The Wit of Knitting: A Philosophical Reflection on Knitting Things Aright

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Seeing a pattern in a medium of yarn emerge on a pair of needles, initially from a single row of loops, and grow to become an article of clothing, is immensely satisfying. Indeed, every moment of knitting provides immediate gratification. This is perhaps why knitting, like many other occupations of the hands, is so calming to the soulful organism, at once delivering analgesic relief from stress in the form of an endorphin cocktail, and simultaneously aligning the mind with the movements of the spheres. And so knitting soothes the Animal soul as it simultaneously stimulates the distinctively Human one.

A philosopher's rationale for knitting, however, cannot appeal to the effects of knitting on the Animal soul—or, at any rate, not on paper. The Animal rationale, it seems, is still too closely allied in many minds with being Woman—or, at any rate, Domestic and Lowly. And being Woman (or Domestic or Lowly) has not yet been entirely rehabilitated in the academy. This is thoroughly regrettable. Because obviously the Animal and the Human are overlapping—affectations to the contrary notwithstanding. And so it seems that if I would bring my knitting into the departmental and senate meetings—as I indeed would—then I am obliged to offer reasons for its loftiness—reasons for its being more on the Human side than on the Animal side of the equation. So here, for the record, are some distinctively philosophical reasons for knitting.

First, and most attractively: a knitter bears the characteristic mark of the divine, because at every moment a knitter is bringing forth something out of nothing. (Nine out of ten times, the knitter is also trying to keep warm in the crib another thing that was also brought forth out of (nearly) nothing.) Next, the knitter is intimately acquainted with the Mobius strip, the Klein bottle, and all the other subversions, diversions, and perversions of mundane earthbound topology. The Knitter thus ponders the perplexities of space, time, and how the whole universe might be wrought from string—and thus fabricates (what else?) that luminously high-dimensional Yarn Theory of Everything, so purl-plexing to the non-knit wit. The questions knitters have examined are profound and wide ranging, from logic to metaphysics to morals, and include: (1) Why is it the case that the negation of nothing is knot, but the negation of knot is not nothing?; (2) How does the occupation of three-dimensional space by a strict sequence of (roughly) one-dimensional vibrating loops, connected in a two-dimensional array, result in the look and feel of exactly three dimensions?; and, of course, (3) How does one cast off one's chains?

But, unlike the mathematician, not only can the knitter bring the perversions and other oddities into being, but the knitter can also (this is my own specialty) help them to pass away. We knitters have created knots like nobody's business—knots that only a chosen few outside our fellowship have been privileged to behold, let alone hold in the palm of the hand and allow to rest warmingly in the lap. This is the source of intense power. And with power comes an equally intense obligation of putting things right.

Which brings me to my major point—the major reason for philosophical knitting: knitting is about putting things right, and so reflecting upon knitting is reflecting upon this important duty and activity. And for both these things we knitters have special insights, because we knitters just see the right way of things. We who knit keep knitting because, when we look at our handiwork, we can see what to do next (like Wittgenstein said). And this manifesto comes apart into two theses for defense: first, that the British empiricists were in egregious error when they propounded their reductionist views on the evidence of the senses; and second, that seeing how to go next is just good sense (good observation, if you will)—if you're a knit-wit, anyway. But once you see this, you will see your way clear to Empiricism without Kant. These are the philosophical theses I will propound in the space that falls to me here. These are twin Aristotelian doctrines that a Knitter (well, this one anyway) will be proud to submit for your approval.

Three Cheers for Aristotle, Part 1: Seeing and Believing

The Knitter, like the Philosopher, knows that observation and judgment lie on a continuum. True: the world presents us with a richly structured array, in unrelentingly continuous flux, of multimodal stimulation to all of our senses simultaneously. Entities can be seen, heard, smelled, felt, and tasted, sometimes all at once. And as we engage with the objects in our environment we ourselves contribute to the continuous fluxion in proprioceptive and visual feedback to our own sensory systems. How could a naïve observer—a newborn, for instance—perceive anything but unrelated patterns of visual, acoustic, and tactile stimulation, in William James's (1890) famous phrase a "blooming, buzzing confusion"? Modern thinkers proposed that perceivers must learn to interpret and integrate sensations before meaningful perception of objects and events could happen for them. This so-called "constructionist" approach, which dominated the perception psychology of the twentieth century, presupposed that the different forms of stimulation from the various senses must be integrated or organized in the brain and therefore posed a "binding problem" for perception—the thought (still exercising many) is that sensory stimulation has to be united by a separate mechanism that somehow achieves a meeting of differently coded information from different channels on some common ground.[1] (Some of us knitters are familiar with another binding problem, this one in the kitchen; and often the solution to this one is just more eggs.)

