of the Bergsonian model of actualization, we should be wary of the ways in which concretization theory may influence our reading of Deleuze, and conceal new theoretical gestures. For example, Deleuze refers to "centers of indetermination" (Cinema 1 65). These centers should not be confused with Ingarden's "spots of indeterminacy" (Ingarden 246), which are found in otherwise determinate structures. In Ingarden's theory, they are potentialities awaiting concretization. In Deleuze's theory, centers of indeterminacy are produced in an a-centered world of images. They become such centers because of their connection to an interval, and because they exist in a fold between received and executed movements (Cinema 1 62). This may seem an insignificant point to contest, were it not for the fact that Deleuze borrows "centers of indetermination" not from Ingarden, but from Bergson.⁸ The possibility that Bergson may be a source of Ingarden's philosophy leads us to suggest that a confrontation between Bergson and concretization theory is not a side issue in the contemporary excavation of Bergson, but central to it.

Interaction between Scheme and Image: The Evolving Scheme

As presented so far, concretization theory is a project organized around the question of the identity of the work of art. It is, in brief, an identity theory of the work. By contrast, Bergson's model of actualization allows us to interact with the scheme not on the level of its identity but on the level of its difference—that is, through images or performances of the scheme that are different in kind. In concretization theory, the concretization of the work is a teleological process, whereby a specific concept and picture of the work guides the filling in of the scheme, the production of images, characters, etc. Accordingly, the scheme can be said both to enable and police the concretization of the work. And note that this is a particular conception of the work: not the "intellectual effort" that Bergson is concerned with, but the work as "Work of Art," bearing a unique ontological status of its own. In concretization theory, then, actualization is managed to maintain the identity of the Work, of work in relation to the Work.

But what would happen if actualization were not presupposed by concretization? What would happen if the identity of the work of art were displaced enough to allow for alternative forms of "effort"? Bergson's model of actualization allows for the possibility of exploring an alternative approach towards the work, more focused on difference than identity. He introduces this possibility by emphasizing, first, the mobility of the scheme, and second, the interaction between scheme and image.

Turning first to the topic of the mobility of the scheme, Bergson states that it is not "necessary that the scheme . . . explicitly precede the image" (*Mind-Energy* 174). Moving in the opposite direction to concretization theory, he highlights a more mobile conception of the scheme:

. . . in place of a single scheme with fixed and rigid lines, given to us immediately in a distinct concept, we may have an elastic or mobile scheme the contours of which our mind will not fix, because it will get the suggestion of a definite shape from the very images which the scheme is calling up in order to be embodied in them. (175)

Remember also, that part of the mobility that Bergson is discussing here involves the possibility that the scheme springs from one plane of consistency to another, and is not locked into a singular perspective or operation of construction.

Turning now to the interaction between the scheme and image, two tendencies in Bergson's model of actualization need to be highlighted. On the one hand, there is a tendency towards radical differentiation. The scheme and the image are different by kind and not by degree. They exist

on different planes of consistency in different ways. Thus, Bergson is able to suggest that "sometimes there remains nothing of the primitive scheme in the final image" (174). It is almost as if the image supplants the scheme entirely. In this mode, aside from his obsession with "planes," Bergson sounds very much like a "straight" concretization theorist: "To work intellectually is to take one and the same idea and lead it through the different planes of consciousness, in a direction which goes from the abstract to the concrete, from the scheme to the image" (175).

Yet, on the other hand, there is a tendency in Bergson's model towards radical interactivity. Having established the differences in kind between the scheme and image, and the particularity of their planes of consistency, Bergson emphasizes the "action of one of these elements on the other." As we heard in respect to the mobile scheme, the scheme can be shaped by the final image. Bergson stresses that "we must not believe that the scheme remains unchanged throughout this operation" (174). At one point, Bergson describes the scheme in terms of images: "An image of this kind, which exhibits relations rather than things is very much like what I have called a scheme" (178). In this mode, despite stressing the difference in kind between scheme and image, Bergson seems to subordinate the gap between the two in favor of an account of their interaction within a model of actualization.

The notion that images can themselves become proto-schemes, or the possibility that schemes and images are two kinds of ideas (166), is precluded in concretization theory. What distinguishes Bergson's model from concretization theory more definitively, however, is that he views the interaction between scheme and image less on a model of realization, than on a model of becoming. For Bergson, this becoming is constituted on a number of levels. "Besides the influence of image on image, there is the attraction or the impulsion exercised on the images by the scheme. Besides the development of the mind on one single plane, on the surface, there is the movement of the mind which goes from one plane to another, deeper down" (188). Central to Bergson's interest in becoming is that the scheme is an evolving entity (163). The construction of the image out of the scheme is not a one-time event, but continues again and again. The direction of actualization here is not over-determined by a singular identity, but contingent on the evolution of the scheme, and interaction between the scheme and the images.

