Creativity and imagination

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The lunatic, the lover, and the poet,
Are of imagination all compact.
One sees more devils than vast hell can hold;
That is the madman. The lover, all as frantic,
Sees Helen's beauty in a brow of Egypt.
The poet's eye, in a fine frenzy rolling,
Doth glance from heaven to earth, from earth to heaven;
And as imagination bodies forth
The forms of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name.¹

Shakespeare, one might suppose, knew what he was talking about. In so closely linking the poet's creative act to imagination he was giving expression to a belief long maintained in Western culture. It is a view most famously celebrated by the Romantic poets (and, as we shall see, by Kant, their rather unlikely progenitor). Shelley tells us that 'Poetry, in a general sense, may be defined to be "the expression of the imagination": and poetry is connate with the origin of man', indeed 'poetry creates anew the universe'. And the link of creativity to imagination has a history that long predates the eighteenth century, as indeed Shakespeare's enunciation of it demonstrates. Leonardo in defending painting observed that 'it is by manual work that the hands represent what the imagination creates'. The view is even embodied in our common beliefs and language: when someone is stuck for a new approach to something, we might suggest that they use their imagination; and the term 'imaginative' is a near-synonym for 'creative'. This link between creativity and imagination is perhaps the most influential of the three traditional approaches to creativity - the others being the inspiration view (that the poet is literally the mouthpiece of the gods, and so does not know what he is doing, as enunciated in Plato's Ion, and given a secular twist in Freud's theory of the

unconscious) and the derangement view (that the poet is a madman, also suggested in the *Ion*, and a view to which Shakespeare adverts).

The traditional linking of imagination to creativity invites a number of questions, which have been surprisingly little explored within contemporary philosophical discussion. I shall concentrate on two. First, is the traditional linking of imagination to creativity correct, and if so what kind of link is it? A second question arises if the link is validated: if the creative imagination exists, can we say anything about *how* it works, perhaps revealing something about its characteristic forms or modes of operation?

1. Creativity

To answer our first question about the tenability of the link between creativity and imagination, we need to clarify the two concepts in play. Creativity might seem to be a kind or way of making something; but in fact the term has a slightly wider application, as in Joseph Schumpeter's phrase 'creative destruction'. Though the term has this wider modal sense, in which even destruction can be creative, the core sense, and the one with which we will be concerned, qualifies a particular kind of making; and creative making is what we call 'creation' in the fully fledged sense of the word. Plausibly this requires that the making be a production of things which are original, that is, saliently new.

But more seems to be required to be creative than simply salient newness; for we use 'creative' as a value-term, which refers in people to a kind of excellence or virtue, in the broad sense of 'virtue'. Creativity is the virtue exhibited most fully by genius. But is the mere possession of originality sufficient to make the original object valuable? Kant, in a related discussion about genius, holds that 'Since nonsense too can be original, the products of genius must also be models, i.e., they must be *exemplary* ...'. ⁴ Kant's point is that originality can be exhibited by nonsense, and by implication be worthless. Now had Kant been acquainted with modern academia, he might have been more struck by the thought that even nonsense is not often original. And I am inclined to think that originality has at least some *pro tanto* merit: that even original nonsense has some merit over received nonsense, since it evinces some intellectual stirrings in its utterer, and may even produce some intellectual movement in its hearer. Be that as it may, the cutting edge of Kant's remark remains

unblunted: we think of creativity as possessing considerable merit, but even if originality as I have suggested has some *pro tanto* merit, that merit is surely not commensurate with the great value we place on creativity.

That being so, we should hold that creativity is the kind of making that produces something which is original and which has considerable value. The object has this value in part because of its originality, but mainly because of its other valuable features. So we think of Picasso and Braque as exhibiting creativity, partly because of the originality of their Cubist paintings, but mainly because that originality was exhibited in paintings which, considered apart from their originality, have considerable artistic merit. The production of artworks that have little or no artistic merit, considered apart from their originality, strikes us, in contrast, as empty and not really creative.

A third condition is required for creativity to exist; for it is possible to make something that is original and valuable, but for one's making of it not to count as creative. Suppose that you daub me all over with paint and imprison me in a dark room in which there is a primed canvas. I flail around for several hours, attempting to escape; my frantic thrashings cover the canvas in such a way that it becomes, unknown to me, a stunningly good abstract painting, significantly different in appearance from any abstract painting hitherto produced. I have inadvertently produced something valuable and original, but it would be wrong to say that I have done so creatively – I made it purely by chance.⁵ Or suppose that I engage in a mechanical search procedure for some desired outcome, systematically working through all the relevant possibilities, and in the course of the search come across a result that is original and valuable. Again, the upshot of such a search procedure is not an instance of creativity, for the procedure adopted is a mechanical one. 6 So how the original and valuable product is made plays an essential role in determining whether the act of making it is creative. And we must, at least, rule out cases of making by chance or by mechanical procedure, if an act is to count as creative. I will say that the making must involve *flair* by the maker to rule out at least these kinds of cases.

So creativity in the narrower non-modal sense is the kind of making that involves flair in producing something which is original (saliently new) and which has considerable value. Related accounts readily suggest themselves for the adjective 'creative' when applied to acts, people, processes and artefacts. A creative act is one that is the making of a saliently new and valuable thing by flair. People are creative, roughly speaking, when they have a trait disposing

them to engage in creative acts. A process is creative when it is the producing of something valuable and original by flair (or, if we allow that a creative process need not always produce a creative outcome, when it is an instance of the kind of process involving flair that usually tends to produce original and valuable things). And artefacts (in a broad sense including the performance of acts) are creative when they are original, valuable and produced by flair. Originality, value and flair are the vital ingredients in creative making.⁷

2. Imagination

The notion of imagination is more slippery to handle than that of creativity. Part of the problem is that it has a variety of uses, not always closely related to its core sense. In one such use, to say that I imagined such and such is to say that I falsely believed it, or to say that I misperceived something: for instance, to say that I imagined the coatrack to be an intruder is to say that I misperceived the coatrack as an intruder. In this use, imagination involves false (propositional or perceptual) beliefs. This usage is one that is at least partly in play in the passage from *A Midsummer Night's Dream*, for the lunatic and the lover are both in the grip of false beliefs and misperceptions. But clearly this usage is distinct from the sense in which we are asked to imagine that, say, grass is red, for we are not required to believe it to be so.

