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THIS ISSUE FEATURES

Repetition and the Honest Signal in Elizabeth Bishop's Poetics

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Many fine critics of Elizabeth Bishop's work, including David Kalstone, Bonnie Costello, and David Shapiro, have discussed Bishop's natural inclination towards repetition. Shapiro argues that Bishop's repetition, whether metrical, sonic, tropic, or syntactic, does not insist upon "consciousness or voice" in the way of Gertrude Stein, but instead enables the poet to "compose and decompose with repetition and persistence to give a very palpable thickness . . . of attention" (Shapiro 77). I posit that Bishop's repetition engages with attention so as to articulate its foundational role in forging a connection between consciousness and conscience (which are not necessarily coincident). Repetition, with its generative ties to feeling, is also a site of creative immanence and a potential force of authentic communication in her poetics.

Re-creating the organic and ontological makeup of sensual attention, Bishop's repetition exposes the material, physiological, and psychic underpinnings of sense experience, which bears a renewable relation to feeling. Like many formal poets, Bishop establishes patterns of repetition in order to pivot from them, disrupting the reader's expectations and offering novel possibilities for apperception. Attention, as Shapiro argues, is the fulcrum of Bishop's repetition; however, while formally inflected, her repetition is conceptually concerned with variation or repetition-with-a-difference, a phenomenon that for Bishop is derived from the organic processes of life. The imbrication of attention and repetition, as well as how that relationship establishes the aesthetic, ethical, and social valences in her work, requires further examination.

A poetics invested in optics, her work examines the potentially vexed relationship between perception and sense- and language-making. Her poems engage the somatic-cognitive dimension of meaning-making, in which judgment can never remain fixed because it is contingent upon how accurately the beholder views the material world. Acts of perception within her poems are marked by self-qualification and the interposition of mediating similes, which function as markers of the limits of human perception. The repeatedly self-inquisitive, self-monitoring aspect of Bishop's mode of attention mimics the fleet cognitive-affective shifts of the observer. An ethics inheres within her aesthetics, as her signature permutational similes and qualifying descriptions disclose the process of developing both consciousness and the conscience. This process can be traced in her poem "North Haven," the primary poem of my study, which intersects personal, social, and biological themes.

Tied to these concerns are the interactive states of compulsion and consolation, a means for Bishop to depict and cope with bereavement and suffering, such as in "One Art," "Casabianca," "North Haven," and "Sestina." While repetition bears a compulsory cast in the aforementioned poems, these poems work through its consequent agitations through repetition, which is not conceived as monotonous, but rather a trace of biologically rooted needs. Indeed, particularly in her mid-career and later poems, repetition, paradoxically, can chart a double-movement of the mind: both

compulsiveness and self-realization, describing a potentially constructive process at work. These acts of repetition undertake a process of reversal, as Bishop moves excesses of emotion or doubt through circuits of repetition so as to reconfigure suffering into an alternate state. Thus, her poetics describe a process of working through subjectivity in conflict.

Congruous with this subjective labor is an ongoing search in both the natural world and the industrialized modern world for traces of connection and community. Her poetics disclose life-affirming relational ties that extend beyond the human order and into a nonhuman order. An admirer of Darwin's "endless, heroic observations," Bishop was influenced by his naturalist's eye, which can be traced throughout her imagery and, like Darwin, her thinking as a critic and poet drew from the lessons of the natural world. As a student of his optics, she worked against the generalizing impulse that is a product of hypostatizing habits of looking and communicating.

In its formal, thematic, and technical articulations, her repetition is elementally tied to an organic process. Her poems present repetition as an activity that enables apperception and re-discovery, laying the groundwork for ingenuous communication. Not merely a unifying formal element or a conceit that lends itself to art (in all senses), repetition discloses an event, an immanent becoming that unfolds through a semiotic process. In her attunement to the signals that define relations among and between animals and humans, Bishop ultimately taps into a biological evolutionary understanding of the communication and reception of signals. Her poetic ethos calls for a consideration of optical and communicative strategies in their most inclusive sense. Biosemiotics approaches the evolution of a semiotic system as coincident with the evolution of life and examines forms of communication and signification found in and between living systems. According to the International Society for Biosemiotic Studies, "Biosemiotics . . . [examines] forms of communication and signification found in and between living systems. It is thus the study of representation, meaning, sense, and the biological significance of codes and sign processes, from genetic code sequences to intercellular signaling processes to animal display behavior to human semiotic artifacts such as language and abstract symbolic thought" (ISBS). It reaches across the fields of biology, philosophy, linguistics and communication studies to ground code and sign-making processes – the channels by which data and signals are sent and received among living organisms – in biology (ISBS).

In the realm of communication, the transmission of quality, reliability, and honesty from the signaler to the receiver is imperative. The evolutionary biologist Amotz Zahavi, extrapolating from Darwin's theory of natural selection, sought to explain what Darwin could not: the waste or excess that an individual incurs in displaying its sexual fitness for potential suitors. While for Darwin natural selection is premised on the species' elimination of unfavorable traits over time as a mechanism for survival, Zahavi developed the concept of the honest signal and the "handicap principle" to explain the phenomenon whereby individuals possess characteristics or behave in such a way as to communicate "honestly," even at the cost of making themselves vulnerable to attack (Zahavi 1-11). According to Zahavi, these handicaps are signals to other individuals. Extrapolating from sexual selection, he applied his theory of signaling to all realms in which individuals communicate.

Among animals and humans, honest signaling always involves dimensions of altruism: a cost or handicap to the signaler. As Zahavi explains, the signal can operate as "a test of bonds" among individuals (230). The higher the cost, the less likely the recipient of the signal will be conned. Among humans, an honest sign might take the form of a suicidal gesture or – less costly, yet still signaling a potential limitation in mobility – an individual that gives up the use of a hand to hold the hand of his or her lover for an extended period of time (Zahavi 218). He writes, "To the altruist, the cost – the waste – of altruism is no different than . . . growing and carrying a large, heavy, decorated tail of the peacock. The cost of [this] signal is the handicap that ensures that it is reliable – that the signaler is what . . . she claims to be" (150). In such occurrences, the relational tie between the signaler and receiver of the signal is under pressure, carrying with its state of mutual dependency a benefit to both individuals: the promise of reliability in communication.

In the poems I have previously mentioned, Bishop casts repetition as a compulsion, a ritual gone awry, in which a subject seeks to redress and protect itself from its own limitations and self-imposed boundaries, her poetics describing a process of working through subjectivity. With its compulsive affects and dimensions of exaggeration, discord, and partial-correspondence, her later works imagine repetition as a social act that involves a labor of re-constituting the self through its relations with objects and organisms. Enacting repetition as an encounter that displaces stultifying habits of communicating and seeing, Bishop's poetics are committed to an ethos of radical honesty, grounded in instinctive, biological structures of signaling. To recognize repetition as a signal, which becomes visible through an attunement to partial repetitions, distinctions in reiterative acts, as well as a subject's affect and behavior, the beholder must develop an attitude of new-sightedness: a willingness to see incipient possibility within the commonplace.

A poetics willing to interrogate its own perceptions and – by extrapolation – the groundwork of judgment, Bishop's work is motored by a curious and concerned intellect (curious is derived from the word "curia," meaning care or concern). Her poems record efforts at seeing among terrains that are both foreign (as in her travel poems) and familiar (as in her domestic poems). To detect the possible overlapping of the two – as in the familiarity of the foreign or the foreignness of the familiar – one undergoes a process of re-imagining their previously distinct domains. Particularly in her mid-career and later poems, her repetition generates sites of intensity, creativity, and singularity. As such, repetition discloses a potentiality for immanence, as well as for seeing the familiar landscape and inscape afresh. Turning a Darwinian eye to the miniature, the prosaic, and the overlooked, Bishop enables apperception and self-affection as she seeks human-to-human, human-to-animal, or human-to-object exchanges.