An account of the dynamics of actualization is important in the context of Hardt's discussion of Deleuze and Bergson. Hardt suggests that "Bergson is very effective in describing the emanative movement from a unity to a multiplicity" (20). However, he suggests that a "complementary organizational movement in the opposite direction" is nearly absent in Bergson's thought. For Hardt, Deleuze searches "in vain" for an "organizational movement" to counter the "emanative movement" (22). Hardt traces out several options in the text, and while Deleuze "does his best," he isn't overly convinced by them. "Deleuze tries to explain the human capacity for creativity, the capability to take control of the process of differentiation or actualization and to go beyond the 'plane' or 'plan' of nature" (21). An explanation of this creativity is "not immediately obvious." If we suspend, for a moment, the emphasis on the critique of Hegel, and social theory, that dominates Hardt's commentary, evidence can be found to support the overturning of the plane that Deleuze refers to. Above all, the account presented here of the interaction between scheme and images, and the evolution of the scheme, is important. What we find is that the slippage between the "plane" and "plan" is implicit in the idea of actualization, and not an external problem as Hardt's phrasing seems to suggest. The slippage appears undervalued in Hardt's reading, and works mainly as a terminological curiosity. Yet this slippage is fundamental to the scheme, as well as the model of actualization Deleuze affirms in Bergson.¹⁰

Formations of the Virtual

For Bergson the virtual is not simply abstract, but has a reality. "The real" (not to be confused with the actual) resides not simply at the point of the realization, but across the image-scheme relationship. Bergson's deviation from concretization theory forces him to reconsider the nature and function of the scheme and its virtuality. If we can transpose Bergson's discussion of the scheme onto the virtual, it is as if Bergson is suggesting that "virtuality" is not uniform, nor localized to one plane of consciousness, but layered, heterogeneous, and not without consistency. As part of the same argument the scheme is not fixed and static, but dynamic and mobile. The resulting conception of the virtual is not easily assimilable within the current study of virtual reality, nor the understanding of the passage from abstract to concrete promoted by concretization theory. For these reasons, it warrants further discussion.

The philosophical engagement with the notion of the virtual has given rise to at least two versions of the concept. It is worth comparing the two. The first, and most common, constructs the virtual as a *simulation* of the real. "In a virtual world, we are inside an environment that we can see,

hear, and touch" (Bricken 363). Baudrillard's well-known thesis holds that in hyper-reality, via a supposed simulation of the real, the real is surpassed through the precession of simulacra (*Simulations* 2). The main feature I want to foreground here is the relationship between simulation and the virtual.

Against reductive readings of this relationship, it should be noted that it operates on a number of different registers. Baudrillard's account of the Gulf War can serve as an example. In the register of hyper-reality, Baudrillard's virtual is a simulation, of a kind well described by Heim. "When we call cyberspace a virtual space, we mean a not-quite-actual space, something existing in contrast to the real hardware space but operating as though it were real space" (Heim 132). In this register, the virtual functions as an "almost": a not-quite-actual phenomenon that functions as the actual. "Everything is therefore transposed into the virtual, and we are confronted by a virtual apocalypse, a hegemony ultimately more dangerous than real apocalypse" (Baudrillard, Gulf War 27). There is a tendency to read this conception of virtuality back into a Platonic distinction between original and copy. On a different register, however, that of virtuality as an effect, Baudrillard is more careful in insisting on the unique features of the simulacrum. He emphasizes its dissimulating effects, outside of the original-copy distinction. "Our virtual has definitively overtaken the actual and we must be content with this extreme virtuality which, unlike the Aristotelian, deters any passage to action. We are no longer in a logic of the passage from virtual to actual but in a hyperrealist logic of the deterrence of the real by the virtual" (27). On yet another register, that of the channel, Baudrillard reactivates an aspect of Shannon's theory of information in order to read the virtual as a channel. "Against this obsession with the real we have created a gigantic apparatus of simulation which allows us to pass to the act 'in vitro'" (28, 61). 15 It would be erroneous to suggest that the idea of simulation is exclusively Baudrillard's. Not all of the military, technical, and artistic projects traversed by these different conceptions of the virtual can be described as Baudrillardian. Nevertheless, Baudrillard's work figures prominently in the area: both as a meditation on the status of hyper-reality, and an analysis of the epistemological implications of simulated worlds and processed reality.

