Abstract: This paper examines the Contextualist solution of the Sorites Paradox; in particular, the variety of Contextualism known as Extension-Shifting Contextualism, as opposed to Boundary-Shifting Contextualism. The Contextualist solution of the paradox is first presented, along with its explanation of why we are seduced into the paradox, before the three main objections to Extension-Shifting Contextualism are discussed in turn. Firstly, the argument that vagueness still remains even when the context is held completely fixed; secondly, the argument that since Extension-Shifting Contextualism denies that there are cut-offs for predicates within contexts, classical logic must fail; and thirdly, the objection that if Extension-Shifting Contextualism were true, many forms of reasoning which we deem to be valid would be placed under doubt. The paper finds that Extension-Shifting Contextualism can, with minor alterations, overcome the first two arguments. The third objection, however, is more problematic. A general objection to the Contextualist methodology is discussed and rejected, before it is concluded that the Extension-Shifting Contextualist solution to the Sorites Paradox, while functioning extremely well as a solution, has the problematic consequence of rendering much, if not all, everyday reasoning invalid; thus the cure seems worse than the disease.

Keywords: Contextualism; Paradox; Vagueness; Sorites; Logic.

Critically discuss one of the main solutions to the sorites paradox.

Proposed solutions to the sorites paradox can usually be grouped into one of three categories: epistemicist, supervaluationist, and contextualist solutions. In this essay I will examine Contextualism and its attempt to solve the sorites. In particular, I will discuss so-called ‘Extension-Shifting Contextualism’ (ESC), as opposed to ‘Boundary-Shifting Contextualism’ (BSC).¹ The important difference between the two is that according to BSC, there is a sharp cut-off for a vague predicate within a specific context, whereas ESC holds that there are no cut-offs within contexts, only between contexts. I will first outline how ESC (particularly Diana Raffman’s version of ESC) proposes to solve the sorites, and how it accounts for why we are seduced into the paradox in the first place. I will then discuss three objections to the view: the argument that vague predicates still remain vague when the context is held fixed; the fact that since there are no cut-offs within contexts, classical logic must fail; and the observation that were ESC the case, many forms of reasoning which we now deem to be valid would be under doubt. I will examine whether ESC can overcome

these problems, and finally consider a more general objection to contextualism. I will conclude that it is a fairly convincing solution to the sorites (at least as convincing as the other proposed solutions), but not without its problems.

The basic motivating idea for Contextualism is that, ‘the vagueness of an expression consists in that its extension is sensitive to shifts in the V-factors’ (V-factors just being contextual factors). In other words, the predicate ‘red’ is vague because the objects to which it can be applied vary as a function of the context in which it is being used. The particularities of Raffman’s ESC will be shown through explaining its solution of the sorites. Suppose a subject, a competent user of English, is faced with a series of fifty colour patches, patch #1 being clearly red, patch #50 clearly orange, and each patch differing only marginally in colour from its neighbour. The subject is then asked to judge the colour of the patches, in order, beginning with #1, and ending with #50. The basic statement of this type of sorites (known as the phenomenal sorites) is as follows:

(1) Patch #1 looks red.
(2) For any n, if patch #n looks red, then patch #(n+1) also looks red (since they are only marginally different).
(3) Therefore, patch #50 looks red.

However, patch #50 looks clearly orange, ex hypothesi, so we have a contradiction.

Raffman takes it as a datum that ‘a competent speaker must reach a point at which he refuses to apply [red]’; if the subject simply judged all of the patches to be red, we would think he did not fully understand the concept of red, orange, or perhaps colour in general. Thus premise (2) of the sorites reasoning is false: for some n, patch #n looks red, while patch #(n+1) does not. Raffman then states that this point where the subject changes judgement from red to orange is a ‘category shift’, a psychological shift in which the subject

