

THE TIME OF OUR LIVES:
ARISTOTLE ON TIME, TEMPORAL PERCEPTION, RECOLLECTION, AND
HABITUATION.

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ABSTRACT:

In *Physics IV*, Aristotle poses the question whether time depends on mind for its existence (223a25-27). This thesis begins by arguing that Aristotle's account of time is, in fact, one in which time is mind-dependent. The remainder of the thesis demonstrates how this interpretation of time informs and explains Aristotle's accounts of perception, recollection, and habituation. The thesis is divided into four chapters, each dealing in detail with the topics of time, perception, recollection, and habituation. In Chapter One I argue that time is a phenomenon which requires minds in order to be actualized. In the second chapter I argue that time, as mind-dependent, is an incidental object of perception perceived by the common sense, and that this is consistent with Aristotle's description of perception in *De Anima*. Chapter Three provides arguments that recollection, as understood in *De Memoria*, is a capacity which allows for the association between present perceptions and memory-images. In the final chapter, I argue that the process of habituation in the *Nicomachean Ethics* is best understood with reference to the associative power of recollection. In this way, I hope to demonstrate how Aristotle's analysis of time in the *Physics* has significant implications for our understanding of his views on perception, recollection, and habituation.

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INTRODUCTION

While reading the *Nicomachean Ethics* I have often been struck by the way in which a complete understanding of Aristotle's ethical theory seems to require an understanding of many other aspects of human life. The account of how we become virtuous presupposes not only the employment of certain human faculties such as perception and memory, but also some kind of relationship to the temporal. For instance, the very project of attempting to describe how best to live a life presupposes our ability to organize our lives toward the goal of living it well. As Francis Sparshott rightly notes in the introduction to his analysis of *Nicomachean Ethics*,

It follows that humans, unlike all other animals, being able to formulate alternatives and to envisage courses of action within the limited span of a lifetime, can think of themselves as living 'a life' and are faced with the question of how to organize that life; and this is an aspect of their general ability to formulate, articulate, and calculate – their possession of articulate speech, *logos*. And time, be it noted, is the same for all minds, so that plans can be not only formulated by individuals but interrelated. (Sparshott, 8)

The project of this dissertation is to investigate how Aristotle's account of time informs his account of other aspects of life; how views from his work in natural philosophy can elucidate topics in his psychological and ethical works. In the course of this investigation, I follow a thread from Aristotle's account of time in the *Physics*, through his accounts of perception in *De Anima* and recollection in *De Memoria*, and end with his views on habituation and its connection to virtuous action in the *Nicomachean Ethics*.

In what follows I shall argue first, that time is a phenomenon which requires minds in order to be actualized, second, that time is an incidental object of perception perceived by the common sense, third, that recollection is a capacity which allows for the association between present perceptions and memory-images, and finally, that the process of habituation in the *Nicomachean Ethics* is best understood with reference to the associative power of recollection. The general purpose is to show that Aristotle's analysis of time in the *Physics* has significant implications for our understanding of his views on perception, memory, and habituation.

In the first chapter of this project, I begin with Aristotle's discussion of time in *Physics* IV, with particular emphasis on the question of whether or not time could exist without a mind. In other words, I focus on the question whether time is a feature of the natural world like motion, or a phenomenon that only exists for beings like us who measure motion and change. This focus is motivated by the question which Aristotle poses at the conclusion of his discussion of time (*Phys.* 223a25-27), where he asks whether it is possible for there to be time without minds. Aristotle's raising of this question bespeaks the inherent need to think time along with the temporal beings for whom time is relevant. To the extent to which time is not treated in connection with the perceptive soul and memory, Aristotle's concluding remarks about the nature of time and our relation to it shall remain mysterious. However, it is surprisingly rare for a commentator to take seriously the claim that time does not exist independently of minds. For example Ross, in his introduction to *Aristotle's Physics*, writes of the claim that mind is the *sine qua non* of time: "...since the discussion is very brief and Aristotle nowhere

recurs to the subject, we need not suppose that he attached much importance to the answer he gives” (Ross, 68). Contrary to Ross’ assessment, I maintain that the relation of the human perceiver to the phenomenon of time is of the utmost importance.

In the course of the first chapter I argue for the consistency of the claim that there can be no time without minds. This is a provocative claim, but there is actually an explicit precedent in another of Aristotle’s works for the structure that I argue is found in the account of time. According to Aristotle in *De Anima*, a sensible, such as colour, is neither solely on the side of the object nor solely on the side of the sense (*DeA*, 426a20-28). An object may have a perceptible form, but if no sense actually perceives it then this object is only potentially sounding, or is only potentially coloured. In other words, when a tree falls in the forest and nobody is around, there is only potential sound without actual hearing. Similarly, time is neither solely on the side of change (object), nor solely independent of it on the side of the perceiver. I argue that, just as there is no perception without both the sound to be heard and the hearing, so too there is no time without both change and the perceiver noticing the change.

For Aristotle, time is the number of change with respect to before and after, or what is countable by reason in the soul, and the ‘now’ is that with which we count. Aristotle goes to great lengths to explain in detail what the now is and even the many ways in which the term is used, but he is conspicuously reticent on the subject of the present as we understand it. The now, in Aristotle’s account, is akin to a point. The now has no duration as a point has no extension. It is difficult to reconcile this with the concept of the present as that time in which we have experiences. However, it is my

position that an adequate account of the present, as having duration (in contradistinction to Aristotle’s durationless ‘now’), can be extrapolated from Aristotle’s account of time in the *Physics* by understanding the mind-dependent nature of time.

It is important to consider Aristotle’s reasons for insisting on the instantaneity of the now while attempting to reconcile this with an account of the perceptual present as having duration. Aristotle’s account of time includes the claim that “when the soul says that the nows are two, one before and one after, then it is and this it is that we say time is” (*Phys.* 219a22-30). What this claim amounts to, I shall argue, is that the perception of time is dependent upon the perception of change. Time is that which is counted by the mind, and the now is that with which, or by which, we count. Since time and change define each other, and change for Aristotle involves a continuous magnitude, time too involves a continuous magnitude and the mind may pronounce a now at any point along this continuum. For this reason, Aristotle writes that “...time is both continuous, by virtue of the now, and divided at the now” (*Phys.* 220a4-5). I argue that the present, as a span of time with a variable duration, is the interval between the two nows pronounced by the mind; but the nows themselves, as limits of this span, form no part of time. As continuous, time is potentially divisible by the now at an infinite number of points. At which of these temporal points the now actually makes its division is left to the pronouncement of the mind.

What is required for the perception of change is the retention of the recent past in the present, such that a history of the continuity of the change is part of the perception of the completion of the change. As we watch the final moments of the change, we also

retain the beginnings of the change and its progress up to this point. To know when it began is to mentally mark off that moment and link it to the moment in which we perceive its completion. I submit that this marking off of moments in perceptual history is a description of the role Aristotle assigns to the now, and that this is not incompatible with a kind of perception that retains the immediate past in order to understand the present meaningfully. The mind pronounces that the nows are two and there is some interval between them, and hence time is perceived when a change is perceived as having a beginning and end. The duration required for the perception of change is not a now stretched out to include past and future within itself, but rather the perception of time involves the retention in present perception of the recent perceptual past. Thus, in sum, the conclusions argued for in chapter one are that i) time is, in fact, dependent on mind for its actuality, that ii) the now pronounced at the end of the change still absolutely divides past from future, and yet iii) the immediate past, stretching back to the now that was pronounced at the beginning of the change, is retained and understood as perceptually relevant to the perception of the change as a whole.

In Chapter Two, I turn to consider Aristotle's views on the perception of time. If the conclusions of Chapter One are correct and time is only actualized through our perceiving change, then time will be a special kind of sense object whose perception is dependent upon our perceiving change. Just as perception is the relation between sense and potentially sensible form, so too time is the result of the mind's pronouncement of nows upon or within perceived change. In the second chapter, I analyze Aristotle's

account of perception as given in *De Anima*, in order to explicate the kind of perceptual object that time is and the faculty of sense that is responsible for our perceiving it.

Aristotle describes three kinds of sense objects and two ways of perceiving them. The three kinds of sensibles are i) the proper sensibles, that is, the objects of the five special senses (i.e.: texture, colour, flavour, sound, and odour), ii) common sensibles such as motion, figure, and number, and iii) incidental sensibles, as an example of which Aristotle gives 'the son of Cleon'. Moreover, sensibles can be perceived either in themselves or incidentally. The five kinds of sensibles associated with the five senses are perceived in themselves by means of their respective sense, because they affect that sense directly without the involvement of any other sense. Colour is perceived directly by means of the eye, sound by means of the ear, etc. Common sensibles, however, are perceived by more than one of the five special senses, albeit only incidentally. Common sensibles are perceived directly, I argue, by the common sense through the intermediary of one or more special senses. Motion, for instance, can be perceived by both sight and touch, but is only perceived in itself by the common sense. It is most difficult to understand exactly how incidental sensibles are perceived, and indeed what exactly incidental sensibles are. I argue that incidental sensibles are sensibles whose perception requires the application of past experience to present perception. In the example of perceiving 'the son of Cleon', what we perceive is more than the colour, shape, and motion of the object before us. Our perception also involves the familial relation that obtains in our recognition of this individual. It follows from this that incidental sensibles are never perceived directly, but only incidentally, since a familial relation is not the sort

of thing we have a sense capable of perceiving. I go on to argue that time is an incidental sensible for similar reasons. The first chapter attempts to establish time's dependence on the perception of change, specifically the perceptual marking off of two nows, one before and one after.

The conclusion of the second chapter is that time is an incidental sensible perceived incidentally by the common sense, as that sense which perceives change in itself. Taking these points together, we can see that the perception of time requires the application of past experience (the marking of a 'before' now in the change) to present perception (of the 'after' now marked in the change), and that this is accomplished through the common sense.

These conclusions about the kind of sensible that time is lead naturally on to the issues of the retention of past perceptions and a mnemonic functioning of the common sense. Therefore, in Chapter Three I turn to consider Aristotle's views on memory and recollection, through an analysis of *De Memoria*. I argue that the associations between memory-images involved in recollection, as described by Aristotle, also involve a temporal ordering of thoughts and perceptions within our personal histories. I argue further that it is consistent with Aristotle's account of recollection to claim that the chain of associations that are formed between memory-images can also be formed between present perceptions and memory-images. In this way, a present perception can regularly bring to mind a certain memory-image. It is this ability for present perceptions to suggest retained memory-images that shall prove crucial to our understanding how the process of becoming habituated to virtue is possible.

In Chapter Four, I turn to Aristotle's account of habituation and its relation to virtuous action in the *Nicomachean Ethics*. One of the essential features of Aristotle's virtue ethics in the *Nicomachean Ethics* is the significance placed on the role of the internal state, or character, of the agent when considering the value of an action. Understanding the means of acquiring a virtuous character is therefore of paramount importance. If acquiring a virtuous character is the sine qua non of virtuous action, it is incumbent upon Aristotle to give a coherent account of this process, thus ensuring the possibility for virtuous action. In Aristotle's account, the possibility for acting virtuously depends upon the ability to acquire a virtuous character through habituation. This makes an understanding of habituation crucial to our understanding of virtuous action as conceived in the *Nicomachean Ethics*. However, the usual understanding of habitual action, (as a kind of bodily memorization, or the unreflective performance of the same actions in the same situations) creates a difficulty for the consistency of Aristotle's account. When he gives his most concise formulation of how it is that we act in accordance with virtue, Aristotle writes that an agent must know that he is performing a virtuous action, and also decide upon this action for its own sake (*NE*, 1105a31). Both conscious awareness of the action and an active deciding upon it seem to be at odds with the notion of actions arising from habituation. Habits are usually thought of as those things we do 'without thinking', for example, the habit of biting one's nails out of nervousness. Habit has the connotation of not involving conscious thought, and is usually contrasted with decision. The question arises then: If we are to become virtuous through

habituation, how can this process result in our performing actions that are not unreflective and unthinking but rather performed knowingly and deliberately?

I propose that we can resolve this difficulty if we connect Aristotle's account of habituation in the *Nicomachean Ethics* with his views about recollection in *De Memoria*. The framework for resolving this difficulty resides in a careful cross-referencing of what Aristotle writes of habituation in the *Nicomachean Ethics* with his account of recollection in *De Memoria*. The distinction drawn in this latter work between memory and recollection dissolves the apparent incompatibility of habituation and decision by establishing habituation as involving recollection, rather than memorization. Habituation, understood as involving recollection, is a consistent foundation for an account of actions arising from habituation as consciously and deliberately performed. In so far as habituation involves the association of the past with the present, it involves a process of recollection. Aristotelian habituation brings about a condition in the agent such that a situation that requires bravery would summon to mind the past brave actions performed in preparation for an agent acting bravely on his own. Aristotelian habituation involves a connection made, due to repetition, between past situations in which virtuous actions were enacted as part of the process of habituation, and present situations that are relevantly similar.

This, broadly stated, is the goal of the present project; to explain the relevance of Aristotle's account of time as mind-dependent first, to his account of our perceptual and mnemonic faculties, then in turn, to the possibility for the process of ethical habituation in the *Nicomachean Ethics*. This thesis is written with an eye toward the connections

between seemingly disparate texts within Aristotle's corpus as a contribution toward refocusing Aristotelian scholarship upon that topic which is most relevantly and pre-eminently Aristotelian: human life.

CHAPTER ONE

Aristotle's description of time in *Physics* IV relies heavily upon his conception of the now as a durationless instant that marks off points of reference in the continuum of motion or change. Aristotle's now is akin to a point; as the latter has no extension, so the former has no duration. The now, considered as a point, is difficult to reconcile with our experience of the present as having duration. In what follows, the term 'now' will be used in Aristotle's sense, while the term 'present' will refer to the notion of an experiential present with a sensed duration. Aristotle explicitly states both that the perception of time is dependent upon the perception of motion and that the now is durationless. A durationless now would seem to exclude the possibility of a present in which the perception of motion is possible, since the perception of motion cannot occur within a durationless point. The resolution of this problem requires a thorough understanding of Aristotle's account of time, since the peculiar features of the now described by Aristotle make sense only within the larger framework of his understanding of time. It is the position of this chapter that an adequate account of the present as having duration can be extrapolated from, and reconciled with, Aristotle's account of time and the now in the *Physics*. The development of this position will rely upon the relation of time to perception, drawing out the implications of Aristotle's account in order to show that his account holds time to be ontologically dependent on mind. The account of this position will be preceded by two preparatory sections; first, a recounting of the relevant sections of Aristotle's theory, and second, a consideration of possible responses to intuitive

objections to Aristotle’s theory. Finally the position itself will be argued for by showing that objective time and Aristotle’s cosmology are incompatible and by arguing that time is dependent on counting and hence time is dependent on mind.

Section One: Aristotle’s Account of Time:

In *Physics* IV.10 Aristotle considers the view that time is [identical with] motion and change (*Phys.* 218b9). He rejects this assertion as it stands, but finds direction in it for his investigation. The claim is considered to be wrong for two reasons: first, motion and change are always specific. They are where and when the changing thing is. Time however, is equally everywhere. Second, motion and change are fast or slow but fast and slow are defined by time. Motion and change cannot be identical with time since time would then be defined by itself (*Phys.* 218b16-17). Nevertheless, Aristotle claims that time is not entirely independent of motion or change and for this reason he takes the connection between time and motion or change¹ as the starting point for his investigation (*Phys.* 219a2-3). He explains the connection between time and change thus:

But neither does time exist without change; for when the state of our minds does not change at all, or we have not noticed its changing, we do not think that time has elapsed, any more than those who are fabled to sleep among the heroes in Sardinia do when they are awakened; for they connect the earlier ‘now’ with the later and make them one, cutting out the interval because of their failure to notice it. So, just as, if the ‘now’ were not different but one and the same, there would not have been time, so too when its difference escapes our notice the interval does not seem to be time. If, then, the non-realization of the existence of time happens to us when we do not distinguish any change, but the mind seems to stay in one

¹ At 218b19 Aristotle asserts: “We need not distinguish at present between movement and change.”

indivisible state, and when we perceive and distinguish we say time has elapsed, evidently time is not independent of movement and change. It is evident, then, that time is neither movement nor independent of movement. *Phys.* 218b21-219a1

The perception of time requires the perception of change; the perception of time involves marking off of *nows* within change². For Aristotle the *now* is an indivisible instant³. The *nows* mark off the before, or earlier state of the change, and the after, or later state in the change. These serve as the boundaries between the past (before) and the future (after) in time. Furthermore, the perception of time (and time itself, as will be demonstrated) requires the marking off of *two* *nows*, one marking each end of the time so determined:

But we apprehend time only when we have marked motion, marking it [motion]⁴ by before and after; and it is only when we have perceived before and after in motion that we say that time has elapsed. Now we mark them by judging that one thing is different from another, and that some third thing is intermediate to them. When we think of two extremes as different from the middle and the mind pronounces that the ‘*nows*’ are two, one before and one after, it is then that we say there is time, and this that we say is time. For what is bounded by the ‘*now*’ is thought to be time – we may assume this.

When, therefore, we perceive the ‘*now*’ as one, and neither as before and after in motion not as the same element but in relation to a ‘before’ and an ‘after’, no time is thought to have elapsed, because there has been no motion either. On the other hand, when we do perceive a ‘before’ and an ‘after’, then we say that there is time. For time is just this – number of motion in respect of ‘before’ and ‘after’. *Phys.* 219a22-219b2

² Time and motion are actually perceived together but are separable conceptually.

³ Cf. 220a18-19 The *now* is a boundary of time but forms no part of time. As such it has neither duration nor magnitude and so is not divisible. It nonetheless marks a boundary in perceived change, and so deserves the title instant at least as a boundary to the perceived duration.

⁴ The ‘*it*’ here should be read as referring to motion rather than time, both because of its proximity to ‘*motion*’ and because of the previous application of *horizōmen* to *kinesis*.

The perception of time then, is a determination involving the perception of before and after. We judge that the former and the latter are different, and perceive some third thing, the interval, as intermediate between, and different from them. The perception of a single now is not enough for the perception of time (and, as the case of the Sardinian sleepers illustrates, neither is the perception of two nows *as identical*). Further, the interval between the two nows must be perceived as distinct from either now. It is important to note that it is the *perception of change* that is the *sine qua non* of our perception of time. When change is not perceived, time is not perceived. We perceive change and time together. The implication is that change alone is not sufficient for the perception of time; the change must also be perceived, and in this way time is tied to perception. Time is a number of motion and without this enumeration change alone does not constitute time. Furthermore, change need not be external (as perceived through the senses), since it is sufficient for the perception of time that there is a perceived change in the mind. This shall be made clear below in the exposition of the relationship between time and the soul.

The question naturally suggests itself at this point: How can there be more than one now? Understanding the answer to this question begins with understanding that time is that which is counted and the now is like the unit, by which we count (*Phys.* 220a3-4). Like the unit of number, the now is a marker that is used twice to delimit the time that is counted: once for the now that is perceived as before and once for the now that is perceived as after. Aristotle's explanation proceeds through a distinction made between the two primary senses of now, and is illustrated by the use of a spatial analogy. The

distinction between the two senses of now is between i) a specific now determined at a given point in the process of change and ii) the function that the now in general has as determining these points: “The ‘now’ in one sense is the same, in another it is not the same. In so far as it is in succession, it is different (which is just what its being now was supposed to mean), but its substratum⁵ is the same.” (*Phys.* 219b12-15). In other words, the now can be thought of as i) within a specific context, or ii) in terms of the role it plays generally as marking off before and after. In the former sense this now will always be different, marking off a different before or after in a motion than any other now. In the latter sense the now is always the same, since it always plays the same role. In the illustrative spatial analogy, the now is thought of as analogous to a moving thing:

the now corresponds to the body that is carried along, as time corresponds to the motion. For it is by means of the body that is carried along that we become aware of the before and after in the motion, and if we regard these as countable, we get the ‘now’. Hence in these also the ‘now’ as substratum remains the same (for it is what is before and after in movement), but its being is different; for it is in so far as the before and after is that we get the ‘now’. *Phys.* 219b22-29

Just as the same thing moves along but differs in location from its position before moving and after moving, so too the now is the same qua dividing instant, but the nows differ by marking the distinction of *this* before or *this* after rather than any others. The now is always the same in its function of marking off a point of motion but each particular now that is pronounced differs as each particular point of the motion differs. Two nows are different in somewhat the same way that the Sophists say that “Coriscus’ being in the

⁵ “ho pote on esti”. For an excellent discussion of the possibilities for translating this difficult phrase see the appendix in Coepe 2005.

Lyceum is a different thing from Coriscus' being in the market-place" (*Phys.* 219b20-21). Just as Coriscus is the same in the general sense of being the same person, so too the now is always the same in the sense of accomplishing the same role of marking a point in the perception of change. However, Coriscus does not exist in a void but is always to be found in a particular context (the Lyceum or the agora). Similarly, every actual now is a marker within an actual process of change. The instant of change that any particular now marks will be different from any other instant marked by any other now. Every now is the same in its function but each now differs from every other in its instantiation⁶. Of course, the analogy is not perfect: Coriscus presumably remains himself in, and is continually present during, the transitional movement from the Lyceum to the Agora. We can make no such analogous claim with regard to the now. The now is an instant that marks the extremities of a motion or change but, unlike Coriscus, the now is not an object of motion or change.