Distinct from this concept of the virtual as a simulation is a Bergsonian approach. For the latter, the virtual is modelled not on the real, or its simulation, but on the possible. Promoted by Deleuze, this conception of the virtual is based on Bergson's discussion of the problem of the "possible

and the real" (*Creative Mind* 91-106), and of the virtual and actual in *Matter and Memory* (28, 163, 319). Bergson's conception of the possible does not relate to a possible that is awaiting realization, nor a fixed potential. He describes this possible negatively as that which is not impossible: a non-impossible awaiting the touch of life (realization). Bergson suggests that this idea, immanent in most philosophies, is pure illusion (*Creative Mind* 101). This conventional view suggests that the possible is "something ideally pre-existent" waiting to come into existence (102). While incorrect, this latter phrase provides Bergson with a glimpse of the true nature of the problem. It suggests that the possible has an existence, a positive reality: a "pre-existence under the form of an idea" (102). Recognition of this pre-existence allows Bergson to question the notion of realization, and its limited, negative conception of the scheme. Bergson writes, "it is the real which makes itself possible, and not the possible that becomes real" (104).

In other words, the possible is not a lack awaiting realization, or the acquisition of existence, but presupposes and shapes the real. When Bergson argues that "Hamlet was doubtless possible before being realized," he is not using the possible to mean a potential awaiting realization, but rather a pre-existence under the form of an idea. In the first sense the possible can only precede realization, "the possibility of a thing precedes its reality," which is the conventional wisdom of concretization theory. In the second sense, however, Bergson suggests that "the artist in executing his work is creating the possible as well as the real" (103). In this formulation, the possible is part of the reality of the idea. While it is entirely possible to reinstate concretization theory in this space and situate the idea as a blueprint, such a gesture would go against the grain of the model of actualization that informs Bergson's position.

The possible and the real exist in a relationship of correspondence and not just realization: "the possible is the combined effect of reality once it has appeared and of a condition which throws it back in time" (101). This combined effect leads Bergson to describe the possible as a mirage of the present in the past that, because of our reluctance to recognize an interpenetration of past-present-future, is reified as having been always possible. As this mirage effect is re-produced over time, the idea of an ideally pre-existent possible is fixed. Bergson suggests that our failure to grasp the nature of this dynamic comes from a false temporization of the possible, which is read back, or deduced from the real, such that it can only be realized. "Backwards over the course of time a constant remodeling [sic] of the past by the present, of the cause by the effect, is being carried out" (104). In this remodelling, the possible becomes a poor extraction or

resemblance based on a fixed conception of the present. It suffers from what Deleuze calls being "retroactively fabricated in the image of what resembles it" (Difference and Repetition 212).

Released from the mechanics of realization, the virtual regains its dynamism. Deleuze is wary of the term "possible," its links to realization, and warns that all manner of false problems emerge from a confusion of the virtual and the possible (211-212). The problem of the possible is like the threshold to the virtual; once properly defined, the virtual can be affirmed in its multiplicity. "For, as we shall see, the same author who rejects the concept of possibility . . . develops the notion of the virtual to its highest degree . . . " (Bergsonism 43). Integral to both Bergson's and Deleuze's comments is a conceptual shift whereby the possible is no longer opposed to the real. This gesture effectively supplies a reality to the possible—or what we now encounter as the virtual. In order to cement this shift Deleuze states that the virtual "is not opposed to the real but to the actual" (208). Massumi reiterates this position by stating that, "the virtual is real and in reciprocal presupposition with the actual" (Massumi 37). The change in terminology from "possible" to "virtual" is part of a broader conceptual shift. What is not commonly grasped in this change is that the difference between the Bergsonian possible and the conventional definition is a difference in kind and not of degree. The difference in kind relates to a shift in the model upon which the possible is formed: a shift between realization and actualization. As Deleuze states, the "possible is opposed to the real; the process undergone by the possible is therefore a 'realization.' By contrast, the virtual is not opposed to the real; it possesses a full reality by itself. The process it undergoes is that of actualization" (Difference and Repetition 211).