A second usage is that in which 'imagination' is used virtually as a synonym for the ability to engage in creative thought; it is the usage under which 'imaginative' is employed as a synonym for 'creative'. In this usage, there is a true but analytic and trivial connection between imagination and creativity; and this use merits a deflationary account of the connection between the two realms. If this were all that there were to the connection, we need proceed no further.

There is a third use in which 'imagination' is employed to mean the same as 'imagery'. For instance, if I cannot remember how someone looks, I might be told to try to imagine her face, that is, to try to form an image of it. Some philosophers have characterised imagination simply in this sense: Mary Warnock, for instance, claims that imagination is 'that which creates mental images'. But there is a different (fourth) use of the term 'imagination' under which one needs to distinguish between imagery and imagination. In this sense, if I have remembered someone's face, it would be misleading to say that

I had imagined her face; and also one can imagine a state of affairs without having any imagery of it. It is this usage that is the one which we will now target.

Imagery is a matter of the having of sensory presentations; but these images need not be instances of imagination. A memory image of the blue front door of my previous house involves a belief about that front door, not an imagining of it. The same is true of many dream images. Perception involves perceptual presentations of the objects perceived; and such presentations though arguably images are not imaginings of the objects perceived. So memory, dreams and perception involve imagery, but are not instances of imagination. The point, then, is that one cannot *identify* imagery with imagination (though, as we shall see, *some* images are imaginings).

Conversely, imagination need not involve imagery. If I asked you to imagine that gradually your brain cells were replaced by silicon chips, you need form no mental image of this process to comply with my request; indeed, if I asked you to imagine an infinite row of numerals, you *couldn't* form an (accurate) mental image of that row.

So imagination is conceptually distinct from imagery. What, then, is imagination? A suggestion mooted by several philosophers, and one I think is basically correct, is that imagining that such and such is the case, imagining that p, is a matter of entertaining the proposition that p. Entertaining a proposition is a matter of having it in mind, where having it in mind is a matter of thinking of it in such a way that one is not committed to the proposition's truth, or indeed to its falsity. In contrast, the propositional attitude of believing that p involves thinking of the proposition that p in such as way as to be committed to the proposition's truth. One can put this point in slightly different but equivalent ways. Instead of talking of entertaining the proposition that p, one can talk of thinking of the state of affairs that p, without commitment to that state of affair's (actual) existence. Or some make the point in terms of unasserted thought: to entertain the proposition that p is to think of p, but without 'asserting' that p. Since assertion is strictly speaking a speech-act, not a propositional attitude, 'assertion' here, I think, should be understood in terms of commitment to the truth or falsity of a proposition (alethic commitment) in the way just outlined. These equivalent ways of presenting the view all have an important corollary: it is possible both to believe that p and to imagine that p, since one can consistently have the two distinct propositional attitudes towards the same proposition.

Thus far we have given an account of propositional imagining – imagining that such and such is the case – for instance, that it is raining. But in addition to propositional imagining there is objectual imagining: imagining an object, such as a wet cat. The account can be extended smoothly to cover such cases: imagining some object x is a matter of entertaining the concept of x, where entertaining the concept of x is a matter of thinking of x without commitment to the existence (or non-existence) of x. Equivalently, we can talk of having an 'unasserted' thought of x, where 'unasserted' thought is construed in the way just mentioned, namely, in terms of thinking of x without commitment to the existence (or non-existence) of x.

Thirdly, consider experiential imagining – the kind of case where imagining has a distinctive experiential aspect. Such imagining covers both sensory imagining (for instance, visually imagining the wet cat) and phenomenal imagining (for instance, imagining what it is like to feel soaking wet). This kind of imagining involves imagery, though we have seen that not all imagery is a kind of imagining. So what differentiates the two kinds of imagery? One might hold that visually imagining a wet cat involves having an image of a wet cat, and then thinking of that image that it is a mere imagining. But that would be false to the phenomenology of imagining, and also redundant. An image is a type of thought, possessing the hallmark of thought, namely, intentionality: an image is an image of something, and that thing need not exist, that is, the thoughtcontent has intentional inexistence. A visual image is thus a kind of thought, and what makes it distinctively visual is not its content, but its mode of presentation, for I may think of how a wet cat looks without visually imagining a wet cat. When I visually imagine how a wet cat looks, the mode of presentation of that thought is visual. So what makes imagining sensory or phenomenal is the mode of presentation of the thought. The thought of the cat can be 'asserted' or 'unasserted' in the sense indicated earlier: in the former case the image may be a memory-, dream- or perceptual-image; in the latter case, the image is a kind of imagining. Thus, experiential imagining is a matter of phenomenal or sensory modes of presentation of 'unasserted' thoughts. Often when we talk of 'imagining' it is experiential imagining that we have in mind, which is a richer kind of imagining than the often minimal imagining involved in entertaining a proposition or the concept of an object. If someone says that he can entertain some proposition, but that he cannot imagine it, this shows not that imagination is never a matter of entertaining a proposition but that, in one usage of the term, to imagine involves an experiential aspect that goes beyond the minimal entertaining of a proposition.

Finally, there is what is sometimes termed *dramatic* imagining, imagining what it is like to be some person or imagining being in a person's position. This should not be thought of as a fundamentally distinct kind of imagining, for it is a structured composite of the other sorts of imagining previously mentioned. In imagining being in another's position, I have to entertain various propositions about his situation and entertain concepts of various objects, and may engage in both phenomenal and sensory imagining of his situation. The task is often a complex one, requiring considerable skills to be carried off successfully, perhaps even the skills of a great novelist. But to say that it is complex is not to say that it is irreducibly different from these other sorts of imagining.

3. Models of creativity

Given these targeted senses of 'creativity' and 'imagination', what is the relation between creativity and imagination? To take the simplest case, is there any necessary relation between them?

