

# 透明的臉

賴仕維

世新大學

人文社會學報第九期 抽印本

中華民國九十七年七月出版

JOURNAL OF THE HUMANITIES AND SOCIAL SCIENCES

SHIH HSIN UNIVERSITY

No.9 July 2008

## 透明的臉

賴仕維 \*

### 摘要

「辨識哲學」中的主流模式抱持如下觀點：辨識人的臉孔時，牽涉一個心靈詮釋的過程。這個模式是這樣的：若我在當下的視覺印象符合先前在我心靈中所儲存的印象時，我就能辨識你的臉孔；就像是閱讀刻在蠟板上的字一般，只要蠟板上的字還在，就能夠存取過去的記錄。在哲學與日常經驗中，這個模式廣泛地為人所接受，但是在不為人知的情況中，這個模式受到廣泛接受的事實，反而遮掩了許多反對這個模式，但存在於辨識過程中的諸多特徵。在本文中，我們將透過與另一種模式共置的方式，重新呈現那些在辨識過程中存在但尚未受承認的概念；這也就是那種從維根斯坦哲學以及他針對辨識與視覺記憶的說明裡所推衍出來的模式(Wittgenstein, 1958, 1974)。在這個作為另一種選擇的模式中，人的臉孔是透明的。維根斯坦說，看到某張臉孔的理由，不是因為反省到什麼印象的理由，而是因為這張臉本身的理由(Wittgenstein, 1980, §170)。我們將以辨識熟悉的臉孔作為「透明臉孔模式」的典範例證。我們同時也檢視這個模式中所涵蓋的幾點批判意涵。首先，辨識你的臉孔並不需

---

\* 世新大學語言中心講師

要在我的腦海中涉及你的臉孔或表情的任何印象。其次，將一個腦海中的印象與照片作比較的想法，是錯誤的。最後，即使在我腦海中，你的臉孔所出現的印象的確因伴隨你的臉孔或表情而生，這依然不能解釋什麼，因為那樣我總需要反過來先能夠辨識說，這個印象就是那張臉孔表情的印象。

關鍵字：人的面孔、臉部辨識、視覺記憶、維根斯坦

# The Translucent Face

Simon van Rysewyk \*

## Abstract

The dominant model in philosophies of recognition holds that human facial recognition involves a process of mental interpretation. The idea is that I recognize your face or expression when the current visual impression coincides with my previously stored mental one, like reading off writing on wax tablets: as long as the wax imprint remains, the record of the past can be retrieved. Although this model is widely accepted in philosophy and much human experience, it unconsciously screens out various features of recognition that speak against it. In this paper, we draw out the unacknowledged acceptance of this conception by juxtaposing it with a different model; one derived from the philosopher Wittgenstein and his remarks on recognition and visual memory (Wittgenstein, 1958, 1974). In this alternative model, the human face is translucent. One sees the human face, Wittgenstein says, not “in reflected light but rather in its own” (Wittgenstein, 1980, §170). We consider the recognition of familiar faces as paradigmatic of the model of the translucent face. We also review the critical insights this model embodies. Firstly, facial recognition need

---

\* Lecturer, Language Center, Shih Hsin University

not involve a mental image in my mind of your face or expression. Secondly, comparing a mental image with a picture is misconceived. Finally, even if a mental image of a face in my mind does accompany recognizing your face or expression, it cannot explain it, since I would in turn have to recognize that the image is an image of the facial expression.

Keywords : human face, facial recognition, visual memory,  
Wittgenstein

## 1 Introduction

In *Conduct of Life*, Emerson writes: "A man finds room in the few square inches of his face for the traits of all his ancestors; for the expression of all his history, and his wants". One would have to agree with Emerson's observation. What differentiates the remarkable variety of human facial expression may be no more than a *minute* difference (a thousandth of an inch) in the orientation of the lips, the brow, or the wrinkle in your nose. In the swing and play of features on a human face, an abrupt qualitative change results from a minimal quantitative change. If the features change slightly, we can speak of a corresponding change in the facial expression. The difference between a friendly smile or a sarcastic smile, a wry look or a cruel look is told in no more than an ounce of flesh. But if the margin of error is so small, it is surely remarkable that we are able to differentiate facial expressions at all. How does facial recognition work?

