Reviewed Article:

Working with Artisans; The 'It Depends' Dilemma

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We live in a world where scientific method is both the expected and accepted path to knowledge. With any scientific method, experiments based on detailed, well-documented, well-considered theories, and precise set-ups must be replicated exactly by others who come to the same conclusion to consider the information gleaned from them to be valid. This has become the accepted practice for most education and exploration. Using this method produces great results, observable in the scientific disciplines that affect our daily lives as well as progress in many fields of research. As experimental archaeologists, we have an unspoken,

and sometimes unnoticed, expectation that we prove our theories with the same exactness in detail and scope.

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If we want useful data, it only makes sense to ask experienced artisans who do the type of work we wish to replicate or understand what they can tell us about the details and nuances of their craft. Any method imagined for reproducing a handmade object can function eventually, though the attempt might not be effective, efficient, or sometimes even reasonable. Sensibly, we decide interviewing these artisans would produce a better result, as any craft becomes easier and more consistent with time and practice. Expecting detailed information and/or outcomes, we as academics get frustrated when artisans reply to our carefully considered questions with, 'Well, it depends…'

Let me take a moment and discuss my qualifications on the subject. I am an academic. My area of study is the use and understanding of medieval textile tools, specifically the warp-weighted loom. My postgraduate degree is from the University of Manchester, in Britain. My publications include an article in the Cambridge History of Western Textiles, text for a museum display for the British Museum and York Archaeological Trust, and being consulted on the weaving techniques of the Shroud of Turin.

I am also a textile artisan. I started tatting, quilting, and crocheting at eight years old, picking up many other related crafts over the years. I have been a spindle spinner for more than a quarter of a century and a weaver nearly as long. I have worked with and on a warp-weighted loom for nearly twenty years, researching the medieval uses of it for even longer. Needless to say, as an academic, I know the frustration of 'It Depends', but as a artisan, I often say it to other researchers.

I first recognized the 'It Depends' conundrum while writing my thesis. A researcher considering Irish cloaks (called brats) as legal currency, Mark Zumbuhl, asked me and a fellow researcher and artisan how much yarn and time it would take to make one of the cloaks (2013, p.55). Our initial response was – well, you guessed it. He did not have any parameters to give us, so we guessed based on a very rough weave of twenty ends per inch, two meters long and a meter wide. Needless to say, the answer lacked accuracy.

Around that same time, in my thesis on the warp-weighted loom, I stated, 'It depends on many criteria,' based on my experience as a spinner and weaver. At the time, I could not produce other, more detailed or documented information. No studies existed on the amount of time it took to do such things, outside of a Swedish paper from the 18th century, which

examined wheel spinners and floor loom weavers instead of spindle spinners and weaving on the warp-weighted loom. The article, referenced by other sources, was not accessible. Also, experience with the tools demonstrated spinning wheels and floor looms do not compare well to warp-weighted looms and spindle spinning. The time required to make cloth, techniques for use, amount of material wasted, construction costs, and even the math required to use them vary quite a bit. The readers of my thesis focused on that particular phrasing, asking me during my viva what, exactly, it depended on, requiring a written response. The answer added another page.

Around that same time, people in a web board for textile artisans called Ravelry often repeated a semi-joking answer to most requested advice about our craftwork. When someone asked for advice about a knitting technique, spinning details, or weaving project, and the initial response became “it depends, four pounds, and sample” followed by a more serious and complete answer.

The Perception of the Environment by Tim Ingold (2000) from the University of Manchester became my working theoretical frame around that same time. This text, directed toward anthropologic and ethnographic studies, included sections on the observation of craftwork. Ingold backhandedly acknowledged the ‘It Depends’ problem, if not in those words, but did not address it directly. Those three things together caused me to notice the common and frustrating problem of this particular disconnect in communications between researchers and artisans. I then spent years considering and discussing this problem with academics and artisans of all sorts.

Of course, we all understand that life is messy and with few definitive answers. But we tend to expect specific, detailed answers to studies and research – that seems part of the assumed definition of the word. We need to examine the underlying cultural assumptions. The first was already touched upon – that for results to be scientifically valid, they should be reproducible. Truly accurate (therefore, reliable) results depend on controlling as many variables as possible, and being able to carefully describe and account for these variables.