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In 1974, during the same year that the media aired Richard Nixon's resignation, Elizabeth Bishop rented a house off the coast of Maine, traveling to North Haven to distance herself from a nation charged by political double-speak and dissembling (Costello 208). Regarding the political impetus for her retreat, she writes, "Nothing but false rhetoric, bombast, self-righteousness, repetition. G. Stein said Americans

love repetition. She was right. If this is 'witnessing history' – I'd rather not" (Costello 209). The island also offered the occasion for her poem "North Haven," an elegy for Robert Lowell. In her memorial, Bishop re-imagines repetition and temporal witness through her own reflective relationship to the Natural world and its renewable effects upon subjectivity:

In Memoriam: Robert Lowell

I can make out the rigging of a schooner
a mile off; I can count
the new cones on the spruce. It is so still
the pale bay wears a milky skin; the sky
no clouds except for one long, carded horse's tail.

The islands haven't shifted since last summer,
even if I like to pretend they have—
drifting, in a dreamy sort of way,
a little north, a little south, or sidewise—
and that they're free within the blue frontiers of bay.

This month our favorite one is full of flowers:
Buttercups, Red Clover, Purple Vetch,
Hackweed still burning, Daisies pied, Eyebright,
the fragrant bedstraw's incandescent stars,
and more, returned, to paint the meadows with delight.

The Goldfinches are back, or others like them,
and the White-throated Sparrow's five-note song,
pleading and pleading, brings tears to the eyes.
Nature repeats herself, or almost does:
repeat, repeat, repeat; revise, revise, revise.

Years ago, you told me it was here
(in 1932?) you first "discovered *girls*"
and learned to sail, and learned to kiss.
You had "such fun," you said, that classic summer.
("Fun"—it always seemed to leave you at a loss . . .)

You left North Haven, anchored in its rock,
afloat in mystic blue . . . And now—you've left
for good. You can't derange, or rearrange,
your poems again. (But the Sparrows can their song.)
The words won't change again. Sad friend, you cannot change.

(Bishop *The Complete Poems*1-30)

In form and theme, the elegy posits an interrelationship between repetition and semiotic exchange. Bishop configures a three-way semiotic encounter among the poet-as-speaker, the apostrophized dead (Lowell, to whom the poem is addressed), and the poem, figured in the lyric voices of the poem's birds. For her, poetry and science share the same processes of inquiry into the conditions of life. The search for

meaning and desire for discovery – the impetus for the poet – also underlies semiotic exchange. In several of her later works, such as "North Haven," meaning is not conceived as a consequence of a search, but instead exists in the intellectual and affective underpinnings of a repeated encounter.

"North Haven" reveals a broken continuity in a semiotic event, making palpable a multivalent loss: not only the speaker's loss of a friend, but also Lowell's epistemological and psychological losses, as he – unlike the speaker – can no longer engage in the semiotic encounter. Ultimately, "North Haven" elegizes not only a lost contingency, but the dynamic in which contingency becomes a possibility or impossibility. The dynamic encompasses states of estrangement and connection, which are not displaced, but mutually rooted in the affective and intellectual agitations of its tropes: loss and return. The speaker's optical movements from identification to dis-identification and qualification to psychic recognition are worth charting: "The Goldfinches are back, or others like them,/ and the White-throated sparrow's five-noted song/ pleading and pleading, brings tears to the eyes" (16-18). In her qualifying impulse, Bishop privileges a phenomenology that recognizes zones of mutual otherness and shared estrangement, rather than direct (and potentially mis-) identification. She addresses both the potentialities and limits of intersubjectivity and reciprocity. While the sparrow, speaker, and the apostrophized dead – the poem's phantom presence – occupy a site of loss, connection cannot be taken for granted: it may be missed, missing, or made. Whereas the bird's compulsive cry generates an affective response on the part of the beholder and signals a human-animal affective and cognitive connection, Lowell cannot participate in the interpretive, epistemological, and affective processes of sign-making and re-making, although his quoted words can.

Her poem mourns a three-way loss, yet the poem-as-biosemiotic process converses with an opening of novelty and creative possibility. In effect, the sparrows and the poet of "North Haven" can re-constitute sense and acquire new meanings as a result of their losses, while the dead cannot. However, in the discourse of the poem, the dead and undead do meet, as the text becomes the site of biosemiotic exchange. Addressing an apostrophized Lowell, Bishop writes, "You can't derange, or rearrange,/ your poems again. (But the Sparrows can their song.)/ The words won't change again. Sad friend, you cannot change" (28-30). The assonantal rhyme of derange and re-arrange demonstrate a partiality of repetition – a necessary gap between exact correspondence – that mimics the emergence of a creative act; this gap is the source of meaning in her elegy. In the interstices of repetition, such as in the generative friction between slant or visual rhymes, originary meaning can emerge.

Meaning also develops in the semiotic space of call and response. Bishop writes, ". . . The white-throated sparrow's five-noted song/ pleading and pleading, brings tears to the eyes./ Nature repeats herself, or almost does:/ *repeat, repeat, repeat; revise, revise, revise*" (16-20). In its repetition, the word "repeat" contains an immanent elaboration of its meaning. As a compulsive repetition, the word "repeat," which is sonically mimetic of a bird's peet-like cry, discloses the reiterative grammar of bereavement. The public cries or songs ("five-noted" like the poet's heroic pentametrical line) of both humans and animals signal lack, functioning as indicators

of distress and the concomitant need for aid. Compulsively repeating itself and thereby communicating the magnitude of its need, the bird produces an affective response – empathy – in the beholder's universalized "eyes." Ultimately, repetition is not analogized to equivalence, but near-equivalence and intensity.

The speaker's temporal experience of the island, framed as "Nature," is tied to both repetition and absence. The language of repetition discloses the personal work of grief, and the poem's sense of time is concerned with the structure of memory. The interaction of the griever with sensory data gives rise to the making of memory. With attention, the griever can register the temporal evolution of grief, as well as the human and nonhuman relational ties that allow it to evolve and become intelligible to the human consciousness. In distinguishing her immediate appraisal of the island with past encounters, the speaker recognizes a space of distinction, the stimuli for expression and re-orientation: the radical makings of an attitude or sensibility. In the poem, perception is the locus for the communal aspect of memorial-making.

The repetitive nature of the sparrow's call signifies not only the degree of its desire, but honesty that elicits tears, an emotive reply on the part of the beholder. As a signal, the sparrow's cry – in its repetitive cast – conveys the intensity of its need for satiation, operating as a gauge of quality. The sparrow risks the detection of a predator, yet continues to cry. With this persistent cry, the bird converts a compulsive physiological reflex to an honest signal. Similarly, Nature almost repeats itself; as an adverb of degree, "almost" makes difference manifest, while also hinting at language's lack: its failure at approximation. Given its limitations, the adverb fails to describe the quality of its difference, and instead operates as an index of degree.

Similarly, left freestanding, the honest signal may not be sufficient in itself to convey the underlying emotion that prompts its transmission. The gestural repertoire of signs, flags, and semaphores often appear in Bishop's poems in a state of mutual relations with symbolic language, offering a rich linguistic texture structured by the poet's dedication to reliability. In *The Handicap Principle*, Zahavi conceptualizes the necessary interconnectivity of honest signaling and symbolic language in human communication, writing the following:

> The information that nonverbal vocalizations do convey is very exact: they express the degree of feelings much more precisely than words can. For example, the words I am angry do not convey how angry one is; to convey the degree of anger by words alone, one has to use more words: 'I am very angry' . . . Even then, words can express only a few of the infinite gradations of anger that are possible; but nonverbal vocalizations reflect such gradations admirably . . . There is no substitute for the reliability and precision of nonverbal vocalizations . . . [However,] a person listening to a stranger may be unable to relate the intensity of vocalization to the degree of emotion, as the stranger's constant companions can, from past experience. This is especially true among people of different cultures. (222-223)

Zahavi's findings lay the groundwork for a reading of the biological evolution of linguistic communication, as well as the insistence of the honest signal throughout human history. The development of symbolic language, he explains, allowed individuals to communicate with strangers, offering a means to express one's needs or warn others of imminent danger. Individuals outside of one's kin or community could thereby convey information about that which was not immediately apparent or within their line of sight. By extrapolation, symbolic language provided information about events beyond the eye's scope, and yet it still could not operate alone as a litmus test for honesty. Consequently, humans have not jettisoned honest signals (Zahavi 223).

