

UNIVERSITY OF HAWAII

Department of Anthropology

Mr. Johan Kamminga
Department of Anthropology
University of Sydney
Sydney, N.S.W. 2006
Australia

May 8, 1972

Dear Mr. Kamminga,

I have read the manuscript of the paper you and Brian Hayden wrote as a critical review of the microwear studies done by myself, Dorothy Koster, and Ann Sontz. I have taken the liberty of sending Xerox-copies of the paper to my co-authors and to Don Crabtree in Idaho. In your letter of April 10 you stated that Brian Hayden will be intransit to Canada for the next 3 months, so I am addressing my comments to you and will leave it to you to pass them along.

There are many things I could say about this paper, but in this letter I shall confine myself to more general observations and questions. It should be understood from the outset that I welcome constructive criticism from any quarter, and I am glad that controlled work is being done to test our observations. Neither I nor my co-authors would ever argue that our results represented the last word on the subject - - indeed, the whole idea of writing the paper in American Antiquity was to get scholars interested in looking more closely at these issues.

You have clearly made some useful observations which ought to be published. Your findings concerning use-wear from scraping soft wood are especially interesting. In the whole two years that I spent in the Western Desert I never once saw any Aborigine make an artifact out of soft wood of any kind, and your observations on this matter open up some interesting possibilities. I do recall once seeing some soft wood or bark bowls in use among desert people in the Clut-terbuck Hills region, but I was not present when these items were manufactured (and besides, these bowls were very unusual and were only minimally shaped). With the exception of certain kinds of spears, everything I saw being manufactured under traditional desert conditions was made of mulga (Acacia aneura) or, occasionally, various very hard eucalypts.

Also, your notes on use-wear occurring as a result of general handling and usage are interesting. I had noted this myself on some flakes, although to nowhere near the extent to which you report it. I recall that small flakes or nicks sometimes appeared on the acute-edged flakes being kept as knives (tjimar) but were much less commonly present on thick, steep-edged flakes being kept for future use as adze-flakes. I didn't bring this up in our study because: a. there were so few of these occurrences, and thus, b. it seemed like a pedantic point to include in an already over-long paper. If the frequencies of occurrence of small terminated flakes are the same, as you state, then this does change matters. But my observations had not indicated "general usage" as a particularly significant cause of this kind of wear-pattern.

Had you treated these matters as straightforward problems in archaeological description this would have been fine. But instead you chose to frame this into

CE 44.221

a waspish attack on the work done by me and my colleagues. I say this because in your haste to criticize, you have failed to understand what our study proposed in the first place - - that is, you have quoted us out of context and have misrepresented both the letter and the spirit of what we were trying to do in that paper. This distortion arises in regard to three main points:

1. You claim that Koster, Sontz, and I, "...have proposed that terminated flake scars are diagnostic of a wood-working usage." True, I would say, but only of hardwoods (specifically, Acacia aneura). Our observations were strictly empirical and made no claims for anything but wear associated with work done on this particular kind of wood. Our paper attempted to account for use-wear patterns arising in a particular ethnographic situation, and we went on to propose that this approach be tried in other areas by archaeologists. But I must reject your implication that we attempted to generalize for all kinds of woodworking.

2. Our use of the phrase, "distinctive signs of use-wear", was conditioned by our insistence that this wear occurred in combination with other attributes. You imply in your paper that we urged that the single attribute of use-wear be treated as absolutely diagnostic of woodworking use. After reading your arguments I am inclined to agree that this wear-pattern may be less diagnostic than we had supposed, but remember that our paper was primarily concerned with accounting for the presence of these small terminated flakes and with the definite absence of striations or gloss on these same working edges. The whole thrust of our paper was to show that each attribute, while not diagnostic by itself, is part of a total lithic assemblage, and that each attribute must thus be considered in the context of other attributes. So if one finds flakes which show: 1. steep working edges, 2. simple or scalar retouch 3. thick cross-section, 4. the absence of gloss or striae on the bulbar face of the working edge, and 5. the presence of tiny terminated flakes on the bulbar face of the working edge, then the probability is high that one is dealing with scrapers used for shaping hard wood. Taken by itself the presence of these terminated flake-scars does not prove anything, but when combined with these other attributes it increases the overall likelihood of this as the tool's function.