---

changes from one psychological context to another.\textsuperscript{4} Suppose the first patch which the subject judged to be orange is #27; Raffman argues that since the category shift has taken place, were the subject to look backwards through the series, he would judge patches orange which he previously judged red, for instance patches #26, #25, and #24. This is because the subject is now in a new psychological context, and the extension of ‘orange’ has shifted as a function of that context; it has ‘spread backward’.\textsuperscript{5} This psychological shift can occur even without a change in external context. Thus it can be seen that ‘a run of applications along a sorites series is not made relative to a single context’; the context changes when the subject jumps from one predicate to the other.\textsuperscript{6}

A consequence of this view of psychological contexts is that two adjacent patches, judged pairwise (i.e. at the same time, and therefore in the same context) can never be judged to have differing colours: ‘no single internal context can dispose a competent speaker to ascribe incompatible predicates to marginally different items’.\textsuperscript{7} Thus we can formulate a principle of tolerance to replace premise (2), which we have seen to be false; (2*) ‘For any n, if patch #n looks red then patch #(n+1) looks red, insofar as #n and #(n+1) are judged pairwise’.\textsuperscript{8} Raffman argues that this principle, which is true, is mistaken for premise (2), and this explains why we are seduced by the sorites reasoning. Premise (2), as originally formulated, did not specify that patch #n and #(n+1) had to be considered in the same context, and as such would be false when they were not; precisely when the jump occurs in the sorites series.

An objection to contextualism which occurs almost immediately upon hearing the theory is what Akerman and Greenough term ‘the simple objection’: supposing we hold the context completely fixed (including internal, psychological contexts), vagueness still remains.\textsuperscript{9} We can specify that a subject is considering a sorites series in a fixed external context (lighting

\textsuperscript{5} Ibid, p. 50.
\textsuperscript{6} Raffman, ‘Vagueness and Context-Relativity’, p. 179.
\textsuperscript{7} Ibid, p. 184.
\textsuperscript{8} Raffman, ‘Vagueness Without Paradox’, p. 47.
\textsuperscript{9} Akerman and Greenough, ‘Hold the Context Fixed’, p. 279.
conditions, etc.), and also a fixed internal context (however this may be defined), and still find that the use of ‘red’ is vague. Vagueness here is thought of in terms of the three dimensions explicated by Greenough; epistemic tolerance (ignorance of cut-offs), borderline cases (cases where both not definitely P and not definitely not-P), and sorites-susceptibility (the ability to construct a sorites series going from P to not-P).  

The ESC proponent can deal with these dimensions of vagueness individually. Firstly, they can argue against epistemic tolerance by arguing that there are no cut-offs within contexts, only between contexts. It cannot be replied that in this case epistemic tolerance amounts to ignorance of cut-offs between contexts, i.e. the boundaries of contexts, because the premise of the simple objection is that the context is held fixed. If it is unknown what it means to hold a certain context fixed then the simple objection can never arise. Secondly, ESC seems to imply that within a single context, the subject is determinately disposed to either judge a patch as red, or judge it in a different context. There are no borderline cases between the two: a complete context determines the subject’s dispositions entirely.

Raffman is actually somewhat unclear about whether she believes that internal contexts do completely determine the disposition of the subject to judge patches one way or another, or indeed shift to a different context when considering a new patch. She says at one point that your initial internal context is ‘that internal state of a competent speaker in virtue of which he is disposed to judge #1 - #26 red, to judge #28 - #50 orange, and to judge #27 orange in some new internal context or other’, which appears to imply the dispositions in that internal context are determinate. However, she also says that which patch ‘will or will not trigger a shift is not something to which we, as judging subjects, have access’; these two claims together seem to suggest a sort of epistemicism regarding the dispositions we have within an internal context. The contexts do determine our dispositions, but we do not know what these dispositions are. I will return to this idea that we do not know when a shift will occur later in the essay.

Lastly, according to ESC it is impossible to construct a sorites series within a context. This is because, as Raffman has already pointed out, a competent speaker must jump from judging the patches red to judging them orange some way along the series, at which point the context is changed. If the context never changes, the jump can never be made, and so even the last patch in the series will be judged red. In that case, we would either say it is not a sorites series, or, more likely, the subject does not fully understand the term ‘red’.