As a strategy for cooperation or reciprocity, the honest signal, in its imbrication with repetition and symbolic language, has significant epistemological, psychological, and political implications. Giving expression to the apparently ineffable and necessitating cooperation between the signaler and beholder, the honest signal communicates what may not submit to language alone. As in "North Haven," the honest signal can be transmitted and received between strangers, even between species.

Figuring as the bedrock for ingenuous communication, the honest signal offers an ethical model for community. Among both animals and humans, the honest signal calls for the signaler and the recipient of the signal to synchronize their respective sensibilities in relation to the signal. "North Haven" touches upon the psychic and biological valences of semiotics as an ongoing process of signaling and sense-making by which both the signaler and recipient have an equal stake in the relationship, meriting their close attention. Perceptual, instinctual and cognitive, these signals return readers and poet to the domain of altruistic behavior. Both must be in a state of affective, ethical, and intellectual melody to receive the signal properly. As Zahavi shows, animals are constantly collecting information about one another, but a message is conveyed only if the individual is interested in the message and sees it properly. A ritualized signal evolves when the observer sees a distinction between past movements and a signal in the present, as well as distinction between the signaling individual and its group (Zahavi 66). In this sense, the signaler does not inflect the signal, but the signal becomes the connective tissue between the signaler and the receiver of the signal: both must be in tune to communicate and respond to the signal appropriately.

With its components of waste and altruism, the birdsong takes on a compulsory cast that causes a breakdown in previously regulatory conditions. The sparrow's altruistic cry in "North Haven," repeatedly vocalized at its own expense, communicates its essential need as it oversteps diametric conceptualizations of difference, such as the past and the immediate, the human voice and the animal voice, as well as the elegy and birdsong. Meaning is conveyed in the sparrow's affect and behavior, revealing an immanence that inheres within repetition. A moment of unanticipated empathy gives rise to re-vision and relation between species.

The transformative potentiality of re-visioning precedents of difference and sameness correlates with Alain Badiou's theorization of an event that generates novelty not via "the outside," through an ex-centric transcendence, but within existing structures. For Bishop, the act of repetition effectuates what Badiou describes as a "transversal of difference" and a subsequent in-difference to previously normative modalities of

difference and sameness (Badiou 98). Both he and Bishop apprehend repetition not as an automatic allegiance to preexisting behaviors or structures, but an event that permits a disinterested re-appraisal of difference. The emergence of truth involves – for both – in-difference, a state of becoming indifferent to patent differences (Badiou 98). In-difference is potentially revolutionary, an affirming process that does not resolve a dialectic into a single meaning or truth, but that enables a re-conception of difference itself. To be on the lookout for the event, which entails for Bishop a naturalist's eye, is to be aware of the ceaselessly evolving processes of communication, which always call back to an origin. The poem enacts a Badiou-like in-difference in the moment of honest signaling, displacing habitual patterns of thinking and feeling and setting into relief the altruistic and universal dimensions of the honest signal. Bishop favors the potentialities that inhere in a two-fold semiotic system, including the horizontal reverberations of symbol, metonymy, and permuting similes, as well as rhetorical, lexical, and syntactical honest signals. Where language does not adequately convey quality or degree of intensity, the honest signal can.

For Bishop, the consummate traveler and translator, the desire to communicate across cultural and geographic borders was real, and yet also cautious, self-regulated. Interrogating her tourist's eye, Bishop registers its potential to mis-identify or mis-represent that which is foreign to it and transfers her cautious optics to her travel poems (Costello 152). Her poems present a beholder whose conscientiousness is actualized in her resistance to a self-projective or proprietary spectatorship. As Costello argues, Bishop's poetics are committed to questions of mastery, which are particularly prominent in the travel genre. In her study, she writes, "Travel is a constant challenge to the boundaries of culture and selfhood and an expression of their frailty" (Costello 10). She charts in Bishop's poems an "ordering mind" that expresses both desire for and resistance towards a dynamic of mastery that the poet recognizes as illusory and potentially perilous (Costello 10). She argues that Bishop's penchant for order finds itself at odds with an agitated inner life and the slapdash messiness of a "recalcitrant world." Nevertheless, the poet confronts and often delights in the mess, engaging an "excursive vision" that resists an optical proprietary claim or vision's conventionally normalizing or regulatory role (Costello 2-3).

Additionally, Costello posits that Bishop's travel poems engage with themes of memory, writing, "The traveler through space becomes a traveler through time as poems of witness become poems of remembrance" (11). Both a travel poem and a memorial, "North Haven" transverses space and time to construct not only an elegy, but also a map of the optical-cognitive process that makes memory and recognition possible. The poem's epigraph foregrounds the memorial in an activity of apperception that turns to lyrical re-perception. The phenomenology of the poem flexes between a microscopic and macroscopic optics, visual elasticity acting as the understructure for consciousness and memory, as the speaker attends to her own subjective realignments between the past and present. Repetition girds this process; the capacity to make out rigging or count new cones on a spruce indexes the subject's repeated acts of perception that are involved in processes of identification and memory-making. Through repetition, Bishop works through the relativism of memory, which can be ephemeral or as seemingly immediate as the present, depending upon the subject's perspectival relationship to the past and the affective

conditions by which the memory arises in the consciousness. Such a phenomenology locates immanence within repetition; this dynamic within the elegy is consoling for multiple reasons. “North Haven” does not ritualize grief so as to stabilize memory, but rather copes through a conception of time that summons the past alongside the unfolding present.

Repetition, in Bishop’s hands, is securely fastened to the cognitive and affective aspects of recognition, contingent – of course – upon memory, as well as perspective in all senses: spatial, temporal, optical, and subjective. “North Haven” conceptualizes repetition as both structure and stimulus for memory, as well as for the imagination: “The islands haven't shifted since last summer,/ even if I like to pretend they have/ — drifting, in a dreamy sort of way,/ a little north, a little south, or sidewise” (6-9). As though anticipating her own future readings of the poem, she constructs a poem invested in re-activating apperception and in articulating repetition’s conjugal relationship to the imagination. As such, the re-read poem possesses an energy that has an infinitely renewable relation to subjectivity.

The speaker in Bishop’s mid-career poem, “Filling Station,” undergoes subjectivation through active attendance to the other. In her study, Costello gestures to the altruistic dimension in this poem, as it performs perspectival realignments at the speaker’s own expense (Costello 38). The speaker of “Filling Station” first confronts the grime of the station from a classed, feminized point of view that responds to her environment with disgust (Costello 38). However, the speaker searches for a home amid the filth that had initially repulsed her. The poem marks a classed and gendered difference between the beholder of the filling station and the family who had resided and presumably worked there. In her search, the speaker happens upon tokens of domestic care: a doily, an “extraneous” plant, and an arrangement of cans, signs of what Costello describes as a “creative impulse . . .small attempts at aesthetic order which express affection” (Costello 39). The final stanza of Bishop’s poem evolves through repetition: anaphora, a loose iambic meter, rhyme (such as “doily” and “oily,” a mere letter apart from one another) and a reiterative onomatopoeic honest signal. An unnamed female presence places the cans in order “. . . so that they softly say:/ Esso—so—so—so/ To high-strung automobiles./ Somebody loves us all” (Bishop *Complete Poems* 38-41).

In these final lines, the repetitive “so” sounds that emerge out of ESSO, which are the initials of Eastern States Standard Oil, are also – according to Bishop – the signals repeated to console a horse (Bishop *One Art* 638). Significantly, the personified cans identify their contents by their brand name; however, the branded objects – in their repetitive act of utterance – shrug off their identifications and are actualized as de-branded subjectivities. In turn, an activity initially of repetitive naming undergoes a linguistic and semantic torque and becomes a repeated gesture of consolation. A recognizable name for a corporation becomes a three-syllable affectively charged sound: one of consolation.

Accurate discernment is carried out by the speaker’s imagination, as she reads the cans’ utterances as honest signals undertaken in a process of altruistic (de-) identification and exchange with the “high strung automobiles.” Gesturing towards the

limitations of representation, Bishop grants the cans ethical agency. The cans attend solicitously to "high-strung automobiles;" their careful labor rhymes with that of the maternal presence in the household and the speaker's curious search of the filling station. As in Badiou's theorization of universalism, the poem's semiotic exchanges proceed out of difference or separation, yet ultimately render existing precedents of difference obsolete. A spirit of care is exchanged between human and non-human presences, making their mutual subjectivation immanent.

