Coarser is better?

Posted by Ripley - 29 Apr 2012 02:20

Came across this bit of text recently:

Many treatises on sharpening tend to focus on getting a polished, razor-like edge. This is partially the fault of the tests we use to see how good our sharpening skills are. Shaving hair off your arm, or cutting a thin slice out of a hanging piece of newpaper, both favor a razor polished edge. An edge ground with a coarser grit won't feel as sharp, but will outperform the razor polished edge on slicing type cuts, sometimes significantly. If most of your work involves slicing cuts (cutting rope, etc.) you should strongly consider backing off to the coarser stones, or even a file. This may be one of the most important decisions you make -- probably more important than finding the perfect sharpening system!

Recently, Mike Swaim (a contributor to rec.knives) has been running and documenting a number of knife tests. Mike's tests indicate that for certain uses, a coarse-ground blade will significantly outperform a razor polished blade. In fact, a razor polished blade which does extremely poor in Mike's tests will sometimes perform with the very best knives when re-sharpened using a coarser grind. Mike's coarse grind was done on a file, so it is very coarse, but he's since begun favoring very coarse stones over files.

The tests seem to indicate that you should think carefully about your grit strategy. If you know you have one particular usage that you do often, it's worth a few minutes of your time to test out whether or not a dull-feeling 300-grit sharpened knife will outperform your razor-edged 1200-grit sharpened knife. The 300-grit knife may not shave hair well, but if you need it to cut rope, it may be just the ticket!

If you ever hear the suggestion that your knife may be "too sharp", moving to a coarser grit is what is being suggested. A "too sharp" -- or more accurately, "too finely polished" -- edge may shave hair well, but not do your particular job well. Even with a coarse grit, your knife needs to be sharp, in the sense that the edge bevels need to meet consistently.

Has anyone found this to hold true? And if so in what applications? Can a knife be "too sharp"?

It seems off to me but maybe I'm just not wrapping my head around it in the right way.

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Re: Coarser is better?
Posted by jendeindustries - 29 Apr 2012 08:38

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I disagree that a knife can be considered "too sharp", but I agree with the article that a knife should be sharpened to the level the fits the task.

Finding what is the best sharp for your purpose is the fun of the game.

Too coarse, and you can rip through what you cut, but your edge can literally fall off since your spaces between the "teeth" are prone to breaking and/or bending. Too refined, and you risk rolling an edge over. And of course, everything in between!

This is where all the different steels are factored in along with the edge retention at different refinement levels. The variables here are the intended cutting purposes - slicing, chopping, piercing, etc., and the users tolerance levels for deciding when a blade is dull enough to warrant touching up or maintenance.

The simple answer is "it depends"

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Re: Coarser is better?
Posted by Ripley - 29 Apr 2012 21:01

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But is more a matter of choosing a correct angle or can you refine the edge too much? I understand that at the extremely high grits that you can make the edge so small that it can be delicate but below 5K or so grit will:

An edge ground with a coarser grit won't feel as sharp, but will outperform the razor polished edge on slicing type cuts, sometimes significantly.

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Re: Coarser is better?

Posted by jendeindustries - 30 Apr 2012 01:40

While the article is certainly correct in saying that you don't need .025 micron finishes on everything from your EDC to your can opener to your lawnmower blade, it looks like the tests are performed without adjusting the cutting techniques to compliment the change in refinement. This is a fatal flaw of the experiment, IMO.

With more obtuse edge geometry, you will have a longer lasting edge - regardless of its refinement level. However, as you increase geometry, you lower it's slicing capabilities. It's the classic Axe vs. Razor blade analogy. What needs to be factored in here is that as you refine more, you tend to make the edge of the edge thinner. As you approach zero width of the edge, will make it more fragile, no matter what the geometry.

If you take two identical knives with the same geometry and refine them to different levels, say 1K and 10K, you will notice a difference in which one slices better (10K) over which one saws better (1K). If you subject them to a chopping test, you may find that the 1K lasts longer than the 10K.

But this is a trick test. Technique plays a huge roll in all this, and is yet another wide variable. The 10K should chop through with less force than the 1K. If you don't adjust the pressure of the swing, then you will most certainly see a longer lasting 1K edge due to less damage on the 10K caused by slamming into the cutting board.

You also need to look at the potential of the sharpener (both the system and the person) to bring out the most at a certain grit - Clay arguably gets better edges off his WEPS than anyone else primarily because of 1) the huge amount of time and knowledge he has vested in it, and 2) the quality of the system that is able to deliver.