It is strongly felt by all of us who are at home in their face and who do regard it as his or her autobiography or fiction, that human facial recognition involves a process of interpretive involvement. It is true that we do see human faces and facial expressions, and recognize many of them instantly, but we also look *behind* many of them to figure out what they mean. We strongly incline toward the view that the human face is *transparent*: it can be seen through. Like any material that allows light to pass through it without distortion, a facial expression travels uninterrupted from your face to my *mind*, where I fit it into my gallery of portraits. Not understanding a facial expression means not being able to interpret it thus. It seems facial recognition is a specific process of interpretation involving an essential reference to a past history; that is, to our having seen certain facial expressions previously. What could be more natural than to think of facial recognition in this way: whereby light reflected from your expression strikes my face, illuminating my mind. You slip smoothly into my own private showroom. We call this the 'model of recognition'.

This way of seeing recognition resonates intuitively with the model of recognition common in various *philosophies* of recognition. The idea is that I recognize your facial expression when the perceived impression *coincides* with my previously stored one, like reading off writing on wax tablets: as long as the wax imprint remains, the record of the past can be retrieved. The metaphor of wax tablets is used by Plato to represent visual memory:

Imagine then, for the sake of argument, that our minds contain a block of wax...Let us call it the gift of the Muses' mother, Memory, and say that whenever we wish to remember something we see or hear or conceive in our minds, we hold this wax under the perceptions or ideas and imprint them on it as we might stamp the impression of a seal ring. Whatever is so imprinted we remember and know as long as the image remains; whatever is rubbed out or has not succeeded in leaving an impression we have forgotten and do not know.<sup>1</sup>

In favor of this conception is its familiarity. We know what it is like to record information on paper or on a scratch pad, and we know what it is like to retrieve the information: we simply read it off of the written surface. Should the material record be destroyed, and we need to retrieve the information, we simply consult the paper duplicate, or we make another paper copy from memory, or we read the same off of a memory image, and so on. We read information off of wax tablets so long as the wax impression remains; and we remember what impresses us until the impression fades along with what we remember. Thus, in Aristotle: perception impresses a picture in my soul or body which memory subsequently *retraces*. A memory is what is left when something happens that does not completely un-happen. There is no remembrance of a thing not previously imprinted<sup>2</sup>.

---

<sup>1</sup> Plato, *Theaetetus*, 191c-e

<sup>2</sup> Aristotle, *On Memory*, 450a 29-30; 450b 6-11, 15-19. Indeed, the only advantage in a memory that does not work, or that works badly, and thus is not imprinted - or unreliably so - is in the dubious pleasure that one is able to enjoy several times the same good things for the first time. So much for bad memory!

Some time later, Bertrand Russell worked out in *Analysis of Mind* a conception of recognition and memory based on Aristotle's trace theory according to which the past does not pass since it survives in memory as a picture from which I read off the remembrance of it (Russell, 1921, 158). The past is never dead, for it is not even past. What makes a memory-image into a *memory*-image is not the greater vivacity of the current image compared to the memory-image as Hume had conceived of it<sup>3</sup>; according to Russell, the truth of the matter is in the special feeling of *familiarity* accompanying the memory-image (Russell, 1921, 162). Memory is simply what our feelings do to us. Familiarity is also necessary for recognition, but must be accompanied by knowing the object currently perceived to be such-and-such, or associated with such-and-such a word. The feeling of recognition is the feeling that results from this habit of association. Or again, Plato: it is like familiarity consists in an object's fitting into an imprint which it made before, when first encountered.

Despite the wide acceptance of this model in much human experience and philosophy, it unconsciously screens out various features of recognition that speak against it. The philosopher Wittgenstein draws out the unacknowledged acceptance of this conception by juxtaposing it with a different model in his remarks on recognition and visual memory (Wittgenstein, 1958, 1974). In this alternative model, the human face is *translucent*. One sees the human face, Wittgenstein says, not "in reflected light but rather in its own" (Wittgenstein, 1980, §170). This model embodies the following critical insights. Firstly, facial recognition need not involve a mental image in my mind of your facial expression. Secondly, comparing a mental image with a picture is misconceived. Finally, even if a mental image of a facial expression in my mind does accompany recognizing your expression, it cannot explain it, since I would in turn have to recognize that the image is an image of the facial expression.