This point provides an insight into the importance of interrogating the slippage between the real and the actual that occurs in many discussions of the virtual, as it reveals a failure to grasp a difference in kind between realization and actualization. We have already noted the difficulties that arise from opposing the possible and the real.¹⁷ The present argument rests on the assumption that the Bergsonian and "Baudrillardian" approaches to the virtual are different in kind, and not by degree, involving diverging models of actualization/realization. In the Bergsonian approach it is the intertwining of the virtual and the actual that comprises the real, or the reality of the real. In the "Baudrillardian" approach, however, the virtual is distinct from and opposed to the real. A crucial question in thinking about the virtual is how one considers the process whereby the virtual becomes real. Conventionally, this process is constructed as a process of realization,

of becoming-real, a movement from the abstract to the concrete. The inverse is depicted as a process of de-realization. In contrast, Bergson attempts to model the movement from the virtual to the real not on the model of realization or concretization, but on the model of actualization. In other words, Bergson's contribution to the area is to model the movement of the virtual not from a fixed position (the real-concrete, the virtual-abstract), but on the process or movement of actualization itself.

Stylistics and Actualization

Earlier, I made the point that Bergson's account of actualization propels us into a contentious area of thinking about textual production: namely, the identity of the work of art. I also posed the question, what would happen if actualization was not presupposed by concretization? This questioning alludes to an inadequacy in contemporary stylistics in coming to terms with the problem of actualization, of the interaction between scheme and images, and the dynamic scheme. ¹⁹ Deleuze's study of cinema provides one example of what a Bergsonian stylistics looks like. The general question remains, however, of the broader parameters of a Bergsonian stylistics, and what this stylistics might look like? This section begins the task of answering this question.

The notion of an evolving scheme remains an under-explored terrain in contemporary aesthetic theory. Stylistics has, through recourse to cognitivism on the one hand (Bordwell 32), and opposition to subjectivism on the other hand, discouraged investigation of this space of the evolving scheme. The work of Fish is a notable exception (see below). Interestingly, the phrase, "act of reading" seems to prohibit investigation of this dimension. Referring to a singular, uniform operation of text construction, reading figures here as a process of manufacture. Questions of textual/material indeterminacy are subordinated to this construction.

As a demonstration of some of the problems that concretization theory has in grappling with these dynamic textualities, we can turn to the example of a filmic or performance script. While such entities are not directly analyzed by concretization theorists, texts and schemes are treated by them as though they were instruments for visualization. Thus, these schemes function as scripts for performance—hence the construct "script/scheme" that I shall use below. While an argument might be made that by introducing this construct I am unfairly re-shaping the body of concretization

theory, I am not the first to suggest the link,²¹ and my main focus is the status of the scheme and its capacity for actualization.

Beyond limited interest in the *ciné-roman* of Robbe-Grillet and Duras, and a cameo appearance in analyses of the process of adapting novels into films (Bluestone), the script has been neglected in literary theory. This neglect has lead to an unquestioned acceptance of what could be called the capture of the script, and its powers of actualization. This capture is enacted through hermeneutic processes whereby particular institutions delimit the function and identity of the script. By "capture," I mean the policing and suppression of the constitutive play that is actualization. While academic institutions are content to read texts such as films, or chart the movement from "novel" to "film" (Morrissette), few examples exist of approaches that address the script in its non-academic, institutional performance contexts—in its realm of possibility, or Bergsonian virtuality.²²

In this context, concretization theory has provided a valuable yet limited contribution. It has, and properly so, recognized the importance of the script/scheme in anchoring performances or "acts" of different kinds (image building, for instance). Within this framework, the script/scheme is indeed a kind of blueprint, functioning as a stage play, or screen play. This contribution should not be under-stated. Even Bergson leaves a place for "realization" in his method (*Mind-Energy* 90). However, Bergson's work reminds us that the script/scheme may not simply be a plan for realization, but can also itself be the product of actualization. As such, the script/scheme is an undecidable entity, both a scheme and an "image," traversed by flows of both actualization and articulation.

Against this background, concretization theory enacts a kind of double capture of the script/scheme. First, it has an intense investment in emptying the script/scheme, in placing it in lack. In a more specific form, this emptying can take the form of a schematization of the script/scheme, whereby the scheme is transformed into a blueprint or plan, segmented into distinct strata (Ingarden 378). Second, concretization theory will place the script/scheme in a position of limit-indeterminacy, and set the "reader" up as the exclusive bearer of determinacy.

Bergson's model of actualization offers tools with which to challenge both sides of this double capture. First, the notion that the scheme exists in a state of reciprocal implication of images suggests that the script/scheme is not simply in lack, but excessive. It is not "less" than the performance, but "more" to the extent that the scheme exists, literally, as a multiplicity of connections and possibilities—although, as Deleuze suggests, we should be wary of the logic of "more or less" for the way it ties us to a notion of

difference in degree (*Bergsonism* 17). Second, Bergson offers a position from which it can be argued that the scheme is not simply indeterminate, but in fact dynamic. Deleuze would stress the importance of the interval, the fold between received and executed movements, to this dynamism. If "indeterminacy" becomes a preoccupation in concretization theory, it is because the scheme has been emptied of its dynamism, of the "movement of ideas" that makes it unique.