Does a creative act require an imagining? Not so: Bertrand Russell reported how, when he was writing *Principia Mathematica*, he would frequently go to bed having failed despite much effort to solve a difficult problem, but then wake next morning knowing the solution. Russell went from not knowing the answer to knowing the answer, without it seems any imaginative act on his part. A more subtle instance of this involves the chemist Friedrich von Kekulé, who claimed that he discovered the ring structure of the benzene molecule by dreaming in front of his fire of snakes devouring their own tails. This example does involve imagery, but being dream-imagery, and depending on the precise details of the case, it may well not have involved imagination: Kekulé while asleep may have believed that he saw snakes devouring their tails, and when he awoke, the image suggested his discovery to him.¹¹

Conversely, does every imagining involve a creative act? One might hold that all imagination is creative in the sense that it can go beyond what is given to belief and to perception.¹² When I imagine a golden mountain, I am thinking of something which goes beyond my experience and my beliefs. But even so, this is not to make me creative in the sense defined earlier; for there need be nothing saliently new and valuable about my imaginings. When I peer over a

cliff's edge I may, with boring and predictable regularity, just like countless other people, imagine being hurled down to the rocks below. What I imagine (luckily) goes beyond my experience and beliefs, but it is not in any even minimal sense a creative bit of imagining. The same is true of most fantasising: I may have the same fantasies as many other people, and my fantasies may be much the same each time I have them. Fantasising is a kind of imagining, but is rarely creative. Indeed, perhaps the simplest but most telling objection to Freud's influential piece 'Creative Writers and Daydreaming' is that daydreaming, a kind of fantasy, is almost never creative, and thus is not a promising model for creative writing.¹³

There thus seem to be no necessary relations at the most general level between creativity and imagination. But perhaps by examining in more detail creative uses of imagination, we might be able to find some other, more modest connections. To do so, consider two models of how imagination might operate in relation to creativity.

3.1 The display model

The first of these models I shall call the *display* model. This holds that imagination operates as a way of displaying the results of creativity to the creative person, but that creativity itself operates through some other mental capacity, perhaps in some other mental domain, such as the unconscious. The creative subject's unconscious, for instance, generates the creative idea, and this is then displayed to the subject through her imagination. In this respect at least, the display model is the heir to the traditional inspiration account of creativity, for that account holds that the creative person does not know what he is doing, and simply receives the creative result as a revelation, something that he cannot explain (as Plato tellingly argues of Ion).

One should not hold that the role of the imagination here is a necessary one in general, since, as we have seen in the cases of Russell and Kekulé, the creative idea can be displayed simply by forming a belief, or having an image. But, still, imagination would often have a display function. And that is plausible enough as an empirical claim.

However, the modest display model of the relation of imagination to creativity cannot give the whole story; for it makes imagination strictly speaking extraneous to the creative process. That process goes on in some other mental

faculty, perhaps operating deep in the subject's unconscious, and then the result is displayed to the subject's consciousness through an imaginative act. It is as if imagination is just the recorder or scribe of creative processes happening elsewhere. Yet in Theseus' speech in *A Midsummer Night's Dream* it is imagination which bodies forth the form of things unknown, and the poet's pen operates as a transcriber of these imaginative acts. But on the display model the role of the imagination to creativity is merely peripheral; so we have not found the central connection between imagination and creativity for which we have been searching.

This point can be refined by distinguishing between two kinds of creativity, or perhaps aspects of creativity. *Passive* creativity occurs when the subject is unaware of the creative process, if any, which has occurred to produce the creative outcome. The outcome simply 'pops into the head' of the subject, as we say. The cases of Russell and Kekulé are like this. On a less exalted level, this kind of thing happens frequently: a solution to a thorny problem may come to someone when they are not dwelling on the problem at all, perhaps when they are on a walk or taking a shower. The display model fits this case well, at least when the medium for displaying the outcome is imagination rather than belief.

In contrast *active* creativity occurs when the subject actively searches out various solutions, consciously trying out different approaches, and in the course of this activity comes upon a solution. The solution does not emerge unbidden and unawares 'in a flash', but rather is the outcome (albeit necessarily the unforeseen outcome) of a sometimes sustained conscious process. Active creativity seems more common and important in the arts than passive creativity: a painter may for instance suddenly 'see' how his painting will look, but much of the subsequent work will involve scrutinising the painting as it is being made, imagining how it could be improved by altering it in various ways, trying out these changes, observing the results, making more alterations, and so forth. And this process may take the painting far away from its original imagined look.

In the case of active creativity, the subject uses her imagination as part of the creative process, so that imagination is not the recorder of an already completed creative process, but rather is a core aspect of that process. The role of imagination in active creativity is the locus of much of the attraction of the view that imagination is centrally involved in creativity, yet the display model signally fails to capture this role for it.

3.2 The search model

A different model of the relation of imagination to creativity appears more promising in giving imagination a role in the creative process itself: this is what I will call the 'search model'. According to this model, when one comes up with a new idea or invents a new object, one can be thought of as having worked through various possibilities ordered in logical space. The creative person has a strong, powerful imagination, capable of imagining more widely and deeper than most; her imagination is capable of grasping a set of the relevant possibilities, and selecting from them the one most suitable to the circumstances. Thus the process of 'trying out' various approaches, which we have seen is the hallmark of active creativity, is to be understood in terms of considering or surveying the relevant portion of logical space, and the process of invention is that of choosing from one of the surveyed possibilities.

Like the display model, the search model contains an important element of truth, since it takes account of the way we actively create certain things. But it also suffers from a number of defects. Most importantly, it is misleading about a very important aspect of active creativity. Contemplating Kasparov's creativity in playing chess, it is tempting to think that it lies in his ability to survey a wider range of the possible moves ahead than can anyone else. But this would be deeply mistaken. For consider Deep Blue, the chess computer which beat Kasparov in 1997. Deep Blue really does survey vastly more possible positions than any human could, and selects from them the one most likely to win the game. Deep Blue has in this sense a powerful imagination. But the problem is that it is the epitome of an uncreative way to play chess: it mechanically searches through the possible positions to arrive at the best. Kasparov in contrast, plays chess creatively, but cannot do so by surveying the vast numbers of possibilities that Deep Blue does. Creativity is precisely not a matter of a powerful imagination, in the sense of an ability to search through vast numbers of possibilities.

It may be objected that Deep Blue does not have an imagination at all—to have an imagination requires having consciousness and an ability to reason, and a computer has neither of these things. This may well be true, but the form of the objection stands. For consider an idiot savant, who plays chess exactly like Deep Blue is programmed to do, surveying a similarly vast array of possibilities and settling on the best. This idiot savant—let's call him 'Shallow

Pink' – has consciousness and reason, so he can and does have an imagination, which he deploys to survey a vast array of possibilities. But Shallow Pink, like his computational brother, plays chess in an uncreative, mechanical fashion.