It was not until J.J. Gibson pioneered what is now referred to as the "ecological" view of perception that integrationist presuppositions vis-à-vis perceptual development were seriously questioned. Gibson held that different streams of information, as such, posed no special problem for unitary perception because multiple processing of input is a norm in cognition. In fact, the senses are highly interactive and cooperate in the detection of invariant aspects of stimulus arrays—so much so that we should recognize only one "perceptual system." What Gibson did was focus psychologists' attention upon invariants in stimulus arrays. And he taught psychology that the first things of which an organism becomes perceptually aware and upon which anchored, may well not lie as content in any one sensory modality, but may instead lie in the higher-order invariants in the blooming and buzzing array. This is an Aristotelian idea.

Aristotle had postulated a "sensus communis"—an *amodal* or *common* sense—which he thought was responsible for

perceiving the qualities of things that were more general and not specific to single senses ("common sensibles"). According to Aristotle, common sensibles included motion, rest, number, form, magnitude, and unity. This inventory has a strong resemblance to lists of the amodal by contemporary perceptual theorists following Gibson's lead.[2]

The conceptual keys to unlocking how detection of such qualities is achieved are overlap and redundancy. As Aristotle observed long ago, amodal information is not specific to a particular sensory modality but is information common to several senses. Such things as temporal and spatial features of a scene are typically conveyed in multiple senses: the rhythm or rate of a ball bouncing or hands clapping are good examples. Rhythm in both cases can be picked up visually and acoustically. And when it is conveyed in overlapping media (as in these examples), the redundancy makes the temporal features highly salient. And so understanding the pickup of amodal information involves understanding the production of salience—a topic that is still in its infancy.

A vast body of research conducted over the last twenty-five years of the twentieth century confirms that even young infants are adept perceivers of amodal stimulation.[3] Infants detect the temporal aspects of stimulation such as synchrony, rhythm, tempo, and prosody common to visual and acoustic information that proceeds from single events, as well as spatial collocation of objects and their sound sources, and changes in intensity across the senses. "These competencies," as Bahrick and Lickliter write, "provide the foundation for the perception of meaningful and relevant aspects of stimulation in social and nonsocial events....In our view, detection of amodal information in early development provides a radical and efficacious solution to the so-called 'binding' problem...The task of development becomes to differentiate increasingly more specific information from the global array through detecting invariant patterns of both multimodal and unimodal stimulation."[4]

This is a lesson that philosophy has had a much harder time learning. And this is due entirely to the profound influence that British Empiricist dogma has exercised on modern philosophical sensibilities—not common sense. This dogma goes against the grain of knitting. The British epistemological tradition, to Hume himself, consistently drew a categorical distinction between sensing/observing, on the one side, and judging, on the other. But common parlance does not draw any such firm line. So, for example, it is unremarkable to hear it said: "I see that the glasses are missing from his face in the photo," where of course the sense data do not go as far as the utterer says. Today's empiricists draw the seductive conclusion that something—something much more in the way of judgment and much less present in the stimulus—has been superadded to sensation in between the time I look at the photo and the time I make the utterance. But this is deceptive. For not since I was a neonate (and for that matter long before that still) has my experience been anything but a matter of "superadding" (if the name is apt, which it probably is not). I notice that I can make it through this doorway, he observes that they can make it up the mountain pass, I see that the picture on the wall needs adjusting. And all these things happen automatically, effortlessly. Better and better judgment is what normal human development—and knitting, too—is all about.

What transpires over the developmental interval is expertise, as the organism acts upon its environment to bring about changes to it and, thereby, to its own organismic states. Feedback is the key. Now, expertise consists of a series of (typically incremental) achievements that make the critical features of my environment ever more prominent in my perception, so that they can effectively guide my behavior. As I grow up, it becomes more and more true that certain features of my environment have a more and more direct and regularized bearing on my behavior, as I learn to respond in more and more regularly effective ways. I become an increasingly more reliable channel through which certain environmental cues get transformed into certain human behaviors.

The phenomenon of expertise (sometimes referred to as "flow") is interesting in its own right. In expert performance—of such things as, for example, walking, riding a bicycle, playing tennis, performing on a musical instrument, driving a car, skilled typing, and, of course, knitting—the body, rather than the mind, seems to be the locus of control over the behavior. J. Jastrow's description (penned in 1906) of this phenomenon is still the most evocative: "At the outset each step of the performance is separately and distinctly the object of attention and effort; and as practice proceeds and expertness is gained...the separate portions thereof become fused into larger units, which in turn make a constantly diminishing demand upon consciousness."[5] Expert performance is, as I have put it elsewhere, the phenomenon of molarization of behavior. Expert performance comes in yards rather than in inches. Just as knitting comes in patches, rather than in stitches.