So far we have an account of time in which the perception of time is dependent upon the perception of before and after. In addition to this, time is perceived once the mind pronounces that there are two nows, one before and one after. "For time is just this – number of motion in respect of 'before' and 'after'" (*Phys.* 219b1-2). Time is number for Aristotle in the sense of that which is counted or countable, not in the sense of that

⁶ The relevant Greek is "ho men pote on nun esti, to auto, ... to d' einai heteron" 219b26-7. Ross renders 'ho pote on' as 'substratum'. The point is that, as marking a before instant in motion, and marking an after instant in motion, the essential characteristic of marking an instant in motion is the same underlying function of every now. The 'being' of the now is different because nows result from an act of counting, and counting, as it is employed here, requires at least two (cf. Annas, "Aristotle, Number, and Time"). The two with which we count are always distinguished by one's being before and the other's being after in motion. Hence, the being of the now, the manner in which we get actual nows, is by having two different nows, one before and one after in the motion.

with which we count (*Phys.* 219b7-9). Time gets counted by marking off the before and after with two different nows. In terms of the analogy: “the number of the locomotion is time, while the ‘now’ corresponds to the moving body, and is like the unit of number.” (*Phys.* 220a3-4). Time is that which is counted and the now is that with which, or by which, we count (*Phys.* 219b6, 221a14-16)⁷. Since time is what is counted, the nows with which we do the counting cannot be part of time. Therefore the now is no part of time. The now is durationless but time is continuous: “because the magnitude is continuous, the movement too is continuous, and if the movement, then the time” (*Phys.* 219a12-13 cf. 220b25-26). Thus the mind may pronounce a now at any point along this continuum (*Phys.* 219a10-14). The time perceived is the interval between the two nows pronounced by the mind, but the nows themselves form no part of time. The now is like a point on a line, for a point is not a part of a line, only shorter lines are parts of a line (*Phys.* 220a19-21). The now divides time but it is also the connecting point between past and future; it marks the distinction and meeting point between before and after. For this reason Aristotle writes that “Time is both held together by the now, and divided by the now” (*Phys.* 220a4-5). As continuous, motion is potentially divisible by the now at an infinite number of points. At which of these points the now actually divides motion is accomplished by the pronouncement of a mind in relation to perceived motion.

The discussion of time presented by Aristotle leads the reader to explain difficulties of the account with recourse to the role of the perceiving soul. It is essential that we understand the significance of this perceiving soul. It is the position of this

⁷ Cf. *Metaphysics* 1021a12-23 “One is the beginning and measure of number.” and thus cannot itself be a number.

chapter that Aristotle’s account indicates time’s ontological dependence on soul, but since some maintain either that Aristotle does not unequivocally make this claim, or that it is of little import⁸, we must carefully analyze the statement in which Aristotle is most explicit on this point: “if nothing but soul, or in soul reason, is qualified to count, it is impossible for there to be time unless there is soul” (*Phys.* 223a25-27). The consideration of some intuitive objections to Aristotle’s account of time, as explicitly stated, will provide the needed preparation for approaching an analysis of this quotation. After the responses to these intuitive objections have been given it will be shown i) that the supposition of objective time creates contradictions within Aristotle’s account of the Heavens, and ii) that Aristotle’s account requires us to affirm the antecedent ‘that nothing but soul can count’ and so justifies us in supporting the consequent that ‘it is impossible for there to be time without soul’. More specifically, only beings which are generated and decay are capable of the counting required for the existence of time.

Section Two: Objections and Perceptual Considerations:

In her book *Time for Aristotle*, Ursula Coope responds to a possible objection to the notion of a continuous time which has infinite potential divisions that get actualized by a pronouncement of the mind.

⁸ In Ross’ introduction to his *Aristotle’s Physics*, 1960, he writes of the claim that mind is the sine qua non of time: “...since the discussion is very brief and Aristotle nowhere recurs to the subject, we need not suppose that he attached much importance to the answer he gives” p68.

The ...challenge is to explain the sense in which we count nows. ..., the problem arises because time is continuous. ... Aristotle thinks that nows are potential divisions in time and that there can only be such potential divisions, in so far as we create them. It follows that in counting nows, we are also bringing them into being. Moreover, since time is infinitely divisible, we can create indefinitely many potential divisions in it. Between any two nows that we count, we could always have counted another. But in that case, what is it to *count* nows? Counting, as it is normally understood, is a way of finding out how many things of a certain kind there are in a plurality. But how many nows there are itself depends on our counting: there will, necessarily, be just as many nows as we count. In this context, the notion of *counting* might seem to be devoid of any content. (Coope, 88)

Before I deal with the objection along with Coope’s response to it, a major point here regarding Coope’s presentation of the objection first requires clarification.

Coope repeatedly makes the claim that ‘we count nows’⁹ and many of her conclusions rely upon this claim being true. It is my contention however, that the claim that we count time *with* nows makes better sense with Aristotle’s overall position and is better supported by the text of *Physics* IV. The three most relevant passages for this issue are *Phys.* 219b6-9, 221a14-16, and 220b8-10. I shall endeavour to give an explication of each in support of my position. In the first passage, Aristotle distinguishes between two uses of the word ‘number’: “...time is a kind of number. But number is [so called] in two ways: we call number both (a) that which is counted and countable, and (b) that by which we count. (That by which we count is different from that which is counted.)” (*Phys.* 219b6-9). While it is not explicitly stated that the now is that with which we count, the

⁹ See for instance pp 4,5,22,86,87,89,129. In certain sections regarding what is counted, it seems that Coope does not distinguish between time and the now: “Time, he says is number of the second sort: it is countable, but it is not a number with which we count. As such, it is continuous. Having singled out the sense in which time is a number, we shall be in a better position to understand what might be meant by the claim that nows are *counted* [Emphasis hers]” Coope, 89. Cf. also “Hence the point of counting nows (and the times that they limit) cannot be to find out how many of them there are” Coope, 90.

paragraph before as well as the lines immediately following the passage cited, deal with the differences and relationship between time and the now. On the face of it, it seems strange for Aristotle to make a point of the difference between that which is counted and that with which we count, and then to name only time as that which gets counted, if he had also intended to include the now as that which gets counted and had no item to fill the place of that with which we do the counting. We would then be left wondering what it is that we count with. Putting this strangeness aside, the context seems to make clear that the now is intended as that with which we count.

Prior to the quoted passage, at 219a25-219b2 Aristotle is stipulating the conditions under which we say that there is time. When we perceive two distinct nows as before and after in a motion, then we say that time is:

We mark off change by taking them to be different things, and some other thing between them; for whenever we conceive of the limits as other than the middle, and the soul says that the nows are two, one before and one after, then it is and this it is that we say time is. (What is marked off by the now is thought to be time: let this be taken as true.) *Phys.* 219a25-30

Here we have a stipulation that in pronouncing that there is time, we mark off change and we do this marking off with nows. I argue that this marking off, which is accomplished with nows, is the act of counting, or counting with, that is the counterpoint to time as that which gets counted. The quotation continues:

So whenever we perceive the now as one, and not either as before and after in the change, or as the same but pertaining to something which is before and after, no time seems to have passed, because no change [seems

to have occurred] either. But whenever [we do perceive] the before and after, then we speak of time. For that is what time is: a number of change in respect of the before and after. *Phys.* 219a30-219b2

It is this mention of number that leads to the distinction between number as that which is counted and that with which we count. It is in reference to the claim that time is said to be number of motion with reference to (“in respect of”) before and after. But it must be borne in mind that the before and after are really two nows: a now marked as before and a now marked as after. So the claim that initiates the need for a distinction between the two senses of number is a claim about the relation between time (as that which is counted) and the now. Further, the lines immediately following this distinction continue as an exposition of the relation of time to the now: “It is the now that measures time, considered as before and after” (*Phys.* 219b11-12). Taking the content of the statements preceding and following 219b6-9, we see that the view that the now is that with which we count, fits perfectly with the general claims that Aristotle is espousing in this section. Nows delimit points in motion in order to delimit durations or times, just as unit is used to determine quantity in enumeration. Time, as counted, is a duration that corresponds to motion, and it is the now (one marking before and one marking after) with which we mark off motion and so count time.

The second passage in which Aristotle most explicitly addresses the relation of time and the now to number is 221a14-18: “And since time is a number, the now and the before and everything of that kind are in time in the way in which the limit and the odd and the even are in number (they are aspects of number just as the others are of time)”. It is difficult to see how this comparison is to work on Coope’s account, since it seems clear

that we count with a unit, we do not count the unit itself. The now is that with which we count by delimiting a certain phase of motion, just as the unit allows us to count a quantity of objects. Considering the now as that with which we count allows us to understand how the now is like unit: we count with a unit, we do not count the unit. Similarly, we count time with nows, we do not count nows.

Another possible interpretation is that of Annas: “But to mark off different nows is not yet to do any counting; for that we need to mark off the periods of time as units of some kind.” (Annas, 108). She takes a time delimited by the nows to be what Aristotle refers to as a unit in his analogy with number. A day or an hour is taken as a unit with which other stretches of motion can be measured or counted. Even on this interpretation, the nows are not themselves counted but play a structural role in the possibility for the counting of times. However, it should be noted that Annas thinks that the significance of the distinction between what is counted and that with which we count is over emphasized: “The significance of the second point in particular for Aristotle's concept of time has been much exaggerated. It is contradicted within the analysis at 220b 3-5, where time is said not to be quick or slow because neither of these applies to number that we count with” (Annas, 97, note 3). The full passage in question reads:

It is manifest too that it [time] is not said to be fast or slow, but is said to be much or little, and long and short. It is as being continuous that it is long and short, and as number that it is much and little. But it is not fast or slow – nor indeed is any number by which we count fast or slow. 220a32-220b5.

I do not agree that this contradicts Aristotle’s distinction between the two kinds of number; he does appear to slip from describing time to describing that with which we

count (which I maintain is the now) but his point applies equally to both. Since, three lines later, Aristotle iterates his claim that time is not the number with which we count, I take this to be an instance of infelicitous usage rather than an incompatible position on time as number.

This brings us to the third passage for consideration. At 220b8-10 Aristotle reasserts his position: "...time is not the number by which we count but the number which is counted, and this number turns out to be always different before and after, because the nows are different" (*Phys.* 220b8-10). Once again a distinction is being made between the counted and that with which we count, and once again time is clearly cited as the counted and we are left with only the now as a sensible candidate for that with which we count. Further, the sense of the passage becomes clear if it is restated in terms of the now as that with which we count: the number of the time (the delimited duration or time span) is always different because the before now and after now that delimit it are always marking different points in change. In other words, the counted time is always different because that with which we count (the now) is always different.

In order to perceive time we do not count nows, we mark off change with earlier and later nows and notice the interval as different. It is not important that there are two nows rather than three but rather that the before now is distinguished from the after now. What is essential to the constitution of time is not the enumeration of nows but the differentiation of nows. So, to restate the potential objection:

The ...challenge is to explain the sense in which we count nows. ..., the problem arises because time is continuous. ... Aristotle thinks that nows are potential divisions in time and that there can only be such potential divisions, in so far as we create them. It follows that in counting nows, we

are also bringing them into being. Moreover, since time is infinitely divisible, we can create indefinitely many potential divisions in it. Between any two *nows* that we count, we could always have counted another. But in that case, what is it to *count* *nows*? Counting, as it is normally understood, is a way of finding out how many things of a certain kind there are in a plurality. But how many *nows* there are itself depends on our counting: there will, necessarily, be just as many *nows* as we count. In this context, the notion of *counting* might seem to be devoid of any content. (Coope, 88)

My response to this objection would begin with the clarification that it is not the case that “in counting *nows*, we are also bringing them into being” because we do not count *nows*, we count time *with* *nows*. Making this clarification, we can, on a generous reading, transfer Coope’s presented objection regarding counting to that which actually gets counted: time. Coope’s potential objection would then be that the counting involved in counting time (rather than *nows*) is meaningless, or “devoid of content”. This meaninglessness results from an arbitrariness in our designating *nows*: “how many *nows* there are itself depends on our counting”. We need to amend this last point to bring it in line with Aristotle’s position, and so it might read: ‘how much time there is itself depends on our marking *nows*’.

Thus restated, the spirit of Coope’s potential objection would revolve around the following two points: (i) the seemingly arbitrary nature of the temporal divisions; that is, the positions of the *nows* with which we count and, hence, the subjective nature of the time that gets counted, and (ii) the meaninglessness of a counted time when there are an infinite number of ‘times’ that could be counted. In other words, there is no counting going on at all.

Dealing with the latter objection first: it is not the case that Aristotle is actually prescribing a means for tallying all the possible delimitations of time within a continuum, and so this is no objection at all. Time is that which is counted in the sense of being delimited by nows and this is done only in terms of change or motion. Aristotle writes: “It is clear, then, that time is number of movement in respect of the before and after, and is continuous since it is an attribute of what is continuous” (*Phys.* 220a24-26). We say there is time when we count change by demarcating a before and after with nows. If time were independent of change and still considered continuous then perhaps this second objection would stand since there would be no difference between any two counted times. However, as the number of change, counted time has a meaningful connection to actual change. Annas summarises quite well:

to know how long a process took (or some other kind of "motion" broadly understood) is not a matter of comparing it with the passage of Time, as we might be tempted to think if we conceive of Time as a something objectively progressing against which we can compare processes as they occur. To know how long a process took is simply a matter of being able to count or measure its duration (just as to know how large a group is, is just a matter of being able to count its members). Doing this involves knowing what period is being taken as unit (just as counting a group involves knowing what type of thing is being taken as unit). Once we know what the unit period is, we can use it to check off against the duration of the process, and conclude that the process lasted, e.g., 3 hours. The length of time taken is related to the period of time taken as unit in the way that the size of number is related to the type of object counted.
Annas, p103-104

Just as Annas points out that we can use standardized lengths of time by taking some particular motion as our point of reference, so too every time that is perceived will have reference to some particular change. In this way, every perceived time, that is, every

counted time, is meaningful since it refers to some actual change. One must bear in mind that the perception of time is predicated upon the perception of change. The perception of time is the marking off of before and after in change and so is always meaningful, at the very least, in terms of its reference to that change. Thus, the objection is addressed to a position which is not Aristotle's.

Turning now to address the seemingly arbitrary nature of the designations of the nows along a continuum, we can take the spirit of the objection to be something like: 'If it is only a pronouncement of the mind which determines the 'placement' of the nows, why should they be determined at *this* now rather than any other now, earlier or later?' The response to this objection builds upon the previous response. Arbitrariness is not an issue at all since we do not require an objective determination for the pronouncement of nows. However, there is a basis for these pronouncements of the mind, and that basis is perception. The perception of time rests upon the perception of change by an individual at least capable of perception. The nows are pronounced by the mind and serve as reference points, marking before and after in the change perceived. This means that the mind determines their relative position in the continuum of change and that this determination can only be the expression of the attention of a mind, and not an objective determination. This fact points us to the perceiving individual as the primary determinant of the pronouncement of nows. Time can only be known by those beings capable of counting in the sense of delimiting motion with nows. As Aristotle writes: "But if nothing but soul, or in soul reason, is qualified to count, it is impossible for there to be time unless there is soul" (*Phys.* 223a25-27). It seems clear enough that we can now

endorse this antecedent since there is nothing in Aristotle's corpus that describes a kind of substance besides soul that could count. It then follows that time is ontologically dependent on soul. Time is only encountered as the *perception* of time by souls that can count in this way, and the perception of time depends upon the perception of change. It is a plausible response to the charge of arbitrariness to assert not only i) that the *nows* delimit time, in general, in accordance with the perception of change, in general, but also ii) that the *before* and *after* specifically pronounced refer to specific perceptions. The question of why a 'now' is pronounced by the soul sooner rather than later is transformed into a question about the selectivity of perception and attention. We perceive change and can understand a change by marking two moments in its course. These designations *are* arbitrary in so far as there is no external necessity to their determination, but they nonetheless correspond to meaningful perceptions of processes of change in the world. It is change in the world (internal and external) as relevant to our lives that inspires the pronouncement of *before* and *after* in motion. There is no universal answer to the question of why this 'now' is pronounced rather than that 'now', nor is one needed. Rather than being an issue revolving around the arbitrary designation of points on a continuum, I suggest that this is an issue of how we perceive the world around us. The pronouncement of *nows* is grounded in our perception of change.

Coope's response to this objection is quite different from mine. She argues that, in order to respond to this objection we must understand that we count *nows*, and that 'number' and 'counting' are being used in a special sense by Aristotle. Coope agrees that it is a mistake to think of counting time as an attempt to enumerate how much of

something there is. Rather, counting in this context means to order something sequentially: "...the word 'number', as it occurs in his definition of time, has a special sense. To define time as something countable is to say that it is essentially ordered, rather than that it is essentially a kind of quantity" (Coope, 99). While I agree that time is something essentially ordered for Aristotle, I maintain that this is because it is ontologically dependent on sequential change. While Coope's response addresses the second issue ('that there is not counting going on at all'), it requires a redefining of terms which I do not find supported in the text. I rather take countable, as it applies to time, to mean something like measurable. Finally, Coope's response does not provide a response to the charge of arbitrariness in the process of counting time by marking nows, whereas my response does attempt to address this in light of the role of the subject's pronouncing nows.

This mind-dependent nature of time and the pronouncement of nows does not however, imply an anti-realist element in Aristotle's account, nor does it conflict with accounts found elsewhere in the corpus. In fact, there is a relevant analogy to be found in *De Anima* where neither the object of perception alone nor the sense alone is sufficient for the actualization of the sensation:

The activity of the object of perception and of the sense is one and the same, although what it is for them to be such is not the same. I mean, for example, the actual sound and the actual hearing; for it is possible to have the capacity to hear and not to be hearing, and that which has the capacity for sound is not always sounding. But when that which can hear is active, and that which can sound is sounding, then the actual hearing takes place at the same time as the actual sound, and one might call these, the one listening, the other sounding. (*DeA.* 425b26-426a1, cf also *DeA.* 426a15-26)¹⁰

This point needs to be understood in connection with the assertion that an object itself can be both an actual and a potential object of perception. Thus we can understand that the mind-dependent nature of time no more renders time unreal than the sense dependent nature of sound renders it unreal. Changing or moving objects are potentially objects of time perception, which become actual when a mind pronounces a before and after within the change. Change is potentially temporal and is made actually so by the soul's counting.

Section Three: Instantaneous Now and the Present of Experience:

The perception of change is fundamental to the account of time and so warrants further investigation. We should begin by wondering about the compatibility of the perception of change with Aristotle's own description of the now. To perceive a change is to retain an earlier moment in the process of change, which the mind pronounces as before, in the perception of a later stage of the same process, which is pronounced by the mind to be

¹⁰Cf. "Since we speak of perceiving in two ways (for we speak of that which potentially hears and sees as hearing and seeing, even if it happens to be asleep, as well as of that which is actually doing these things); perception too will be so spoken of in two ways, the one as in potentiality, the other as in actuality. Similarly with the object of perception too, one will be potentially, the other actually." *DeA.* 417a9-14

after. Change involves a lapse of time and therefore there must be a before that is different from the after or else no change would be perceived. The mind pronounces two nows as the extremities of an interval and as distinct from that interval itself. This interval is the duration of perceived change. The perception of the interval involves the retention of the past perception (the before ‘now’) in the present perception (the after ‘now’).

The now is an instant for Aristotle, like the point on a geometrical line. The now as a point has no duration and hence is not accessible to perception. Aristotle writes in *De Anima* that perception involves motion and being affected (*DeA.* 415b24; 416b33-35). The now is a pronouncement of the mind in the perception of motion, it is not itself a motion perceived. Yet the perception of change involves a present stretched out to retain the now that came before while the now that comes after is pronounced. This retention is necessary for us to link the before and after together in the perception of one and the same change or motion. How is it possible for perception to have such a duration if the present, the now, is instantaneous? In his article “Aristotle on the Reality of Time”, Michael Inwood summarizes Aristotle’s arguments for the impossibility of a divisible now, or of a present as having duration. Of the four arguments Inwood presents, one is particularly relevant to our concerns here.

The most pertinent reason given by Aristotle for the impossibility of a divisible now is that “there will be a part of the present that is past and a part that is future, and it will not always be the same part that is past or future” (*Phys.* 234a16)¹¹. The argument runs roughly thus: imagine the present divided into three parts: [-A-/-B-/-C-]. Working

¹¹ References to the *Physics* after 224a15 use Ross’ 1947 translation.

backward: C refers to the most recent section of the present, B refers to the intermediate section of the present, and A refers to the least recent section of our divided present.

If the now were not an instant it would be divisible in this way and so the least recent present (section A) would be past with respect to the other sections. The intermediate present (B) would be future with respect to the least recent present (A), and also past with respect to the most recent present (C). This is obviously unacceptable for Aristotle.

Inwood's response to this formulation of the objection is to accuse Aristotle of confusing "the notion of past and future *simpliciter* with the notion of earlier and later (than) or of past and future with respect to something" (Inwood, 161-2). Inwood takes Aristotle to be asserting that we cannot consistently describe events as earlier and later relative to the same event without committing a temporal contradiction. For example, on Inwood's interpretation, to say that Wednesday is future with respect to Tuesday, and that Wednesday is past with respect to Thursday, is to make Wednesday be both future and past which is impossible. But Inwood responds by pointing out that there is no contradiction inherent in the same thing being described as future with reference to one event and past with reference to some other event.