Wittgenstein reminds us that it is misleading to think that a process of

---

<sup>3</sup> Hume, *A Treatise on Human Nature*, I.1.v

interpretation happens whenever we recognize facial expressions: for we also describe a face *immediately* as friendly, sad, radiant, bored, even when we are unable to give any other description of the features. And we describe familiar faces thus, and would not explain our different descriptions by reference to any interpretive experience beyond what is immediately perceived in the *facial features* alone. Let us now consider this alternative model in detail.

## 2 Need facial recognition involve mental imagery?

The conception of the face as like transparent material can be summarized thus: when I recognize your facial expression, I fit my current impression of expression *x* with a mental image derived from a previous experience of *x*. When a face is recognized as the expression of friendliness, there is a strong inclination to think that the recognition lies in there being something like a showroom of faces in our mind, into which the current impression fits, like recognizing a face from its similarity to a picture of it.

In the *Philosophical Investigations*, Wittgenstein queries whether facial recognition *always* involves having a mental image of the currently perceived facial expression. Is this experience typical in cases of facial recognition? It seems atypical. In some cases no mental image may occur at all. Or, a mental image occurs only *after* one has recognized a facial expression in another's face. Imagine arriving at a class reunion. One may meet an old friend there, and directly see her in one's mind as she was twenty years ago. Or, you recognize expressions of gloom and boredom on the faces of the participants, but suddenly you can't help thinking of the fun everyone had at your family get-together last Christmas. In this last situation, not only do mental images *follow* recognition of the facial expressions, they are of something *else* associated with the current impression. Notwithstanding the fact that we sometimes have memory-images when we recognize a face, that fact is exceptional, and hence cannot be sufficient to account for recognition in a

general way.

This brings us to the memory-image itself. According to much philosophy, in recognition one compares one's present impression with a stored memory-image. The memory-image is treated as a picture or photograph. Is a memory-image like a picture? One may say that it is misconceived to compare a mental image with a picture. A memory-image informs me that it is an old friend I currently see only if I remember that *this* is what so-and-so looked like. *I* do the remembering, not the memory-image. The memory-image can only *remind* me of what so-and-so looked like, and its occurrence presupposes memory and recognition. Russell (1921) suggests that a special feeling of familiarity connects a memory-image with the past; justifies it as a symbol of a prior experience. But I recognize the special feeling by remembering it, not the other way round. The special feeling is not recognized independently of memory, and is not *evidence* for how things were. It takes memory to inform us that what is presented is a representation of the past (Wittgenstein, 1967, §662).

The inclination to view individual recognition *after the event* may betoken contrasting it with matching a picture to what it represents. Ordinarily, when we recognize someone's face we don't compare recognition with fitting a picture with what it represents, but in philosophy we routinely do this. Now, there is nothing wrong with this *per se*. Philosophers look at something when no one else *ordinarily* looks at it, and in such a way that often generates puzzlement or doubt. If so, then we should remember that it is possible to look at recognition in at least two ways: we can look at the act of recognition after the event to see what actually happened; we can also look at it by *presuming* that ordinarily my current impression of a face coincides with an imprint in my mind, or that I compare my current impression of someone's face with a memory-image, and so on. According to Wittgenstein, what appears inevitable in a philosophy is often the unacknowledged model we bring to the table and which we never think to question. Again, it is atypical that people have memory-images when they recognize someone's face. This important fact

should not be *forgotten*. Once this is acknowledged, the grip of the dominant model of recognition is weakened.

Wittgenstein does not deny that we sometimes have memory-images when we recognize someone, or when we recognize a facial expression. What he does deny is that having such an image is necessary or sufficient for the truth of 'A recognizes *x*'. As we have seen, I may recognize *x* without any mental image occurring to me, and I may have a memory-image of *x* without thereby recognizing *x*. The memory-image is not *evidence* for a prior experience, and does not relate to facial recognition as a photograph convinces me now how things were in a past situation. The memory image no more justifies the truth of the words 'A recognizes *x*', than the words justify the memory image. 'The memory image and the memory words stand on the *same* level' (Wittgenstein, 1967, §662).