Uncovering tokens of conscientiousness in the home, the speaker collides not with an impasse of irreconcilable dualisms, but instead she comes to inhabit a state of in-difference to formerly normative differences of gender and class. Prompted by curiosity, the speaker seeks the trappings of a home and finds a vestige of maternal concern. She thereby passes beyond her initial repulsion to happen upon tokens of love. In *St Paul: The Foundation of Universalism*, Badiou reads St Paul's vision of love as the force that "alone effectuates the unity of thought and action in the world" (Badiou 91). In their symmetrical arrangement, the cans reveal a "consoling" presence in the household that extends to a universal "us," encompassing both the human and non-human.

Each presence in the poem undergoes subjectivation through active attendance to its "other." Of St Paul's conceptualization of this labor, Badiou writes, "Paul has the intuition that every subject is the articulation of a subjectivation and a consistency . . . the subject has to be given in his labor, and not only in his sudden emergence. Love is the name of that process" (92). The beholder's efforts at looking and understanding the presences within the household convey an optical-ethical orientation consonant with Badiou's formulation. Instead of positing a single law that supplants life's spontaneity with automatism, both Bishop and Badiou envision repetition as an event traceable to an originary need: love (Badiou 92). Re-imagining the cans beyond their branded and mechanical objectness gives rise to a semiotic encounter between human and object, which is interwoven with a sudden awareness of the material and psychic underpinnings of sentience itself – an empathetic awareness prompted by objects.

Bishop generates the consciousness-heightening experience of feeling an object's capacity to stir empathy. Her brand of repetition is securely fastened to the cognitive and affective aspects of recognition, contingent upon memory and perspective. Identifiable at the moment of its own praxis, the honest signal, as discussed, distinguishes itself from common patterns of behavior, possessing a revolutionary potentiality within its own enactment. Perhaps Bishop's poems, traditionally read by critics as formally inflected, can offer a new vantage for considering the question of form via a posthumanist reading of the signal. In her poetics, repetition's formal qualities have biological and social valences; her repetition is not just an aesthetic, rhetorical, or metrical concern, but an investment in developing authentic structures of communication that are not confined to a human realm. Her use of repetition, placed in conversation with biological forms and structures, can serve as a point of inquiry for how we – human beings and animals – forge relations and social practices, how we communicate "honestly," and how we might begin to reinvent ourselves and each other as actors in the social world.

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Consciousness, Ethics and Dostoevsky's Underground Man

Tom Dolack

> Imagine: inside, in the nerves, in the head – that is, these nerves are there in the brain . . . (damn them!) there are sort of little tails, the little tails of those nerves, and as soon as they begin quivering . . . that is, you see, I look at something with my eyes and then they begin quivering, those little tails . . . and when they quiver, then an image appears [. . .]That's why I see and then think, because of those tails, not at all because I've got a soul, and that I am some sort of image and likeness.
> —Fyodor Dostoevsky
> *The Brothers Karamazov*[1]

Few authors are more renowned for their insight into human psychology than Fyodor Dostoevsky. It is ironic that while he is most well known for his portrayals of the dark side of human nature in characters such as Raskolnikov in *Crime and Punishment*, Ivan in *The Brothers Karamazov*, or most of the characters in *Demons*, Dostoevsky only portrayed the dark as a means of showing how to get to the light. It can be too easy to focus on the Grand Inquisitor and to forget about the humble Zosima or to let Raskolnikov take away from the example of Sonya. There is perhaps no better example of this disconnect between good models and bad than *Notes from Underground*. It is one of his shortest novels and lacks the emotional volatility and extreme acts of many of his other works: no murder, no devil, no gambling addiction, no rape of a small child. Nevertheless it is one of his most ambitious undertakings. A book largely focused on the issue of free will and human consciousness, the narrator imposes his will on others in the only way he is able, by making others acknowledge his suffering by forcing some of it on them. Dostoevsky renders the narrator objectionable through a similar imposition on the reader. Furthermore, it is precisely through the reader's experience of the narrator's suffering that the book exercises its moral effect on the reader. That is to say that as a result of the text the reader's future interactions with people will be changed. What I would like to examine is how this effect is possible. I will argue that the foundation of literature's moral efficacy is the very consciousness that Dostoevsky's Underground Man is obsessed with, although due to mechanisms that Dostoevsky never could have imagined.

To be clear, there are many cognitive processes that underlie our ability to read and appreciate literature. I do not intend to examine here the capacity to understand what happens in narrative in terms of causality,[2] of understanding the internal world of characters through Theory of Mind[3] or to empathize with characters.[4] Instead, I will focus on the cognitive mechanisms by which what we see, hear or read becomes part of our self. "The self" can be a very vague term, but a cognitive approach can give us one way of specifying it. The self is the result of the sum total of an individual's experiences and memories, including the "virtual" experiences of fiction, and this self is the basis of future interactions. More to my point, it is consciousness that mediates the updating of the self and so enables fiction to change the self. It is therefore

consciousness that is the foundation for the ethical power of literature. All authors make use of this power, but certain authors take advantage of it more than others. I contend that one of the reasons for the success of Dostoevsky is that he uses this universal mechanism more effectively than many other authors.

To understand how narrative is able to change us through consciousness, it is important to keep in mind the nature of consciousness. Mind and brain are not two different things. Consciousness is not a separate substance from the brain; it is a product of what the brain does, even if the exact process is not fully understood. Consciousness is affected by injury to the brain: a stroke can knock out our ability to be conscious of highly specific things such as color, movement or even a full half of our visual field. Even more bizarrely, people with "blindsight" can lose the ability to see, yet still be somewhat conscious of what is before their eyes.[5] Cutting the connection between the hemispheres of the brain can result in a limited splitting of consciousness, each hemisphere aware of a separate half of the visual field. The variety and specificity of these possible deficits goes to show that consciousness is part of what the brain does and that the unified, seamless thing we call consciousness is really the end result of many separate processes, all focused on highly specific inputs that are integrated together. These deficits show that the brain does not behave like the old science fiction cliché of the brain in a jar. While mental functions are localized in the brain, the brain is part of the body and is connected with it.[6] The body affects the brain and vice versa. It should come as no surprise that experiences that have physical effects in addition to intellectual will leave a deeper mark on our psyche.

The question it leaves is why that is the case, and how something as airy as "changing who we are" (even slightly) can be instantiated physically. Consciousness, I contend, is an important aspect of the relationship between the self and other because it is where the physical and the mental, the outward and the inward, meet; it is the source of lived experience and thus where it can become part of who we are in a deeper way than, for instance, memory or imitation allow. It also allows for the analysis of the subjective experience of a text, its fundamental aspect for a reader. Over the last decade or two we have begun (but only begun) to understand what are called the neur(on)al correlates of consciousness.[7] This basis is useful in understanding how we internalize what we take from our environments, including virtual environments.

The scientific study of consciousness is one of the most active cottage industries in science, at least judging by the barrage of books that have come out on the topic in the last decade or so.[8] Of all the approaches to consciousness,[9] the most relevant to the processing of the arts appears to be that of Antonio Damasio. For Damasio, consciousness as we generally think of it is the last step in a long process. At the base of this process is what he calls the "protoself," on top of which is placed "core consciousness." The protoself is essentially an unconscious neural map of a person's physical state at a given instant. As we go about our daily lives, the brain produces a continually-updated map of the body. In addition, it also maps all the objects and people we come into contact with. These various maps are the first level of consciousness. On the next level, the brain produces a map of the relationship between the protoself and non-self objects or people. Core consciousness is a result of this

second-order mapping. As Damasio phrases it: "core consciousness occurs when the brain's representation devices generate an imaged, nonverbal account of how the organism's own state is affected by the organism's processing of an object."[10]

It is important to note that in order to create core consciousness, "it does not matter whether the object is present and interacting with the organism or is being brought back from past memory."[11] In other words, a memory of an object is just as capable of producing core consciousness as the object itself. If, at this level, a memory is treated identically to a present object, then a purely fictional object should be just as capable of producing core consciousness. Damasio has more recently hinted as much: "As in the case of actual motor interactions with an object, recalled or imaginary motor interactions can modify the protoself instantly."[12] Imaginary interactions (including narrative) would thus be capable of affecting (and effecting) our selves on a basic cognitive level.