The second assumption is based on our reliance on machines that create most of the goods we use in modern society. For the most part, the material goods in our lives come from production lines replicating thousands of items in a short amount of time. Exchange one set of dishes with another of the same pattern and no one would notice. Clothes come from a rack of many copies of the same item in several sizes, not made to the specifications of individual bodies. Something damaged or destroyed can be replaced without the substitution noticed or even notable.

The robotic fabricators making our goods require precision in order to function. This not only requires careful alignment of parts and machines, but also the basic materials fed to those machines as similar as possible. Steel is a certain grade and composition before it is fed into

the fabricators. Wood cut and planed to standard sizes. Thread is spun to exact diameters and twist then fed into mechanized looms weaving hundreds of yards of the same fabric. Even in our personal lives, we go to the grocery store to pick up 2% chlorine bleach, consistently flavored pure orange juice, and ground beef with a known fat percentage without considering the steps it took to get there. This was not typical of the experience of our ancestors.

Another assumption is related to time. Our fabricating machines require very specific timing. Scientists measure experiments to the fraction of a second. Calculations for speed require time measurement. We discuss distance in time. Even my chocolate chip cookie recipe calls for a temperature of 350 degrees Fahrenheit for ten minutes (not to mention specific amounts of flour, sugar and butter, none of which I create myself). During an era where most judged time through the seasons or angle of the sun, such a precise definition of time simply did not exist.

Expecting craftwork to function, be described, or understood in a more scholarly, scientific manner is not inherently bad or wrong, but would previous generations think about creating things with this in mind or expect this sort of exacting replication of goods? Intellectually, we understand items were made bespoke for each use, but when it comes to our research, do we really consider the full ramifications of that? Is it possible to precisely replicate an item or technique by a human being?

Some researchers believe students of craft follow their teachers exactly. Anyone who works in any sort of craft knows this is just not possible. Humans are not machines capable of exact replication of movement. Thousands upon thousands of minute adjustments happen based on physiology, thought process, learning ability, circumstance, materials, and experience. Each piece made entirely with human hands is unique, even if similar to others by the same maker.

So, what type of things actually go into craftwork? What details make it difficult to give a more precise answer than 'It Depends'?

Over the years, I have talked to many types of artisans who work with medieval era replica tools. Casual interviews produced a wide range of concerns and difficulties relating to each separate craft, though 'It Depends' nearly always came up in the first few minutes. Longer conversations allowed the artisan to think, producing more complete, detailed answers.

Carpenters mention wood grain, humidity, tool sharpness, number of knots in the wood, and availability of materials. After some consideration, one carpenter acknowledged his list, while accurate for medieval craftwork, only covered wood after modern production processes got it to the lumberyard where he purchased it. Earlier woodworkers had to consider tree growth, insect activity, sunlight availability, and where it grew in relation to other trees or water sources. Ageing of the wood for specific projects might require direct sunlight, shade, or

possibly keeping it inside or outside stacks of similar wood for months or years. The artisan needed to watch over the woodpiles to reduce insect gnawing, proper ventilation, and other preventable damage during this time. Wood may need to be treated with oil (creating a whole other process with different specializations and knowledge), heat, or dried.

Metal workers talk about purity of the ore, quality of the charcoal, the temperature of the fire, and amount of wind in the area. When they work outside, ambient temperature is a factor. The quality and upkeep of their tools affects the work.

These somewhat detailed responses come after explaining 'It Depends', followed by a short fifteen- to twenty-minute conversation with the artisans. The above lists only take into account the details that immediately came to mind. None of the people I spoke with considered their personal level of experience, physical capabilities or limitations, talent, or aptitude for the work.

I am a textile artisan, with years thinking about this, so I will go into more complete detail with weaving as an example.