There is something else to be learnt from this example. Let us return to Kasparov, who does play chess creatively. He may search through comparatively few moves ahead. But the ones he does survey are those which are likely to give him a significant advantage, and to be ones that may be surprising and original. Though he uses his imagination as part of the creative process, in trying out a range of selected possibilities, much of the creativity has gone into the prior selection of this small range of possibilities, rather than consisting in an ability to survey a vast array of them. And he may also use his imagination in seeing a current position as a variation of one with which he was previously familiar. So the difference between Kasparov and Shallow Pink does not lie in the fact that one uses his imagination and the other doesn't, for both employ their imaginations; rather the difference consists in *how* they use their imaginations. Kasparov uses his imagination creatively; Shallow Pink does not.¹⁴

This point shows that we should distinguish between imagination as a *source* of creativity, and as a *vehicle* for creativity. In being actively creative, in trying out different approaches, Kasparov uses his imagination, imagining different moves he might make. But though his imagination is a vehicle, or medium, for his creativity, it does not follow that it is the source of that creativity – that which explains why he is creative. His creativity is displayed in how he uses his imagination, but that in turn is explained largely by factors such as his vast experience, considerable knowledge of chess history, practised technique and his sheer native talent. It is these things which allow him to use his imagination creatively.

Failure to respect the distinction between the source and the vehicle of creativity explains in part the Romantic hyperbolic inflation of the importance of imagination in the creation of art, and indeed of its significance more generally. Shelley, as we noted, held that poetry, the expression of imagination, is connate with the origin of man and creates anew the universe. He thought of imagination as the source of creativity, but what we have just noted is that the imagination can be employed in an uncreative, mechanical fashion, and so cannot in itself be the source of creativity. But Shelley did see something true and important—that imagination is involved in the creative process as, I suggest, the vehicle of active creativity.

4. Imagination as the vehicle of active creativity

In being actively creative, the chess player employs his imagination in trying out various available moves ahead. The same use of imagination occurs in trying out different solutions to intellectual problems in general, and to trying out different ways to develop a painting, sculpture, novel, and so on. The painter and the musician are likely experientially to imagine their results, while the intellectual is likely to use propositional imagining; but both employ their imaginations. Imagination in such cases is the vehicle of active creativity, being that mental capacity which is used in being actively creative. If that is so, then we have found a connection between imagination and a type of creativity. The connection for which we will argue can be formulated this way: imagination is peculiarly suited to be the vehicle of active creativity. That is, it is suited *of its nature* to serve as such a vehicle, suited because of the kind of intentional state that it is. In this it differs from other intentional states, such as beliefs and intentions, which are not suited of their natures to be such vehicles.

We noted earlier that to believe a proposition is to be committed to its truth. Belief therefore aims at the truth; moreover, this end is *intrinsic* to or *constitutive* of belief: a propositional attitude counts as belief only if it has that end. (Of course, belief may not succeed in achieving this end – there are false beliefs – but belief is what it is because it has this end). It is the fact that belief has the intrinsic end of truth that helps to explain Moore's paradox, the paradoxicality, for instance, of the assertion that 'I believe that it's raining, but it isn't raining'. To assert this is ipso facto to be shown to be irrational, since it is to assert that one is in a mental state which aims at the truth while simultaneously denying that the content of that state is true. Further, it is because belief aims at the true that it is properly responsive to evidence, that is, to reasons for holding something to be true.

Intention also involves a kind of commitment, but a commitment to action, not to truth. To intend to do something involves a commitment to doing that thing *ceteris paribus*, when one can. The intrinsic end or constitutive aim of intention is thus achievable action. And this helps to explain why it is paradoxical to assert, for instance, that 'I intend to go climbing, but I won't when I can'. Again, one stands convicted of irrationality in this instance, because one commits oneself to a certain action by saying that one intends to perform it, yet simultaneously denies that one will perform it when one can.¹⁵

Imagination lacks the intrinsic ends of belief and intention. To imagine something is, as we have seen, not to be committed to its truth (or falsity); thus it is not in the least paradoxical to say, 'I imagine that it's raining, but it isn't'. Nor does imagination involve a commitment to performing an achievable action: it isn't paradoxical to say, 'I imagine going climbing, though I won't go climbing when I can'. Imagination is free from commitments to what is the case and to particular actions. In fact, imagination seems to lack any intrinsic end at all – that is, any end that makes it the state that it is. Imagination thus exhibits a kind of freedom in this respect. As such, imagination is peculiarly suited – suited of its nature – to be the vehicle for active creativity, since one can try out different views and approaches by imagining them, without being committed either to the truth of the claims or to acting on one's imaginings. Imagination allows one to be playful, to play with different hypotheses, and to play with different ways of making objects.

Since imagination lacks an intrinsic end, the ends of imagination are extrinsic to it: so one can use imagination for many different purposes without being irrational. (Contrast this with, for example, belief, where one cannot rationally simply choose to believe what it suits one to believe, because belief aims at truth and is consequently answerable to it.) In fantasy, the goal of one's imaginative project is to enhance one's own enjoyment, and the aim of this project determines what counts as a successful piece of fantasising. So, if despite my efforts, I keep imagining myself being embarrassingly humiliated. the fantasy has gone wrong. Alternatively, imagination can aim at learning something: here truth governs the imaginative project, but it is an extrinsic, adopted, aim of imagining, not its intrinsic aim. I may imagine myself in someone else's position in order to discover what she is feeling; but I do not believe that I am in her position. I can also imagine what I believe to be true; but when I do so, the aim of truth in my imagining is extrinsic. Creative uses of imagining, in contrast, need not aim at personal pleasure or at learning something. Nor need they aim at being creative: for one can be creative even though one does not aim to be so; indeed, it is likely that consciously aiming at being creative will to an extent be self-undermining, leading to a frenetic striving after shallow effects. ¹⁶ Creative uses of imagining are thus identified, not by their aims, but by their results (they produce, or are the kinds of imagining which often produce, a creative outcome). Creative uses of imagination need have no one extrinsic aim.