Although this may well be correct, it does not address the whole of Aristotle's concern. Part of Aristotle's concern here is that the now is to be the absolute division between the past and future, for the past and future are distinct. Aristotle begins his discussion of the impossibility of a divisible now with this remark: "Necessarily, too, the now...is indivisible and is inherent in all time. For the now is an extremity of the past (no part of the future being on this side of it), and again of the future (no part of the past

being on that side of it): it is, we maintain, a limit of both.” (*Phys.* 233b33-234a3)¹². I suggest that we can retain this core aspect of the now for Aristotle while also allowing for a present with duration that is compatible with the perception of change.

The instantaneous now that divides past and future is a pronouncement of the mind, and we perceive time when the nows pronounced by the mind are two different points with an interval between them. This means that within the perception of change the mind pronounces two nows, one before, and one after. How are we to understand the intermediate span however, during which change is actually occurring? Is there an insurmountable contradiction between the now as instantaneous and the present of perception as necessitating duration? It may be helpful in answering this question to refer to the spatial analogy used earlier. The ‘now’ is like the moving thing in so far as it remains the same in its nature. For, just as the moving thing does not change what it is, in its nature, by its being moved, so too the ‘now’ does not change in its nature as marking off an earlier moment of change or a later one. In all cases the instantaneous now is a boundary pronounced by the mind between what comes before and what comes after.

What is required for the perception of change is the retention of the past in the present perception such that a notion of the history of the change is part of the present perception of that change. In other words, as we perceive a later moment of motion we also remember an earlier moment of the motion. I submit that this marking off of moments in perceptual history is a description of the role Aristotle assigns to the now, and that this is not incompatible with a kind of perception that retains the immediate past

¹² Cf also Aristotle’s recounting and refuting of Zeno’s paradox of the arrow at *Phys* 239b5ff.

in order to understand the present as meaningfully related to that past. The mind pronounces that the nows are two, and hence time is perceived when a change is perceived as having a before and after, which is how we regularly perceive change. The now, as instantaneous, continues to maintain its general nature of dividing past from future at both pronouncements of nows in terms of the change. The duration required for the perception of change is not a now stretched out to include past and future within itself; but rather, it is the retention in present perception of the perceptual past. The now pronounced later in the change still absolutely divides past from future. However, the perceptual past is retained and remembered with the present perception of the motion.

Section Four: The Incompatibility of Objective Time with the Heavens

If time existed everywhere in actuality and were independent of soul then everything which moved would be in time. The consideration of some passages from *De Caelo* serves to show that this is not the case on Aristotle's account: not everything that moves is in time. Aristotle conceives of all matter in the universe as organized in concentric spheres. He distinguishes three senses in which we use the term 'heaven': first as the outer circumference beyond which there is no body, second as the area between and including the moon and the outer circumference, and third as everything contained within the outer circumference, including the earth at the centre (*DeC* 278b10-21). This last sense captures the sense of the universe. An analysis of the motion of the outer sphere

shows that there can be motion without time on Aristotle’s account and hence time is not objectively present everywhere.

Time only applies to sensible bodies capable of being affected; time is a measure of change or motion. Time is the measure of motion with respect to before and after. Measurement is always of finite things and thus any measurement is finite. Not only is an actual infinite impossible for Aristotle but the measurable must be perceptible in some way and Aristotle maintains that an infinite body is not perceptible (*DeC* 275b6). We may imagine an infinite body, a part of which we perceive. The part would then be measurable but this part must stand in some relation to the whole and Aristotle claims that there is no proportion between the finite and the infinite (*DC* 274a7-10).

For these reasons and others, Aristotle asserts that the outer sphere is finite. However, as “exempt from generation and decay, the heaven is eternal¹³” (*DeC* 277b26-28). The outermost sphere of heaven (in the sense of the entire universe) is a finite sphere. This sphere is in eternal motion, motion that was neither generated nor will ever cease. If time were independent of perceivers but still an attribute of motion then the heavenly sphere’s motion would be in this objective time. As unlimited, this sphere’s circular motion in objective time would occupy infinite time. Aristotle is quite explicit in denying the possibility of a motion occupying an infinite time (*DeC* 277a26-7). Instead of describing the heaven’s motion as infinite [*apeiros chrōnos*], he uses the term *eternal* [*aidios*] (*DeC* 277b11). ‘Eternal’ is used to describe an existence which is unaffected by generation and decay, rather than an existence which occupies an infinite amount of time

¹³ Translations of *De Caelo* are from the *Revised Oxford Translation*. Barnes ed. Vol. 1.

(cf 277a26-7, 277b27-30)¹⁴. The reading of time as real yet mind-dependent allows us to make sense of a heaven which is in motion but outside of time. As finite, the heaven is perceptible and because it is perceptible we perceivers are capable of measuring its motion. Counting nows with reference to the heavenly motion actualises the time which the motion has as a potentiality. The heaven is eternal because it is not subject to generation and decay; it does not occupy infinite time because (in addition to an actual infinite being impossible) this would require a perceiver to mark a before and after which could somehow include an infinite time¹⁵. This is absurd first because the notion of delimiting with before and after is incompatible with infinite (unlimited) time, and second because no perceiver is exempt from generation and decay and so no perceiver could witness all of an infinite motion.

This is not to say that we do not have temporal perceptions of the heavenly sphere; indeed the regular motions of the heavenly bodies can serve as units for our measuring other motions. In so far as we can and do perceive them, heavenly bodies are ‘in time’. Julia Annas does an excellent job explaining Aristotle’s sense of being ‘in time’:

¹⁴ The claim in *De Caelo* II. 1, that the heaven contains infinite time, is to be read as a stipulation that this sphere is the locus of all possible time, not the location of an actual infinite.

¹⁵ Extrapolating from a single rotation of a heavenly body to consider its infinite motion taking infinite time is an instance of speculating about the time that infinite motion *would* take if a soul were there to perceive it. However, since time requires the actual marking off before and after in motion, this would only be a thought experiment and not the realization of actual time that is present potentially in motion.

A group of three apples is "in" the number 3 in this sense in that, if we talk about the group in terms of 3 then we are talking about apples (and not molecules, etc.); in this sense the "being" of the apples is measured by the number. 'In time' is to be understood in the same way; the point, that is, is being extended from objects to processes. A thing is "in number" if it can be counted; a process is "in time" if it can be timed. So a play would be "in" the period of time 3 hours if what lasted 3 hours was the play, rather than, say, one of its acts. Annas, p.105

In this way heavenly bodies are in time in so far as their motions are perceptible by minds capable of counting motion. "Time is not in any sense there already to include all the processes that can be timed" (Annas, 106). The motion of the heavenly sphere represents a potential infinite time since motion is potential time, but actual time is time that is actually counted by a certain kind of soul. No actual soul could do the kind of actually infinite counting that would be required to make this potential infinite into an actual infinite.

Section Five: The Unmoved Mover as source of Objective Time

It may be suggested that there is an alternative conclusion to be drawn from Aristotle's account of time as mind-dependent. One may be tempted to nominate the unmoved mover as a candidate for that mind in which time's objectivity could be grounded. It is clear from the fullest account of the unmoved mover in *Metaphysics XII* that the unmoved mover thinks (*Meta.* 1074b15ff). As thinking, it must possess mind and it is mind which is the sine qua non for time. As the product of a divine mind, this thinking could conceive of all motion and thus provide the counting of motion that would give rise

to time. Since the divine thought counts all motion it could give rise to all time. In other words, the objective divine thought of motion could yield objective time.

This account may seem appealing since it would appease those who are ill at ease with a subjective account of time. However, this account suffers from at least two irremediable difficulties. The first difficulty for this description of the unmoved mover's thought applies to the quantity of its thoughts; the second applies to the quality of its thought. The first problem is that the unmoved mover cannot have more than one object of thought. "Evidently, then, it thinks that which is most divine and precious, and it does not change; for change would be change for the worse, and this would be already a movement" (*Meta.* 1074b25-7). Perceiving motion requires at least two perceptions¹⁶, a before and an after, and this would involve change in the mind of the unmoved mover. Two points follow from this, both of which are unacceptable for Aristotle; i) the unmoved mover, by changing the content of its thought, is no longer thinking the one best possible thought, and hence no longer deserves the title of divine thought, ii) by changing the content of its thought, the unmoved mover is no longer unmoved but its thought is moving (changing) from having one object of thought to having another.

A potential response to these problems may be that the divine mind need not perceive motion piecemeal but that the divine perspective beholds all motion at once in an unchanging omniscience. This, however, does not avoid the difficulty as it applies to time since it is not merely the perception of motion that is required for time,

¹⁶ Or one continuous perception of two distinguishable stages in a motion or change.

But we apprehend time only when we have marked motion, marking it by before and after; and it is only when we have perceived before and after in motion that we say that time has elapsed. Now we mark them by judging that one thing is different from another, and that some third thing is intermediate to them. When we think of two extremes as different from the middle and the mind pronounces that the ‘nows’ are two, one before and one after, it is then that we say there is time, and this that we say is time. *Phys.* 219a22-8

Time requires, not only the perception of motion but the marking off of two nows in such a way that they are known by the mind to be different (one after the other), and that the interval (duration) between these two nows is different from either one. How a mind, even a divine one, could contrast three objects of thought (before, after, and interval) and yet not be said to have more than one object of thought is beyond my mind’s comprehension. This marking of before and after is the process of counting time, and it is of this counting that the unmoved mover is incapable. The counting performed here is not a general accounting, like taking stock of all motion, but rather a differentiation of motion. A divine mind may be capable of the former, but on Aristotle’s account does not perform of the latter.

The second difficulty posed for an account which would have the thought of a divine mind serve as the ground for objective time is that Aristotle stipulates quite clearly what the thought of the divine mind is: “it must be itself that thought thinks (since it is the most excellent of things), and its thinking is a thinking on thinking” (*Meta.* 1074b32-4). Whatever it may mean that ‘thought is thinking itself’, it certainly does not point to the kind of omniscient perception of motion that would be required to ground an objective time. Further, even if we were to grant a divine mind which is capable of counting all

motion in the manner required, it does not follow that this would yield objective time. If we allow that Aristotle's account requires the counting of motion for there to be time, it is not clear that it follows that one being's perception of motion is sufficient to engender time for another being. In other words, if time depends on consciousness for its existence, then time is not actualized independently in the objective world. Nor does it become so in virtue of a single being perceiving motion in the requisite way. A divine mind counting motion does not safeguard an objective time for other minds any more than my perceiving motion in the requisite way provides time for those in the situation of the Sardinian heroes who do not distinguish the earlier now from the later one. Time is potentially present in change but is not actualized without the requisite counting that can only be accomplished by a mind.

In summary, regarding the divine mind as providing for objective time: it cannot think anything besides its own thought, which means it cannot think motion and so there is no time for it. Even if the divine mind could think something other than its own thought, it cannot think more than one thing and so cannot make the distinction requisite for the counting of time and so there is no time for it. Finally, even if we grant the divine mind the kind of distinguishing counting required for the perception of time, there may be time for it, but it does not follow that time thereby becomes objective.¹⁷

¹⁷ The same analysis applies to the supposition that heavenly bodies possess soul and so may perceive time, even if one succeeded in arguing that heavenly bodies could count.

Section Six: Sorabji and Possibility versus Capacity

While Ross dismisses Aristotle's claim that time is mind-dependent, despite admitting that it is consistent with the account of continua (Ross, 69), Sorabji takes it as given that Aristotle does in fact hold the position that time is, as Sorabji puts it, consciousness dependent (Sorabji, pp. 89-94). Since this position is taken as obviously being a commitment of Aristotle's Sorabji gives no arguments to support this attribution. However, while granting that Aristotle actually held this position, Sorabji maintains that it is a mistaken position, grounded on the failure to distinguish between capacity and possibility. Sorabji writes:

Aristotle's claim that without anyone to count, there is no countability and no time, has seemed too surprising to many commentators. And they have tried to reinterpret the text. But I think that Aristotle's conclusion, although mistaken, is not surprising, if we turn our attention away from time to the notion of *possibility*. (Sorabji, 90)

What Aristotle is mistaken about, according to Sorabji, is that there is an assumption in the argument that the removal of a possibility is the removal of a capacity. In other words, Aristotle's argument claims that the removal of the possibility of counting (the non-existence of souls to do the counting) entails that there is nothing that is countable. Sorabji offers some counter examples to this entailment: it may not be possible to burn a piece of wood deep beneath the earth's surface but this does not mean that the wood is not combustible (Sorabji, 92). However, he claims that it would make sense to claim, in reference to that same piece of wood that it is not possible to see it, and that it is not visible. This distinction, thus presented, seems to equivocate on at least two notions of

possibility: first whether something could ever happen, and second whether it is presently practical to effect its happening. In the piece of wood example, there is a sense in which it is possible to burn the wood if sufficient effort is applied to excavate it. Sorabji is sensitive to this and stipulates that whether or not the removal of possibility will bring about the removal of capacity is going to depend on the predicate involved (visibility or combustibility) and the context of the claim:

...for if the *context* were concerned with a contrast between things perceptible to the senses and things apprehended only by the mind, then it would be legitimate to class a rock at the centre of the earth as visible. This is not to deny that it would be illegitimate, if the context were instead concerned with what to see on a sight-seeing tour. Sorabji, 92

The general point is that the removal of the possibility of souls to do the counting is not sufficient to prove that there is nothing that is countable.

If this were the sum extent of the argument then it would undermine Aristotle's position. However, I would argue that it is consistent with Aristotle's position to allow that there may be countables without anyone to do any actual counting. Indeed, I take this to be what he means when he allows that there could be change without soul even if there could be no time: "... if it is possible for there to be change without soul. The before and after are in change, and time is these *qua* countable" (*Phys.* 223a27-29) As long as soul is still required to do the counting then there may well be countables but there will not be time unless they actually get counted. Aristotle may have gone too far in this one instance where he claims that there would be nothing countable without soul, but this does not affect the overall position that there would be nothing counted without soul. After all,

time is not defined as the countable (that would be change) but rather, that which gets counted. Time is still soul dependent but we must recognize the possibility of motion existing without souls. Motion is always potentially countable even if there are no souls to do any actual counting.

Conclusion

These conclusions describe a reconciliation of the now as a durationless point with the present as having experiential duration. This reconciliation comes in virtue of taking seriously the dependence of time on perception. In this way a picture emerges of a perceptual present that is constituted by the marking off of two nows that are themselves durationless. The explication of time in terms of perception leads us to take seriously the definitive role that the perceiving individual plays in the constitution of time. The mind-dependent nature of time is not only consistent with Aristotle's broader perceptual and cosmological framework but the most likely alternative explanations are untenable. What is required next is i) a deeper account of the relationship between time and perception as well as ii) an account of the kind of memory involved in the retention of the perceptual past in the present perception. These shall be given in chapters 2 and 3 respectively.

CHAPTER TWO

In the previous chapter, I argued that Aristotle’s account of time required a determination of now points with reference to perceived motion. These determinations are the result of the individual’s focus of attention rather than being the perception of an objective phenomenon. The perception of motion is the *sine qua non* of the perception of time but this relationship must be properly understood. It is not the case that an individual must first have a perception of motion, to which is then added a perception of time, as though layering one perception upon another. Rather, the perception of motion is already a temporal perception, since motion is perceived in relation to other motions (or parts of a motion) anticipated or retained in memory. To perceive motion is to perceive motion as temporal: “We perceive motion and time together” (*Phys* 219a2-3). Neither motion nor time is perceived on its own. Since to perceive one is to perceive the other, motion is always perceived temporally and time is always perceived with reference to some motion or change.

However, a difficulty arises in attempting to explicate this claim with reference to Aristotle’s account of perception. It is not immediately clear what kind of object of perception time is. Even once this issue of classification is solved, there remains the more substantive issue of how exactly we can give a coherent Aristotelian account of time as it applies to our perceptual lives. The analysis that follows will suggest that the solution to

the first issue leads to a solution for the second: time is an incidental sensible of the common sense; and understanding it in this way allows us to explain how all perceptions are temporal perceptions.

Sense Objects and Senses:

In *Physics IV*, Aristotle asserts that the perception of time is dependent upon the perception of movement or change¹⁸. This is because, for Aristotle, the perception of time is the result of the distinction between two points, or nows:

But we apprehend time only when we have marked motion, marking it by ‘before’ and ‘after’; and it is only when we have perceived ‘before’ and ‘after’ in motion that we say that time has elapsed. Now we mark them by judging that A and B are different, and that some third thing is intermediate to them. When we think of the extremes as different from the middle and the mind pronounces that the ‘nows’ are two, one before and one after, it is then that we say that there is time, and that this we say is time. For what is bounded by the ‘now’ is thought to be time – we may assume this. *Phys* 219a22-30

It thus appears that, in perceiving motion, in marking off an earlier moment and a later moment and perceiving the interval between the two moments, we are perceiving time. We are thus entitled to make the generalization that the perception of time is dependent upon the perception of motion. Since the perception of motion is the *sine qua non* of the perception of time, a complete understanding of the latter will require a firm grasp of perception itself.

¹⁸ Ex: *Phys* 218b21-219a34, 219b22-32.

Aristotle's more technical treatment of motion as a natural phenomenon is, of course, presented in the *Physics*. Perception, on the other hand, is an activity of the soul and so for its treatment we must look to *De Anima* and the *Parva Naturalia*. In *DeA* II.6, Aristotle distinguishes the three ways in which we speak about objects of perception: as special sensibles, as common sensibles, and as incidental sensibles (*DeA* 418a7-11). In order to understand what kind of sensible time is, we must understand, in detail, the difference between sense and sense-organ, the different kinds of sensibles, and how they are each perceived. Sense is the capacity for perceiving, a sense organ is the substrate of that capacity, and a sensible is that which is perceived. For example, the various colours are sensibles perceived by the sense of sight, the sense organ, or substratum, of which is the eye. Special sensibles are those which are perceived directly only by their respective sense. The various colours are the special sensibles of the sense of sight. The special sensibles are each perceived directly by just one of the five senses of touch, taste, sight, hearing, and smell. Common sensibles, on the other hand, can be perceived by more than one special sense (e.g. motion can be perceived by both sight and touch), though there is no individual special sense for any of them. Finally, incidental sensibles are perceived as incidental to the special sensibles of perception in so far their perception is not the result of the object affecting a special sense as such. Aristotle's example of this is our incidentally perceiving that the white thing is also the son of Diares.

In *DeA* III.1, Aristotle further explains this classification by referring to a sensible's relation to the senses. A special sensible is perceived in itself (*kath' hauto*) by its special sense. A common sensible is perceived incidentally (*kata sumbebēkos*) by

more than one special sense and directly by the common sense. Finally, an incidental sensible is perceived incidentally by the special senses and the common sense (*DeA* 425a14-29). A sensible is perceived in itself (or directly) if its perception as such requires only the activity of its relevant sense, while a sensible is perceived incidentally if its perception requires something more than the activity of the relevant sense (more on this below). Special sensibles include colour, sound, texture, flavour, and odour. We cannot be mistaken *that* we are perceiving such sensibles, for, according to Aristotle, we never deceived about whether there is a colour or sound. However, we may be deceived “as to what or where the coloured thing is or as to what or where the object which sounds is¹⁹” (*DeA* 418a16). As examples of common sensibles, Aristotle names “movement, rest, number, figure, size²⁰” (*DeA* 418a18). Figure can be perceived either through sight or through touch and motion can be perceived through hearing, touch, or sight.

The descriptions of special and common sensibles are relatively straightforward, while those of the incidental sensibles are less so. We must bear in mind the distinction between kinds of sensibles and ways of perceiving sensibles. To begin with, Aristotle distinguishes between the incidental perception of common and special sensibles and incidental sensibles themselves. In the connection with the former, Aristotle writes, “The senses perceive each other’s special sensibles incidentally, not in so far as they are themselves but in so far as they form a unity, when sense-perception simultaneously takes place in respect of the same object” (*DeA* 425a30-31). An example would be sensing sweet by sight when one sees honey-milk. In *Aristotle: the Power of Perception*, Deborah

¹⁹ *De Anima* translations from Hamlyn 1968.

²⁰ For variations on this list see *De Sensu* 437a8ff, 442b5ff and *De Insomniis* 458b5ff.