3. In our study of the ethnographic scrapers it is quite possible that we counted some small flakes in our totals that did not belong under the heading of "terminated flake-scars". Since our paper was written, I have supervised further experiments (some remarkably similar to your own), and I have further supervised the microscopic examination of all the adze-flakes and adze-slugs from the Puntutjarpa excavations (a total of 437 implements were examined at a constant magnification of 30X). We find the average number of terminated flakes on the bulbar face of the working edge to be slightly lower for each implement than was true of our ethnographic sample. As you suggest, we may indeed have allowed some non-terminated flake scars to slip into our counts during our initial observations, but our technique has improved since then. Out of this total only a handful showed any signs of gloss (no more than 5 or 6 flakes), and a few others (fewer than 50) showed unambiguous signs of the edge-rounding you claim to be "ubiquitous" (and none of the ethnographic flakes showed either of these attributes under a wide range of magnifications, although these were originally what we were looking for in our studies). I fully expected, after reading Semenov, to find striae, gloss and/or edge-rounding on the ethnographic adze-flakes, and I was surprised and impressed by the utter absence of these traits. One of the few striated examples we got was sent to J. Desmond Clark at Berkeley for examination, and I have a letter giving his views on it. The point of all this is to let you know that I quite agree with your closing statement that, "More experimental work is necessary...", and to inform you that further experiments have been and are being performed to test our original propositions. Instead of implying that we have been content to stop where we were in our 1971 paper, you might at least have noted the fact that

Ce.4.4.22.2

further experiments were going on. It would have been easy for you to check with us on this point.

- - - -

I do have some questions for you. You argue that our category of "terminated flake scars" confounds 4 major categories of fractures. You list "shatter", "semi-detached", "stepped", and "stepped scars" as these categories. What are these? I cannot find any mention of this terminology in the literature, and I would like to know how you define each of these categories and which "different mechanics of generation" account for each category. The term, "terminated flake scar" was suggested to me personally by Don Crabtree; and these may vary considerably in size. They all, "...could not terminate by feathering but were hinge-fractured instead, so that the edge was thickened at their point of termination" (D. Crabtree & E.L. Davis, "Experimental Manufacture of Wooden Implements with Tools of Flaked Stone", Science, Vol. 159, No. 3813, 1968, p. 428). Such flakes, whether large or small, result from force being driven into the body of the material, resulting in what Crabtree has alternatively called "step fractures". Perhaps this equates with your use of "stepped", but I really cannot tell this from your description. I realize that sometimes Australian and American scholars use different terminologies for the same phenomena, but I think our use of the term "terminated flake scar", while it could be quantified better, is a useful descriptive category which has already found use by other scholars in America. We were conforming to this usage when we published this term in American Antiquity.

Another question: How are you distinguishing the striations and gloss that appear on your adzes used for scraping soft wood from striations and gloss due to other functions like skin and hide scraping? ^{or digging} You assert that, "this wear occurs only when these stone types are used to adze and scrape soft wood," yet I saw no mention of Semenov's experiments in your paper. You did not include any photographs of these striations and gloss for me to examine, so I cannot attempt a comparison myself, but you should at least review Semenov's results before suggesting that you have discovered a distinctive wear pattern yourselves. In other words, you should apply the same caution to your results as you urge toward ours. You must be sure that soft-woodworking wear can be distinguished clearly from other kinds of wear, and so far you have not established that at all.

I really have tried to be objective about your paper, and, as I said earlier, I think it has merit. But I must strongly urge you to rewrite it so that the views which I and my co-authors offered are not misrepresented. If you do not, we will, of course, have to consider writing a suitable reply in order to clarify matters. I hope that won't be necessary, but I would appreciate your letting me know what action you plan to take and to whom you are submitting your manuscript (so I will know where we can address our reply if we need to). I am sending copies of this letter along with the Xerox-copies of this paper to the parties mentioned earlier and, in addition, to Dr. J. Peter White, since he is indicated as having read (and presumably approved of) your paper.

Sincerely,

Richard A. Gould
Richard A. Gould
Assoc. Professor

cc/ D. Washburn (Koster)
Ann H, L. Sontz
Don Crabtree
J. Peter White