Bergson's model provides the basis for an extended conception of the script/scheme that goes against the grain of some conventional views about scriptwriting. Following this extended conception does not necessarily entail arguing in favor of "pure performance," or "pure filmmaking," sans script. Rather, it entails a shift in the way the process of scriptwriting is conceived. That is, less a preparatory work of plan-making or administration than a mixed-media inscription of creative intensities that are in becoming. By this definition, the script/scheme can be defined as an inscription or recording of a process of actualization that is continually being negotiated through contact with different bodies, spaces, institutions, technologies, media, and desires. Understood along these lines, performance would be less a matter of "concretization," or "interpretation" of the script/scheme, than a continuation of its "writing" on a different plane of consistency. A more thorough exploration of this shift would involve a challenge to the very nature of production—how various institutions delimit this term. For the moment, we can say that this re-framing of the script/scheme represents a decisive move away from the "blueprint" conception of the script/scheme. In the latter view, the script/scheme as notation or diagram is utilized as a way of managing bodies and desires.²³ On the Bergsonian view, the script/scheme is an object in becoming, which can diversify through contact with bodies, media, and desires. On the former model, the script/scheme is static, and divorced from actualization. On the latter model, the scheme is mobile, a relation that is only comprehensible from the viewpoint of actualization.

Reclaiming the undecidability of the script/scheme requires a careful and critical negotiation of the legacy of concretization theory. As part of its schematization of the script/scheme, concretization theory has engendered a receptionist attitude towards the work that effectively limits the reader's encounter with the work to the space of exhibition, publication, or display. In so doing, concretization theory has foreclosed access to that space of production or creativity (often localized around the script/scheme) that has been fetishized in commodity capitalism as the "behind the scenes," or "backlot."

In more practical terms, this out-of-field is comprised of instances of (pre-)performance that support a complex process of actualization; a process that precedes and supports exhibition (rehearsal, editing). The limitations of concretization theory with respect to the "exhibition" context of the work masks the complex nature of textual interaction: not just the meeting of texts and readers, but that interactivity internal to the "text." What Bergson might call its "movement of ideas," the reciprocal implication of images in the scheme. In other words, the play of schemes and images that constitute the conceptual and affective dimensions of the production. Concretization theory's most serious flaw is its failure to explore this dimension of actualization. Based on the present account of concretization theory, it is not surprising that when Ingarden addresses the functions of language in the theater, it is at the moment of exhibition, with the script/scheme appearing as "stage play," and disappearing completely with adequate realization of the work.

The main text of the stage play consists of the words spoken by represented persons, while the stage directions consist of information given by the author for the production of the work. When the work is performed on stage, the latter are totally eliminated; they perform their representing function and are really read only during a reading of the play. (377)

What is interesting to note here is the way in which performance and reading are kept separate in Ingarden's account (with the body as a noteworthy absence). Ingarden writes as if the border between performance and reading was not itself undecidable, shifting between actualization and articulation, and different possibilities of performance/rehearsal, in and on numerous stages. By ignoring this out-of-field, concretization theory is complicit in an institutional capture of "the text."²⁴

The argument that reading is a form of capture is not a novel one, but a Bergsonian account may take it into new areas. Fish's Is There A Text in this Class? exemplifies one understanding of the institutional capture of the text, from a perspective that, interestingly, gives special status to actualization. For Fish, interpretive strategies "are not put into execution after reading: they are the shape of reading, and because they are the shape of reading, they give texts their shape, making them rather than . . . arising from them" (13). "Or to put in another way, the entities that were once seen as competing for the right to constrain interpretation (text, reader, author) are now all seen to be the products of interpretation" (17). Under different conditions, it would be possible to view Fish's work as a kind of concretization theory. His work dwells on the edges of many of the "fault-lines" of concretization theory, and inherits many of its problems: the attempt to

give actualization a greater role in textual production; the problem of how to escape the determining influence of the scheme, and inversely, how to allow the scheme autonomy from different readings; the problem of how to open up the identity of the work to different interpretations, without succumbing to subjectivism. However, his approach is also typified by an implicit Bergsonism that follows the reader's "actualizing participation" (28). Fish's method is based on consideration of the "temporal flow of the reading experience," and he proposes "an analysis of the developing responses of the reader to the words as they succeed one another on the page" (20).