Modrak rightly points out that incidental perception involves learning, bringing past experience to bear on this white thing to perceive its also tasting sweet (Modrak 64). Perceiving a white thing as sweet, even if this is a mistake, requires that a retained previous perception be applied to the present perception. The previous perception of the honey-milk being sweet is retained and then combined with the present perception of the white liquid. A special sense, e.g. sight, is able to perceive the special sensible of a different special sense, e.g. taste, in virtue of an association based on experience. Hamlyn shares the interpretation of Modrak and myself:

Commentators usually object to the notion of seeing that something is sweet, but there can be no valid objection to speaking in this way; the objection presumably stems from the prejudice that there must be an intrinsic connexion between sight and its object if we are to speak of seeing at all. The phenomenon in question is no doubt a product of learning or experience, but this does not make it any less a case of seeing. Hamlyn, 118-9

Hamlyn may think it a prejudice to limit the use of seeing to instances of a connection between sight and its object but Aristotle does in fact insist on this as part of his account of seeing; “for each sense-organ is receptive of the object of perception without its matter” (*DeA* 425b22-24). While one possible explanation of the account of incidentally perceiving could be the broadening of terms like seeing as Hamlyn suggest, but I think an explanation that better reflects Aristotle’s account is one that broadens, not the terminological understanding, but rather the temporal understanding. It seems that in order to speak of seeing, even in terms of incidental perception, there must be a connection between sight and its object. However, that connection may have occurred in the past, prior to the incidental perception in question. Indeed, on my view, it is the

insistence that sight must involve the connection of sight and its object that makes necessary the appeal to learning or past experience. If we grant that we can see sweet in the perception of honey-milk, it can only be in virtue of the application of a previous perception of the combination of sweet and white in a single unified object. In the first instance of seeing honey-milk it would be impossible to sense sweet by sight since sweet is not a special sensible of sight and so could never be directly perceived by sight²¹. The perception of sweet by sight then must rely upon the application of a previous perception in which white was perceived by sight and sweet was perceived by taste with reference to the same object. This may be implied in Hamlyn's account but it is not explicitly stated as far as I have seen.

Thus, in the act of perception, we perceive not a white thing and a separate sweet thing but rather a unified white and sweet thing (the honey-milk). Incidental perception is the perception of a special sensible by a sense which does not directly perceive that object (the perception of sweet by the seeing of white) and must not be confused with the perception of an incidental sensible. The objects involved here are special sensibles, since they each have a corresponding special sense, but they are perceived by other special senses incidentally. This kind of incidental perception is the perception of a unity of disparate special sense objects and this unification cannot be effected by any of the special senses, since this would require the direct perception of a special sensible by another and different sense (e.g. the direct perception of sweet by sight), which is

²¹ A possible exception would be if we perceived some other object that was both white and sweet and so applied this association to honey-milk in virtue of its whiteness, but then the argument would apply to that earlier perception of the combination of white and sweet, and so on, if need be, to the earliest encounter of the combination of sweet and white.

impossible and which Aristotle explicitly rejects at *DeA* 425a30-31. This unity then must result from the work of some other faculty. A special sense, for example sight, cannot be the source of the unification of the sense objects (white and sweet) because this would make the other senses involved extraneous. If sight alone is capable of recognising sweet in an object then taste is superfluous. Further if sweet and white were both directly perceived by sight then we would not be able to distinguish them as different kinds of sense objects; since we do make such a distinction, there must be some other perceptual faculty by which we both unify disparate kinds of sensibles and distinguish between them. “Since we judge both white and sweet and each of the objects of perception by reference to each other, by what do we perceive also that they differ? This must indeed be by perception” (*DeA* 426b12-15). This other faculty is revealed to us through Aristotle’s description of incidental sensibles of perception, rather than through his description of incidental perception of special sensibles.

Aristotle gives, as an example of an incidental sensible, the son of Diares. This is an incidental sensible because ‘the son of Diares’, as an object of perception, is incidental to the perception of the special sensibles (such as white) which constitute the direct perception of the object. ‘The son of Diares’ as a perceptual object is incidental to the white thing that is perceived via sight. (*DeA* 418a20-21). ‘The son of Diares’ affects the special sense of sight directly only as a white thing, not *as* the son of Diares. This latter is not only perceived incidentally but is itself an incidental sensible. The perception of an incidental sensible would seem to involve the application of experience, just as the incidental perception of special sensibles did. Neither Modrak nor Hamlyn addresses how

the interpretation of incidentally perceiving as involving learning, or the application of past perception, serves to explain an apparent perplexity at 418a20-24 where Aristotle writes:

An object of perception is spoken of as incidental, e.g. if the white thing were the son of Diares; for you perceive this incidentally, since this which you perceive is incidental to the white thing. Hence too you are not affected by the object of perception as such.

Without understanding that both, incidental perception and the perception of incidental sensibles, involves the application of past perception, it would be difficult to understand how any instance of perception could occur without being ‘affected by the object of perception as such’. We are not affected by sweet in its incidental perception in the case of the honey-milk example because sweet is not being directly perceived. We are not being affected by ‘the son of Diares’ as such because ‘the son of Diares’ is not something that can be directly perceived by any sense. In both cases we are applying something perceived or learned in the past to a perception in the present. It is by being familiar with Diares and his son that we can perceive the white object as ‘the son of Diares’, just as it is through familiarity with honey-milk that the white liquid could be perceived as sweet by sight alone. As the application of experience to perception, the perception of an incidental sensible involves a judgment²². This perception involves the inclusion of something beyond what is given, directly or incidentally, by special or common sensibles, to the

²² ‘Judgement’ here is used in the sense of a perceptual judgement as in *DeA* 426b8ff, which describes the combination and discrimination of sensibles (white, sweet) in the determination of a single object (honey-milk).

special senses at the time of perceiving. This perception includes a retained perception in addition to the present perception.

The perceptual judgment is effected by what Aristotle calls the common sense. Though Aristotle does not discuss the common sense at length in *De Anima*, it is important to our purposes here. For it is the faculty of the common sense that i) is responsible for the unification and differentiation of the perception of special sense objects (as in the honey-milk example), ii) perceives incidental sensibles that are not directly perceived by any sense (perceiving the white thing *as* the son of Cleon²³), and iii) perceives common sensibles directly. Common sensibles are perceived incidentally by the special senses but the common sense perceives the common sensibles directly (*DeA* 425a27-30²⁴). Aristotle is clear that there is no sixth special sense beyond the five enumerated; the common sense is not a new special sense but rather represents a common functioning of those five senses which, with the addition of judgment, give rise to the direct perception of the common sensibles as distinct from the special sensibles. As Modrak puts it “The emergence of a *koinon* [common object] as a *kath’ hauto* [direct] object is also the emergence of a distinct perceptual capacity exercised through the peripheral sense organs and manifested when the activity of several senses converges to form a single perceptual act with a single object” in the common sense (Modrak 65).

Common Sense and Shared Sense Ability

²³ Between Book II and Book III Aristotle changes his example of an incidental perception from ‘the son of Diaries’ to ‘the son of Cleon’.

²⁴ “But for the common-objects we have even now a common sense, not incidentally; there is, then, no special {sense} for them; for if so we should not perceive them otherwise than as stated [that we see the son of Cleon].”

In his book, *Aristotle on Common Sense*, Pavel Gregoric argues against the interpretation of the common sense as a sense that is independent of the five senses of touch, taste, sight, hearing, and smell. He calls this the ‘standard view’ and offers an alternative which interprets the common sense as a shared functioning reducible to the five senses. In the interest of simultaneously elaborating on my understanding of the ‘standard view’ and defending it against possible objections, I shall examine Gregoric’s position. First, I will argue against his objections to what he calls ‘the standard view’ and second, I will argue against his ‘alternative view’.

In order to address Gregoric’s objections to the standard view, I must first address his presentation of that view. Gregoric presents what he calls the standard view as the second of three possible solutions to the difficulty of reconciling the claim that common sensibles are perceived *kata sumbebēkos* by each sense with the claim that common sensibles are perceived in themselves.

The second solution is to assume that the expression ‘accidental’ at 425a15 is used in a looser sense than the usual one. In this loose sense the expression captures the fact that the common perceptibles are not properly perceived, but only relayed by the individual senses. The idea is this: since the common perceptibles affect the individual senses together with the special perceptibles, they are classified as objects perceived in themselves; but since they are not properly speaking *perceived* by the individual senses, they are said to be perceived ‘accidentally’ by each individual sense, and thus the contradiction is avoided. Gregoric, 70.

Before I consider Gregoric’s objections to this position I wish to clarify an important point about his presentation. He states that common perceptibles are considered to be perceived in themselves since they affect the individual senses together with the special sensibles. However, this is precisely the opposite of the point that those people would

want to make who, like myself, consider the common sense to be a ‘higher-order perceptual power’, as Gregoric puts it. It is precisely because common sensibles are not perceived in themselves by the special senses that there is an exegetical need to explain by which sense the common sensibles *are* perceived in themselves. The proponents of ‘the standard view’ take this sense to be the common sense. The distinction which Gregoric is missing in his exposition is one between the common sensibles being perceived incidentally [or accidentally] by the special senses and their being perceived in themselves by the common sense. Gregoric is aware of this stipulation to the standard view, as made apparent on page 72²⁵; it is only an unfortunate omission in his presentation of the position.

Having made this clarification we can now proceed to a consideration of Gregoric’s objections to the standard view, which come in two sections; first two immediate objections are made following his presentation of the standard view, and second, six further objections are offered. The first pair of objections stem from i) the interpretation of *kata sumbebēkos* in this context, and ii) the apparent tension between this interpretation and Aristotle’s account of what it is to be perceived. Dealing with the first objection first: Gregoric writes that the standard view requires a different understanding of *kata sumbebēkos* in 425a15 than at 425a24, the latter of which Gregoric calls the “strict, technical sense” (Gregoric, 70). To see whether this objection has merit, let us turn to this technical use of the phrase and see if the standard view deviates from it.

²⁵ “...the common sense should be engaged in such a way which compensates for the insufficiency of the individual senses in perceiving the common perceptibles.”

Far from containing a concise definition, the usage of *kata sumbebēkos* at 425a24 requires considerable context in order to be understood. The passage reads:

Hence it is clear that it is impossible for there to be a special sense for any of these, e.g. movement. For in that case it would be as we now perceive the sweet by sight; and this we do because we in fact have a perception of both, as a result of which we recognize them at the same time when they fall together. (*Otherwise we should perceive them in no other way than incidentally, as we perceive the son of Cleon not because he is the son of Cleon but because he is white, and the white thing happens to be the son of Cleon*). [emphasis mine] *DeA* 425a20-27

If we agree with Gregoric that this is the technical sense of *kata sumbebēkos* then the most that we can conclude is that the standard view must give an account in which the incidental perception of common sensibles by the special senses must occur in the same way that we perceive the son of Cleon “not because he is the son of Cleon but because he is white”. In other words, the standard view must claim that the special senses must perceive the common sensibles, not in themselves (i.e. not because he is the son of Cleon) but through, or in virtue of the special sensibles in which they are manifest (i.e. because he is white). Once we remember the stipulation which Gregoric omitted from the standard view, we can see that this is exactly what the standard view does claim, or at least, this is my understanding of it and the position that I am prepared to defend.

The second of the initial pair of objections runs as follows: “it is doubtful whether Aristotle would permit the claim that a perceptible affects a sense yet not so as to be perceived by that sense” (Gregoric, 70). Once again, I feel that this objection dissolves if we reinsert the essential distinction between incidental perception and perceiving something directly, or in itself. Certainly, Aristotle would object to Gregoric’s claim as it

stands, but if we add the missing subtleties of the standard view, the claim becomes: ‘a *common perceptible* affects the *special senses* yet not so as to be *directly* perceived by them’. There is nothing more objectionable in this claim than in that of Gregoric’s cited ‘technical sense’ of *kata sumbebēkos* in which the son of Cleon affects the special sense of sight in virtue of being white. I shall address this second initial objection further in my response to Gregoric’s alternative account of common sense but let this suffice for now.

When addressing the standard view in earnest, Gregoric presents six difficulties which, he maintains, must be overcome in order to make the standard view acceptable (Gregoric 73-4). I shall deal with the first four since the fifth and six are objections based, respectively, on an omitted article in the Greek and the reversal of the terms common and sense at 425a27. While these textual anomalies may warrant further investigation, on their own I do not consider them difficulties to be overcome for the standard view or my interpretation thereof. The first of the four objections is that the claim supporting the standard view does not occur elsewhere: “The only place in the entire body of Aristotle’s works where the common perceptibles seem to be unambiguously associated with anything other than the individual senses is the passage currently under consideration”. If Gregoric were providing passages from other works of Aristotle’s which clearly contradicted the standard view then there would be something to which a response would be necessary. The claim that this description occurs only once does not, on its own, go any distance toward undermining it in my view. The second objection derives from the claim at 425b4-11 that common sensibles are less likely to avoid detection since they are

perceived (incidentally) by more than one special sense. Gregoric offers the following comment:

This formulation implies only that it would be *harder* to perceive the common perceptibles if we had a single sense, not that it would be impossible to perceive them. The passage seems to suggest that some common perceptibles could be detected, at least to some extent, by an individual sense, without the activity of a higher-order perceptual power. And if one insists that the activity of a higher-order perceptual power has to be present, assuming that it plays an essential (non-accidental) role in the perception of the common perceptibles, then one has to explain why should the number of individual senses make any difference to the way in which the common perceptibles are perceived. That is, if we have the common sense for common perceptibles, shouldn't its coupling with only a single individual sense, such as touch or sight, allow us to perceive the common perceptibles as sharply as they possibly can be perceived? Gregoric, 73.

While I don't see where the passage implies that a common perceptible could be perceived 'without the activity of a higher-order perceptual power', my response to this objection is actually to agree with it. A single special sense combined with the common sense *is* sufficient for the sharp perception of a common sensible, for example, motion. However, it is less likely for motion to escape detection if I can both see and hear it. I may have my back turned to an oncoming train, but if I hear its engine approaching, I may yet perceive its motion incidentally through hearing. It is neither inconsistent, nor a difficulty, to explain that the common sense directly perceives motion while motion is incidentally perceived by a single sense. The fact that motion is incidentally perceived by multiple special senses would still ensure that it is less likely to escape our notice.

The third objection asserts that there exists an incompatibility between the standard view and Aristotle's claim about the fallibility of perceptions involving common

sensibles: “if we have a higher-order perceptual capacity which perceives the common perceptibles in a proper, non-accidental fashion, it would be rather difficult to explain why the perception of the common perceptibles is particularly prone to error, as Aristotle claims in *DA* III.3 428b22-5” (Gregoric, 73). In his commentary on this statement of Aristotle’s Hamlyn suggests that it is due to the nature of the common objects that their perception is most prone to error. Common objects such as size and speed are relative “in a way in which colour and identity are not” (Hamlyn, 135). I do not think that this, in itself addresses Gregoric’s difficulty since it does not explain why this should provide any difficulty for the common sense if the common sensibles are perceived in themselves by it. I would suggest instead that this fallibility is due to the fact that, unlike the perception in themselves of special sensibles by their dedicated senses, the perception of common sensibles in themselves by the common sense occurs via the incidental perception of the common objects by the special senses. It is perhaps the nature of this mediated perception that introduces the increased likelihood of error in the perception of common sensibles.

The fourth and final difficulty to consider from Gregoric is based on *De Somno* 455a14-b2, in which Gregoric finds the absence of the common sensibles an obstacle to be overcome by proponents of the standard view:

The perception of the common perceptibles is not mentioned as one of the common functions assigned to the ‘common power’. This is not conclusive, of course, but it is reinforced by other passages which suggest that for Aristotle seeing does not consist only in grasping colours, but also in grasping the common and accidental perceptibles. Gregoric, 74.

I agree that this omission is not conclusive and would like briefly to address the suggestion that seeing consists also in grasping common and accidental sensibles before I return to the omission in question. I completely agree that seeing can and does involve the perception of common and incidental sensibles, however, the standard view, as I understand it, maintains that we do see common and incidental sensibles, but we do so *incidentally*. If Aristotle is describing the complete perception of a moving object then it is natural to speak of seeing motion, the son of Cleon, etc. However, if the context is one of stipulating the constituent elements of perception and their respective senses (as we find in *De Anima*, then we would expect Aristotle to proceed more carefully and stipulate which senses perceive which sensibles and whether the sensibles are perceived incidentally or in themselves. Now, to return to the omission of any mention of common sensibles in the passage from *De Somno*. In the context of the passage Aristotle is explaining that waking and sleeping are both affections of a single sense organ. He is not interested here in the details of perception and there is no mention of the distinction between perceiving a sensible in itself or incidentally, the crucial distinction upon which the standard view hinges. What is described in the passage is a single controlling organ of sense. I find it difficult to explain what sense would correspond to this controlling sense organ on Gregoric's account. Surely there must be some sense if there is to be a sense organ, but if the common sense is reduced to a common functioning of the special senses, some new sense would be needed to explain the functioning of this controlling sense organ. I therefore find this passage to offer a greater difficulty for Gregoric's account than that of the standard view.

Having considered Gregoric's main difficulties with the standard view, I shall now briefly consider his alternative. Gregoric posits that, at 425a27, *aesthesis* should be understood as referring to a perceptual ability rather than a sense and *koinē* should be understood as referring to the sharing of this perceptual ability. Thus his alternative runs: "Aristotle denies the existence of a separate perceptual ability for the common perceptibles by saying that for the common perceptibles we in fact have a perceptual ability (*aesthesis*) which is shared (*koinē*) by the individual senses" (Gregoric, 78). In this way he reduces what would be the functioning of the common sense in the standard view to a shared functioning accomplished by each of the special senses. There are at least two difficulties with this reduction. First, Gregoric's reduction of the common sense to the special senses invites the third difficulty he levels at the standard view: if the common sense is simply a functioning of the special senses, why should there be any more difficulty in perceiving them than the special sensibles? Second, by reducing the common sense to a function of the special senses, Gregoric has eliminated the possibility for common sensibles to be directly perceived since Aristotle claims that the common senses are incidentally perceived by the special senses yet there is no other sense to which Gregoric can appeal for direct perception of the common sensibles. In his description of the standard view, referring to the incidental perception of common sensibles by the special senses, Gregoric raises the following concern: "it is doubtful whether Aristotle would permit the claim that a perceptible affects a sense yet not so as to be perceived by that sense" (p.70). On his own account however, Gregoric has the inverse problem, and I am concerned that it is doubtful whether Aristotle would permit

the claim that a sensible does not directly affect any sense and yet is perceived directly by some sense. While Gregoric’s explorations of instances of ‘common sense’ open the door to the possibility of it meaning something different than a ‘higher-order perceptual power’ in other works, he does not succeed in closing the door behind him in terms of its use in *De Anima*.

Time as Object of Perception:

Time is not a special sensible of perception since there is no single dedicated sense by which we perceive it. However, we do perceive time (“We perceive motion and time together” *Phys* 219a3-4), and so we must discover which of the other two kinds of objects of perception time is. *Physics* IV described the perception of time as dependent on the perception of motion, and it stands to reason that an understanding of the details of this dependence would contribute to understanding the kind of perceptual object that time is. In *De Anima* III.1 Aristotle describes the proper objects of common sense as those “which we perceive by each sense incidentally, e.g. movement, rest, figure, magnitude, number, and unity; for we perceive all these through movement” (*DeA* 425a15-17). This claim by itself might suggest that time should be classified as a common sensible since we also perceive time through movement. A passage from *De Memoria* reinforces this likelihood:

Now, one must cognize magnitude and motion by means of the same faculty by which one cognizes time. Imagery is a phenomenon belonging to the common sense. thus it is clear that the cognition of these objects is effected by the primary faculty of perception²⁶ (*DeM* 450a10-12).

In this quotation, the same faculty is cited as the source of our ‘cognizing’ time and motion. However, it does not follow from this that time and motion are the same kind of sensibles as Aristotle distinguishes them. As we shall see, the possibility for one kind of sensible, for example special sensibles, to be perceived by both the special senses and the common sense, opens the door to the possibility that time and motion are different kinds of sensibles despite being ‘cognized’ by the same faculty. Just as sweet is not a common sensible despite its being perceived in some way by the common sense, so too I will argue, time is not a common sensible despite its being perceived by the common sense.

Approaching the same conclusion from another angle, Gregoric, in *Aristotle on the Common Sense*, succinctly considers the possibility that time is a common sensible because number is a common sensible.

Perhaps one could suggest a different argument to the effect that time is a common perceptible. Aristotle defines time as the number of change (*Phys* IV.11 219b1-2); since number and change are both common perceptibles (*DA* III.1 425a16), time too must be a common perceptible. This inference seems too hasty. I take it that time is number in the sense that we can countnows which first have to be marked out in some way. This involves much more than perceiving a number. An eagle-hen, for instance, can perceive threeness of the eggs in her nest, for she will be upset if she finds any other number of eggs in her nest. Yet surely she does not *count* her eggs. So, if something is capable of perceiving number and change, that in

²⁶ On the subtle differences in terminology (common sense, primary faculty of perception, common power) referring to a single doctrine of the common sense, see Kahn 1979, p.14 and Gregoric 2007 p.101 note 7. It seems clear that, since motion is clearly described as directly perceived by the common sense, this ‘primary faculty’ and the common sense are one and the same. Or at least, any possible differences in the dispute over a potential distinction between a faculty versus a capacity do not affect my purposes here.

itself does not entitle us to conclude that it must be capable of perceiving the number of change, that is time, too. (Gregoric 105)

Assuming that Gregoric's argument is valid, his point is that the perception of number does not necessarily entail the perception of time and hence it does not *necessarily* follow that time is a common sensible just because number is a common sensible. However, neither does it necessarily follow from Gregoric's example that time *cannot* be a common sensible. One may make the argument that any soul capable of performing the counting requisite for the perception of time must carry out such counting on each and every occasion that number or change is perceived; in other words, since counting and the perception of time are inseparable then time may well be a common sensible like number. If the possibility of time's being a common sensible is to be convincingly excluded from consideration, a positive argument for its being an incidental sensible is needed. I will now turn to this argument.