Core consciousness, however, is only the foundation of what we commonly refer to with the term "consciousness," which more closely resembles what Damasio calls "extended consciousness." This emerges out of additional levels laid on top of core consciousness. To begin with, every time core consciousness is produced – hundreds of times a second – a new "core self" is produced and records the changes made to the protoself through interaction with the external world. The core self is like a still frame of the self in its environment. When these still frames are put together, if we extend the metaphor, to form a movie of an individual's life we get the "autobiographical self." The autobiographical self is in turn dependent upon "autobiographical memory," or the ability to recall past instances of core consciousness. That is, the newest frame in the reel can be affected by any other frame in the movie if brought into the present through memory.[13] "Extended consciousness occurs when working memory holds in place, simultaneously, *both* a particular object *and* the autobiographical self, in other words, when *both* a particular object *and* the objects in one's autobiography simultaneously generate core consciousness."[14] Consciousness as we generally conceive of it, then, is the result of the interaction between our physical selves, our environment and our own lived history including our mental repertoire of memories and stories. In this sense the stories we hear or read are part of who we are and how we experience the world.[15]

Indeed, our innate narrative impulse may do more than simply change our selves, but may be how those selves are instantiated to begin with: "Implicit storytelling has created our selves, and it should be no surprise that it pervades the entire fabric of human societies and cultures."[16] Thus the fireside hunting tale, the bedtime story, the soap opera and the Realist novel are all products of our consciousness at the same time that they shape that consciousness.

There are several things worth underlining about this account. Fundamental to Damasio's conception of consciousness and the self is the idea of mapping. The brain is constantly updating maps of the self, non-self objects (including memories) and the relationship among all of them. It is on the basis of this map of the self – or simply, the self – that value can be calculated, how we decide what is worth our attention or an expenditure of energy in the interest of homeostasis. As the self changes, what is

valued changes and hence how it reacts, interacts, and behaves changes.[17] Memory alone is in comparison rather passive and can only change self by updating the self through consciousness. One level of the implications of this is inherently ethical. The self is *relational*.[18] It exists only as so far as it interacts with the non-self – including both the "outside" world of other beings and things and the "inside" world of memories and imagination. The self is created through its interactions with others, and it is through those interactions that individual values are established and changed. I argue that this represents the arts' most *direct* influence on the self. There are of course other ways of influencing people such as presenting models for imitation or rules to be followed or information to be considered. But these are all indirect influences on our decisions because they are non-self objects (although potentially powerful ones). Consciousness is the only means of directly affecting the self that establishes value. It is also my contention that the emotional coloring of what we process affects how it is valued and mapped and therefore how strongly it affects our selves. Our emotions are our quick and dirty evaluation system. They tell us how to think of something or someone without requiring the expense of prolonged thought.[19] Thus, not only real events, but narratives that are emotionally tinged can change us more effectively.

This brings us back to fiction in general and my specific example, Dostoevsky. For those not familiar with the novel, some background and interpretation are necessary. The novel is split into two halves with the first, but chronologically later, part consisting largely of a philosophical disquisition on the psychological problems of the narrator (who is nameless, but is generally referred to as the Underground Man). The second half tells a story from the Underground Man's past when he attempts to gain the friendship of a group of old classmates and almost begins a relationship with a young prostitute (this is Dostoevsky, after all). These failed attempts at companionship seem to mark his last chance to get out of his "underground" existence and the man we see at the start of the novel is the result of the decisions taken at the end.

The Underground Man is arguably the greatest example of tortured self-awareness in modern literature. As Bakhtin shows, nearly his every word is said in anticipation of and then in reaction to the reader's response. The novel begins: "I am a sick man . . . I am a spiteful man. I am a most unpleasant man. I think my liver is diseased. Then again, I don't know a thing about my illness; I'm not even sure what hurts. I'm not being treated and never have been, though I respect both medicine and doctors."[20] The opening is simple enough: he is sick. But he does not want pity (the ellipses mark an internal dialogue and could be virtually inserted at the end of every sentence in Part One), so he claims he is "spiteful."[21] "Spiteful" makes too negative an impression and so he pulls back to merely "unpleasant." He then feels the need to give a reason for his unpleasantness and blames his liver. This could elicit too much sympathy from the reader so he claims to not really know what his problem is and takes back the diagnosis.[22]

And so on and so on for another twenty-five pages. This constant back and forth, this implicit dialogue with the reader, is a symptom of what he calls his "hyperconsciousness." This "disease" leads him to an overawareness of and an

oversensitivity to several things.[23] He becomes too conscious of outside influences on his actions, which leads him to doubt his ability to act as an independent agent. This in turn makes him doubt free will and consequently makes him that much more desperate to prove that he has free will, even if it means acting opposite to his own best interests. He is also all too cognizant of the ideals of love and beauty put forth by art and literature and how far short he falls of them. The doubt impedes him from doing anything at all while the ideals drive him to increasingly desperate acts in an attempt to gain the love and respect of his fellow man.

The purest example of this dilemma is the Underground Man's description of the toothache. For a man afflicted with hyper-consciousness there is (in a time before the advent of modern dentistry and anesthesia) nothing that can be done about a toothache and nobody to blame for it. It is simply a result of the mechanistic laws of nature. The only thing one can do (according to the narrator) is moan, and in so doing inflict some share of one's own pain on other people. This solves both conundrums in that it is an act of free will (even if, or even because of the fact that it is, an irrational act) and it establishes some relationship with other people, even if the relationship is sadistic. It is a spiteful act of a spiteful person, but it is what is left to him because of his hyperconsciousness.

Part II of the novel is the practice of the theory of Part I. It also shows, if obliquely, a way out of his vicious circle, even if he doesn't take it. Succumbing to his periodic need for substantive human companionship, he goes to see an old school friend (who barely tolerates him). While there he invites himself along to a farewell party for Zverkov, another classmate. The Underground Man cannot stand Zverkov, but he is too self conscious to renege. His classmates drink and discuss everything from art to Zverkov's future amorous exploits. All the Underground Man can do is pace back and forth in an attempt to gain some form of recognition.

> I had the forbearance to pace like that, right in front of them, from eight o'clock until eleven, in the very same place, from the table to the stove and from the stove back to the table [. . .] my head was spinning from all those turns; there were moments when it seemed that I was delirious. During those three hours I broke out in a sweat three times and then dried out [. . .] It was impossible to humiliate myself more shamelessly or more willingly, and I fully understood that, fully; nevertheless, I continued to pace from the table to the stove and back again.[24]

The Underground Man, as with the toothache, makes others take notice of him by means of his own pain. It may be excruciating for him, but others have no choice but to acknowledge his existence, even if that acknowledgement takes the form of intentionally ignoring him. It is the best he can hope for. It is also through telling such painful stories that he can force himself into the consciousness of his readers, the "gentlemen" that he continually addresses. But we must remember that we the readers are also among these "gentlemen" and we experience some of this anxiety in reading as well. Just as his "enemies" are forced to deal with him through his self-injury, so the reader must deal viscerally with the Underground Man's plight because of the anxiety his tale causes.

Where the Underground Man succeeds in small fashion in making others share his pain, Dostoevsky succeeds more broadly in conveying the Underground Man's existential angst. He does it so well, in fact, that it easily overshadows the example of the young prostitute Liza who tries to love him despite knowing the depth of his "disease" and his need to dominate others. If anyone is more degraded than he, it is she, and yet she finds a way to rise above her situation morally and love the Underground Man. However, he rejects her love and he misses his last chance to emerge from the underground. From the first half of the novel, we know where he winds up twenty years later. But her example does not mark us the way that his does. We do not respond viscerally to it, merely intellectually, and therefore we fail to respond to it as strongly because visceral, emotional reactions change us more – affect our value-attributing self more – than intellectual or purely moral arguments can.[25] As Daniel Kahneman demonstrates, our quicker, but dirtier, mental faculties (what he calls system 1) take precedence over our slower, but more accurate faculties (system 2).[26] The Underground Man pitches himself to system 1 and we focus immediately on him. Liza's actions must be appreciated with system 2 and so require focused attention. Whereas our (presumably) negative reaction to the Underground Man is instantaneous and unconscious, Liza requires specific conscious attention. We must *choose* to think about Liza.