The claim that imagination is suited of its nature to be the vehicle of active creativity does not require that one always and necessarily employ imagination in being actively creative. Imagination, as we saw, is peculiarly suited to be the vehicle for trying out various options, because it is devoid of commitments to their truth or to acting on them. However, suppose that, instead of believing that the next option tried will be the correct solution, the creative person believes that it is possible that the next option tried will be the correct solution. Here the content of her belief does not commit her to the claim that the option is correct, so that her belief could be employed in being actively creative. But note what has happened: here the content of the belief mimics the feature of imagination that is crucial to explaining imagination's role in active creativity, that it be free of commitments to what is actually the case; the belief is now about the possibility of the correctness of the option. So here the *contingent* content of one intentional state, belief, mimics the essential mode of another, imagination. And this supports our claim that imagination is of its nature suited to be the vehicle of active creativity, and that belief is not. It is the nature of imagination as an intentional state, being free of commitments to truth and action, that allows it to be the vehicle of active creativity, and this is not true of the nature of belief. Individual beliefs, if they are employed in being actively creative, do not do so by virtue of their nature as intentional states, but by virtue of the fact that they have a particular content that allows them to mimic imaginings.¹⁷

Thus, properly understood as a point about the nature of imagination as opposed to other intentional states, the claim that imagination is peculiarly suited to be the vehicle of active creativity is correct. It establishes a constitutive connection between imagination and creativity that is the kernel of truth in the traditional linkage of the two domains. It also has the merit of explaining the appeal of the derangement view of creativity – that the creative person is literally mad. The actively creative person imagines various propositions and objects, but it would be easy to confuse her imaginings with beliefs – we have already noted that a common use of 'imagining' is in terms of falsely believing. And, indeed, given a vivid enough imagination, it would not be hard for the creative person to pass from vividly imagining something to actually believing it. The derangement view of creativity can be thought of as the degenerate offspring of the imagination view.

5. Creativity and metaphor

In answer to the first question raised at the start of this essay, we have discovered two ways in which the traditional link of imagination to creativity can be validated. First, the creative product is often made known to its creator by its display in imagination; this is an empirical claim. Second, and more importantly, we have argued that imagination is suited of its nature to be the vehicle of active creativity; this is an priori claim, holding that there is a constitutive connection between imagination and active creativity. We can turn now to the second question mooted at the start: can we say anything about how creative imagination works? Perhaps surprisingly, I think we can do so, at least in part. To approach this, let us turn briefly to Kant's account of genius, perhaps the finest extended account of creativity in the philosophical canon.

In sections 46–50 of the *Critique of Judgment*, Kant investigates the relation of art to genius, and of genius to imagination. Fine art, he says, is the art of genius, 'the foremost property of genius must be originality' (175), and also the products of genius must be exemplary. Characteristic of genius is spirit, 'the animating principle in the mind', which is 'nothing but the ability to exhibit aesthetic ideas; and by an aesthetic idea I mean a presentation of the imagination which prompts much thought, but to which no determinate thought whatsoever, i.e., no [determinate] concept, can be adequate, so that no language can express it completely and allow us to grasp it' (313–14). Imagination in general, he says, is 'a power to intuit even when the object is not present'. 18 Reproductive imagination seems to be a matter of having memory images; productive imagination, to be a matter of sensory imagination. It is productive imagination which Kant has in mind in the passage about aesthetic ideas. But not just any exercise of the productive imagination is creative; indeed, Kant notes that we use this kind of imagination 'to entertain ourselves when experience strikes us as overly routine' (314), namely, to fantasise. But when aesthetic ideas, a kind of presentation of the imagination, are involved, then creativity occurs (315).

Though much in these passages is obscure, it is clear at least that Kant links exemplary originality (creativity) to a kind of imagination, without holding that all uses even of productive imagination (experiential imagination in our terms) are creative. There are thus some striking points of agreement between Kant's account and the position developed so far. But there is also something new: Kant considers under what circumstances imagination is creative, and

his answer is in terms of when it exhibits aesthetic ideas. Yet his characterisation of them is less than pellucid: whatever are these things which prompt much thought, but to which no determinate concept can be adequate?

One answer is suggested by his remark of productive imagination in general that it is 'the originator of chosen forms of possible intuitions' (240). One might think of aesthetic ideas as the production of sensory forms that we lack the ability to describe adequately in literal language: think of some of the sculptural forms of Tony Cragg or the architectural forms of Frank Gehry, for instance. These are the products of highly complex uses of spatial imagination, and they are certainly examples of the creative use of imagination.

Though an attractive interpretation, this does not seem to be what Kant has in mind in talking of aesthetic ideas. He cites as examples of aesthetic ideas a 'poet [who] ventures to give sensible expression to rational ideas of invisible beings'; Jupiter's eagle with lightning in its claws as an attribute of God; a poem in which Frederick the Great asks us to leave our lives in the same way as the sun at the end of the day 'Spreads one more soft light over the sky'; and a line from a poem that 'The sun flowed forth, as serenity flows from virtue' (314–16). All of these examples involve attributing to something that Kant thinks of as the referent of a rational idea (invisible beings, God, death, virtue) a property which it does not literally possess, but which can be fruitfully attributed to it (a particular sensible expression, an eagle with lightning in its claws, the sun setting, the sun rising). In short, these examples involve a metaphorical attribution of a property to some object which does not literally possess it. And that suggests that what Kant has in mind by aesthetic ideas are metaphors. (Successful) metaphors do prompt much thought, but what they say cannot be completely paraphrased by any determinate, literal language; they involve a use of imagination; and originality is a merit of a metaphor, as it is a virtue of genius. Moreover, Kant holds that it is in the art of poetry that the power of aesthetic ideas can manifest itself to the fullest extent (314), and of course metaphors are most explicitly present in poetry, though there are visual and other sensory metaphors too.

Kant's connection of creativity with imagination in its employment of metaphor-making is intriguing, and captures an important insight. Metaphor-making, I suggest, is a *paradigm* of creative imagination. To rescue the concept of a paradigm from its Kuhnian multiple mugging, I mean

by a 'paradigm' no more (and no less) than something to which we can fruitfully appeal in order to understand the phenomenon in question, or an aspect of that phenomenon. A paradigm in this sense is a heuristic notion, its application helping us better to understand the relevant phenomenon. Metaphor-making is a paradigm of the creative use of imagination, then, since it displays how creative imagination can work especially clearly and so helps us to understand creative imagination better; metaphor-making is also an instance of creative imagination.