Equally, learning to see something as requiring handling a certain way—a loop on my needle, for example, as requiring knitting a particular way—is not only possible and desirable, but also even necessary. So let's turn to my second thesis: it is possible to "observe" our reasons for doing something—for doing the right thing (for example, seeing what stitch or stretch of stitches should come next), and that a learning process makes this possible (for example, seeing a twist of yarn as a stitch within a particular context is seeing a reason to knit it, and moreover to knit it in a particular way).

Three Cheers for Aristotle, Part 2: The Knitter Is Not a Lawgiver but a Lawreceiver

Let's take that point more slowly. I want to make a sweater—*that* sweater. I secure the pattern, and yarn, and accessories accordingly, adopting the pattern as (roughly) my plan of action. My desire to make that sweater provides me reason to follow the pattern. But I also have reasons to depart from the pattern—to modify, improvise, or personalize it. I am skilled at such improvisation, and have been pleased with my results. And I also have reasons to do what I can to make my execution of the project as easy—and even as pleasurable—as possible. Who doesn't? So obviously I don't undertake to follow a pattern too difficult for my skill level, though I might want to challenge myself a bit, to develop my knitting skills. My reasons vis-à-vis this sweater project are thus very complex. But they get somehow focused upon and embodied by the pattern. The pattern summarizes what I need/intend to do, if somewhat imperfectly.

One view of the matter, centered upon Harvard, is the view that a norm—in my case, the knitting pattern—is rather like a law that I give to myself. But this view harmonizes ill with the experience of the knitter. Here's why:

A norm is an itinerary—a kind of script of what I need to do. That I experience myself as *need*ing or *intend*ing to perform it (however imperfectly) is what makes it a script, rather than a story or simply a pleasing pattern of marks or sounds. (The fact that I can inscribe, transcribe, or read my itinerary is a testament to my ability to use tools as aids to memory and cognition—to extend my functioning by adding to my repertoire elements of the world—as well as communicate and receive communications that facilitate my cognition.) A norm is something that is cognized as *to be reproduced*, in some fashion, by me, in my present circumstances.

Similarly, when I am in the middle of making the sleeve of the sweater, say, I view a particular loop upon my needles as needing knitting in a particular way, rather than another way, and rather than simply being ignored or dropped. A loop appears to inherit or acquire that quality of needing-to-be-knit-thus-and-so from the pattern. (And if I'm mistaken about a particular loop, my sweater will suffer for it. It will not be executed according to the pattern, or even according to a modified, improvised, or personalized vision of that pattern.)

But how do I manage to arrive at the place where such loops elicit from me the "they need knitting in a particular way rather than another" response? How do I learn to "see what needs to come next" (to put the question Wittgenstein's way)?

Perhaps I consult an inscription of the chosen pattern. This is less than ideal. Remember, I have reasons to make execution of my sweater as easy and as fun as possible, and unremitting consultations with inscriptions of the pattern stand in the way of that. I need to implement the pattern in a more "direct" way—a way that bypasses the constant intrusion of the pattern inscription in a micromanagerial way. I need to *learn* the pattern rather than *follow* it in a tedious step-by-step way. Just as I learned to knit properly, rather than follow an exhaustive set of step-by-step instructions for looping, hooking, and shaping yarn on fingers and needles. (Patterns that gave instructions in these terms would be unspeakably tiresome tomes rather than succinct single pages.)

So once more: How do I manage to arrive at the place where I simply and directly "see" such loops as-needing-knitting in a particular way rather than another? How do I learn to "see what needs to come next"? Here is my answer: I manage to adopt (perhaps even create) concepts of what I'm doing in small enough chunks that a brief inspection (after a period of training) will allow me to apply the concepts to the loop. Acquiring the seeing-as skill is a conceptual achievement, in addition to all the other conceptual achievements I already (at my advanced age) have to my credit. Here is a somewhat more detailed account of this matter.

Suppose the sweater pattern calls for fifty rows of knitting a rather complex lace stitch that repeat every six rows and over a stretch of ten stitches: the same sort of loops recur, but in different configurations over that stretch, but the whole configuration will repeat itself both vertically (every six rows) and horizontally (every ten stitches). There might be more than one way of breaking up the sixty-stitch configuration so as to "know where I am in it" at any given moment. I might decide to break it up for myself as follows: the first two rows do X, the second do Y, and the third do Z. While along the first two rows the first three stitches do A, the second do B, and the third do C, with a "separating" stitch before repeating. Perhaps you will see the pattern slightly differently. No matter: your way might work better for you, given your training and other cognitive economies, while mine might work better for me. (Obviously, I might well have no knowledge of how you will see fit to do it, so as to compare. I simply devise a way for myself, and I might well miss a simpler way.)