All authors want to have some effect on their readers, even if they claim their primary readers are themselves. Dostoevsky clearly had larger-than-normal goals in this regard. Although his plots were "ripped from the headlines," to use the cliché, he used the contemporary and the local to address what he thought was universal: the nature of free will, despotism, murder, God, violence, suicide. At times he lays things on so thick he can fall into self-parody, but his ethical concerns are unmistakable. Dostoevsky wants to change Russia and even the world as a whole, but he understands that to do that he has to change his readers. He likely did not worry about how exactly such a thing was possible – indeed, as the epigraph makes clear, he would have shuddered at the materialism of this approach – he just assumed that it was possible based on tradition and past experience. Pushkin, Gogol, and Lermontov certainly had achieved outsized influence on the Russian intelligentsia. With his sense of human psychology he intuited that if the Underground Man can inflict some portion of his angst not only on others in the novel (appealing to System 1), but on the reader as well, his words would have a larger effect. Unfortunately, he may not have anticipated that this would also lead to the novel's positive message (which requires System 2) being swamped by the negative.

Perhaps the most exciting thing about approaching the classics of world literature from a cognitive perspective is not necessarily any new insight we can gain into the texts themselves, but the appreciation we can gain for how those works engage us. An understanding of the relationship between consciousness and narrative can give us an appreciation of how an artist is able to change who we are. Thus, there is empirical evidence for the contention that what we read becomes part of our self and this therefore has ethical ramifications.

Notes

[1] Fyodor Dostoyevsky, *The Brothers Karamazov* (NY: Norton, 1976), Book 11, Chapter IV, 557. I would like to extend my thanks to the editors of the journal for their helpful comments on earlier versions of the manuscript.
[2] Alison Gopnik, *The Philosophical Baby: What Children's Minds Tell Us about Truth, Love, and the Meaning of Life* (NY: Farrar, Straus and Giroux, 2009), 31-43.
[3] Lisa Zunshine, *Why We Read Fiction: Theory of Mind and the Novel* (Columbus: Ohio State UP, 2006).
[4] Patrick Colm Hogan, *What Literature Teaches Us About Emotion* (NY: Cambridge UP, 2011).
[5] See, inter alia, Adam Zeman, *Consciousness: A User's Guide* (New Haven: Yale UP, 2002), 197-239.
[6] A point most prominently made by Antonio Damasio. *Descartes' Error: Emotion, Reason, and the Human Brain* (NY: G.P. Putnam, 1994).
[7] Christof Koch, *The Quest for Consciousness: A Neurobiological Approach* (Englewood, CO: Roberts and Co, 2004).
[8] E.g. Susan J Blackmore, *Consciousness: An Introduction* (Oxford: Oxford UP, 2004); Koch, *Quest*; Francis Crick, *The Astonishing Hypothesis: The Scientific Search for the Soul* (NY: Scribner, 1994); David John Chalmers, *The Conscious Mind: In Search of a Fundamental Theory* (NY: Oxford UP, 1996); Gerald M. Edelman, *Second Nature: Brain Science and Human Knowledge* (New Haven: Yale UP, 2006); Gerald M. Edelman, *Wider Than the Sky: The Phenomenal Gift of Consciousness* (New Haven: Yale UP, 2004); John R. Searle, *The Mystery of Consciousness* (NY: New York Review of Books, 1997); Zeman, *Consciousness*; Daniel Bor, *The Ravenous Brain: How the New Science of Consciousness Explains Our Insatiable Search for Meaning* (NY: Basic Books, 2012); Giulio Tononi, *Phi: A Voyage from the Brain to the Soul* (NY: Pantheon, 2012).
[9] Despite the territoriality of some of the discussion, many of the approaches dovetail, or at least are not mutually exclusive. Overviews of many of the main approaches are collected in *The Blackwell Companion to Consciousness*, ed. Max Velmans and Susan Schneider (Malden, MA: Blackwell, 2007), 223-484.
[10] Antonio Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (NY: Harcourt, 2000), 169.
[11] Damasio, *The Feeling of What Happens*, 170.
[12] Antonio Damasio, *Self Comes to Mind: Constructing the Conscious Brain* (NY: Pantheon Books, 2010), 204.
[13] The process can work in the reverse direction as memories can be slightly rewritten every time they are accessed and then "reconsolidated": Joseph E LeDoux, *Synaptic Self: How Our Brains Become Who We Are* (NY: Penguin Books, 2003), 161-62.
[14] Damasio, *The Feeling of What Happens*, 222.
[15] There is nothing specifically new about this general idea – indeed it is central to several forms of therapy, including narrative therapy – but most approaches to this idea posit memory as the system by which we are changed. While that is certainly the case, consciousness allows for a broader influence on the self. See Michelle Scalise Sugiyama, "The Forager Oral Tradition and the Evolution of Prolonged Juvenility," *Frontiers in Evolutionary Psychology* 2 (2011), 1-19 (10) and John Tooby and Leda Cosmides, "Does Beauty Build Adapted Minds? Toward an Evolutionary Theory of Aesthetics, Fiction and the Arts." *SubStance* 30 (2001): 6-27.
[16] Damasio, *Self Comes to Mind*, 293.
[17] Damasio delves into the neurology behind his theory, but it need not detain us here. It should be noted, however, that the self is distributed across multiple parts of the brain. The self does not reside in a single place; there is no homunculus.

[18] In this there is also something Bakhtinian as well. For Bakhtin language is inherently dialogic and shared. His famous dictum that "The word in language is half someone else's" can be applied to consciousness in that consciousness is always consciousness of something or someone. Bakhtin, M.M., "Discourse in the Novel." In *The Dialogic Imagination: Four Essays by M. M. Bakhtin*, ed. Michael Holquist, trans. Caryl Emerson and Michael Holquist (Austin: U of Texas P, 1981), 293.
[19] Joseph E. LeDoux, *The Emotional Brain: The Mysterious Underpinnings of Emotional Life* (NY: Simon & Schuster, 1996).
[20] Fyodor Dostoyevsky, *Notes from Underground: A New Translation, Backgrounds and Sources, Responses, Criticism*, trans Michael R. Katz (NY: Norton, 1989), 3.
[21] The Russian "*zloi*" can be translated many ways including evil, wicked, malicious, angry or just simply bad. "Spiteful," however, is the standard translation since the noun form, "*zlost'*," another key word, is best translated as "spite" in the rest of the novel.
[22] See M.M. Bakhtin, *Problems of Dostoevsky's Poetics*, ed. and trans. Caryl Emerson (Minneapolis: U of Minnesota P, 1984), 228. I do not pretend that my reading of Dostoevsky is original and it owes much to Bakhtin's *Problems* in particular. Rather, the reading is intended to support my application of consciousness studies to literature more broadly. For other useful approaches see Robert Louis Jackson, *Dostoevsky's Underground Man in Russian Literature*, ('s-Gravenhage: Mouton, 1958), 31-48; Joseph Frank, *Dostoevsky: The Stir of Liberation, 1860-1865* (Princeton: Princeton UP, 1986), 310–47; James P. Scanlan, *Dostoevsky the Thinker* (Ithaca: Cornell UP, 2002), 57-80.
[23] It is clear from Dostoevsky's note on the first page that he believes this hyperconsciousness is a result of "general circumstances" and "actually must exist in our society" and is therefore a more general diagnosis of Russia rather than a peculiarity of the narrator, even if he has contracted a particularly strong case of it. It is clear that the target Dostoevsky has in mind is the materialist and nihilist thinking so in vogue in the previous decade. Dostoyevsky, *Notes from Underground*, 3.
[24] Dostoyevsky, *Notes from Underground*, 54.
[25] Martha Nussbaum is clearly right to point out that "emotional response can sometimes be not just a *means* to practical knowledge, but a constituent part of the best sort of recognition or knowledge of one's practical situation." Martha Nussbaum, *The Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy* (NY: Cambridge U P, 1987), 15-16.
[26] Daniel Kahneman, *Thinking, Fast and Slow* (NY: Farrar, Straus and Giroux, 2011).