A metaphor is an expression of imagination, since when I say metaphorically that x is γ , I invite my auditors to think of, to imagine, x as γ . If I say that men are wolves, I invite my auditors to think of men as wolves; the 'thinking of' here is not a matter of believing that men are wolves, but rather of imagining men as wolves. Or to put the same point slightly differently, in employing the metaphor, I invite my auditors to take up a wolfish perspective on men, to consider men as if they were wolves. 19 Besides being an exercise of imagination, the making of a good metaphor exhibits creativity: it shows flair; and originality is a prime virtue of new metaphors, creating a striking new way of looking at or thinking about some otherwise familiar object. But metaphors can also be extravagant and unconvincing, and can misfire in various ways; a good metaphor in contrast must be apt, must seem appropriate to its object. In this respect the cognitive content of the metaphor is important: if there are properties literally possessed in common between the two items linked by metaphor, then the metaphor will prove apt. It is because men really do have some salient attributes in common with (the ordinary conception of) wolves that the wolfish metaphor is an apt one. So the making of a good metaphor exhibits creativity because it shows flair and originality, and exhibits the value of aptness, which in turn often rests on a cognitive insight.

So metaphors involve imagination and exhibit creativity when freshly minted. Moreover, these are not independent features of metaphors: rather, the making of the metaphor exhibits creativity *through* the use of imagination. The perspective we are invited to take up on the object is the perspective of imagination – we are to imagine men as wolves – and generation of this perspective is an instance of creativity. For in a good metaphor, concepts and domains of thought otherwise far removed from each other are brought into intimate contact, reconfiguring the familiar conceptual terrain into a place both hauntingly strange yet oddly right. Wolves and men, concepts otherwise not closely related to each other, are brought strikingly together, and we are

asked to imagine men as wolves. Moreover, the making of a good metaphor is not just a piece of creativity achieved through an imaginative act; the metaphor also encourages, indeed guides, further creative acts, through its encouragement of its audience's active search for the literal features that the object and its metaphorically ascribed predicate have in common (the elucidation of the metaphor), and in its propensity to support the working up of related or cognate metaphors guided by the original one (the elaboration of the metaphor).

Metaphor-making, then, is a paradigm of creative imagination, for in good metaphors an imaginative act brings together two otherwise disparate domains, and in so doing invites us to look at some object in an original yet apt fashion. As such it displays particularly clearly a central way in which active creativity operates.

This claim may seem to fall to a fundamental objection. For it seems to require that all instances of metaphor-making employ creative imagination. But surely that cannot be so: could not there be a metaphor-generating Deep Blue or Shallow Pink, mechanically grinding out metaphors, some good, some bad, some indifferent, and none of them the products of a creative imagination? And if that is possible, then it seems that metaphor-making cannot be a paradigm of creative imagination, since it need not even be an instance of creative imagination.

However, there are strong grounds for resisting the possibility of mechanically generating metaphors. In the case of chess positions, there is a set of finite, determinate rules which, together with the current position of the pieces on the board, specifies what future positions are allowed for the pieces. It is the existence of these rules that allows for mechanically searching through all of the moves ahead. There is also a clear criterion for what counts as success - checkmating one's opponent. But in the case of metaphors, there is no evident way to list all possible metaphors, since there is no similarly specifiable set of rules for what is to count as a metaphor. There seem to be no universal syntactic or semantic markers for an utterance's being a metaphor as opposed to a literal utterance. Nor can one appeal to the evident falsity of metaphors as one's criterion, both because there are plenty of evident falsities that are not metaphors, and also because there are metaphors that are literally true (for instance, 'no man is an island'). Nor would listing every sentence in English count as a way of mechanically generating metaphors, since by performing this task, one would be listing vast numbers of sentences that were not

metaphors. One might as well claim that one had found a way of mechanically generating all truths, since one could generate a list of all English sentences, many of which would be true.²⁰ Add in the task of finding *successful* metaphors, and the difficulties of mechanical generation grow even more insuperable – though the existence of salient resemblances is one ground of success, it is not the only one, and in any case it is doubtful that there is any way of mechanically determining what is to count as salient for these purposes.²¹

I am highly sceptical, then, of the possibility of Deep Blue or Shallow Pink launching themselves on successful metaphor-making careers. But even if this were deemed possible, the claim that metaphor-making is a paradigm of creative imagination would not be materially damaged. For recall that this proposition is advanced not as a constitutive claim, grounding a universal a priori link between metaphor-making and creative imagination. Rather, it is proposed as a heuristic claim, a claim about how creative imagination, in one of its uses, can fruitfully be understood, thus illuminating how it operates. If, as the objection holds, metaphor-making is not necessarily an exercise of creative imagination, then a simple modification would hold that those instances of metaphor-making which are exercises of creative imagination are also paradigms of it. Thus restricted, the core of the heuristic claim would be undamaged. In such cases, metaphor-making would still display the process of creative imagination especially clearly. Through an exercise of imagination involving flair, such metaphors would bring together disparate domains into original and, if they were successful, apt connections. The product here illuminates the creative process; that is the core of the heuristic claim. Contrast this with, say, scientific or mathematical theorems. These may also be the products of creative imagination; but unlike metaphors, they do not similarly illuminate through their structure the process of how creative imagination works. For they are generally deductively structured from some basic propositions. Yet what we know about the creative process of making them strongly suggests that they were not generated by deductively following such steps.²² In such cases, unlike that of metaphors, the product does not illuminate but rather occludes the process of its creation.²³

In addition to metaphor-making being a paradigm of active creativity, metaphors are also surprisingly common in many domains of creative thought. This is obvious in the case of literature and especially poetry. But metaphors exist in other domains of art. There are visual metaphors, or visual works that function very like metaphors: Edvard Munch's painting *The*

Scream is sometimes said to be, or to function as, a metaphor for the human condition, for instance.²⁴ And werewolves are an embodiment of the metaphor that men are wolves. Metaphors are not just found in artworks. It is also a significant feature of our talk *about* artworks that it employs metaphors. The language of art criticism is heavily metaphorical; indeed, even basic terms of musical appreciation, such as talk of tension and resolution, high and low notes, musical space, and so on, are metaphorical. And metaphors enter into our experience of artworks, conditioning it into a kind of imaginative experience.²⁵ Finally, metaphors are also of considerable, though more covert, significance in science. Many philosophical and scientific theories are literal developments out of metaphors. The human mind has been variously conceived in history as a kind of hydraulic mechanism (whence some of Descartes' and Hume's psychological theories derived), as a telephone exchange, and more recently as a computational system. Sometimes these models were taken literally, but often they were treated as metaphors which would help focus intuitions, and from which a more exact literal understanding of the phenomena could emerge. Similarly, atoms have been variously thought of as billiard balls, as little planetary systems, and as waves. Science often spins its theories from a metaphorical source.