Things that affect the weaving process, aside from the obvious of the visual aspect of the craft itself includes: experience (obviously), type of loom, intended finished product, type of yarn (wool, silk, linen, boucle), twist of the yarn, strength of the yarn, tension of the warp, type of heddles (string, metal, Tyvek), type of beater, spacing of the reed, rust (if there are metal parts), humidity, light (amount, quality, color), breakage, solution to the break, age and upkeep of the yarn/tools/weaver, mood, music and type thereof (if any), attention level, cats, dust, sizing (if any), time of day/month/year, deadlines, weather, achy back, height of weaving bench or stool, shed height, shuttle type, winding of the shuttle, kids, hand and arm strength, arm length, treadle tie ups, pattern complexity, stability of the loom and the floor, sleep (or lack thereof), commission or personal project, color of the yarn vs color of the floor or wall, availability of supplies or parts… I could continue, but the list is already rather long.

With all this detail, why do we still get 'It Depends'?

There are two major reasons. **Firstly**, most artisans have no reason to examine these sorts of details. As one gains experience, problems arise, and solutions discovered. These solutions become muscle memory or are not actively thought about until the problem asserts itself again. Often minutia of the work is not consciously considered, but simply accommodated, especially if common and familiar. The more experienced the artisan, the more likely this is the case.

This is part of the reason why diagrams are not the most useful way to learn craftwork. Aside from the fact that crafts are three-dimensional through time, diagrams do not help describe or overcome the nuances that cause difficulties. Images on a page cannot notice difficulties in a student as they arise, account for all possibilities and errors, nor create solutions as needed.

In The Perception of the Environment, Ingold set up an experiment with a Boy Scout knot book and his officemates to discover the likelihood of success using only the diagrams to make the complicated knots (2000, p 357-8). They discovered the pictures in the book made good signposts, if you already knew the knot, but lousy for teaching new ones. Ingold did not discuss why that might be, but I believe it was in part because no diagram can address all the minutia required to teach and accomplish most craftwork to the novice. Experience is required first.

Ingold also tells a story of Aboriginal net bag makers (2000, p 354-7). For more than six months, a mother taught her nine-year-old daughter to make the simple knotted bags. Wanting to be helpful, the daughter tried to finish a bag her mother started. Later the mother needed to undo all the daughter's work to finish the bag properly. The daughter did not yet have enough experience to compensate for all the details and nuance particular to her and the materials, not because the craft was difficult.

Secondly, the questions often asked are thought by the researcher to be fairly specific and quantifiable but to the artisan are generalities with many answers. I am guilty of asking these types of questions. Questions like 'how many hours will this take' seem very specific because we are used to knowing this kind of information. Journeys of known distances are described in hours travelled, because we travel in vehicles where weather generally makes little difference to our experience. Machines take in supplies at one end of a process, and how long it will take to complete the items measured out in minutes or seconds because of how machines function.

For most modern artisans working in medieval contexts, their crafts are not their primary occupation. This creates possible difficulties in measuring timing – does it really take ten days if some days only allow for an hour or two to work on the project, and other days the artisan can devote eight to ten hours? Also, does ten years' experience with a craft in modern times where it is a hobby equate to ten years' experience with the craft when it was a useful life skill? Blacksmithing requires large blocks of time, which might take the smith weeks or months to find in their schedule. Shipwrights building a medieval replica longboat may not have the space to work indoors, so the project becomes seasonal. Spinners can work in relatively small increments of time – fifteen minutes here, a few hours there - but the time it takes to create the miles of thread required to weave a large piece of cloth will still vary based on the schedule of the artisan.

Also, artisans usually work on a project until it is finished, or the deadline is reached. We may have several projects going at the same time, so order of importance or interest level is a factor. Projects can be finished within a certain timeframe if there is a firm deadline, but this often requires putting aside other commitments and some late nights. Paying detailed attention to the time it takes to do the various steps is unusual. Taking the time to document

the time would also cause delays, possibly skewing the results of the question. At least, that is my experience.