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Savouring the View: David E. Cooper's 'Daoist' Philosophy of Nature

Ben Irvine

Abstract: *The question of how a person might live in an appropriate relationship to nature is not only of intrinsic philosophical interest but of increasing relevance in the modern world. David Cooper has injected new vitality into current debates by articulating a philosophy of nature inspired by the ancient wisdom of Daoism, which holds that by cultivating a convergent relationship with the natural world individuals can achieve greater virtue in their outlook and comportment. While highly revealing in many ways, Cooper's position is based on a perspectivism which lends itself to a misleading kind of nostalgia, and to an excessive antagonism to science and collective action. These attitudes, in turn, translate into a misconstrual of the benefits and problems of modernity.*

How might a person live in an appropriate relationship to nature? In our time of growing environmental understanding and anxiety, any attempt to provide a dedicatedly philosophical answer to this question may seem brazen and foolhardy – as if to venture naively into a minefield of criticism and censure. After all, even environmentalists themselves cannot guarantee each other safe passage – the intellectual terrain keeps shifting, like the sands of Morecombe Bay, as evidence and debate accumulates.

Yet David Cooper, one of the world's best and most underrated philosophers, is an apt tour guide. His work is syncretic but always precise, combining flexibility with steadiness and unwavering focus, as if steering a coil of good sense along a convoluted wire of truth. Adept at avoiding extreme or one-sided views, Cooper rarely sets off the buzzer of falsehood. In this essay, I reconstruct the journey he takes in his new book, *Convergence with Nature: a Daoist Perspective* (Cooper 2012; henceforth *CN*), suggesting a few places where I believe he errs.

1. The personal and the profound.

Cooper announces and defends his philosophical methodology by declining, in the main, to engage with "strident" (*CN*: 10) environmentalist concerns; he hopes to avoid getting bogged down in issues of "collective action" (*CN*: 9) which, he says, are mostly irrelevant to the question of how an individual person should relate to nature. To ward off any knee-jerk charges of "egotism," "moral indifference" or "nihilism" against his emphasis on "self-cultivation" (*CN*: 8-9), Cooper suggests that a "concern for the good of the self" is not without "implications for the enlightened treatment of other people," and that "reflection on one's personal relationship to nature is not disjoined from ethical reflection" (*CN*: 10). We are promised, in effect, two for the price of one.

At the heart of Cooper's project is a desire to bring to the reader's attention how profound and inspiring the natural world can be when experienced through a certain kind of grateful awareness. Each person will no doubt be able to recall his own treasured exemplar of such an experience. Mine heralds from Cooper's own beautiful county, Northumberland, and especially its tiny rural fishing village of Craster. Looking along the shore, you can see the craggy ruins of Dunstanburgh Castle shimmering against the misty sky ahead, with sheep grazing on bright green pastures below, while the North sea, the colour of grey glass, is flecked with white threads as it surges against rugged black rocks where the land slopes away. There is something perennially life-enhancing about that scene, and Cooper's book seeks to explain why.

2. Oneness and ephemerality.

Nature's profundity doesn't shine through only in places of wilderness – it can happen, Cooper notes, in any encounter with animals, plants and natural places, including "humanised" (*CN*: 8) or "cultivated environments" (*CN*: 119) such as farms and parks. What all these have in common is that our experience of them can be enhanced – whether deliberately or epiphanically – by a mood of "convergence." In this mood, Cooper explains, we see nature in a certain light. Above all, in the very act of recognising nature as a single object of awareness, we see its "oneness" (*CN*: 68). We realise that everything is indelibly linked to everything else – in "an interconnected whole" (*CN*: 53). To be sure, this is a far-reaching realisation, yet it is *deep*, not superficial. It points us to the core of all things, to what they share.

Yet what we discover at these depths is "ephemerality" (*CN*: 96); that all objects and life-forms must end up "dissolving" (*CN*: 53). A Schopenhauerian would say that we encounter in nature a scene of conflict, a battlefield wherein all things compete for a fleeting existence; a more sanguine commentator might observe a harmonious scene of mutual dependencies, wherein nothing can exist without sustenance, inevitably finite, from without. Cooper eschews anthropomorphic stances like these (*CN*: 96-101), noting simply that nature exhibits the "temporary character of all life," and our experience of this fact is "tempered by sorrow" (*CN*: 96).

When it comes to my own experience of nature, I can certainly vouch for such "melancholic sensitivity" (*CN*: 96). So strong is the connection between Craster and my sense of mortality, I've always said that I would want my ashes to be scattered there. But obviously I wouldn't say that unless I had some affection for the place and what it represents to me. That's the thing about recognising nature as what it truly is, as a unity founded on transience: the whole edifice looks undeniably, unimaginably wonderful. Not uniformly beautiful and not without suffering, but never without wonder. It is an intricate, efflorescing scene you don't want to miss out on. It invokes a sense of death yet also the deepest appreciation for life.

3. Mindfulness and attunement.

The desire to bear witness to nature, and to feel thereby such "sober joy" (*CN*: 96), hints at another aspect of Cooper's notion of "convergence." When a person responds to nature in a convergent way, his "enjoyment is in part 'reflexive,'" or "mindful"; for example, in enjoying a forest, a person "takes pleasure not only in the forest

environment, but also in his . . . having the forest *as* an environment" (*CN*: 114). In other words, a person enjoys the forest partly through *being aware of being there*. Importantly, this mood doesn't imply that a person is detached from the forest – a soul haunting it like a will-o-the-wisp. On the contrary, a person's "wish to converge with nature reflects an appreciation of . . . there being no dualistic divide between him and the world" (*CN*: 79): such an "opposition of 'self and other' . . . occludes an attentive openness to things" (*CN*: 91). Indeed, convergence requires a person to be an "engaged participant": mindful, but no "mere spectator for whom forests, rivers, and mountains are 'scenery'" (*CN*: 112).

A "direct acquaintance with nature . . . is simply a more effective teacher than any book or lecture" (*CN*: 52), Cooper insists. In experiencing convergence, we undergo a "tuning [of] the mind as a whole," as if from "darkness to light." Furnishing us with a new "orientation," "the change is one in sensibilities, in attunement to the world": these "sensibilities learned through acquaintance with the rhythms and spontaneous processes of natural life then become available to people when considering the direction of their own lives" (*CN*: 52).

Nature's educative role is at the heart of the "Daoist perspective" promised in Cooper's subtitle. Throughout the book, he quotes heavily from the *Daodejing* and *The Book of Zhuangzi* – texts, dating from the third century BCE, which articulate the notion of the *Dao*, or "Way." Roughly speaking, the Way is a term of art which subsumes the notions of profundity, oneness, transience, efflorescence and wonder to be found in the natural world – these comprise nature's Way, if you like – while also harbouring a pedagogical meaning. As Cooper notes, "a way – a path for instance – typically goes somewhere; it has a destination; it leads or guides those who are on it" (*CN*: 16).

Where does the Way lead? Its trajectory is frequently compared in Daoist texts to that of flowing water, and this analogy elucidates the convergent mindset of the "sage." Cooper explains:

> Water has no shape of its own, but takes on that of its container; it flows freely, but typically along a course or channel; agitated water does not reflect its surroundings, whereas still water does; clear water, while it reflects well, is itself hard to see; water does not 'contend', but flows past obstacles to its destination; water flows downward to lie at the lowest level of a place. From these observations, implications are drawn for the proper conduct of human life. Some of these are not obvious, which suggests that the analogy is doing real work in generating, not just poetically expressing, comparisons between water and human life. Guided by the model, the sage will respond in a supple way to circumstances; maintain stillness and clarity of mind, while recognizing the difficulty of describing this state; act in a 'feminine', non-contending manner; and feel no shame in occupying a lowly station in society. (*CN*: 51)

Cooper summarizes these qualities variously: "in his actions, gestures, demeanour and speech, the sage shows himself to be responsive yet steady, focused yet spontaneous, firm but flexible, reserved but accessible" (*CN*: 77), "alert and mindful" (*CN*: 78). He

is “gentle, respectful, tolerant and compassionate” (*CN*: 76). He shows “patience” and has a well-looked after body (see *CN*: 114-117) that’s “relaxed and tranquil, balanced and poised, yet possessed of vitality and energy, of a still power” (*CN*: 76). Above all, he shows humility: “those with mature experience of natural life appreciate that nature is a ‘great cauldron’ of ‘creation-transformation’ and accept with equanimity their own subjection to the process” (*CN*: 53). “I’m less likely to ‘make too much of myself,’” explains Cooper, “when I learn that the energy coursing through me also courses through everything” (*CN*: 88).