Though I have stressed the surprising frequency of metaphors in our creative practices, let me emphasise that my principal point is that metaphor-making is a paradigm of the creative use of imagination, and that this does not rest on a claim about how pervasively metaphors are employed. Paradigms are still paradigms, even when they are very uncommon. Rather, what the pervasiveness of metaphors shows is that metaphor is very influential in our creative thought; metaphor is not just a paradigm of creative imagination, but its use is a very common feature of creative imagination. However, imagination's employment in metaphor-making is not the only kind of creative imagination. We have already noted that the works of Cragg and Gehry are the products of powerfully creative spatial imaginations, but while some of their works have metaphorical aspects (Cragg's suggestion of laboratory vessels in some of his sculptures, for instance), the creativity of their forms is not exhausted by them. The claim that I am advancing purports to be only a partial answer to the question of how creative imagination operates.

Finally, it is worth briefly returning to Kant's discussion of creativity, which, I claimed, appeals to metaphors in talking of aesthetic ideas. We can now see

that Kant's account has a significant defect. An aesthetic idea is characterised as a 'presentation of the imagination which prompts much thought, but to which no determinate thought whatsoever, i.e., no [determinate] concept, can be adequate...'. Kant's causal talk of 'prompting' here is inadequate as a characterisation of a good metaphor, or indeed of a good idea in general, since even excruciatingly bad metaphors and ideas can prompt much thought – for instance, thoughts about how bad these metaphors are, about how shallow and predictable their authors are, about how this kind of thing is typical of a certain banality in our culture, and so on. The causal idea of prompting, and the quantitative test of 'much thought' are inadequate standards of success in metaphor-making and of good ideas in general. A good metaphor doesn't so much prompt thought, as guide thought, asking us to think of one object in terms of something else; and its standard of success isn't the volume of thought it causes to gush from us, but the quality of that thought. For, as we have seen, a good metaphor must be apt, and a salient way in which it is apt is in fastening onto some previously overlooked features that two objects have saliently in common.

Perhaps it was Kant's hostility to the view that art can teach us anything (as opposed merely to stimulating our cognitive powers in free play) that prevented him from seeing this crucial point. But, in any case, it shows that the values necessary for creativity are in part cognitive ones. And in that respect Aristotle gives us a much better, albeit much briefer, account of the links between creativity and metaphor than Kant provides. Aristotle remarks in the *Poetics* that for a poet in respect of his use of language 'the greatest thing by far is to be a master of metaphor. It is the one thing that cannot be learnt from others; and it is also a sign of genius, since a good metaphor implies an intuitive perception of the similarity in dissimilars' (*Poetics*, 1459a5–8).²⁶ The link of creative thought to metaphor, and of a good metaphor to sensitivity as to how things are, could not be put much better than that.

6. Conclusion

In investigating the question of the links, if any, between creativity and imagination we have seen that some of the supposed connections have rested either on the use of 'imaginative' as a near-synonym for 'creative', or from confusing the mere use of imagination in active creativity with the claim that

the imagination is in itself the source of creativity. Nevertheless, we have also seen that there are genuine links between creativity and imagination. We have seen the plausibility of the empirical claim that imagination is an important way in which creative results are displayed to the creative person. More important, we have defended the existence of an a priori constitutive connection between imagination and creativity: imagination is suited of its nature to be the vehicle of active creativity. We then investigated the question of how the creative imagination operates, and returned a partial answer to this question. We defended the heuristic claim that a paradigm of active creativity is metaphor-making, for such activity clearly displays how one can use imagination in being creative, in bringing together previously disparate domains in a way that is valuable, particularly in inviting insights into these domains. The creative product here illuminates the creative process.

The upshot is that the traditional linking of creativity to imagination is correct. Though the relation is more complex than at first appears, there are substantive and important connections – empirical, constitutive and heuristic – between the two domains. Much remains to be learned about this topic, but I hope that I have at least shown that there is a rich and interesting set of issues to be investigated here.

Notes

Versions of this paper were read at Queen's University, Kingston, and the Universities of Aarhus, Sussex, McGill, Leeds, and Sheffield. I am grateful to the audiences on these occasions for their comments, suggestions and questions.

¹ Shakespeare, A Midsummer Night's Dream, 5.1.8-17.

² Percy Shelley, 'A Defense of Poetry', pp. 498-513, at pp. 499 and 512, in Hazard Adams, ed., *Critical Theory Since Plato* (San Diego: Harcourt Brace Jovanovich, 1971).

³ Quoted in Peter Burke, *The Italian Renaissance: Culture and Society in Italy*, 2nd ed. (Princeton, N.J.: Princeton University: 1987), p. 80.

⁴ Immanuel Kant, *Critique of Judgment*, trans. Werner S. Pluhar (Indianapolis: Hackett, 1987), Ak. 308 (pagination of the *Akademie* edition).

⁵ The stress here is on *purely* by chance; a creative procedure can involve serendipity, but for it to be creative, one must exploit chance occurrences with flair – for instance,

one must recognise the importance of an overheard remark for the solution of a problem. If the outcome occurs purely by chance, then the process is not a creative one.