### 3 Can mental imagery explain facial recognition?

According to the dominant model which is the subject of this paper, recognition involves comparing and coinciding one's current perceptual impression of a face with one's stored memory of it. This idea is derived from the familiar empirical operation of applying a process to a quantity or quantities. To slip a material object into an imprint prepared for it is a phase or a component of a phase in the course of coinciding two objects. Coinciding two objects has a beginning and an ending, between which the operation or process occurs. We see that the piston fits into the cylinder; or, we notice that they do not fit each other, and so we may attempt to orientate the one into the other for a fit. What goes on in orientating the piston into the cylinder is a phase in the process. Until the various phases in the process have been gone through, one has not completed the coinciding. We are thoroughly familiar with what is involved in the operation of applying a mechanical process to a material quantity or quantities.

There is a strong analogy between coordinating a piston into a cylinder manually, and coordinating one's current perception with one's memory mentally. Piston and cylinder, perception and memory are each objects coordinated *in time* and differ only in that each process is concentrated in a different *organ*, to cite Aristotle and Sophocles: in the former, the eye does the work, in the latter, the mind. Recognition is in the mind, as sight is in the eye. Is this an accurate comparison?

Imagine that one did have a mental image of the facial expression that one is now perceiving, and suppose that the expression and one's image *coincide* on analogy with coinciding a piston and cylinder. But, it can be asked: how does one know that the relation between the face and the image is one of coincidence or of agreement? We would *still* need to recognize the relation between the expression and the image as one of coincidence. But, in that case, we need to have a mental image of the coincidence between the image and the expression, and to interpret that the image of the coincidence coincided with the coincidence! T.S. Elliot captures this muddle of thought in the following quip:

Footfalls echo in the memory

Down the passage which we did not take

Towards the door we never opened

One never knows when one is making a memory. At least, one can never know if a previous memory is taken to confirm it. The point is that a mental image of your face cannot explain my recognition of it, for I would have to recognize that the image is an image of the expression. But the philosopher wants to insist that

' "This object is familiar to me" is like saying "this object is portrayed in my catalogue".' In

that case it would consist in the fact that it was a picture filed with others in a particular folder, in *this* drawer. But if that really is what I imagine – if I think I simply compare the seen object with pictures in my catalogue and find it to agree with one of them – it is something quite unlike the phenomenon of familiarity. That is, we are making the assumption that the picture in our catalogue is itself familiar. If it were something strange, then the fact that it was in this folder, in this drawer, would mean nothing to us. (Wittgenstein, 1974, §179f.)

It is quite imaginable that one may note a facial expression on a person, acquire the memory image that coincides with one's current impression of it, and yet not remember who one's memory-image is an image of, and therefore, not recognize the facial expression on the face before one. Unless one knows what a memory-image is an image of, it is quite useless for recognition. It takes memory to tell me whether what I experience is the past. In any event, if one knows what it is an image of, why then do we need it in the first place?

Philosophers have maintained that when I recognize your facial expression, I fit my current impression of expression  $x$  with a mental image derived from a previous experience of  $x$ , like a piston fitting into a cylinder. What, then, of Plato's metaphor of the wax tablets? Do we know of any such imprint in our experience of recognition? Again, even if there were an imprint, how would we know whether the current perceptual impression fits it? Russell said that the coinciding between my impression and memory-image is told by a special *feeling* of coinciding. But, how would we recognize the feeling? Suppose now that the imprint signals to us in facial recognition. Conceivably, I might be able to coordinate my present impression and memory-image for a fit; but again, it is equally conceivable that I not yet recognize the face, because I do not remember whom the imprint is of. Wittgenstein writes:

When I speak of a pattern in my mental catalogue, or of a sheath into which an object fits if it is familiar, what I would like to say is that the sheath in my mind is, as it were, the 'form of imagining', so that it isn't possible for me to say of a pattern that it is in my mind unless it is

really there. – The pattern as it were retires into my mind, so that it is no longer presented to it as an object. But that only means: it didn't make sense to talk of a pattern at all. (The spatial spectacles we can't take off.)

If we represent familiarity as an object's fitting into a sheath, that's not quite the same as our *comparing* what is seen with a copy. What we really have in mind is the feeling when the object slips smoothly into the contour of the sheath. But that is a feeling we might even if there were no such perfectly fitting sheath there at all.