Knowing exact quantities of supplies needed for a particular project is also not a simple question with definite answers. We are trained to expect many things require a precise amount of something, such as the 2 ¼ cups of flour in my chocolate chip cookies. However, in most pre-Industrial craftwork, how much depends on the quality and availability of materials. Sheep simply do not produce a specific amount of a certain diameter of fiber on demand. Individual sheep grow their wool differently from others of the same breed, flock, or even themselves from year to year. Carpenters can have differing amounts of waste wood, depending on the cuts required, whether the grain should match, how many knots grew in that particular tree, or growth patterns of the tree from year to year. Potters often cannot tell you to the gram how much clay they will use, but can only make rough guesses, and keep more clay than they expect they will need. Painters keep pots of left-over paint, in case they need the color again because exact matches are difficult, especially when mixing the colors from original pigments. Sometimes a piece from a previous project is exactly what is needed for the current project. Do we include that in the calculations for materials? There are reasons artisans tend have a room, garage, or workshop full of materials, called "stash" that often builds to SABLE (Stash Accrued Beyond Life Expectancy).

So, as academics and experimental archaeologists, what is to be done?

We still want to be as exacting, specific, and scientific as possible, which makes 'It Depends' not a particularly desirable answer, especially for a study or paper. Setting down all possible details explaining the nuance that goes into craftwork would take up a great deal of ink and time, not to mention being more than a bit tedious to list or read. I suggest two major options for consideration.

Option 1: Use the opportunity presented when interviewing artisans to go into more specific details. 'It Depends' on what, exactly? What difficulties have to be overcome? Which problems are common and/or most frustrating? What do they have a hard time communicating to students? What questions often get asked? What would they like to be asked? Take time with them, talk for extended periods. Sending a quick questionnaire and expecting reasonably accurate answers or an in-depth understanding of the craft will not suffice. Have the artisans themselves help build better questions. It can be surprising what the conversation reveals.

Option 2: Do the large studies necessary to determine the answers to the big questions. Find several hundred people who work in the craft. Find all levels of experience and ability. Trust me – they are out there. Time them. Find out how much they purchase in basic materials, then calculate how much ends up in the finished product. Spend time with them observing and asking questions as they arise. See how much of how they work is personal preference,

how much fits on charts, statistical averages and outliers. I would love to see this one happen more often, but I do understand time and funding constraints.

Discover what aspects of craft are culturally based. For example, American spinners I speak to believe the lighter the spindle, the thinner the yarn. I spoke with a Danish spinner at a naalbinding class once. She said Danes are taught the opposite – the heaver the spindle, the thinner the yarn. Find out if one approach more accurate, quicker, or productive than another. Does the difference even matter?

Dip your toe in the deep water of unwritten understanding. All that knowledge and experience handed down from teacher to student via oral and observational methods – years of work, sweat, and experiment only hinted at in the end product. Follow the example of Katrin Kania (2013). Working with the prevailing thought that the more skilled the artisan, the more they needed high-quality tools, she set up an experiment to see what difference the tools made in how well people spun, using the consistency of the yarn as her baseline for judgement. Which spindle was more effective for thin yarns? A heavy or a light one? A long or short shaft? She created a number of spindles of the same weight and size, acquired some processed wool from a single sheep, and asked everyone who was willing to spin ten yards of yarn with the tools she provided. After a great many volunteers, she discovered that the tool made little difference: the quality of the yarn produced entirely depended on the experience of spinner, which was unexpected. But it took a great deal of time and many artisans to discover this.

However, you choose to approach the 'It Depends' dilemma, consider the words of the great Sir Terry Pratchett...
'Sometimes, the best answer is a more interesting question.'

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Gallery Image

FIG 1. THE AUTHOR TABLET WEAVING AT THE VIKING RE-ENACTORS MARKET IN ARCADIA, OKLAHOMA.

FIG 2. THE AUTHOR SPINDLE SPINNING AT A RE-ENACTMENT OF THE BATTLE OF CLONTARF IN DUBLIN, IRELAND.

FIG 3. THE AUTHOR WORKING ON A WARP-WEIGHTED LOOM IN AN EDUCATIONAL DISPLAY AT THE NORMAN MEDIEVAL FAIRE IN OKLAHOMA.

FIG 4. SOME OF THE WORK PRODUCED BY THE AUTHOR. ALL OF THE PIECES ARE HANDWOVEN. THE LARGER PIECES WERE ALSO MADE WITH HAND SPUN, NATURAL DYE YARNS.