Bergson's comments on Zeno's paradox are apposite in a discussion of Fish's method. Bergson states that the major problem in any attempt to plot the path of a moving object is to follow a logic of segmentation rather than affirm the indivisible duration of that movement. Problems arise from confusion of the movement with the space covered (*Creative Mind* 145). In attempting to plot the temporal flow of the reading experience within the points author-text-reader, Fish's approach engenders a similar confusion. Bergson's strategy is to point out how "analysis" is unable to describe movement (161-162), and to develop a metaphysics of duration more appropriate for the task. For Bergson, "analysis" and "intuition" are different in kind (161). From this viewpoint, Fish's attempt to write the temporal experience of reading within the triad of author-text-reader remains an exercise internal to analysis.

At the end of his introduction, Fish gathers the triad into a concept of interpretation (Text 17). The resulting notion of interpretation retains strong links to reception, and is constrained by a view of textual interaction dominated by the text-reader duality. This results in a one-sided account of textual production that a broader account of intellectual effort, and interactivity, might provide. In addition, Fish's notion of interpretation is constantly underwritten by the communities that determine interpretive authority and filter out mere "readings" from valid interpretations—communities that in effect determine the rules of possibility. At this point, despite all its distinctiveness, Fish's method is close to concretization theory, as both approaches seek to delimit the very idea and identity of the possible. It could be argued, against the perception that Fish's method liberates reading, that his method institutionalizes the possible more extensively than any prior concretization theory. Within his conception of interpretation, Fish can only access the temporal flow of reading in a limited way, and constantly with a nostalgia for "actual reading experiences," "the actual experience of the work" (5), the "real reading experience" (15) that

escapes his analytical apparatus. Fish is exploring a terrain similar to Bergson's, but in a receptionist framework. Fish's theory exacerbates the relations between interpretation and movement, reading and actualization, rather than reconciling the two. From the present viewpoint, there are overlaps between Fish's approach and a Bergsonian one, but there are differences in terms of the plane upon which actualization is delimited.²⁷

A more adequate theory of capture needs to address the way receptionist theory delimits the identity of the work through a three-fold operation: by dampening the interaction of the scheme and the image; by sectioning actualization off from its out-of-field; and by dividing the movement of actualization into segments. By necessity, such a theory requires an appreciation of the complex problem of actualization, the interaction of scheme and image, and the means by which actualization has been subordinated to realization. At stake in the formulation of this problem is the very definition of the possible, both general and textual. In this context, what the Bergsonian model of actualization offers is a way to contest the impoverished understanding of the possible that underpins a great deal of discussion of textual production, as well as the cultural logic of virtual reality.²⁸

University of Western Sydney, Hawkesbury

Works Cited

Baudrillard, Jean. The Gulf War Did Not Take Place. Trans. Paul Patton. Sydney: Power, 1995.

- —. In the Shadow of the Silent Majorities. Trans. Paul Foss, John Johnston and Paul Patton. New York: Semiotext(e), 1983.
- —. Simulations. Trans. Paul Foss, Paul Patton, and Philip Beitchman. New York: Semiotext(e), 1983.

Bergson, Henri. The Creative Mind: An Introduction to Metaphysics. New York: Citadel, 1992.

- —. *Matter and Memory.* Trans. Nancy Margaret Paul and W. Scott Palmer. London: Allen and Unwin/New York: Humanities P, 1911.
- —. Mind-Energy: Lectures and Essays. Trans. H. Wildon Carr. London: Macmillan, 1920.

Blanchot, Maurice. *The Space of Literature*. Trans. Ann Smock. Lincoln: U of Nebraska P, 1982.

Bluestone, George. Novels into Film: The Metamorphosis of Fiction into Cinema. Berkeley: U of California P, 1957.

Bordwell, David. Narration in the Fiction Film. London: Methuen, 1985.

Bordwell, David, Janet Staiger and Kristin Thompson, *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960.* New York: Columbia UP, 1985.

Boundas, Constantin. "Deleuze-Bergson: an Ontology of the Virtual," in P. Patton (ed.). Deleuze: A Critical Reader. London: Blackwell, 1996. pp. 81-106.

Bricken, Meredith. "Virtual Worlds: No Interface to Design," in M. Benedikt (ed.), Cyberspace: First Steps. Cambridge, Mass.: MIT, 1991. pp. 363-382.

Deleuze, Gilles and Félix Guattari. A Thousand Plateaus. Trans. Brian Massumi. Minneapolis: U of Minnesota P, 1987.

—. What is Philosophy? Trans. Hugh Tomlinson and Graham Burchell. New York: Columbia UP, 1994.