We might also imagine that every object had an invisible sheath; that alters nothing in our experience, it is an empty form of representation. (Wittgenstein, 1974, §180)

Wittgenstein concludes that the model dominant in many philosophies of recognition and memory is *misleading* because it misrepresents and misconceives recognition and memory. If we consider instances we would doubtless call 'recognizing a facial expression', we will certainly see that no mental process of interpretation in them is necessary. As we have already observed, some cases may involve having a mental image in one's mind. In other instances, it may come to one before one recognizes the facial expression, or after one has recognized it. Or, there is simply no inner pageant to speak of. In this last case, one simply sees, without doubt or prior warning, that the facial expression one recognizes is friendly, now sad, radiant, bored, or whatever. To contrast with the conception of the human face as like transparent material, let's baptize this one, after Wittgenstein, the 'translucent face'. We outline this model below and compare it to the dominant model of recognition.

#### 4 Translucency in facial recognition

According to Wittgenstein, the human face is like *translucent* material: it *cannot* be seen through (Wittgenstein, 1958b; 1980). A facial expression is dispersed in the *features* of the face and embeds there like diffuse light. It is not

concentrated or derived as the result of any *process* of recognition or interpretation; it is simply there, *alive* in the features. When one recognizes a facial expression, one does not necessarily compare the expression with a mental image. There is typically no interpretive involvement or experience of recognition at all – one *sees* a face immediately as so-and-so or as the expression of-such-and-such. We will now consider recognition of familiar faces as the paradigm of the translucent face.

#### 4.1 Recognition of familiar faces

There is a photo of my wife on the writing desk, next to my computer. She smiles happily. Nothing is more familiar to me in life than the image of her that I look at every day as I write. Here she is again. And the familiarity of her expression, its features and contours, has quite impressed itself upon me. When I recognize my wife smiling in the desk photo, do I compare my visual impression of her with a memory-image? The model of recognition holds that facial recognition is an inner process, and so they offer a special series of events that is the recognizing. It is quite simple then: If I have perceived the facial expression in the photo before, then there is a stored copy of it in my mind. Any subsequent perception of her smile will coincide with the stored copy. Recognition follows! Perception breeds recognition. Or is that contempt? For it seems that, on this model, all objects – including familiar faces – lose to the *mind* by too familiar a view.

Is it plausible to suggest that whenever I look at the long familiar photo of my smiling wife, I recognize her by comparing afresh my visual perception with a memory-image? No, it is not plausible to think this. I do not *process* her anew on each occasion that I look at her face. Then - according to the model of recognition - it means that I do *not* recognize her smile in the picture when I look at it every time? No, this is also not plausible. To claim that I did not recognize her would imply that I did not know her, which is absurd. If asked

whether I recognized my wife's smile in the photo when I sat at my desk this morning, I should certainly say 'Certainly!'. According to the model of recognition under review, I say this because I have a mental experience of familiarity or recognition, and that I compare my visual impression of her with a memory-image. Then, if I fail to recognize her, do I therefore experience a feeling of *unfamiliarity*? An unfamiliar face *may* confer on us a feeling of unfamiliarity, but it does not follow that a familiar face confers on us a *feeling* of familiarity, which is the result of comparison with a mental item.

Wittgenstein reminds us how we use the word 'recognition': 'No one will say that every time I enter a room, my long familiar surroundings, there is enacted a recognition of all that I see and have seen hundreds of times before' (Wittgenstein, 1958b, §603). In normal contexts, there is simply no reason to doubt that I could fail to recognize my wife. We do not budget for recognitional failure when encountering familiar faces in normal circumstances. Since there is no passing from not knowing to knowing in such a case, we make no provision for failure. Concerning familiar faces, one may say that we neither recognize nor fail to recognize the face one encounters. Typically, one simply sees a familiar face *immediately* as so-and-so or as the facial expression of such-and-such. Besides, is the mental image of a face more familiar than the face itself? It is enough to say that the face is familiar. Therefore, it is misconceived to think that whenever one *perceives* a familiar face, one *recognizes* it. Peter Hobson captures the model of the translucent face well,

the perception is not a two-stage process of which the first stage is the perception of... behavioral or bodily form, and the second is an intellectually based attribution of meaning. Rather, the perception is of the meaning itself...(Hobson, 1993).