With regard to ESC’s claim that a context determines a subject to be disposed to either judge a patch as red or judge it in a different context, the temptation is to see this boundary as a boundary between red and orange, rather than one context and another. If it is determined that patch #27 will trigger a shift in psychological context which will then mean that patch #27 is judged orange, then why not simply say that the boundary between #26 and #27 is the boundary between red and orange, since in one fixed context, #26 will be judged red, and it is determined that #27 will be judged orange (albeit in a new context).

This is where Raffman’s idea of ‘backwards spread’ comes in. Although it might be determined that a shift will occur at patch #27, this cannot be seen as the boundary between red and orange because as soon as the shift does in fact happen, patch #26 and others preceding it will now appear orange in the new psychological context. Indeed, Raffman says this is what a category shift ‘consists in: it consists in the instantaneous backward spread of a psychological category’. 13

This is what differentiates ESC from BSC; BSC can be seen as a variant type of epistemicism (there is a boundary, but the any attempt to find it is necessarily obscured by the context), whereas for ESC, there is no boundary between red and orange, because any change in context immediately changes the extension of those predicates.

The idea that there is no cut-off within a context, so fundamental to ESC, raises another major problem; supposing that, within a fixed context, there is a series such that the first member is F and the last member is not-F, according to the least number principle there

13 Ibid, p. 53.
should be ‘an x such that x is F and x’ is not-F’.\textsuperscript{14} ESC denies this, and so ‘the classical least number principle is invalid’.\textsuperscript{15} Since the least number principle is a theorem of classical logic, this means that classical logic fails according to ESC. This is not necessarily such a problem in and of itself, as there are variant logics available, but it means that ESC will have to give details about which, if any, theorems of classical logic survive, and which form of logic will hold under ESC. This massively complicates the theory, and so can be seen as an objection to it.

There appears to be a reply available, similar to the reply given to the objection that vagueness still remains when the context is held fixed; namely, that it is impossible to construct a sorites series within a single context. Since the least number objection rests entirely upon that being the case, it can be argued that the objection can never even get started. The ESC proponent can say that the least number principle is indeed valid, and can be used as a rule of induction on a series which can be constructed within a single context; for example, the first four elements ordered by atomic number. In this case the first member is a non-metal, the last is a metal, and so it follows that there is a x such that x is a non-metal and x’ is a metal. However, this reply seems to misunderstand the objection. The caveat ‘a series which can be constructed within a single context’ seems to be merely a paraphrase for ‘a series which has a cut-off’; in which case the reply is trivial. The whole force of the objection is that the least number principle should be valid in any series, and, according to ESC, it is not.

The contextualist could argue that there is in fact a boundary within a single context, and that boundary is the boundary of the context itself. As Raffman says, an internal context determines that the subject is disposed to judge some patches red, others orange, and (at least) one in between orange in a new context. This boundary between the patches which will be judged red, and the patch to be judged in a new context, then, can be taken to be the boundary of the predicate red. This boundary is not within the context, as in order to judge

\textsuperscript{15} Akerman and Greenough, ‘Hold the Context Fixed’, p. 279.
the next patch orange, the subject must shift to a new context, but it is determinate in the
current context. Thus the least number principle is valid within contexts. However, it is
debatable whether it can ever actually be applied within a single context. This raises another
deep objection to ESC, and its consequences for valid reasoning, which I will discuss now.