Referring back to the quotation from *De Memoria* 450a10-12, one may reason that, since magnitude and motion are common sensibles of perception and we perceive time by the same means, then time too must be a common sensible of perception. However, the quotation only specifies that we cognize magnitude and time by the same *means* and not that they are the same kind of sensible. Time is not a special sensible since it has no special sense dedicated to it, and so time will either be a common sensible in virtue of being dependent on motion (like rest, figure, etc., see *DeA* 425a16) or it will be an incidental sensible (like the son of Cleon). Now, bearing in mind the descriptions of the latter two kinds of sensibles we see that time cannot be a common sensible. For, the

two criteria of common sensibles given are i) it is perceived by more than one special sense but is not the proper object of any special sense, and ii) it is perceived through motion. In order to be a common sensible, a sensible must meet both these requirements and while time meets ii) it does not meet i). Since time is not perceived by any special sense (either directly or incidentally) it cannot be perceived by more than one special sense (directly or incidentally). While I take it as granted that we do not perceive time directly, that is, in the way we see colour or taste flavour, it may be objected that we can perceive time incidentally, not only through a special sense, but also by more than one of them. For example, we can mark the passage of time through hearing a song or by watching a passing train. In response, one must bear in mind that a sensible perceived incidentally by the special senses may only be one or the other of two kinds, either i) the special sensible of some other special sense (for example, the bitter that I perceive incidentally, long with the yellow that I perceive directly through sight, is the special sensible of the special sense of taste), or ii) it is a common sensible. We can perceive the special sensible bitter incidentally by the special sense of sight but time is not the special sensible of *any* special sense and so it is not perceived in this way. An incidental sensible is different from a special sensible perceived by a special sense *incidentally*. Marking time by hearing a song is not the perceiving of a special sensible incidentally, since time is not the special sensible of any special sense. Common sensibles are all said to be perceived through movement (*Phys* 425a15-17). By a process of elimination, this leaves only the possibility that time is an incidental sensible of perception. To return to the example of perceiving the white object as the son of Cleon: the white is perceived

directly by sight, his motion is perceived incidentally by sight but directly by the common sense, and ‘the son of Cleon’ is perceived only incidentally and only by the common sense.

We must now investigate whether the claim that time is an incidental sensible of perception is tenable and consistent with what Aristotle writes about incidental sensibles and time. The passage from *De Memoria* 450a10-12 quoted previously, is compatible with the claim that time is an incidental sensible, since it only asserts that time and motion are known by the same means; that means is perception by the common sense. Motion is perceived via the common sense directly as a common sensible (*DeA* 425a27-28). Time is an incidental sensible of perception which is dependent upon the perception of motion, and, as an incidental sensible of the common sense, is perceived incidentally. Time however is an incidental sensible *sui generis*, differing in a significant way from the kind of sensible which Aristotle describes in his ‘son of Cleon’ example. While, on the one hand, the perception of a white object does not imply, in itself, the perception of the incidental sensible ‘the son of Cleon’, the perception of motion, on the other hand, *does* imply, for Aristotle, the perception of time. “We perceive motion and time together” (*Phys* 219a3-4). The perception of time is necessarily concomitant with the perception of motion for the kind of soul which, like ours, is capable of the counting requisite for the perception of time.

If the conclusions of Chapter One are correct, then time is a very different kind of sensible than any of the special sensibles or any of the common sensibles. Time cannot be perceived directly either by any one of the special senses or by the common sense

because, unlike colour or motion, time is not a phenomenon of the world existing independently of a perceiving soul. What this would mean in terms of Aristotle's description of perception is that, while the special and common sensibles are perceived both directly and incidentally, time is never perceived directly, but only incidentally. It will be helpful at this point to rehearse the ways in which different sensibles are incidentally perceived. Aristotle discusses three instances of incidentally perceiving at *DeA* 425a14-425b4: i) the special senses perceiving each other's special sensibles incidentally, ii) the special senses perceiving the common sensibles incidentally, and iii) the common sense perceiving those things²⁷ that can only be perceived incidentally, and then only by the common sense (just as we perceive 'the son of Cleon'). The third kind of incidentally perceiving marks a special case in that it is the only instance of incidentally perceiving something which is not also capable of being directly perceived by any sense. With the first kind of incidental perception, a special sensible (e.g. bitter), while being perceived incidentally by one special sense (e.g. sight), is also capable of being directly perceived by its own special sense (taste). With the second kind of incidental perception, while a common sensible (e.g. movement) is incidentally perceived by a special sense (e.g. sight), it is also directly ("not incidentally") perceived by the common sense. With the third kind, there is no sense for directly perceiving 'the son of Cleon'. 'The son of Cleon' cannot be directly perceived because there is no sensible, in the usual sense, to be perceived. The perception that the white thing is the son of Cleon is the unification of past experience with present perception: the soul having met or learned about the son of

²⁷ It is difficult to describe what is being perceived without implying that it is an object, but what is perceived in this way is not a thing but rather a relation.

Cleon and now recognizing him as this white thing of its current perception. Past experience has been brought to bear on a present perceptual object and their unification forms the single present perception²⁸.

What occurs in all cases of incidentally perceiving is the unification of multiple phenomena in a single perception. The special senses incidentally perceive each other's special sensibles in the perception, for example, that bile is both bitter and yellow. The previous perception that the liquid tasted bitter is combined with the present perception that the liquid is yellow. This combination occurs in a single perception:

The senses perceive each other's special-objects incidentally, not in so far as they are themselves but in so far as they form a unity, when sense-perception simultaneously takes place in respect of the same object, e.g.in respect of bile that it is bitter and yellow (for it is not the task of any further {perception} at any rate to say that both are one)" *DeA* 425a30-425b2

Bitter is not perceived directly by sight but incidentally through the unification of the perception of bitter with the perception of yellow by sight to form a single perception or sensible.

The special senses incidentally perceive common sensibles in the perception that, for example, the thing is both white and moving. Colour is directly perceived by sight and so white is a proper sensible of sight. The motion of an object is not directly perceived by sight, since motion is not a proper sensible of sight. According to Aristotle, motion is directly perceived by the common sense but can be incidentally perceived by

²⁸ The means by which past experience is becomes entwined with present perception is the focus of the following chapter. I shall argue there that this is the work of the common sense and falls under the description of what Aristotle calls recollection.

special senses. Motion is not colour or texture but can be incidentally perceived in the perception of a moving coloured thing, or a moving soft thing, etc. Motion, or change of place, can be perceived as the change of place of a colour (and so is incidentally perceived by sight) or as the change of place of a texture (and so is incidentally perceived by touch). Sight directly only perceives colour but we can locate the coloured object because sight also incidentally perceives motion. Just as bitter and yellow are unified in a single perception in the first kind of incidental perception, so too motion and other common sensibles are unified with special sensibles in this second kind of incidental perception.

The common sense incidentally perceives ‘the son of Cleon’ in the single perception that the white thing before me is, in fact, the son of Cleon. It is not possible to directly perceive ‘the son of Cleon’ by sight, since what is here perceived is not a colour but something more complex involving familial relation and past experience. ‘The son of Cleon’ is clearly not a special sensible, but neither is it a common sensible. Unlike motion, figure, etc., the perception of ‘the son of Cleon’ is not accomplished through the unification of a common sensible with a special sensible, like the second kind of incidental perception. Perceiving ‘the son of Cleon’ is not merely the combination of sensibles, but involves the unification of personal experience with present perception. Unlike the perception of bile being both bitter and yellow, or the perception of the object being both white and moving, the perception of ‘the son of Cleon’ requires more than simple exposure of the sensible to the sense. Someone who has no experience or knowledge of the son of Cleon could not have a perception of ‘the son of Cleon’ despite

having a clear view of the son of Cleon. As the son of Cleon walks through the Agora, anyone may perceive a white moving thing²⁹ but only those who can unify the appropriate experiential past with these sensibles can perceive ‘the son of Cleon’.

It is this last kind of incidental perceiving that occurs in the perception of time. Just as ‘the son of Cleon’ is not a sensible which exists independently of our notions of identity and familial relations, so too time is not a sensible which exists independently of the kinds of souls which can count. Indeed, in so far as neither one directly affects any sense, neither one is a sensible at all, in terms of the usual way of thinking about sensibles. As Aristotle writes:

An object of perception is spoken of as incidental, e.g. if the white thing were the son of Diares; for you perceive this incidentally, since this which you perceive is incidental to the white thing. Hence too you are not affected by the object of perception as such. *DeA* 418a20

If the conclusions from Chapter One are correct then time cannot be directly perceived by any sense since time, unlike colour and motion, does not exist independently of the soul doing the perceiving. It cannot, therefore be a common sensible any more than it could be a special sensible. The perception of time is the result of an activity of the soul which marksnows within motion and distinguishes an interim as different. This process is not itself subject to perception since it describes the means by which the perception arises.

Time, then, is incidentally perceived by the common sense and is not directly perceived by any sense. While we do, in fact, perceive time, for example, when listening

²⁹ Of course a spectator would see a young man moving though the Agora and not just whiteness and motion. However, on my interpretation, even the application of the description ‘young man’ is an example of incidental perception since all that is given directly to either the special senses or the common sense is whiteness, motion, etc.

to music, this is not because time is directly perceived by the special or common senses, but rather because we are marking off nows within the movement or change of what we hear and noticing the interval between them. Sound is directly perceived by hearing and the motion or change from one note to another is incidentally perceived by hearing and directly perceived by the common sense. Finally, time is incidentally perceived by the common sense through the marking off of nows in the motion or change of the notes. Though it is not itself perceived, this marking off is the constitutive process that yields the perception of time.³⁰

The description of incidental perception in the example of perceiving the son of Cleon involved the application of previous experience to special or common sense objects. I suggest that the judgments of the common sense need not always be formed by the application of experience but can also be judgments of comparison and unity (more on this later). As the faculty which distinguishes between special sensibles present in the same perception, the common sense is a faculty of comparison. As unifying different special sensibles within the perception of a single object, the common sense is a faculty of unification. I suggest that time is an incidental sensible of perception that is included in every perception of motion through this unifying function of the common sense. Just as sweet and white are perceived together in the unified object ‘honey-milk’, and the white object and ‘son of Cleon’ are unified in a single perception, so too time and motion are

³⁰ The conclusion that time is only incidentally perceived and is not a common sensible is indirectly supported by the fact that in all of the variant lists of common sensibles (*De Anima* 425a14ff, *De Sensu* 437a8ff, 442b5ff, *De Insomniis* 458b5ff), time is never mentioned. Only *De Memoria* 450a9ff mentions time in connection with the common sense, and there, as explained, it only claims that time and motion are perceived by the same means. This is consistent with my claim that motion is directly perceived by means of the common sense and time is incidentally perceived by the common sense.

unified in a single perception; time and motion are together in one perception unified by the common sense³¹. We do not perceive either motion or time independently of each other, they are inseparable in our perceptions.

Unity and the Common Sense:

Time, as I argued in the previous chapter on the basis of *Physics IV*, is the result of our delimiting motion; time is what is counted and the counting consists of marking two nows, one before and one after: it is a limiting of the magnitude of motion, just as the perception of unity is the perception of the limits of the magnitude of the object perceived. The limiting of motion is the result of the activity of the mind, and this activity is a judgment. What is involved is the minimal judgement that the perceptual object forms a whole; that the bitter and sweet are two aspects of one object, or that the delimited length forms a unity. We judge that the motion had a beginning and an end, and in this way can determine it as a single motion. This judging is performed by the common sense and is a judgement which distinguishes and combines:

...one thing must assert that they [sweet and white] are different; for sweet is different from white. The same thing then asserts this; hence, as it asserts so it both thinks and perceives. That, therefore, it is not possible to judge separate things by separate means is clear.” *DeA 426b20-23*

³¹ Both the honey-milk example and the ‘son of Cleon’ example involve what is sometimes called ‘perceptual binding’: the combination of multiple sensibles such that one is aware that they belong to the same perceptual object (it is the same milk that is white and sweet). An important distinction however, is that, while not every case of perceptual binding involves incidental sensibles, on my account, every case of perceiving an incidental sensible is a case of perceptual binding.

The perception of incidental sensibles by the common sense involves a judgment which combines, or unifies objects of perception³². In the case of perceiving the son of Cleon, the common sense unifies the white thing with the ‘son of Cleon’. In the case of perception of motion, the common sense consistently unifies in judgment the perception of motion with a concomitant perception of time. Which is why “we perceive motion and time together” (*Phys* 219a3-4). David Gallop, in his book *On Sleep and Dreams*, describes the process thus:

... it seems clear, at least in the essays on sleep and dreams, that *all* objects of perception, both those proper to single senses, and those common to more than one, must be experienced in a unitary, ‘common’ consciousness. Colours, sounds, and flavours are registered by a single sensory apparatus, not by a plurality of separate subjects. Likewise, it is one and the same sensorium that registers the shape, size, and movement of an object. It can discriminate various kinds of data through its different modalities; it can be aware that it is doing so; it can also recognize that these data differ from one another, yet attribute them all to a single common source, the unitary physical object to which they all belong (Gallop 136).

What Gallop captures quite well is the necessity for a single source to both unify and differentiate between sensibles in order to accurately identify objects in the world. If this were not so, one would be unable to recognise that it is not two distinct objects that one perceives when sensing ‘white’ and ‘sweet’ but one singular object, i.e. honey-milk. Unity is a common sensible of perception directly perceived by the common sense. Time is a unity formed by limiting the continuum of motion and is also an object of the common sense, but is incidentally perceived. It is an incidental sensible because

³² Gregoric, 2007, also claims that the common sense is a faculty which combines, though in terms of the perception of time, he focuses on the general combination of the faculty of perception with imagination. See especially p107.

something is combined with the perception of motion which is not directly perceived by either a special sense or the common sense. The motion directly perceived by the common sense is combined with a temporal aspect: the now that was pronounced before is retained with the now that is pronounced after and the time thus constituted is perceived together with, and inseparably from, the motion within which the nows were pronounced. Just as the retained perception of ‘the son of Cleon’ is combined with the perception of the white thing, so too in the perception of time duration is combined with the perception of the moving white thing.

Every perception is a perception of time

Since we perceive motion and time together, every perception of motion is a temporal perception. Every perception of an object is as either in motion or at rest, and so every perception of an object will be of that object moving a certain distance in a certain time, or as not moving in a certain time. Motion here is understood broadly to include all four types of change listed in *Metaphysics* XII. 2. Thus the perception of an object will be of it changing or remaining the same “either in respect of the essence or of the quality or of the quantity or of the place” (*Meta* 1069b8-13). All perception is perception of motion or the privation thereof. This point is not simply Aristotle’s claim that perception occurs by means of motion (*DeA* 416b33-35), but rather that every object of perception is perceived in terms of motion. We must remember that, for Aristotle, rest is understood in terms of motion since it is only that which has the potential to move that can be said to be at rest

(*Phys* 264a27-28. Our perception of an object maintaining its essence, qualities, quantity, and place will still be a perception of motion, or the privation thereof, and will also be a perception of time as long as there is some other change or motion against which we can measure the object's rest. *Physics* IV established that there can be no time without motion but it remains to be established that there is no perception of motion that is not also a perception of time.

The claim that time is dependent upon motion is not a description of stages of perception but a description of a logical dependency. Time is a measure of motion and so that which gets measured is logically prior to the measuring thereof. However, it is not the case that we perceive motion and then perceive time through some additional act of perception. As Aristotle writes:

The senses perceive each other's special-objects incidentally, not in so far as they are themselves but in so far as they form a unity, when sense-perception simultaneously takes place in respect of the same object, e.g. in respect of bile that it is bitter and yellow (for it is not the task of any further {perception} at any rate to say that both are one) *DeA* 425a30-425b2

The common sensibles are also perceived by the special senses incidentally (*DeA* 425a14-15). The special sensible of a given special sense is perceived by each of the other special senses incidentally, as when we perceive sweet by sight in the case of honey-milk. Motion is not the special sensible of any special sense, but it can be perceived incidentally by a special sense. In this case, the perception of a white object is simultaneous with the perception of its moving. It does not require some further perception to form the unified perception of a moving white object. The same is true of

the perception of incidental sensibles of the common sense. Motion is the proper object of, and is directly perceived by, the common sense, and it is perceived together with time, which is an incidental sensible of, and incidentally perceived by, the common sense. The process is analogous to perceiving honey-milk or the white moving thing. The perception of time is not separable from the perception of motion, it is the same perception unified by the common sense.

Modrak rightly points out that “The sensory basis for the perception of an incidental object does not fully determine the content of the perception” (Modrak 69). The whiteness of the object is not sufficient to fully determine my perception of ‘the son of Cleon’. This is perhaps part of the reasoning behind the claim that “The activity of sense-perception in general is analogous, not to the process of acquiring knowledge, but to that of exercising knowledge already acquired.” *De Sensu* 441b22-3. What this quotation indicates with reference to the perception of ‘the son of Cleon’ is that the activity of perceiving ‘the son of Cleon’ is more akin to attending to knowledge already acquired (my familiarity with the son of Cleon) than acquiring some new knowledge by simply perceiving the white thing now in front of me. However, Modrak does not explore the possibility of a judgment which is not based on specific past experience. Surely the judgment can be made that sweet and white are different on the first exposure to each. The comparison of one particular length of time with another may be the kind of judgment that requires experience (judging which of two durations is longer), but judging *that* motion has duration surely does not need to be learned. The combination of time with the perception of motion no more needs to be learned than the combination of

distance with the perception of space. As Kahn writes: “Just as the special senses share the same type of object in their perception of the *koina* [common objects], so they unite in the perception of a single object which presents their *idia* [special objects] together. In the first case they overlap *qua* faculties; in the second case they coincide in a single momentary act” (Kahn 9). The combination of the perception of time and the perception of motion occurs in this single act of the common sense. The perception of time is accomplished through the activity of the common sense, and it is as the ‘primary faculty’ that the common sense imbues all other perceptions with a temporal aspect. As the faculty responsible for the unity of perception, it is also the faculty responsible for uniting the perception of time with every other perception. Regarding the relation of the common sense and its organ to the special senses and their respective organs, Aristotle writes: “For, when the sense organ which controls all the others, and to which all the others are tributary, has been in some way affected, it is necessary that those others should be all affected at the same time” *De Somno* 455a34-455b3. In this way, time, an incidental sensible of the common sense, is capable of being combined with the sensibles of the special senses and, I maintain, is so combined in every perception thereof.

To summarise: The faculty by which time is perceived is the same as that by which magnitude is perceived (*DeM* 450a10-12), and this is the common sense, since magnitude is a common sense object (*DeA* 418a17-18). The common sense is that faculty by which we perceive all objects of perception (*De Sensu* 449a5-10³³). The common

³³ “If the soul perceives sweet and white with different parts (of itself), either some unity is formed from these parts or there is no unity. But there must be a unity; for the part capable of sensation is one... There is then necessarily one (faculty) of the soul by which it perceives all things”

sense is that by which we perceive time, and is also that faculty by which we perceive all things as unified objects. In understanding that the common sense is the faculty by which all perceptual objects become unified perceptual objects, and is also the faculty by which we perceive time, we can understand how every perception is a temporal perception.

Perception is always of some object composed of sensibles unified by the common sense.

Every perceptual object is either in motion or at rest and we perceive motion and rest temporally. In this way every perception is a temporal perception.

Looking toward Chapter Three: Memory is made possible by temporal perception.

Understanding perception as temporal allows us to explain how something can be remembered as having a certain position with reference to other motions in my history: the perception is not ordered sequentially after the fact, but is already perceived ‘from the beginning’ as coming after x and before y. To perceive any object whatsoever is to perceive it within a sequence of before and after with reference to other motions or stages of the same motion. Just as it is not a separate perception by which we perceive that an object is also in motion, so too it is not by a separate perception that we perceive one motion as occurring after another.

Only souls capable of measuring motion can perceive time, and it is together with time that motion is always perceived by those souls. Every perception is an incidental perception of time and we can relate each of our perceptions to previous perceptions retained through memory. It is because our perceptions are marked within an ordered

sequence in our personal past that they can then be recollected with reference to that sequence. In other words, it is because perception is already a temporal ordering that we can recall our past within that ordering. The next chapter will involve an analysis of the distinction between memory and recollection, as well as the relationship between the perception of duration and the temporal ordering of perceptions.

CHAPTER THREE

I have argued that, for Aristotle, time is the result of a perceptual process on the part of souls like ours and that this perceptual process involves the unifying work of the common sense for which time is an incidental object. The first chapter was an exploration into the nature of time while the second chapter followed the mind-dependent nature of time to provide an analysis of the perception of time. The current chapter will explore that phenomenon in which time plays the most crucial role in human lives: memory. The future as such is not available to experience and the present, even a specious or experiential present with some duration, is fleeting. It is the past which has the greatest relevance for, and influence on, our lives, and memory is the means by which our past continues to affect us.

In his short work *De Memoria*, Aristotle attempts to provide an account of memory and recollection and to explain the significant differences between them. Broadly speaking, Aristotle makes a distinction between the capacity of memory as a disposition toward a persisting image and recollection as the process of searching for a retained image. It will be argued in what follows that there is a temporal ordering inherent in perception which makes memory possible but that ordering alone is not sufficient to explain the phenomenon of recollection. This latter phenomenon, which

involves enacting an established series of connections, implies a past in which these connections became established through regular conjunction. Recollection implies a past which reasserts itself in the present.