It is important to distinguish between cases of recognition of familiar faces, which are not marked by task achievement, and therefore do not admit of recognitional failure (e.g., recognizing my wife), and cases of facial

recognition which, in normal circumstances, are marked by task achievement insofar as there is a presumption that one may not know who or what one is currently perceiving. For example, we *expect* recognitional failure if one has not seen an old friend for twenty years, and now she is before one, for she has probably changed greatly since the previous encounter, or we presume that one may not know the facial expression I immediately recognize now if the original encounter of it was a quick look, and so on. In these cases, we typically *try* to recognize the face or facial expression. In normal circumstances, however, there is no reason to doubt that I could fail to recognize a familiar face. I simply recognize the person before me as my wife.

Now, recognition of my smiling wife *may* be prefaced by a process of trying to recognize her facial expression *if I have enough reason to do it* - though it would be quite strange of me to do this normally - but recognizing itself is not a process. I can decide to *try* to recognize, but not to recognize. Trying to recognize my wife's smile takes time, but the recognizing that is the result of this effort does not. Whatever mental images, feelings or sensations go on while trying to recognize her face they are not part of the recognizing, since recognizing is not a process and does not take time. I may be interrupted in trying to recognize your facial expression, but not in recognizing your facial expression. My trying to recognize you may be incomplete, but not my recognizing you. What is told by the micro-expressions on a face may be conveyed by trying to recognize something there, but in this task one is not engaged in recognizing. Again, just as the mental image experienced during recognition of your face doesn't imply that I recognize your face, it doesn't follow that I recognize your face merely from the fact that I am *trying* to do so. The verb 'to recognize' is an achievement-verb, not a process-verb or an activity-verb. Facial recognition, being an achievement, takes no time. It is not a process or activity *per se* (Hacker, 1996). Unfortunately, to conceive of recognition as *consisting* in a hidden process of coinciding one's impression with a stored representation unconsciously glosses over these subtle differences,

and absorbs into the ancient model the assumption that whenever one perceives a familiar face, one *must* recognize it.

## 5 Conclusion

In this paper, we reviewed the dominant model in philosophies of recognition in which human facial recognition involves a process of mental interpretation. The idea is that I recognize your face or expression when my current visual impression *coincides* with my previously stored mental one. The assumptions of this model are that facial recognition necessarily involves a mental image in the mind of a face or facial expression, and that a mental image is like a photograph or picture. Although this model is widely accepted in philosophy and human experience, it screens out various features of recognition that speak against it. We juxtaposed this model with a different model; one derived from Wittgenstein and his remarks on recognition and visual memory. According to this alternative conception, the human face is *translucent*. To illustrate this model, we offered as a paradigm the recognition of familiar faces. When one recognizes a familiar face, one does not necessarily compare the expression with a stored memory-image. Typically, no interpretive involvement or experience of recognition occurs at all: one simply *sees* a face immediately as so-and-so or as the expression of-such-and-such. The merit of the alternative model lies in challenging the idea that recognition involves a process of interpretation in the mind, which, we have argued, is inappropriate in some cases. Surrounding phenomena with new possibilities has the power to dramatically alter how they look to us.

## References

1. Hacker, P.M.S. 1996. *Wittgenstein: Mind and Will, Volume 4 of an Analytical Commentary on the Philosophical Investigations*. Oxford: Basil Blackwell.
2. Hobson, R.P. 1993. *Autism and the Development of Mind*. Hillsdale, NJ: Erlbaum.
3. Russell, B. 1921. *Analysis of Mind*. London: Allen & Unwin.
4. Scruton, R. 2004. "Witgenstein and the Understanding of Music". *British Journal of Aesthetics* 44 (1): 1-9.
5. Wierzbicka, A. 1999. *Emotions Across Languages and Cultures: Diversity and Universals*. Cambridge: Cambridge University Press.
6. Wittgenstein, L. 1958: *The Blue and Brown Books*. Oxford: Blackwell.  
---1958b: *Philosophical Investigation*, 2<sup>nd</sup> edn. Oxford: Blackwell.  
---1967: *Zettel*. ed. G.E.M. Anscombe and G.H. von Wright, tr. G.E.M. Anscombe. Oxford: Blackwell.
7. ---1974: *Philosophical Grammar*, ed. R. Rhees, tr. A. J. P. Kenny. Oxford: Blackwell.
8. ---1980. *Remarks on the Philosophy of Psychology*, Volume II, ed. G.H. von Wright and H. Nyman, tr. C.G. Luckhart and M.A.E. Aue. Oxford: Blackwell.

收件日期：97年02月29日

審查通過日期：97年07月21日