- ⁶ A real-life instance of such a mechanical search procedure was Charles Goodyear's discovery of vulcanisation. Goodyear dropped a wide variety of substances (including cream cheese) into liquid rubber before hitting on sulphur as a vulcanising agent; see David Novitz, 'Creativity and Constraint', *Australasian Journal of Philosophy* 77 (1999): 67-82 at 75. Novitz agrees that Goodyear's achievement was not radically creative, but on grounds somewhat different from those advanced here.
- ⁷ The above account of creativity could be further developed and refined. For instance, to allow for the possibility of independent discoveries, one could distinguish between a discovery being original as far as the discoverer knows, and its being the first time that the discovery had ever been made; doing so would yield something like Boden's distinction between P- and H-creativity. For discussion of this, see the Introduction to this volume, section 2 (b).
- ⁸ Mary Warnock, *Imagination* (London: Faber and Faber, 1976), p. 10.
- ⁹ For this view, or variants thereof, see Alvin Plantinga, *The Nature of Necessity* (Oxford: Oxford University Press, 1974), pp. 161-2; Alan R. White, *The Language of Imagination* (Oxford: Basil Blackwell, 1990); Sabina Lovibond, *Realism and Imagination in Ethics* (Minneapolis: University of Minnesota Press, 1983), p. 198; Roger Scruton, *Art and Imagination: A Study in the Philosophy of Mind* (London: Methuen, 1974), pp. 97-8; and Nicholas Wolterstorff, *Works and Worlds of Art* (New York: Oxford University Press, 1980), pp. 233-4.
- ¹⁰ For instance, Roger Scruton, *Art and Imagination: A Study in the Philosophy of Mind* (London: Methuen, 1974), p. 97, holds that 'Imagination involves thought which is unasserted...'. Scruton thinks that further conditions need to be satisfied for a mental act to be an act of imagining, something which I do not believe.
- ¹¹ It could be objected that apparent cases of creativity without imagination are really ones in which a person is imagining unconsciously that this, for instance, was what Russell was doing when asleep. But it would be merely dogmatic to insist that this *must* be going on in all such cases, and the mere *possibility* that these cases do not involve unconscious imagining is sufficient to undermine the claim of universal necessity that a creative act requires an imagining.
- ¹² For instance, something akin to this seems to be held by Scruton in his 'Imagination', in David Cooper, ed., *A Companion to Aesthetics* (Oxford: Blackwell, 1992), pp. 212–17. Scruton here distinguishes between imagination in the sense of the

capacity to experience mental images, and creative imagination, which involves the creating of mental contents which are not otherwise given to perception or judgement (p. 214).

- ¹³ See Sigmund Freud, 'Creative Writers and Daydreaming', in *Critical Theory Since Plato*, pp. 749–53.
- ¹⁴ This reinforces the point made earlier that the fantasist uses his imagination too, but rarely creatively; it is how a person uses his imagination that makes him creative.
- ¹⁵ Considerations of this kind are deployed in Peter Railton, 'On the Hypothetical and Non-Hypothetical in Reasoning about Belief and Action' in Garrett Cullity and Berys Gaut, eds., *Ethics and Practical Reason* (Oxford: Oxford University Press, 1997), pp. 53-79.
- ¹⁶ Compare this with the 'paradox of hedonism' that those who strive after only their own pleasure will likely be less successful at achieving this aim than those who do not have this as their explicit or sole aim; for the latter can access other sources of value and pleasure, such as friendship, which are closed to the motive hedonist. In similar fashion, sole concern with his own creativity is likely to blind the artist to other values, such as sound technique, insight and sensitivity; and as we noted in defining 'creativity', some other values are required if creativity is to occur.
- ¹⁷ One might suppose that one could also be actively creative in trying out various options physically rather than in imagination for instance, a painter might try out various designs on a canvas, rather than imagining them. Could this also be an instance of active creativity without imaginings? Not so. The painter's activities would have to be controlled by his intentional states if they were to count as creative; otherwise they would be analogous to the paint-daubed thrashings-around in the dark room discussed in section 1. And if the painter's activities are controlled by his intentional states, then the issues to do with the nature of these intentional states resurface.
- ¹⁸ Anthropology, 167; quoted by Pluhar in his translation of Critique of Judgment, p. 91.
- ¹⁹ I am indebted for this point and several others in my discussion of metaphor to Richard Moran, 'Seeing and Believing: Metaphor, Image, and Force', *Critical Inquiry* 16 (1989): 87-113.
- ²⁰ Concerning the lack of surface syntactic and semantic peculiarities of metaphors when taken literally and that they can be true, see Ted Cohen, 'Figurative Speech and Figurative Acts', *Journal of Philosophy* 72 (1975): 669-84, at 671. Cohen there, and also in 'The Inexplicable: Some Thoughts after Kant' in this volume, questions the possibility of mechanically generating metaphors. He also holds that metaphors are

good examples of what Kant may have in mind by products of genius, though he does not directly connect metaphors to aesthetic ideas.

- ²¹ Mere resemblance will not suffice: as Goodman has taught us, any two things resemble each other, since there is always some property that they share; see Nelson Goodman, *Languages of Art: An Approach to a Theory of Symbols* (Indianapolis: Hackett, 1976), ch. 1.
- ²² Henri Poincaré gives an illuminating account of how during a sleepless night he discovered a fundamental mathematical theorem, a process of discovery that he expresses in terms of ideas arising in crowds and colliding, until some interlocked. The process of discovery was evidently very different from the structure of the formal proof eventually offered. See Henri Poincaré, 'Mathematical Creation', in Brewster Ghiselin, ed., *The Creative Process: A Symposium* (New York: Mentor, 1952), pp.34–42, at p.36.
- ²³ Even in the case of mechanically generated metaphors (if they are possible), there is a way in which their structure would still illuminate the creative process. For, even though *ex hypothesi* they would not be generated by creative imagination nor be produced by flair, they would still guide their audience imaginatively to link together two domains, and if the metaphors were successful, to discover original and apt connections between them and perhaps to elaborate the metaphors further. They would thus guide those who understood them through a process akin to the process of creative imagination that could have, but did not, produce them.
- ²⁴ Some resist calling non-linguistic signs metaphors, for they hold that a metaphor must have a subject-term which denotes the object of the metaphor (e.g., men) and a predicate-term which attributes some property to that object (e.g., being wolves). But property-attribution can be achieved not just by linguistic means, but by other methods, such as painting a property-instance (painting a wolf, for instance). Moreover, even though the object may not be denoted in all cases (the human condition is not denoted by Munch's painting), nevertheless the object of the metaphorical attribution can be *suggested* by visual means, as is indeed true of Munch's painting. So even if one were to insist that the lack of object-denotation means that one is not, strictly speaking, here dealing with a metaphor, nevertheless one can hold that certain visual signs function in a way very like metaphors, in inviting us to imagine a property of something which does not literally possess it. And the latter claim is all we need for present purposes.
- ²⁵ For the point about music, see Roger Scruton, 'Understanding Music', in his *The Aesthetic Understanding: Essays in the Philosophy of Art and Culture* (London: Methuen, 1983). See my 'Metaphor and the Understanding of Art', *Proceedings of the*

Aristotelian Society 97 (1997): 223-41, for a discussion of the role of metaphor in the understanding and appreciation of artworks.

²⁶ Translation from *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes (Princeton, N.J.: Princeton University Press, 1984).