Section 1: The Distinction between Memory and Recollection

Aristotle begins *De Memoria* by making the claim that memory and recollection cannot be the same thing since it is not the same kind of people who are good at remembering and are good at recollecting. The former are slow while the latter are quick to learn (*DeM* 449b7-8). Fortunately, Aristotle does not consider this a sufficient differentiation of the phenomena. For he goes on to explain first what memory is and then what recollection is in contrast to memory. A characteristic of memory offered at *DeM* 449b15-23 is that memory occurs when knowledge or perception is present without the subject actually experiencing a present object of knowledge or perception. To this is added the very important proviso that one also “always says in his soul in this way that he heard, or perceived, or thought this before¹” (*DeM* 449b22-23). Remembering involves the retention of knowledge of, or a perception of, an object when that object is absent, with the concomitant recognition that one has mentally or perceptually encountered that object before. Memory is distinct from perception or thought in so far as it a) involves an object from one’s past, and b) one recognizes that object as being from one’s past.

¹ Translations are from Sorabji, *Aristotle on Memory* 2004.

Therefore memory is not perception or conception, but a state or affection connected with one of these, when time has elapsed. There is no memory of the present at the present, as has been said. But perception is of the present, prediction of the future, and memory of the past. And this is why all memory involves time. So only animals which perceive time remember, and they do so by means of that with which they perceive.
DeM 449b24-30

The way that we distinguish a memory from a novel thought or a novel imagining is by recognizing that we have perceived or thought the psychic object before. A sense of time is required in order to temporally order our thoughts and perceptions such that we distinguish before and after amongst them. The ordering of perceptions with respect to time is a necessary condition for memory. For this reason the capacity to perceive time will make memory possible. This capacity was seen in the previous chapter to be that corresponding to the common sense. What is retained in the memory of a perception is the form of an object without its matter (cf *DeA 424a17ff*). In other words, it is an image of the object that is retained and so memory is a faculty which deals with images. It then stands to reason that the sense responsible for memory will also be the sense responsible for images:

...it is necessary that magnitude and change should be known by the same means as time. And an image is an affection belonging to the common sense. So it is apparent that knowledge of these is due to the primary perceptive part. Memory, even the memory of objects of thought, is not without an image. So memory will belong to thought in virtue of an incidental association, but in its own right to the primary perceptive part.
DeM 450a9-14

Memory [*mnēmē*] is used by Aristotle in two senses. It is a disposition toward retained images², applying to any image whatsoever: "...it is the objects of imagination that are remembered in their own right [*kath'auta*], whereas things that are not grasped without imagination are remembered in virtue of an incidental [*kata sumbebēkos*] association" (*DeM* 450a23-25). What can be divorced from imagination is the source of the image, the object itself. This object itself is indirectly an object of memory as the source of the image, but not itself an image. The image retained is a modification of the soul resulting from perception (*DeM* 450b27-32). Memory is also the attending to this modification. "For one who is exercising his memory contemplates this affection and perceives this [the image]" (*DeM* 450b17-18), which means that we have a kind of image in mind when we are remembering. The previous quotation stipulates that we perceive this modification or image.

This leads Aristotle to wonder how it is that the perception of this image counts as memory rather than simply a new perception on par with all others. We might perceive this image as we might perceive an object in front of us. The question arises: if memory is a perception, how is the phenomenon distinct from any other perception of objects in the present? Aristotle explains the solution to this problem with reference to paintings (*DeM* 450b20-451a2). We can consider the painting in itself, in terms of its figure and symmetry, or we can consider the painting as a representation of an actual animal or particular man. In the former case we are considering the painting or image in itself, in

² Memory, in Aristotle's account, is not the process of retaining perceptions but is rather the disposition of attending to perceptions already retained. The retention itself seems to be a function of perception and the strength of the affect that the perceptible makes upon the relevant sense.

the latter we consider the painting or image as referring us to something beyond itself: the source of the likeness³. “In so far, then, as it is something in its own right, it is an object of contemplation or an image. But in so far as it [the image] is another thing, it is a sort of copy and a reminder [*mnemoneuma*]” (*DeM* 450b25-27⁴). Whether we are perceiving or remembering depends on our attitude toward the image, whether we are considering the image in itself or as a representation of something else. This explains how we can confuse imagining an object with remembering the object and vice versa; it is the same image considered from different conceptual or perceptual perspectives.

We can think of the distinction thus: the facts of mathematics that we remember are considered in themselves as objects of knowledge; we do not usually think of them in terms of when we learned them or the last time that we multiplied 5 by 7. To think of learning our multiplication tables is to think of an image that represents something beyond itself, namely to think of an event or series of events in our past. The role that the image plays is determined in large part by the use we make of it, or the perspective we take on it. In order to quickly recite my facts of mathematics I consider the image of a

³ It is important to note that it is this second perspective on the image that requires us to recognize that the source of the image is in our past: this recognition is not needed to consider the image in itself.

⁴ Sorabji p. 84 offers the following helpful note: “ ‘Both a figure and a copy’ (*zoon* and *eikon*). We should reject the alternative rendering, ‘For the animal drawn on a panel is both an animal and a copy’. This latter assumes that the distinction is between the animal-in-the-picture (which may be ten feet tall, and stalking its prey) and the copy (which may be two inches from top to bottom, and which cannot be said to be stalking its prey). One reason why this cannot be the distinction intended is that in the case of mental images, we are not offered a choice between regarding our image as a copy of Coriscus, and regarding it as an imaged Coriscus. If Aristotle had said this, he would have failed in his whole purpose, which is to show how our attention may, or may not, be directed to Corsicus. If the analogy is to hold between mental images and pictures, it will be only when we regard a picture as a copy that our attention is directed to the object depicted. When we regard a picture in the other way, then, our attention will not be directed to the animal-in-the-picture. We shall think of the picture simply as a figure.” It is important to recognise that the distinction is between a) viewing an image in itself without having reference to a particular beyond the image (which the image is an image *of*) and b) viewing the image as referring to some particular of which it is an image.

particular fact, $5 \times 7 = 35$, as an image in itself and not taken to be a representation of myself practicing mathematics at the kitchen table as a child. My frequent consideration of this image in itself has strengthened this way of ‘viewing’ it as a ‘figure’ and not as a representation. Indeed, in the present example it does not make sense to view the image as a representation since then I would be remembering the situation in which I was learning and not the mathematics itself. Conversely, the image of a day spent in the park is a representation for me of a specific event in my past. I do not think of it as a picture divorced from its source, although I could. For example, I might consider how picturesque the scene was and view it as I might view a painting of a scene without reference to my own experience. In this way I could appreciate the image simply in terms of its visual composition. The same image can be understood in two ways and the repetition of ‘viewing’ the image from a particular perspective creates a habit of considering it in that way. Recollection is a means by which the habit of considering the image as a copy is strengthened: “Exercises safeguard memory by reminding one. And this is nothing other than contemplating something frequently as a copy and not as a thing in its own right” *DeM* 451a12-14. Aristotle concludes his description of memory early in Book I with the statement that memory “is not perception or conception, but a state or affection [*hexis ē pathos*] connected with one of these, when time has elapsed” (*DeM* 449b24-5)⁵. Interestingly memory is not described as an act, but rather a *hexis* or state. Our perceptions or thoughts affect us (*pathos*), leaving an image and memory is the state

⁵ In his summary of Book I, Aristotle seems to come down on the side of *hexis* (*DeM* 451a15).

of considering the image as referring to a thought or perception from one's past⁶. In terms of the two sense of *mnemē* described earlier, memory is a *hexis* in the sense that we are in a state of being that is well disposed toward attending to the image to be remembered, while when we are actually attending to the image in an act of remembering, what we are attending to is the affection or *pathos*. It is interesting to note that Aristotle describes memory, as a capacity, as a state directed toward the memory-image and the act of remembering as attending to that memory image. He does not describe memory as the process of storing of these images; an activity presumably accomplished as part of the act of perception itself.

Having thus established his account of memory, Aristotle begins his discussion of recollection as contrasted with memory, remarking that recollection [*anamnēsis*] "is neither the recovery nor the acquisition of memory"⁷ (*DeM* 451a22-23). Rather, in the initial description of recollection, it seems to be a *process* by which memory is made possible: "when he recovers previously held scientific knowledge, or perception, or that of which we were earlier saying that the state connected with it is memory, this is, and is the time of, recollecting one of the things mentioned. When one does remember, it results

⁶ Sorabji makes this comment on the passage: "An example of such a *pathos* would be anger, or in the present context, a memory-image. A *hexis* of the soul, he says, is something of longer duration, in accordance with which we are well or ill disposed in relation to *pathe*, for example, are good tempered (*NE* 1105b19-28; cf. *Metaph.* 1022b10-12). In the present instance, the *hexis* of memory is something in accordance with which we are well disposed in relation to memory-images" p.69-70. Bloch, comments on the ambiguity in *hexis* between 'state' and its derivation from *echein*; 'having': "And in fact, if one was [sic] forced to choose between the two translations 'having' and 'state' in the *De Memoria*, the former would probably be preferable, since 'state' does not, I believe, indicate equally clearly that the memory-image is *actually* present and viewed internally by the possessor of the state." p. 82. I believe that 'state' more adequately captures the sense of memory being a disposition toward an object, while 'having' may mislead the reader into thinking that a memory image which is not present to mind is no longer 'had' by the subject. Sorabji notes this possible ambiguity on p.87.

⁷ Acquisition = *lepsis*, recovery = *analepsis*. Perhaps 'reacquisition' would be a happier translation of *analepsis*, and one that would not be as likely to cause confusion re: recovery and recollection.

that memory follows” (*DeM* 451b2-6). In recollection we restore the image of past knowledge or perception which is no longer possessed of that permanence which would characterize it as memory. Memory is both a state of being well disposed toward the contemplation of an image and a state in which the subject is actually contemplating a retained image. This is why Aristotle says that when one remembers, memory follows. Remembering is the bringing to mind of the memory-image and memory is the state of attending to that image. If memory were an act of seeking for, or calling to mind an image, claiming that ‘memory follows on remembering’ would not make any sense. Recollection however, is a process by which an image is sought out for such contemplation⁸. In recollection we search for an image which is no longer easily brought to mind. In other words, we search for an image toward which we do not have the well disposed state that is characterized by memory. But the image is always present in some sense if it is possible for it to be recovered through the process of recollecting. If an image were to absolutely lose its permanence there would be no possibility for recollecting but only relearning. The process by which we recover the image which is no longer readily present in thought is a process of moving by associations from images which are present to thought to the associated image we are seeking.

Acts of recollection happen because one change is of a nature to occur after another. If the changes follow each other of necessity, clearly a person who undergoes the earlier change will always undergo the later one. But if they follow each other not of necessity but by habit, then for the most part a person will undergo the later one. *DeM* 451b10-14

⁸ For more on the memory and recollection as state and process respectively, see Bloch *Aristotle on Memory and Recollection*. Brill, 2007. Esp. ch3.

We are led from one thought or memory to another by a connection that is made through the thoughts being “similar, or opposite, or neighbouring” (*DeM* 451b19-20). There are connections formed between thoughts; the connections are made through the similarity of the thoughts, or by their being contraries, or by their being next to each other. Presumably this last kind of connection can refer to contiguity in space or in time. The thought of a friend may lead to the thought of her spouse because they are usually together.

Alternatively, the thought of staying out late with my friend may lead to the thought of sleeping in the next day because the latter usually follows the former in time. Aristotle claims that the associative connections can be of two kinds, necessary or customary. If the connection between two images is necessary then the thought of one will inevitably lead to the thought of the other. If, however, the connection is customary then the likelihood of one thought following upon the other is not guaranteed but will happen only in most cases. We can extrapolate from what Aristotle has claimed thus far to draw conclusions on some of the factors that will affect the likelihood for success for customary connections. One factor influencing success will be the strength of the faculty of recollection in the individual. Aristotle has already mentioned that not everyone is good at recollecting, which seems to amount to saying that not everyone is good at forming those connections which may successfully lead to the recovery of the sought after image. The second factor is the strength of those connections once they are formed. Aristotle claims that returning frequently to these images and the connections between them strengthens our ability to recover the image.

These two factors affecting the reliability of the connections between thoughts are not unrelated. The frequency with which the connections must be revisited, or repeated, in order to establish a reliable process of recollection will vary among individuals. Repetition may be the key to establishing these processes but exactly how much repetition is needed will vary amongst individuals.

It can happen that by undergoing certain changes once a person is more habituated than he is by undergoing other changes many times. *DeM* 451b14-16

To recollect well is to easily and readily establish and maintain a relation between images, while memory is the preservation of images for recall.

Though initially introduced as a process which allows us to search for images which are no longer easily brought to mind, recollection can in fact take place without any directed effort on our part at all. After describing the role of the three kinds of connection, Aristotle writes: “Sometimes, then, people search in this way. But also when they do not search in this way they recollect, whenever the change in question occurs after another one” (*DeM* 451b22-24). We can conclude that, since 1) recollection is the recovery of images which are not readily attended to by memory, 2) recollection is the process of following the chain of associations, and 3) the associations can be strengthened through habit, that 4) associations can be formed by custom to such a strength that they can occur not only by our intentionally initiating them but also without our intending.

After giving the description of recollection, Aristotle guards against the potential conflation of recollecting and relearning by specifying that recollecting is a process

which is accomplished by the recollecting subject alone. External perceptions may serve to initiate the process, but the individual does not require the assistance of anyone else in order to recollect. It is a process which draws entirely and exclusively on the perceptual content of the recollecting subject⁹. This content may be a mixture of the current and the retained, but it is none the less restricted to that subject. If the assistance of another person is required then that process qualifies as learning or relearning and not as recollecting: “recollecting differs from relearning in that a person will be able somehow to move on by himself to what follows the starting point. When he cannot, but depends on someone else, he no longer remembers” (*DeM* 452a4-7).

These then are the significant characteristics of, and means of differentiating between, memory and recollection. I will now turn to an explication of the role of time in both memory and recollection, with a view to preparing the ground for the next chapter, which will show the connection between recollection and habituation.

Section 2: The distinction between time as requisite for memory and time as requisite for recollection.

⁹ Sorabji takes issue with this claim on the grounds that Aristotle can no longer account for other people providing cues to aid in our recollecting (pp38-40). I think Aristotle’s response might be 1) if another person provides all the details of an image I am seeking then I am not recollecting but rather being reminded. 2) if another person provides the details for an image that I only associate with the image that I am seeking then, in so far as I undergo the process of following the associations from the image of which I am reminded to the image I seek to recollect, then only that far can I be said to be recollecting.

Memory involves the recognition that we have encountered the remembered image's referent before. There is no greater specificity required than that the image is remembered with a sense of 'before now' attached to it. Without this concomitant sense of having encountered the image's referent before, the image would then only be viewed in itself, as a present perception. In a process of recollection which is intentionally initiated, we begin with the expectation that we have encountered the sought after image before (else we would never be moved to search for it). To recognize an instance of remembering as such we must not solely consider the image in itself. To do so is to mistake a memory for an original thought, but we must recognise the image as familiar for it to count as remembering. While it is possible to fail to recognise a remembered image as such, mistaking the retained image for a new image, recollection only occurs when this recognition is present. Indeed, intentional recollection is born out of the recognition that there is some image which now eludes us and so we commence the process for retrieving it. One of the underemphasized differences between memory and recollection is this connection of each faculty to temporal ordering. According to Aristotle, it is possible to have a retained image and yet consider it as an image in itself and mistake it for a new thought or imagining. It is not possible to undergo the process of recollection and not be aware that the goal of the process is the recovery of some image. Even when this process is initiated by an external perception rather than the intentional seeking on the part of the agent, the agent is still always aware that the series of associations set in motion by the perception is an association amongst images of previous thoughts and perceptions.

In order to remember there must be a coincidence of recognising the image as referring beyond itself and recognising the image as referring to the past. Aristotle writes that “if the change connected with the thing occurs without that connected with the time, or the latter without the former, one does not remember” (*DeM* 452b28-29). If one of these two processes is absent for example, if we have an image present in thought but do not recognise it as originating in our past then we do not have memory¹⁰ (but instead, in this case, we mistake the image for a new perception or thought). The perception of time is necessary to recognise previous thoughts and perceptions (images), otherwise we mistake these retained images for new thoughts. This is why Aristotle, in summary, stresses the relation between memory and time: “Now, it has been said what memory and remembering are, namely the having of an image regarded as a copy of that of which it is an image, and to which part in us memory belongs, namely the primary perceptive part and that with which we perceive time”¹¹ (*DeM* 451a14-17). However, the relation between time and memory must not be exaggerated. It is not necessary that every perception of time, that is, every marking off of before and after in change, results in a memory. A perception may form an image, the later recognition of which is a memory. It is because not every perception of time results in a memory that we can have failings of memory and confuse a retained image for a new perception. As Pavel Gregoric writes;

Images of time have a certain degree of autonomy, since they can occur without images of things and vice versa, which explains various memory

¹⁰ While this sentence occurs as part of the conclusion from a description of recollecting, it seems clear to me that these specific conditions apply to memory rather than the process of recollection because a) Aristotle here uses *mnēmē* rather than *anamnēsis*, and b) it is consistent with the description of memory at 449b24-26.

¹¹ By ‘the primary perceptive part’ I take Aristotle to mean the common sense. In defense of this view, see Chapter 2.

failures. Aristotle does not specify these memory failures but we can easily do that on his behalf. First, if an image of a thing does not occur together with an image of time, one will mistakenly think that something is merely imagined, rather than something experienced in the past. Second, if an image of time does not occur together with an image of a thing, one will feel that there is something one has experienced in the past, but cannot remember what. Gregoric, 106

Certain points made in this passage require clarification. I believe that what Gregoric means by “an image of time [that] does not occur with an image of a thing,” is an incomplete image of an event. An example would be when I am remembering my tenth birthday party but cannot recall the name or face of one of my guests. This is because, for Aristotle, there is no image of time that is devoid of perceptual or cognitive content. For there is no perception of time apart from the perception of some change within which a before and an after are marked off.

One may nevertheless be tempted to supply the following as an example of an image of time without an image of the object: knowing that one has encountered an object or person before but not being able to specify the exact time. This however is not an example of a failure of memory because for Aristotle, and importantly for my purposes, the time reference of a remembered image need not be exact in order to count as memory. Knowing that the thing or person has been encountered sometime before is itself a sufficient time reference. Simply having reference to the past in general is sufficient to recognise the image as a memory. In other words, we may remember the exact determinate date and time to which a memory refers, or we may also simply know that it has occurred at some indeterminate period in the past in general without such specificity. This is strongly suggested by Aristotle’s claim that “the main thing is that one

must know [*gnōrizein*] the time, either in units of measurement¹² or indeterminately” (*DeM* 452b8-9). In order to recognise an acquaintance on the street it is not necessary to simultaneously recall when we first met: rather it is sufficient that I recognise that we have met at some time in my past. So too with remembered thoughts, I can have an image of my tenth birthday, and recognise it as an image of a past event, without also having determinate knowledge of exactly how long ago that was. In this perceptual act, I apprehend the image of my acquaintance or my birthday as referring to my past in general.

This relation of the image to the past is quite different from the perception of time as outlined in chapter one. There we saw that the perception of time was the result of marking nows, before and after, in a particular change. This process gave rise to the perception of duration as a result of attending to the change that occurred between the two now points. This duration was a determinate time that was a measure of change. By contrast, in the process of remembering we have an indeterminate time reference. The minimal reference required is one to the subject’s past in general. This difference between the perception of time qua duration in *Phys. IV* and the time relation involved in memory is assumed by Gregoric in his interpretation of a passage from *DeM*:

My interpretation of *DM* 1 450a9-14 rests on four assumptions. The first is that the perception of time, which is said to be constitutive of memory at 449a28-30 [sic.¹³] and 450a19-22, is not the awareness of the passage of time, but the awareness of the temporal relation in which things experienced in the past stand to the subject in the present. Gregoric, 109.

¹² Sorabji is translating *metrō* when he writes ‘units of measurement’.

¹³ It seems clear that 449b28-30 is intended.

I take this to be a reasonable assumption for the reasons given above. Clearly the perception of time involved in the recognition of an acquaintance is distinct from the perception of duration, or as Gregoric puts it, ‘the awareness of the passage of time’. The conjunction of the image with the apprehension of time in the act of memory is the recognition that the image has a position within the sequence of the subject’s history. Every remembered image is perceived as referring to a prior temporal point in the subject’s past. The image refers beyond itself to an abstract ‘before now’ in the case of indeterminate time perception, or a specific time in the case of determinate time perception. In both cases, it is not the perception of a duration that is requisite for a perceived image to count as a memory, but rather this positioning as determinately or indeterminately ‘before’ in relation to the subject’s present.

In the perception of time as duration, it is the perception of change that is essential, while in the perception of time required for memory it is the position relative to the subject that matters. All retained images are marked as referring to ‘before now’. The perception of duration is a measure of change; the position of an image relative to the subject’s present is simply an ordering. In order for the indeterminate perception of the ‘pastness’ of an image to be possible, all potentially retained images must be recognizable as having been perceived before; they must be ‘time-stamped’ as such. Gregoric calls the result of this time-stamping a ‘time-tag’.

...our thoughts require manipulation of images, and our images are temporally determined insofar as they occur in time and have a duration; moreover, our images seem to include some sort of time-tags which enable

us to say whether the imagined thing has been contemplated before, or even when in the past it was contemplated. Gregoric, 100.