Once I've grasped this way of "articulating" the pattern—and this way might well come only once I've actually practiced the stitch for a while—I will come to "see" my position in the configuration whilst in the process of knitting a loop, and I will "see" that loop as requiring knitting a particular way. It takes some skill as well as some practice—and some confidence that the practice will take me where I want to go. Once I've achieved this, I can leave the pattern inscription behind, at least while I work the fifty rows. (The fifty-first row might require me to modify things, for example, so as to shape the armhole and shoulder seams, and I will need to reconceptualize what I am doing so as to work that span of the pattern easily and enjoyably.)

Taking onboard the concepts X/Y/Z and A/B/C is a kind of learning. The achievement of these concepts is my way of not having to consult the pattern inscription repeatedly, and in that way actually internalizing the norms it contains. When I achieve my network of concepts, I become less dependent upon the pattern inscription, all the while in some sense having formed a substitute for it internal to myself. This process, as I'm arguing in a larger project, is an achievement of the cognitive learning strategy—which happens to be a dual-process strategy—that evolution has endowed many organisms and not just humans. And it's special to practical skills, with observation being one of them.

Now, how does this kind of learning differ from the (more theoretical) variety that I enjoy when I find things out about, say, the civil war or Peano's axioms or the laws governing the trajectories of projectiles or the natural history of amphibians? Or the language we speak and the various cultures we navigate? This is a fundamental philosophical question. And my point has been that practical learning is very distinctive, and that learning norms falls into the category of practical learning. Learning a norm involves acclimating oneself to and thereby internalizing norms that are initially external to oneself, just as I acclimatize myself to an unfamiliar knitting pattern. And unless I can expose my cognitive machinery to the norm as an Other (as it were, outside of myself), I cannot begin to internalize it—I cannot begin to learn it. This is a very important feature about learning.

But if this is the case, then it is not at all clear that any sense can be made of the idea that norm-learning is appropriately characterized as "giving a law to oneself." It is much more like receiving a law than like giving one. But I will leave the details of this argument for another occasion.

Finally, if learning to "see-as" in knitting is in any way characteristic of developing a range of skills and learning one's way around norms more generally, then it is clear why at least some norms embody or are constituted by judgments: at least these norms can be articulated in conceptual terms. Following them is, at least in part, a conceptual achievement.

And so it turns out that at least some learning involves the acquisition of concepts, just as some seeing involves the acquisition of concepts. And therefore it is clear that seeing and believing are not the mutually exclusive categories supposed by modern empiricism.

Putting it down

Like God, the knitter knows the time to stop. It coincides with bedtime.

Endnotes

1. See, for example, H. Birch & A. Lefford, "Intersensory Development in Children," *Monographs of the Society for Research in Child Development* 25 (1963); D. Friedes, "Human Information Processing and Sensory Modality: Cross-modal Functions, Information Complexity, Memory, and Deficit," *Psychological Bulletin* 8 (1974): 284-310; J. Piaget, *The Construction of Reality in the Child* (New York: Basic Books, 1954).
2. J.J. Gibson. *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin, 1979); E.J. Gibson. *Principles of Perceptual Learning and Development* (New York: Appleton-Century-Crofts 1969); L.E. Bahrick & J. Pickens. "Amodal Relations: The Basis for Intermodal Perception and Learning in Infancy." In *Development of Intersensory Perception: Comparative Perspectives*, edited by D.J. Lewkowicz & R. Lickliter (Hillsdale, NJ: Erlbaum,1994), 205-33; L.E. Marks. *The*

Unity of the Senses (New York: Academic Press, 1978); T.A. Stoffregen & B.G. Bardy. "On Specification and the Senses." *Behavioral and Brain Sciences* 24 (2001): 195-261.

3. Bahrick and Pickens, 1994; D.J. Lewkowicz. "The Development of Intersensory Temporal Perception: An Epigenetic Systems/ Limitations View." *Psychological Bulletin* 26 (2000): 281-308; R. Lickliter & L.E. Bahrick. "The Development of Infant Intersensory Perception: Advantages of a Comparative Convergent-operations Approach." *Psychological Bulletin* 126 (2000): 260-80; A.S. Walker-Andrews. "Infants' Perception of Expressive Behaviors: Differentiation of Multimodal Information." *Psychological Bulletin* 121 (1997): 437-56; Walker-Andrews & Bahrick. "Perceiving the Real World: Infants' Detection of and Memory for Social Information." *Infancy* 2 (2001): 469-81.
4. L.E. Bahrick & R. Lickliter. "Intersensory Redundancy Guides Early Perceptual and Cognitive Development." In *Advances in Child Development and Behavior*, edited by R. Kail (New York: Academic Press, 2002), 153-87.
5. Quoted in Daniel Wegner, *Illusion of Conscious Will* (Cambridge, MA: MIT Press, 2002), 106.