Deleuze, Gilles. *Bergsonism*. Trans. Hugh Tomlinson and Barbara Habberjam. New York: Zone, 1991.

- —. Cinema 1: The Movement-Image. Trans. Hugh Tomlinson and Barbara Habberjam. London: Athlone, 1986.
- —. Cinema 2: The Time-Image. Trans. Hugh Tomlinson and Robert Galeta. London: Athlone, 1989.
- —. Difference and Repetition. Trans. Paul Patton. New York: Columbia UP, 1994.

Duras, Marguerite. Hiroshima Mon Amour and Une Aussi Longue Absence. London: Calder & Boyars, 1966.

Fish, Stanley. Is There A Text in this Class?: The Authority of Interpretive Communities. Cambridge, Mass.: Harvard UP, 1980.

—. "Why No One's Afraid of Wolfgang Iser," Diacritics 11:1 (March 1981): pp. 2-13.

Hardt, Michael. Gilles Deleuze: An Apprenticeship in Philosophy. London: UCL, 1993.

Heim, Michael. The Metaphysics of Virtual Reality. New York: Oxford, 1993.

Ihde, Don. Postphenomenology: Essays in the Postmodern Context. Evanston: Northwestern UP, 1995.

Ingarden, Roman. The Literary Work of Art: An Investigation on the Borderlines of Ontology, Logic, and Theory of Literature. Trans. George G. Grabowicz. Evanston: Northwestern UP, 1973.

Iser, Wolfgang. The Act of Reading: A Theory of Aesthetic Response. Baltimore: Johns Hopkins UP, 1978.

Morrissette, Bruce. Novel and Film: Essays in Two Genres. Chicago: U of Chicago P, 1985.

Nelson, Theodor H. "The Right Way to Think About Software Design," in B. Laurel (ed.), The Art of Human-Computer Interface Design. Reading, Mass.: Addison-Wesley, 1990.

Patton, Paul. "Notes for a Glossary," I&C 8 (Spring 1981): 41-48.

Rheingold, Howard. Virtual Reality. London: Mandarin, 1992.

Robbe-Grillet, Alain. Last Year at Marienbad. Trans. Richard Howard. New York: Grove, 1962.

Stern, Lesley. The Scorsese Connection. London: BFI/Bloomington: Indiana UP, 1995.

Wills, David. Prosthesis. Stanford: Stanford UP, 1995.

NOTES

- 1. See Matter and Memory (152, 163, 169, 181).
- 2. In this brief question, Bergson reiterates the terms of the "crisis in psychology" he identifies in *Matter and Memory*. As Deleuze puts it, "movement, as physical reality in the external world, and the image, as psychic reality in consciousness, could no longer be opposed" (*Cinema 1* xiv).
- 3. Deleuze makes good use of the photographic quality of this description in his study of cinema, where "plan" means both "plane," and "shot" (*Cinema 1* xii).
- 4. Bergson seems to favor "materialization" and "realization" when referring to the "centripetal" passage of the virtual in specific situations, when it is drawn towards external objects, and deploys actualization to refer to the "centrifugal" departure of the image from pure memory or the scheme (*Matter and Memory* 163). This usage is in accordance with Bergson's notion that the passage from scheme to image involves a shift from the interpenetration of elements to the juxtaposition of parts (*Mind-Energy* 166).
- 5. Bordwell's theory of spectatorship is also a constructivist theory of aesthetic activity modelled on concretization theory. "No one has yet delineated a Constructivist theory of aesthetic activity, but its outlines look clear enough. The artwork is necessarily incomplete, needing to be unified and fleshed out by the active participation of the perceiver. . . . The spectator brings to the artwork expectations and hypotheses born of schemata, those in turn being derived from everyday experience, other artworks, and so forth. The artwork sets limits on what the spectator does. Salient perceptual features and the overall form of the artwork function as both triggers and constraints. The artwork is made so as to encourage the application of certain schemata, even if those must eventually be discarded in the course of the perceiver's activity" (Bordwell 32).
- 6. A parallel with Bergson's critique of associationism is worth noting. "To picture is not to remember" (*Matter and Memory* 173).
 - 7. "Perspective" is one of Iser's key terms (96-99).
 - 8. Bergson uses the phrase "zones of indetermination" (Matter and Memory 37).
- It could be said that, in this teleology, "work" itself is subject to a kind of capture, whereby it is yoked to the (re-) production of the identity of the Work of Art.
- 10. Patton discusses the plane/plane ambiguity, and traces it back to Spinoza, who influenced Bergson as much as he did Deleuze (44-45).
- 11. This leads Bergson to suggest that "there is no virtuality, or, at least, nothing definitely virtual; whatever exists is actual or could become so" (*Mind-Energy* 192).
- 12. Theodor Nelson's notion of virtuality as a combination of conceptual structure and "feel" (239), a consistency, is worth noting in this context.
- 13. Concretization is premised on a theory of the abstract, which is a theory of the virtual. Iser himself states that the literary work must be "virtual in character" (21).
- 14. For a more comprehensive account of possible definitions, see Heim (109-138). Prosthetics forms another interesting axis of research into cyberspace (see Wills 66-91).
- 15. While contesting the notion that information is informative, is somehow meaningful, Baudrillard falls back into the "mathematical" tradition of information he rallies against. This perhaps explains why he finds it necessary to pre-empt convergence, and to conflate the media, information, and computer programming into an