One of the important claims Raffman makes is that we do not have access to knowledge
about which patch in a sorites series will trigger a psychological shift within us. This claim is
necessary because if we could have such knowledge, we would know the boundaries of the
predicate within the current context, which would constitute some sort of boundary, which
Raffman wishes to avoid. However, this leaves open the problem that we do not necessarily
know when a psychological shift has occurred. This is because if we did know when a shift
had occurred, we would realise that it is the patch we are currently judging which had
caused that shift, and so would be liable to call that patch some sort of boundary. Again,
Raffman wishes to avoid this. These two facts, that we do not know when shifts will occur, or
indeed if they have occurred, lead to the following problem for ESC: ‘not only sorites
arguments, but also parts of our intuitively fine everyday reasoning might be equivocal’.16

Akerman illustrates with an example of someone making the following argument: ‘Book 1
is red. Book 2 is red. Thus book 1 and book 2 are red.’ He argues that there is nothing in the
ESC account to stop the possibility that the extension of ‘red’ shifted between the two
premises, which would render the argument invalid by equivocation. Thus it appears as if
ESC, while providing a solution to the sorites by rejecting its reasoning, also rejects
reasoning which we take to be paradigmatically valid. Classical logic might hold according to
ESC, but we will never be in a position to reason with it, because we can never be sure that
the extensions of the predicates we are using have stayed fixed throughout, which is a
precondition of valid reasoning.

A possible counter to this would be the introduction of ‘stabilising mechanisms’, such as
‘relative to the complete context obtaining at time’.17 Inserting this operator into arguments

17 Ibid.
like the one previously mentioned could fix the extensions of the predicate so that reasoning could proceed. However, Akerman points out that operators such as these could then be used to mount a criticism of ESC; one could plausibly construct a sorites series consisting of patches which range from ‘red relative to the complete context obtaining at time t’ to ‘orange relative to the complete context obtaining at time t’. In this case the stabilising mechanisms forfeit the power of ESC to solve the sorites. It appears as if the theory cannot provide both a solution to the paradox and a convincing account of how to rescue our everyday reasoning from being judged invalid. This is a powerful objection to ESC.

Keefe gives a more general criticism of contextualism, and other theories which she describes as ‘non-solutions’, which is somewhat related. Classical reasoning fails, as we have seen, because we do not know when psychological shifts occur; they simply do occur, without our knowledge or will. Since it is argued that it is these psychological shifts which hold the key to solving the sorites, ESC can be seen as somewhat of a descriptive theory. It explains what happens to us when we examine a sorites series, and the reason why we jump from one predicate to another. What it does not explain is the ‘normative issue of how we should classify using vague predicates’ [emphasis in original].\(^\text{18}\) According to Keefe, this means that ESC ‘fails to tackle the primary issues’ raised by the sorites paradox, such as whether the paradox undermines our everyday use of vague predicates, or entails that we should pay more attention to our use of them.\(^\text{19}\) The contextualist may reply that ESC provides us with a greater understanding of our use of vague predicates, and, in showing how the sorites reasoning fails, gives us a reason for believing our current usage is adequate within certain bounds.

In conclusion, then, how well does ESC fare as a solution to the sorites paradox? Initially it is plausible; Raffman gives a good account of how a subject would act when faced with a forced march sorites. It is true than in order to be a competent speaker of the language, the subject will have to jump from one predicate to the other at some point; the phenomenon of

\(^\text{19}\) Ibid, pp. 25-26.
backward spread also seems believable. Raffman’s use of internal contexts seems to provide a convincing explanation of these jumps and how they occur. ESC also seems able to counter suggestions that vagueness can still remain even when the context is fixed; it seems unlikely that a sorites series could be constructed while keeping the internal contexts completely fixed. The objection that ESC entails the denial of the classical least number principle is more worrying, and requires more work from the contextualist to counter.

However, there is an attempt at a reply; contexts do in fact draw a boundary, even if it is the boundary between patches which can be judged within that context and those which can’t. This is less than overwhelming, but I believe could, with some amendments, fend off the objection. The related objection, however, that even if classical logic holds within contexts, we would never be in a position to reason with it since we can never be sure we are staying in the same context, is much more powerful. If ESC can only solve the sorites by making much, if not all, of our everyday reasoning invalid, then it may be fairly argued that the cure is worse than the disease. As such, I believe the power of ESC as a solution to the sorites rests on precisely this objection. In addition, as I can see no way for the theory to both solve the paradox and counter this objection, I am forced to conclude that, for all its plausibility, ESC is not a workable solution to the sorites paradox.
Bibliography