The images must be recognisable as belonging to the past and it is by being marked as such generally that they refer beyond themselves to our pasts and can be perceived as memories. This process is simpler than measuring change, but is nonetheless temporal and not unrelated to the process of perceiving duration. The marking of ‘nows’, before and after, in the perception of change gives rise to the perception of duration, and this marking nows is an ordering. The before now is in a sequence which places it prior to the after now in the sequence of perceived change. Ordering is at the heart of the measuring of change that yields the perception of time as duration. Ordering is also at the heart of an image’s ability to refer itself to the subject’s past though this ordering is less specific and need only point to the vast expanse of the subject’s past in general. All of this is essential for understanding the time perception involved in memory. It also holds significant implications for understanding recollection, as I shall now explain.

Section 3: Temporal Associations, Perceptually Prompted Recollection, and Conclusion

There are two distinct kinds of associations possible in the chain of a recollective process. The first is the one explicitly described by Aristotle, resting on associations formed between images in virtue of relations of similarity, opposition, and contiguity. The second kind is the relation of images to each other in the temporal ordering of the recollecting subject’s experience. The first kind of association can occur between two

images which have no temporal relation whatsoever, such as an association between a pie and the number for pi. I may associate the two images because the names are similar in virtue of being homophones (or even because I associate the circular shape of a pie with the formula for calculating the area of a circle). Further, there may be a temporal relation between the two images without that relation figuring in the association I form between them. For example, my ninth birthday and my tenth birthday stand in a temporal relation of being one year apart however, I associate the two images in virtue of my having had the same kind of cake on each of these birthdays. Both of these cases are examples of associations which are independent of, or indifferent to, temporal relations. By contrast, I associate the image of what I had for breakfast this morning with the image of what I had for lunch. I can follow the connection between these two images, from one to the other, in virtue of the one following the other temporally, in my personal history. It may be argued that the relation between the images in a temporal sequence is one of contiguity, and this may be an acceptable proposal, provided it is stressed that the relation of temporal contiguity between the image of my breakfast and the image of my lunch is different in kind from the relation of spatial contiguity between, for instance, the image of my guitar case and the image of my guitar¹⁴. This difference in kind stems from the necessity of having a temporal ordering amongst the images as they relate to my past.

In contrast with this temporal relation between images found in recollection, the minimum temporal requirement for an image to be remembered is the recognition that we

¹⁴ Sorabji acknowledges this kind of association and seems to consider it an instance of contiguity: “Just as the original actions were ‘neighbouring’ in time, so the corresponding images are ‘together’ in time” (Sorabji 98. Cf. also p.97).

saw or thought the image's referent at some time before now (*DeM* 449b24-26). The image is marked with a sense of 'pastness' but this sense can be vague or indeterminate. A simple ordering is all that is needed; not an ordering amongst the images but only a general sense that all images refer to a time before now. We need not even know how long before now the image was seen or thought. It need only refer to the past in general. This is not to say that temporal specificity cannot be included in the image remembered, but such specificity, and the temporal relation of that image to any other, is not necessary to meet any requirement of remembering. When the recollective process moves by temporal associations, temporal specificity is integral to its very possibility¹⁵.

Aristotle maintains that it is possible for a process of recollection to be set in motion without the intent of the recollecting subject. Furthermore, the recollective process may be set in motion by a perception as well as by a memory-image. In describing Aristotle's use of the term 'recollection' Sorabji touches on this point:

Another way he diverges [from common usage of recollection] is by concentrating exclusively on cases in which recollection starts from one's thinking of something, not from one's perceiving it. The divergence here is less sharp, however, in that he says recollection starts when an appropriate 'change' (*kinēsis* 451b11) occurs within one. This word 'change' could be applied to an act of sense-perception (see 450a31), even though he does not here so apply it.¹⁶

¹⁵ Bloch, in a passage that is perhaps too narrowly focused on temporal recollection, writes: "Time is important not so much conceptually to define recollection but rather because recollection works on series of events, and these series are constituted by time and movement. Events follow chronologically on each other, and the best starting point is therefore, at least partly, dependent on time." This is undoubtedly true of the temporal associations between images (breakfast and lunch), but not so between those non-temporal associations (pie and pi).

¹⁶ Sorabji 41. Cf. p.93: "Aristotle concentrates on the kind of recollection that starts with the excitation of an image. He neglects the kind of recollection described in Plato's *Phaedo* 73c74a, which starts with an *perceiving* something and thus being reminded of something else. However, the word translated 'change' could refer to this kind of perceptual process (450a31), and so Aristotle could have used it to cover the sort of case envisaged in *Phaedo* 73c-74a, if he had had this sort of case in mind." and also p.97 for another

The significance of this point will be developed further in the next chapter with reference to habituation. For now, it is important to understand how this process works. In viewing the memory image as a copy, we implicitly understand that the image refers to some object beyond itself: previous thoughts in the case of conceptions, and perceptual objects in the case of perceptions. If images, viewed as copies of actual perceptual objects, can set in motion a series of associations in the process of recollection, then I see no reason why actual perceptual objects, all of which are potential sources of memory images, cannot do the same. Not only is this consistent with Aristotle's framework, but perhaps more importantly, we all know this phenomenon to actually occur. Just as the image of my little sister can set in motion a series of associations with family, childhood, etc., so can the present perception of her. In addition to providing the groundwork for the coming chapter, I think that this point warrants notice as a phenomenon which is not only consistent with, but is supported by, Aristotle's explanatory framework in *De Memoria*.

Bringing together the claims that a certain kind of recollection is temporally ordered, and the claim that recollection can be initiated by perception, we are now prepared to look forward to the next chapter on being habituated to ethical behaviour. Allowing for perceptions to initiate our movement through a chain of associations is a necessary component of our being able to apply learned lessons in novel situations. It is this structure that allows us to recognise a situation as one in which a previous lesson is

iteration of this point. While Sorabji stresses that Aristotle does not explicitly discuss this kind of recollection, neither does he preclude its possibility. I argue, as Sorabji's notes indicate, that this is completely compatible with the description of recollection given by Aristotle.

applicable. Perceiving a situation in which bravery is called for can initiate the chain of associations which lead to an image of the brave action, for example, which we have learned is appropriate. Further, temporally determined associations will be seen to be necessary to establish an association between encountering a situation which requires bravery and the temporally subsequent appropriate action in the past. These two aspects of recollection will be seen to shed light on Aristotle's rather reticent account of habituation in the *Nicomachean Ethics*.

CHAPTER FOUR

One of the essential features of a virtue ethics is the significance placed on the role of the internal state, or character, of the agent when considering the value of an action. In Aristotle's account of ethical action in the *Nicomachean Ethics* a virtuous character on the part of the agent is requisite for any of the agent's actions to be considered truly virtuous. This does not mean that a non virtuous agent cannot perform an action that is in accordance with virtue but a virtuous action is one that is decided upon knowingly for its own sake from a firm state of character (*NE* 1105a31-33¹⁷). This being the case, understanding the means of acquiring a virtuous character is of paramount importance. If acquiring a virtuous character is the *sine qua non* of virtuous action, it is incumbent upon Aristotle to give a coherent account of this process, thus vouchsafing the possibility for virtuous action. In the *Nicomachean Ethics*, Aristotle distinguishes between two sorts of virtue; virtue of thought, and virtue of character (*NE*, 1103a14-15). The former is achieved through instruction and is not the concern of this paper. The latter, however, is the result of habituation.

In Aristotle's account, then, the possibility for acting virtuously depends upon the ability to acquire a virtuous character through habituation¹⁸. This makes an understanding of the process of habituation crucial to any understanding of the possibility for virtuous action as described in the *Nicomachean Ethics*. When we are habituated, what we are

¹⁷ *NE*: Aristotle, *Nicomachean Ethics*. second edition, Terence Irwin trans. Hackett, 1999.

¹⁸ Note: the relevant terms for habit, habituate, and habituation are *ethos*, *ethizō*, and *ethismos* respectively.

habituated to is a state from which actions issue. These habitual actions can be of two sorts: unreflective actions such as biting one's nails, and actions that can be sensitive to contexts, such as driving habits. Habitual action is usually thought of as a kind of bodily memorization of a given routine which results in our performing the same actions given the same situations. It is important for our purposes here that we not confuse routine and habit, the primary distinguishing factor between habit and routine is that routines typically involve active decisions and contemplation whereas a habit is typically performed without either. I may have a routine of playing chess every day at 4pm but this will certainly require decision. The habit of biting one's nails requires no such cognitive attention. But if the state to which we are habituated, in Aristotle's sense, is of this sort, then a difficulty arises. For, when he gives his most concise formulation of how it is that we act from a true state of virtue, Aristotle writes that the agent must have the knowledge that he is performing a virtuous action and that he must decide upon this action for its own sake, and after deliberation (*NE*, 1105a31-2). Both one's being consciously aware of an action and one's deciding upon it after deliberation are at odds with the notion that one is engaged in habitual action of the unreflective sort. These unreflective habits have the connotation of no longer needing conscious thought, let alone decision. The question thus arises: if our becoming virtuous requires being habituated to a certain state, can we characterize the actions arising from that state as being performed knowingly and after deliberate decision?

In what follows, I shall attempt to resolve this difficulty by means to be found in Aristotle's own writings. I shall do this in five sections. In the first section I shall

examine habituation as it is usually understood in the *Nicomachean Ethics*, outlining the characteristics that it must have in order to fulfill the role which Aristotle assigns to it in relation to virtues of character. This examination will reveal that both Aristotle's process of being habituated and the resulting Aristotelian habit are different from and incompatible with the understanding of habit as the performance of unreflective action, or action requiring no decision. The second section will illustrate how unreflective habit cannot be reconciled with Aristotle's account of decision and ethical action. I argue that actions stemming from unreflective habit fall under the same category of actions as those performed on the spur of the moment or those performed by children; they are voluntary but do not follow from decision. However, virtue of character not only requires that the virtuous action be performed voluntarily but also that it is a state that decides with reference to reason. Sections three and four explain how Aristotelian habit can play a role in virtue of character without abnegating either the involvement of reason or the involvement of deliberation issuing in decision respectively. In the final section I shall argue that all of the outlined requirements for a consistent account of habit's role in virtues of character can be met by understanding Aristotelian habit as involving recollection rather than memory. The distinction between these two faculties, as outlined in *De Memoria*, is the distinction between, on the one hand, memory as a state in which certain retained images are always present to mind and, on the other hand, recollection as both a process of making connections among images and as the process of actively seeking retained images. I maintain that Aristotelian habit must be a state which always employs recollection in order to make reasonable decisions based on the proper

association of past images with present situations; specifically, those images of virtuous actions that were performed in the agent’s past as part of the process of his being habituated to virtue.

Habit in the Nicomachean Ethics:

Aristotle first introduces habit in the *Nicomachean Ethics* concomitantly with his distinction of the two sorts of virtue: “Virtue, then, is of two sorts, virtue of thought and virtue of character. Virtue of thought arises and grows mostly from teaching; that is why it needs experience and time. Virtue of character [i.e. of *ēthos*] results from habit [*ethos*]; hence its name ‘ethical’, slightly varied from ‘ethos’” (*NE*, 1103a14-18¹⁹). Our character is not virtuous by nature, but neither is our nature opposed to the acquisition of virtues; “Rather, we are by nature able to acquire them, and we are completed through habit” (*NE*, 1103a24-26). Aristotle draws a distinction between natural capacities, such as the senses, and our ability to acquire virtues. The senses are already present in us, in their full functioning, and we need merely make use of them. We must first enact virtuous actions in the process of becoming virtuous. In other words, we begin to acquire virtues by performing actions in accordance with virtue, and this is a process that needs to develop over time. We perform actions that are in accord with virtues as part of the process of becoming virtuous but success in these attempts is not sufficient to achieve a virtuous character. By contrast, to take an example from the senses, in order to see, one needs only to look. Aristotle draws an analogy between the acquisition of virtues and the process

¹⁹ Translations of *NE* are from Aristotle, *Nicomachean Ethics*. second edition, Terence Irwin trans. Hackett, 1999.

involved in learning a craft: “For we learn a craft by producing the same product that we must produce when we have learned it” (*NE*, 1103a33-34). This means that becoming virtuous, the product of the agent’s habituation, is achieved through performing those actions that are in accordance with virtue. Just as one becomes a carpenter by producing those products that are expected of carpentry, so too one becomes virtuous by performing those actions that are in accordance with virtue.

As a consequence of our not being virtuous by nature, but of being naturally capable of acquiring virtue, the proper habituation of the individual is of great significance. For, just as learning poor techniques through apprenticing to an inferior carpenter will make you an inferior carpenter in turn, so too one can be improperly habituated: “the sources and means that develop each virtue also ruin it, just as they do in craft” (*NE*, 1103b6-8). Our ability to act virtuously is developed by performing actions that are in accordance with virtue.

However, simply doing what a virtuous person would do is not sufficient to make us virtuous. This is where craft and virtue differ; in craft it is the creation of a fine product that indicates success as a craftsman, whereas the performance of an action that is in accordance with virtue is not sufficient for the agent to be considered virtuous himself:

for actions in accord with the virtues to be done temperately or justly it does not suffice that they themselves have the right qualities. Rather, the agent must also be in the right state when he does them. First, he must know [that he is doing virtuous actions]; second, he must decide on them, and decide on them for themselves; and, third, he must also do them from a firm and unchanging state. (*NE*, 1105a28-34).

Following this description, Aristotle downplays the importance of knowing, but stresses the other two aspects of virtuous action as being of the utmost importance: “And we achieve these other two conditions [deciding and acting from a firm state] by the frequent doing of just and temperate actions” (*NE*, 1105b4-5). We must perform actions that are in accordance with virtue in order to become virtuous, and the repetition of these activities will bring about in us a consistency in deciding upon virtuous actions for themselves, and will ultimately result in a firm state of character from which we perform these actions. Habituation, as the directed repetition of activities that are in accordance with virtue, will eventually bring about a virtuous internal state. It will bring about, not only the performing of actions that are in accordance with virtue but also the habit of choosing virtuous action for its own sake: “To sum it up on a single account: a state [of character] results from [the repetition of] similar activities” (*NE*, 1103b21-22). By repeatedly performing virtuous actions, brave ones for instance, we acquire the inner disposition that makes us brave.

A potential objection suggests itself here: do we not already have to be brave in order to do brave things? In other words, is Aristotle providing a circular explanation by asserting that we become brave by being brave? This objection is easily dissolved, for it revolves around a presupposition about what it is to be brave that is inconsistent with Aristotle’s account. This objection is coherent only if we define bravery solely in terms of the actions in themselves, without regard for the internal state of the agent involved. This kind of understanding of virtue has its own difficulties (on it, we could be said to be brave if ‘brave’ actions occurred by accident, or even despite our intentions), but more to

the point, it ignores the key features of virtue that Aristotle is outlining. On Aristotle's account, the very definition of bravery, or any virtue, includes knowledge, decision, and an internal disposition consistent with the virtuous action. In so far as an action is considered apart from these conditions, while it may be in accord with virtue, the agent of that action cannot be said to be virtuous. Thus, performing an action in accordance with virtue does not presuppose being virtuous any more than picking up a saw presupposes being a master carpenter. Or, to be less glib: I can construct a birdhouse well, by fortune or accident, without needing thereby to be a carpenter. Aristotle makes this point with reference to literacy; I can construct a grammatically correct sentence by accident, or without knowing the meaning of what I am writing. I can copy a line of Portuguese without being literate in that language. “To be grammarians²⁰, then, we must both produce a grammatical result and produce it grammatically – that is to say, produce it in accord with the grammatical knowledge in us” (*NE*, 1105a22-26). To do what a literate person does is not to be what a literate person is. So it is with virtuous action and the virtuous person; to do what a virtuous person would do is not sufficient to make me a virtuous person.

Habit and Decision; the Voluntary:

While the example from literacy serves to allay the above-mentioned concerns about Aristotle's account, it brings to mind another possible objection to this account of virtue as resulting from habituation. The example of grammar is instructive precisely because

²⁰ *Grammatikos*: perhaps better translated ‘literate person’ to avoid the implication of there being formal grammarians in Aristotle’s time.

we are capable of constructing grammatically correct sentences without needing to explain the rules of grammar employed in those sentences. We are habituated to write and speak in a certain way; sometimes for the better, sometimes for the worse. With grammar, we have an example of habituation to a state that does not require decision making but quite the opposite. We are considered to have been well habituated in the employment of grammar when we achieve grammatical results without needing to decide or reflect upon the rule we are using. There was, of course, a time during the process of acquiring grammatical habits that I needed to decide upon the correct part of speech, or punctuation but this was precisely part of the process. This process of being habituated to employ rules of grammar is completed just as soon as I no longer needed to make these decisions, but did them out of reflex. The same can be said about learning to read. These are examples of unconscious habits, in contrast with Aristotle's habit which seems to involve reason and decision.

The kind of habituation involved in acquiring and applying grammatical knowledge cannot be the kind of habituation Aristotle has in mind in the case of virtues, for grammatical habituation is considered complete when the need for decision is eliminated, whereas for Aristotle, as we noticed earlier, habituation is the means by which we come to a state that decides well in terms of virtuous actions. Indeed, keeping in mind that habituation is the means by which we acquire virtue of character, it must not only allow for, but must also lead to, a disposition for choosing virtuous actions. The importance of decision is stressed again in the most famous formulation of virtue in the *Ethics*: "Virtue, then, is a state that decides, consisting in a mean, the mean relative to us,

which is defined by reference to reason, that is to say, to the reason by reference to which the prudent person would define it” (*NE*, 1107a1-3). There are two points in this concise definition of virtue that are important for our consideration. The first is that virtue is a state that decides (*a hexis prohairetikē*), and the second is that virtue consists in a mean defined by reason. Both of these points preclude the habituation that leads to a virtuous person from being the kind of habit discussed with reference to grammar. Being habituated to good grammar is accomplished precisely when decision is made extraneous. I shall deal with these two considerations separately; first with reason because its treatment will be brief, and second with decision, the discussion of which shall lead us to examine voluntary action and its relation to habit.

Habit and Reason:

Surprisingly, there is very little in the *Nicomachean Ethics* that explicitly deals with reason’s relation to habit. We can infer that, since habituation is the means by which we become virtuous, and virtue involves a mean defined by reason, the process of habituation must lead to some relationship with reason in terms of virtue. Habituation leads to the virtuous state that chooses the mean and the mean is determined with reference to reason. For a more explicit statement of the relation between habit and reason we can turn to Aristotle’s *Politics*. At VII.13 Aristotle gives a characterization of the relation of reason to habit:

Now, whereas the other animals live mostly by nature, while some live to some slight extent by habit, a human being also lives by reason, since he is

the only animal who has it. And so these three ought to be in accord; for people do many actions contrary to habituation and nature because of reason, if they are persuaded that another way is better. (*Pol*, 1332b4-8²¹)

This allows for the possibility that a person who has been habituated poorly may yet go about the process of becoming virtuous, since reason is capable of superseding habit. In another passage from the *Politics*, Aristotle again makes habit harmonious with, yet deferential to, reason:

For reason and habit must achieve the best sort of harmony, since it is possible both for reason to fall short of the best basic assumption and for upbringing by habits to fail similarly...Now, the goal of nature for us is reason and understanding; hence the coming to be and the practice of habits must be arranged to aim at these. (*Pol*, 1334b10-18)

These passages serve to show *that* the habituation involved in becoming virtuous must allow for 'accord' and 'harmony' between reason and action. However, these passages do not explain *how* it is that we can be habituated without having our actions becoming mere reflex without a positive relation to rational thought. We should note that to say that unreflective habit does not have a positive relationship with reason is not to say that unreflective habit is impervious to reason. It is certainly the case that we can notice ourselves enacting our habits, for example, I may notice that I am biting my nails and invoke reason to stop doing so, but this is only a becoming aware of my habit and making a rational decision in light of my awareness. This is not the same as being habituated to a state that is consistently a reasoned activity.

²¹ All references to the *Politics* are from Aristotle's *Politics* in *Aristotle: Introductory Readings*, Terence Irwin and Gail Fine trans. Hackett, 1996.

This shall have to suffice for now in terms of our consideration of reason's relation to habit²². The topic shall be revived after the discussion of memory and recollection. The consideration of the role of reason however, turns us back to the issue of decision. For reason is relevant in terms of virtuous action because it allows us to determine the mean, and this is necessary so that we may choose the mean as being in accordance with virtue. Let us turn then to a consideration of the importance of decision and its relation to habit.