apparently uniform apparatus of transmission (see *Shadow of the Silent Majorities* 96-100).

- 16. "Any hesitation between the virtual and the possible . . . is disastrous, since it abolishes the reality of the virtual" (Difference and Repetition 212). Some commentators have gone so far as to re-name the possible as "potential." However, this concept brings with it an Aristotelian heritage that is problematic (Boundas 104, N. 23; Hardt 14-19). It also risks reinscribing concretization theory into the system. Deleuze writes, "for a potential or virtual object, to be actualized is to create divergent lines which correspond to—without resembling—a virtual multiplicity" (Difference and Repetition 212).
- 17. The view that the virtual or possible lurks within the actual is equally problematic. While it substitutes "the actual" for "the real," this view perpetuates in an ambiguous way the idea that the virtual becomes actual through a process of realization.
- 18. The attempt to position the Bergsonian conception of the virtual as possible in this framework is frustrated by a materialism that binds the material to the real—a conception of the real that is static. Bergson's materialism is fluid, and often mediated through a conception of the image.
- 19. To be explicit, I would suggest that the problem of actualization has been inadequately defined because of an over-emphasis on realization.
- 20. Under-explored but not absent. I would like to suggest that it is precisely an engagement with this notion that can explain the attraction of Deleuze's study of the cinema, with its interest in "movement-images" and "mobile sections." Stern's Scorsese Connection pays careful attention to the evolution of the scheme. "It is not simply sight that is mobilized when 'watching' a film, but a variety of senses, so that even when not-watching the screen, we are hearing and seeing (out of the corner of eye and ear). And when watching, we project onto the screen alien sensations, imported images, memories from elsewhere, which might rise through conscious association or which might soar up, out of the past, involuntarily" (74).
- 21. Fish draws the same analogy: "The relationship [between reader and text] is one of script to performer" ("Why No One's Afraid of Wolfgang Iser" 3).
- 22. In theorization of the text, Blanchot's *Space of Literature* would be a noteworthy exception for its emphasis on the production context of writing.
- 23. See the account of scriptwriting in Bordwell, Staiger and Thompson's, *Classical Hollywood Cinema* (134).
- 24. By which I mean a process whereby actualization is subject to a complex apparatus of production that imposes an industrial axiomatic upon (the) work. The brackets are employed here precisely to signpost the difficulty of separating "a product" from its actualization, and to de-familiarize the encounter with (a) work. Inde's critique of "textism" in Postphenomenology could usefully be extended to include approaches that leave little room for actualization (73-74). However, this would perhaps force a reconsideration of Derrida's theory of play, and Inde's assessment of it.
- 25. We should be wary of assimilating Bergson into reception theory (with all its ties to concretization theory) too quickly. As "reception" is often premised on a "transmission" model of communication, there exists the possibility that "reception" is itself a production of an industrialist axiomatic of (the) work.
- 26. Such an identification would have to account for the importance of New Criticism as a departure point for Fish (*Text* 2). The complexities of such an identifica-

tion are demonstrated in Fish's critique of Iser ("Why No One's Afraid of Wolfgang Iser").

27. For Fish, the plane is that of reading. Reading supplants the scheme as a backboard of actualization. It is interesting that, in his critique of Iser, Fish is unable to accept the distinction between the determinate and the indeterminate, which is based, before Iser, on Ingarden's idea of the virtual scheme ("Why No One's Afraid of Wolfgang Iser" 6). Apparently then, Fish uses actualization without any need for a theory of the virtual. Nor has he a theory of the scheme. For him, the "reader supplies everything" (7). The argument could be made that the absence of any conception of the scheme in Fish's work is itself a sign of capture, and indicates an over-determination of actualization by the institution.

28. I am grateful to Paul Patton, David Sutton, Paul Bains, and Anna Munster for their comments on this paper.