So the answer here is, again, "it depends"

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Re: Coarser is better?

Posted by ChristopherStaples - 01 May 2012 08:15

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also agree coarser can be better

ever tried cutting an tomatoes with polished blade it just does not work

infact I am pretty sure I am the only person at work that still tries to keep mirror finishes

every one else runs their blades quickly over 200 - 300 grit stones to roughen them up after they sharpened them

I run double edges I polish the 2ndary edge and then use 400 - 600 grit on the primary edge

(1000 grit .. few cuts .. damn dull)

Boning Room use

how ever a polished blade does not seem to snap as much ... guessing less fractures

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Re: Coarser is better?

Posted by jendeindustries - 01 May 2012 17:56

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Boning Room Use

Here is the perfect example of a specified use - in a meat processing plant, you need aggressive cutting - ripping of the meat from the bone at specific speed in order to keep up with the line. If your knife is "sharp" regardless of the refinement, then you are already at an advantage.

But you probably do not have the time to be delicate or to consider the quality of the cut itself, but look at the face of the meat after the cut from a #300 edge, and if you can, make a few cuts with a 1K edge and compare the them.

If I were the local butcher putting out the cuts for customers to see, I guarantee you that customers will buy the 1K edge cut meat over the 300 because it looks cleaner. But this is another specified use. FWIW, I see this every day at the local fish market - at the end of the morning, the last remaining fish steaks that won't sell don't have a nice surface, and were clearly cut by a dull knife (or very rough technique!). The freshly sharpened knife makes cuts that present themselves better, and they sell very quickly.

BTW - here's a polished knife cutting paper thin slices of a cherry tomato - by Michiel Vanhoudt.

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Re: Coarser is better?

Posted by ChristopherStaples - 01 May 2012 18:44

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also true

mine look moist and have a gloss / shine to them

the others ...

but any how

I rather have the mechanical aid takes less time to sharpen them

and I know exactly how my knife will behave every time

I actually can not wait until my wicked edge arrives

(if the order will ever get shipped honestly how many are on back order still)

as it should allow every different knife to have the exact edge every time

currently using an edge pro , so the edge geometry changes every time the knife is relocated

edit

jendeindustries wrote:

Wait a minute!!!! You're using the Edge Pro #320 stone?

That changes the context of the "#300" grit edge just a little!

No I use 600 edge on my 1/4 knife and 1k on my slicing

I refuse to use the sharpening gear work provides its main reason I have an edge pro its all in a carry case and I use a fridge shelf tray to sit the the EP with suction cup up on the sink in the locker room .. works sweat I just keep the tap running above it

the others are using the 200/300 stones at work in fact I think the highest stone work has is around 400 which is a diamond that everyone seems to stay clear off .. they say it strips their edges off

any how stuff using up 80% of your smoko break on a 50:50 chance you even manage to make it sharper or not

their stones are a complete mess especially when you have like 4 new starters a day ruining them

I only give mine a light rub over at the end of the day and maybe a re profile every 3 mnths when I notice the 2ndary edge getting 50%

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Re: Coarser is better?

Posted by jendeindustries - 01 May 2012 19:32

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Wait a minute!!!! You're using the Edge Pro #320 stone?

That changes the context of the "#300" grit edge just a little!

Either way, I think you will be quite impressed with your WEPS, and even just off the 600 diamond you will find some excellent cutting action thanks to the precision of the WEPS and the diamond finish, even though it will lack the polish effect of the EP stones. The repeatability offered by the clamping will be a game changer for you, IMO.

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Re: Coarser is better?

Posted by razoredgeknives - 01 May 2012 19:52

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My favorite edge for EDC is finished on the 400 grit stock diamond stone... it slices extremely well at any given task, but still will pop hairs off of my arm. I have found that if I go higher (like 1k and finish on 14m strop) then it just does not perform as well at the tasks for which I use it (cutting rope, plastic, fabric, etc. - really anything I need it for). I got a lot of heat for saying this over on bladeforums, lol, but I really do feel like - in my case - this is the best edge. And its not because I can't put a high polish on an edge.

Here's a theory you can weigh in on Tom... the narrower the angle, the higher the polish you can go and still retain the same amount of effectiveness - for example, cutting rope. If you have a more obtuse edge (i.e. 25*/side) with a .25u mirror finish, then it will not perform anywhere the level that the same edge with a 15* finish/side would. This would perform more like a 1k finish would in ease of slicing ability it would seem. Again, these are just my observations and theories, lol, so I could be way off base.

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