Habit and Deliberation:

It is in Aristotle's account of the voluntary and the involuntary that we can find a fuller understanding of the importance of a notion of habit that somehow retains an element of decision. At the beginning of Book III of the *Ethics*, Aristotle writes: "Virtue, then, is about feelings and actions. These receive praise and blame if they are voluntary, but pardon, sometimes even pity, if they are involuntary" (*NE*, 1109b30-32). If virtuous actions were the result of unconscious habit, then virtuous people could not be praised for voluntarily performing them, but this is contrary to Aristotle's position. It is not the case that we pity those who perform actions out of habit, however, so perhaps these actions are not properly involuntary either. It may be the case that unconscious habitual acts are more akin to actions done on the spur of the moment, of which Aristotle writes: "the actions done on the spur of the moment are said to be voluntary, but not to accord with

²² For arguments which support the notion that reason is actively involved in virtues of character see Sherman, 1999 and Lorenz, 2009.

decision” (*NE*, 1111b9-10). It seems right to claim that actions accomplished through unconscious habit may be voluntary, like spur of the moment actions, but there can also be a beginning to them at which a decision was made, as in the example of learning proper grammar. My decision to learn the rules of grammar and any failure to learn some of the lessons are both my responsibility.²³ Decision is rational and so the ensuing habits arising from that decision cannot be said to be involuntary, but like spur of the moment acts, no longer involve decision. It is this position that Aristotle seems to address when he writes: “[Only] a totally insensible person would not know that a given type of activity is the source of the corresponding state; [Hence] if someone does what he knows will make him unjust, he is willingly unjust” (*NE*, 1114a9-12). This may show that we can still be responsible for unconscious habits but not that they still involve decision once the habit is formed. In other words, the converse of this proposition does not apply to virtue; while we may decide to enter into a process of habituation, this initial decision is not sufficient to make us virtuous in terms of our actions, we must deliberate on our actions once the virtuous state is formed by the process of habituation. In order to be considered virtuous, we must retain the ability to deliberate and decide on the virtuous actions that we perform. This is precisely what unconscious habit precludes since actions performed from unconscious habit are neither deliberate nor decided upon and they always end with the same result. In his discussion about which actions are considered voluntary, Aristotle makes a claim that is applicable to the consideration of actions from unconscious habit: “no one deliberates about eternal things... nor about things that are in movement but

²³ It is, of course possible for a habit not to have an origin in decision, for instance the habit of biting one’s nails.

always come about the same way, either from necessity or by nature or by some other cause” (*NE*, 1112a22-25). If acting bravely were an unconscious habit like writing grammatically, the brave person would always act in a prefigured way given an opportunity to be brave and he would do so without deliberation or decision. His movement would ‘always come about the same way’, as though by nature. Aristotle stresses habit’s likeness to nature in terms of its hold on us. Though he does claim that ‘habit is easier than nature to change’, he also states that habit is difficult to change because ‘it is like nature’. In fact, he cites in this connection Euenus’ saying “Habit, I say, is longtime training my friend, and in the end training is nature for human beings” (*NE*, 1152a32-33). Still, habit is not identical with nature for Aristotle, as his contrast in Book II between sight and habit demonstrated. While its sway over us may approach the strength of nature, it is requisite for Aristotle that the state to which we are habituated allows for deliberation. For,

We have found, then, that what we decide to do is whatever action among those up to us, we deliberate about and [consequently] desire to do. Hence also decision will be deliberative desire to do an action that is up to us; for when we have judged [that it is right] as a result of deliberation, we desire to do it in accord with our wish. (*NE*, 1113a9-14)

In light of this, I turn now to Aristotle’s concept of deliberation and its role in the process of habituation.

John Cooper, in his book *Reason and Human Good in Aristotle*, addresses at length the issue of deliberation in *NE*. It is his position that, while the deliberative process is necessary, it need not be performed prior to each individual virtuous action. Cooper begins his analysis by pointing out that needing to deliberate before each virtuous action

does not seem to fit with how ‘we’ think of our acts: I don’t always deliberate before performing a virtuous action and so deliberation must not be necessary (Cooper, 6). Now, it may rather be the case that these actions which Cooper has in mind are not virtuous on Aristotle’s account. Cooper gives three examples to illustrate his point: deciding not to steal a book, almost remaining silent but then deciding to speak, and defending oneself from attack (Cooper, 6). I maintain that at least two of these should not be considered virtuous actions on Aristotle’s account and so cannot serve as counter examples to the need for deliberation prior to virtuous action. The example of not stealing a book is not an example of a virtuous action since it is not an action at all but rather the absence of action. The example of almost holding his tongue and then 'deciding' not to seems more in line with what Aristotle calls acting on the spur of the moment than acting virtuously. In fairness, Cooper describes these as moral decisions, which they certainly could be, and he does not explicitly call them expression of virtue of character, which I argue they are not. It is less clear if the example of defending oneself "on the ground that courage requires me to do so" is an example of virtuous action or not. If Cooper means that he is defending himself because he is expected to but is not himself courageous, then that is clearly not an expression of virtue of character. If we give a generous reading and understand Cooper to mean that his unwavering courageous state amounts to a requirement to act courageously then we may have a candidate for virtuous action. This latter alternative seems to be what Cooper intends as he goes on to write: “And at 1117a17-22 he [Aristotle] says that it is a surer sign of courage that one acts bravely in unexpected emergencies than where there is time to think through what to do: spur of the

moment braveries more clearly derive from a firm character (*apo hexeōs*), since foreseen dangers might be faced from choice...rather than from courage.” (Cooper, 7). The passage that Cooper cites reads:

The brave person, on the contrary, stands firm against what is and appears frightening to a human being; he does this because it is fine to stand firm and shameful to fail. Indeed, that is why someone who is unafraid and unperturbed in emergencies seems braver than [someone who is unafraid only] when he is warned in advance; for his action proceeds more from his state of character, because it proceeds less from preparation. For if we are warned in advance, we might decide what to do [not only because of our state of character, but] also by reason and rational calculation; but in emergencies [we must decide] in accord with our state of character. *NE*, 1117a16-22

I would like to draw attention to two points regarding this passage: first Aristotle is describing how someone seems (*dokei*) braver in a certain circumstance. The second point is that the person who seems braver is acting from a state of character does not necessarily imply that he did not deliberate. I read the passage as indicating a contrast between the person who acts from a firm state of bravery (possibly with deliberation) and the person who acts merely in accordance with bravery because he is able to plan his action to such a degree that it serves to mitigate the fear that would otherwise be overcome by the firm courageous state which he lacks.

It is Cooper’s position that, while deliberation is a necessary process for virtue of character, deliberation is not necessary for each individual action. He sees two alternative ways of understanding the role for deliberation:

On the first, Aristotle would be saying that a course of deliberation must remain abortive unless and until the agent discovers something he (knows he) can do, perhaps on the spot but perhaps, instead, at some appropriate time and place later on, but that once this is achieved no further calculation is called for. The decision to perform the action in question is the final outcome of the deliberative process. On the second interpretation, deliberation always extends right into the situation in which action is first undertaken in pursuit of the end; no course of deliberation is finally concluded until the agent calculates what currently present objects, explicitly referred or pointed to, need to be manipulated, and in what way, at that very moment, as a means to fulfillment of his plan. (Cooper, 12)

Cooper argues for the former alternative. The difference between these two interpretations amounts to a distinction between the need for deliberation prior to each and every virtuous act (the second interpretation) and the need to deliberate only about a certain kind of action once and then simply to recognize the appropriate opportunities for the instantiation of the action so deliberated upon. On the interpretation which Cooper supports, once we have deliberated about the means to act virtuously we would no longer need to deliberate prior to each virtuous act. On this interpretation, what is of key importance once the deliberation is accomplished is that the situations which warrant virtuous action need to be successfully recognized²⁴. It is not necessary for my purposes here to decide for one of these interpretations or the other but this need for recognition as essential to the role of deliberation, and in turn virtuous action, is of great significance to my claim that recollection serves a necessary role in the process of habituation.

To return to Cooper's exposition of the role of perception in deliberation:

²⁴ The need to recognize an opportunity for virtuous action is, of course, required on the alternative interpretation as well. However, that interpretation presupposes the presence of the situation as being at hand since the situation is the impetus for deliberation. Cooper's interpretation requires a greater specificity for the role of recognizing the situation. Deliberation and the corresponding action can be separated by time and space only because this recognition provides the linkage between deliberation and the means decided upon.

For a deliberative problem is in fact only solved provided that the ultimate means decided upon is something the agent can put into effect, and this entails his being able to recognize, by perception, the availability of the means when it is present. To revert to the example of the chicken: the agent is right to think his problem solved when once he has decided to eat some chicken only if he can in fact recognize chicken on sight. Otherwise he will not have selected a means he can put into effect directly, without further calculation. (Cooper, 44)

And further:

Because he knows chicken when he sees it, he does not need to deliberate further as to which of the meats in his vicinity to eat: at the appropriate moment and place he looks, sees the chicken, and eats. Deliberation must continue, Aristotle maintains, until this condition is reached, but once it is reached no further *reflection* but only *perception* is needed to set the agent to acting. (Cooper, 58)

Deliberation issues in decision and we can only enact decisions if we are capable of recognizing those means upon which we have decided. This key component of the process of acting virtuously identified by Cooper raises the issue of how it is that we recognise those instances in which virtuous action is appropriate. I will argue that it is recollection which is employed in the recognition of those instances.

I have argued that the understanding of habitual action as unreflective is incompatible with Aristotle's account of virtue. What remains is to reconstruct an account of habituation that would be consistent with the process by which virtue is attained. There is one significant aspect of habituation that has yet to be explored. One is not said to have been habituated to do something that is accomplished only once. Neither are we said to have been habituated to something performed numerous times in succession, but only on one occasion. Habituation takes time. Likewise, to be habituated

for virtuous acts, it is not enough to perform the action once and then be considered brave or temperate. As Jan Stuetel and Ben Spiecker point out:

Aristotle does not specify *how* frequently virtuous actions need to be performed in order that the corresponding virtues should be acquired, but his use of the word *pollakis* (for example, NE 1103a29, 1105b4), which literally means ‘many times’, indicates that he assumes that they should be performed over and over again. *CSD*, 535²⁵.

Repetition is key to the acquisition of habit, and not merely repetition, but repetition across some time. The fact that habits are not acquired in a day indicates that a habit requires prolonged repetition, and in so far as the same thing is being repeated over time, this same thing must be retained. Since habits are acquired over time, and are the result of a kind of a cumulative effect involving retention of previous instances, habituation must involve memory to some degree. The final aspect of habit to be considered is its relation to memory. It shall be shown through an examination of Aristotle’s *De Memoria* that while unconscious habit may involve memory, Aristotelian habit necessarily involves recollection, and this distinction makes all the difference.

Habit and Recollection

Aristotle begins *De Memoria* with a distinction between memory and recollection.

Memory is the state in which we consider an image that refers to the past whereas

“Recollection is neither the recovery nor the acquirement of memory” (*DeM*, 451a22²⁶).

Recollection is rather the process of retrieving the image of something we have

²⁵ *CSD*: Stuetel and Spiecker *Cultivating Sentimental Dispositions Through Aristotelian Habituation*.

²⁶ *DeM*: all references are to Aristotle, *De Sensu and De Memoria* G.R.T. Ross trans. Arno, 1973. Citations are by Bekker line number.

previously experienced and is also a process by which we associate images. In a state of memory the image is present to mind but recollection is a process of bringing a forgotten experience back to mind: “when we reacquire the knowledge, or perception or whatever it was, the permanence of which we call memory, here and now we have recollection of any of these” (*DeM*, 451b3). However, here one must be careful because this is not the only process which goes by the name recollection. Recollection is the name given, not only to the process of actively searching for something that has been forgotten, but also that process by which a previous experience is suggested to us as a result of some present occurrence:

The occurrence of an act of recollection is due to the natural tendency of one particular object to follow another. If the sequence is necessary, it is clear that, on the former change occurring, the second will be summoned into activity; when however, the connection is not necessary but due to custom, the occurrence of the second process will take place only in most cases. It so happens that some people receive a greater bent from a single experience than others... when we recollect, one of our previous psychic changes is stimulated which leads to the stimulation of that one, after which the experience to be recalled is wont to occur. (*DeM*, 451b13-22)

Sometimes the second process only occurs after repetition of the first process, as in ethical habituation. In the initial process of habituation we search for the relevant action from the past. Once we have the firm and unchanging state, it is only the second process that is needed.

In so far as the habits of virtuous action require the association of the past with the present, it does not involve memory but rather recollection. The process of recollection here described matches the process by which we would recognise the relevant similarities among, and form associations between, the multiple instances of performing actions in

accordance with virtue in the process of habituation. The state of remembering has more in common with unconscious habit than being habituated to virtuous action, for, like the state of remembering, we do not need to seek out the image or action and so the unconscious habitual actions are not called to mind. Unreflective habitual actions are automatically enacted as remembered images are automatically present to mind; my grammar lessons express themselves in these very words I am typing without my having to search for them. In Aristotelian habit, however, the actions are not automatic but rather a situation that requires bravery would summon to mind, through formed associations, the image of the past brave actions performed in preparation for an agent acting bravely on their own. In the process of being habituated the first role of recollection is at work; that of seeking for past images that are relevantly similar, in order to recognise what is similar between previous instances that call for virtuous action and the situation at hand as calling for the same kind of action. Once we have been habituated, we are in the habit of associating situations at hand that warrant virtuous action with retained images of instances in the past which warranted the same kind of virtuous action. That is the second role of recollection. Aristotle's habit involves a customary connection made amongst images between past situations in which virtuous actions were enacted as part of the process of habituation. The present situation, as relevantly similar to the instances of training during the process of habituation, summons the image of relevantly similar activity from the agent. During the process of habituation to the ethical, a connection is formed between actions that are performed merely in accordance with virtue and the kind of situation which warrants that action. Becoming habituated to act virtuously is a process

of forming a strong enough connection between a situation and the appropriate action. This connection is accomplished through the power of recollection such that, once the situation arises, the appropriate behaviour will suggest itself because of the associations formed between those kinds of situations which warrant virtuous actions and the corresponding actions practiced during the process of habituation to the ethical. I maintain that this is the settled state to which the agent is habituated, it is a state in which images of appropriate virtuous actions suggest themselves, through association with the relevant similarity with situation at hand that warrants the same kind of virtuous action. These associations may occur to the acting agent with a regularity that approaches a force of nature but the fact that the appropriate image of an action comes to the mind of the agent does not mean that he automatically performs that action. He may still deliberate (or, if Cooper's position is correct, must have already deliberated and decided but is awaiting the proper perceptual cues) whether the present context is in fact appropriate for the action suggested by the associated image.

In so far as the process of recollection requires the retrieval of an experience not continuously in mind, Aristotle distinguishes between this and learning for a second time. The distinguishing factor is instructive for our purposes. In order for us to learn a second time “the instrumentality of someone else is required”, whereas when we recollect, this is of our own agency (*DeM*, 452a5). In so far as the process of habituation requires an instructor to show us the appropriate situations in which, and extent to which, we should act, the process is like relearning each time what it is to act in accordance with virtue. However, once we have been habituated, we recollect the appropriate actions to perform

through our own agency. In a key passage, when Aristotle is explaining how recollection works, he writes that the tendency to recollect one thing as the result of another *is* a habit: “if the transition is mediated by some connecting link which has not lately been employed, one passes to the more familiar consequent, *for the newly acquired habit* has become exactly like a disposition... and it is frequent repetition that produces a natural tendency” (*DeM*, 452a23-452b1 emphasis mine). Habituation in *NE* involves recollection rather than memory and this recognition serves to dissolve the difficulties associated with the attempts to reconcile Aristotle’s account of virtue with the notion of habit as memory. Understanding the process of being habituated to virtuous action as a process of establishing associations for recollecting allows for the application of these actions in novel situations. Our virtuous behaviour is not memorized, for this would result in unconscious habits and these actions could not be the result of deliberation. Recollection involves a connection between a retained image and the present situation such that past behaviour suggests itself for our consideration. As Cooper indicated, perceptual recognition is essential to our ability to act virtuously in so far as this is the recognition of a situation warranting virtuous action. What needs to be recognized in the perception of the present situation is its relevant similarity to those instances of ethical training that composed the process of habituation to virtue. Recollection allows for the associations that constitute the recognition of these relevant similarities.

By reorienting our understanding of habit as involving Aristotelian recollection, we can avoid the objection that this habit is like a reflex and is incompatible with decision. This, however, does not explain how habituation involves decision. One of the

key components of a virtuous action is that it is decided upon. We deliberate and decide to act virtuously. The habituation virtue, understood as a process of forming associations through recollection, allows the agent to decide whether or not to assent to the course of action which suggests itself in the associated image. The image of virtuous action may suggest itself when we are confronted by the situation with which it is associated, but since this is not an unreflective habitual action, I maintain that we must still decide whether to act or not. Aristotle specifies that recollection is a deliberative process. This deliberative element meets the final requirement needed for consistency with the description of an action in accordance with virtue: “recollection is like a syllogism. One who recollects comes to the conclusion that he saw or heard or had some such experience previously and the process resembles a search and, owing to its nature, recollection accrues only to those that have the power of deliberation, for deliberation is a sort of syllogistic process” (*DeM*, 453a11-15). This means that, not only is this habit a state of associating a previous experience with a present one, but that, as involving recollection, it involves the conclusion that we have encountered a relevantly similar opportunity for virtuous action before. This coheres with the described harmony between reason and habit to which Aristotle alluded in the *Politics*.

There are two kinds of states to which we can be habituated, those that produce unreflective actions and those which permit of deliberation because we are habituated to make associations rather than perform unreflective actions. The settled state from which virtuous action issues is a state in which we have been habituated to recollect. What Aristotle means by habituation in the *Nicomachean Ethics* is a process, accomplished

under one's own agency, by which a past experience can excite the image of a possible response which is made tendency through repetition, but is also accomplished through deliberation such that one may decide the appropriate action in the present based upon the relevant similarity to the past situation.

CONCLUSION

In the preceding chapters I have argued, i) that time is a phenomenon which requires minds in order to be actualized, ii) that time is an incidental object of perception perceived by the common sense, iii) that recollection is a capacity which allows for the association between present perceptions and memory-images, and iv) that the process of habituation in the *Nicomachean Ethics* is best understood with reference to the associative power of recollection. In this way, I hope to have shown how Aristotle's analysis of time in the *Physics* has significant implications for our understanding of his views on perception, memory, and habituation.

To summarize by working backwards from the final chapter: on Aristotle's account, as I have argued it should be understood, we are able to become fully virtuous because of our ability to associate present opportunities for virtuous action with retained experiences of enacting virtuous behaviour during our formative process of habituation. The associated image of our acting virtuously in the past is brought to mind by our current perception of a situation which warrants the corresponding virtuous behaviour. We do not perform the associated behaviour automatically, but rather must decide whether to perform it once we are sure that the present situation is in fact relevantly similar. Connecting habituation and recollection in this way allows for deliberation and decision to be components of virtuous action.

The common sense allows us to relate past experience to present perception because it temporally marks our memory-images with varying degrees of specificity as

being part of our past. It is this crucial stamp of past time that allows us to rest assured that we are drawing on an actual past experience, rather than merely imagining a similar experience. I can thus recognise the relevant aspect of my past training as what I was personally shown to be the proper behaviour given similar circumstances. For this to occur, I need only be able to recognise the relevant images as belonging to my past in general, not as relating to each other in some more specific temporal order.

The common sense has the ability to order our experiences temporally because it is through the common sense that we perceive time, though this is only done incidentally. Time is not perceived directly by the common sense, nor by any other sense, because it is not the kind of thing that can be perceived directly. This is so because time is not like colour or sound or even motion. It is not a directly observable phenomenon of the natural world at all. Time is a measure of motion, the result of a perceptual judgment accomplished by minds like ours that are capable of marking before and after in motion and noticing the interval.

Time's being actualized only through minds facilitates our understanding of how recollection is possible, and this in turn facilitates our understanding of how the process of habituation is possible. If time were not perceived (incidentally) by the very same sense that is also responsible for memory and recollection, it might be a puzzle how our perceptions come to be ordered temporally in memory. The notion that perceptions would first be retained and then sequenced after the fact by some additional process is not only inelegant, but also has the misfortune of having no support in Aristotle's texts. The unification of time perception and the 'time-stamping' of that perception are

accomplished simultaneously by the common sense, which is the faculty through which the perception of motion becomes the perception of time.

It is undeniable that we perceive time, but time is difficult to place in terms of its organ of sense. The view that time is mind-dependant allows us to resolve this difficulty. We do not sense time through any of the five special senses, because there is no time prior to the mind's work of counting motion. The common sense's ability to unify discrete sensations in a single percept, combined with its being the locus of incidental time perception, make it the ideal faculty for providing the temporal aspect to perception, as well as for ordering retained images of our past for memory and recollection. We do not perceive time without marking a now in motion and retaining it while perceiving a later now in motion; this already presupposes the close linkage between memory and time perception. However short the interval perceived between two nows, upon marking the second or later now, the first or earlier now is in the past and therefore only known in connection with the second now through some act of memory. We cannot perceive time without the ability to retain and recall an earlier now of motion. Without explicitly saying so, Aristotle's account of time points us to the need for an account of memory that explains its connection to our perception of time.

In terms of its bearing on the *Nicomachean Ethics*, the most relevant aspect of the common sense is the capacity for recollection. Furthermore, the most relevant aspect of recollection is that it allows us to form associations not only between memory-images but also, as I argue, between current perceptions and memory-images. It is recollection's ability to form these associations that allows for virtuous actions performed out of

Aristotelian habit to be virtuous on Aristotle's own terms. We can be trained to recognise opportunities for virtue only because we can form associations between those opportunities and our earlier training. These associations are possible because we can recognise our memory-images of the relevant training as belonging to our past. We can make this recognition because the common sense time-stamps our perceptions as they are retained; this in turn occurs because time is unified with our perceptions in that same common-sense. Finally, this unification occurs because time is not perceived alongside other natural phenomenon but is dependent on the perceiver's mind for its actuality.

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