4. Modernity and non-convergence.

While I am convinced that my own attempts to become attuned to nature’s profundity, especially in Craster, have a desirable psychological effect on me, and while I feel as though I do indeed thereby become more like the sage Cooper describes, I don’t feel confident that the analogy with water is a strong enough foundation on which to build a comprehensive model of wise comportment. Granted, the analogy itself recognizes “the difficulty of describing this state,” but the convergent mindset needs further elaboration.

Cooper recognizes this, which is why the main proportion of his account seeks to elucidate the notion of convergence by contrasting it with aspects of the modern mindset which are allegedly non-convergent. Most of us will immediately sympathise with such a contrastive approach. We feel that modern life has “estranged” or “alienated” us from nature. We feel a sense of “yearning” or “nostalgia” for “a deep but atrophied convergence with the natural world that is worth reviving” (*CN*: 12). We are “disillusioned” with our lives, perhaps even “misanthropic.” We want less modernity and more of nature’s “mystery” (on all these “moods,” see *CN*: 11-12).

There are four interconnected aspects of modernity that Cooper alleges to be anathema to the convergent mindset. The first and primary culprit could be called *objectivism*. Modernity is characterized by a “lust after knowledge” and “the hegemony of a dissective, analytical attitude to the natural world” (*CN*: 86), a “preoccupation with . . . labelling and analyzing” (*CN*: 87). The problem, Cooper explains, is that this “scientific stance might obstruct mindfulness”: “it is a stance which is too dogged, too much dictated by a ground plan, too rigidly focused on the achievement of goals – overturning a hypothesis about bird behaviour, discovering a new species of reptile, identifying a plant’s medical potential, finding the cause of a tree blight, or whatever” (*CN*: 90). Objectivism is also non-convergent insofar as it prioritizes “technology” (in Heidegger’s disparaging sense), whereby we treat nature “as ‘equipment’ for human beings to use, a ‘reserve’ to draw on” (*CN*: 30). It is hubristic to “‘lust after knowledge’ of a calculating, pragmatic kind” (*CN*: 34), Cooper summarises.

The second non-convergent aspect of modernity that Cooper criticises could roughly be termed *enterprise*. In this mode, knowledge is subjected to “economic” as well as technological “imperatives” (*CN*: 34). We indulge in a “frenzied pursuit of goals” (*CN*: 71) which are focused on “profit and dominion,” leading to a “world of purpose and profit in which people put themselves at the centre” (*CN*: 54).

Accompanying this desire for profit is the third aspect of the modern mindset, namely an emphasis on *law*; "the erection of artificial systems of rules" (*CN*: 71). In the *Daodejing*, Cooper notes, "the laws of nature were contrasted with the humanly constructed laws by which people govern their actions" (*CN*: 47), with the latter – the Way – having educative priority.

Finally, modernity is characterized by an excess of what could be summed up as *integration*. This is manifested in an "imperative" to travel but primarily in urbanization; in the increasing numbers of people who live in "'the dust-filled trap' of a busy, febrile city" (*CN*: 96). "In urban existence" and in "other contexts dominated by human business, by a relentless pursuit of goals, profit and pleasure," Cooper writes, "not only are people estranged from nature but are without space in which to exercise certain virtues" (*CN*: 53).

In contrast to this modern approach, Cooper sketches the Daoist alternative:

> The *Daodejing* . . . looks back, with some nostalgia, to a time when . . . convergence was greater than it has since become: to an age when the human population was smaller, technology more simple, travel less of an imperative, desires more modest, and men did not take up arms against one another. Hardly leaving their own villages, people's lives were contented. (*CN*: 24)

This was, Cooper reports, a "Golden Age, before human beings embarked on insensitive, earth-gouging construction projects, when people and other living beings lived in a state of simple and harmonious naturalness" (*CN*: 48), when economic life was limited to a "simple agrarian society where people plough, raise livestock and live in villages" (*CN*: 119), and when industry was restricted to the activities of "craftsmen who work on materials they have themselves extracted" or "cooks, fishermen, ferrymen" (*CN*: 73) – "skilled practical people . . . whose knowledge is, as it were, in the hands" (*CN*: 107-108). These "genuine human beings of old . . . did not plan their affairs in advance," as the *Daodejing* puts it (cited in *CN*: 35), and when they did travel they made their way, Cooper explains, "like a free-spirited back-packer," one who is "unconcerned with profit, destinations, goals, obligations or commitments, and eschews analytical enquiry which chops things into pieces" (*CN*: 90).

5. Objections to nostalgia.

Such eulogies for a bygone era surely go too far, as no doubt they did in the original Daoist texts (the tendency to romanticise the past is clearly not a new invention). For while modernity with its scientism, enterprise, laws and integration is not without its problems, a return to the scenes Cooper conveys would be incomparably more problematic. As Steven Pinker (2011), Matt Ridley (2010), Jared Diamond (1998) and Robert Wright (2000) have extensively documented, modernization has brought with it huge and increasing benefits. Above all, violence and bigotry have plummeted and edification has advanced as governance and trade have spread, while human lives have become longer and healthier as science and technology – including, notably, developments in agricultural intensification – have progressed. Matt Ridley offers his own contrast between modernity and autarky, and merits quoting at length:

> There are people today who think life was better in the past. They argue that there was not only a simplicity, tranquility, sociability and spirituality about life in the distant past that has been lost, but a virtue too . . . Imagine that it is 1800, somewhere in Western Europe or eastern North America. The family is gathering around the hearth in the simple timber-framed house. Father reads aloud from the Bible while mother prepares to dish out a stew of beef and onions. The baby boy is being comforted by one of his sisters and the eldest lad is pouring water from a pitcher into the earthenware mugs on the table. His elder sister is feeding the horse in the stable. Outside there is no noise of traffic, there are no drug dealers and neither dioxins nor radioactive fall-out have been found in the cow's milk. All is tranquil; a bird sings outside the window.
>
> Oh please! Though this is one of the better off families in the village, father's Scripture reading is interrupted by a bronchitic cough that will kill him at 53 – not helped by the wood smoke of the fire. (He is lucky: life expectancy even in England was less than 40 in 1800.) The baby will die of smallpox that is now causing him to cry; his sister will soon be the chattel of a drunken husband. The water the son is pouring tastes of the cows that drink from the brook. Toothache tortures the mother. The neighbour's lodger is getting the other girl pregnant in the hayshed even now and her child will be sent to an orphanage. The stew is grey and grisly yet meat is a rare change from gruel; there is no fruit or salad at this season. It is eaten with a wooden spoon from a wooden bowl. Candles cost too much, so firelight is all there is to see by. Nobody in the family has ever seen a play, painted a picture or heard a piano. School is a few years of dull Latin taught by a bigoted martinet at the vicarage. Father visited the city once, but the travel cost him a week's wages and the others have never travelled more than fifteen miles from home. Each daughter owns two wool dresses, two linen shirts and one pair of shoes. Father's jacket cost him a month's wages but is now infested with lice. The children sleep two to a bed on straw mattresses on the floor. As for the bird outside the window, tomorrow it will be trapped and eaten by the boy. (2010: 12-13)

Furthering this satire, I wonder how long I would have lasted in days gone by in the wilds of Northumberland, a region renowned for its 'Border Rievers' – murderous bandits who roamed the hills between England and Scotland. The ruins at Dunstanburgh are a clear testament to the violent history of a county studded with more castles than anywhere else in Britain.

Cooper is, in fact, aware that his nostalgia threatens to set off a buzzer in the reader's mind. In numerous passages he attempts to mitigate his position by denying any fundamental discontinuity, as opposed to a difference in degree, between modernity and the agrarian society he envisages. For instance, he reassures us that the latter is not about "instigating a global retreat from a modern to a medieval economy" (*CN*: 131). He insists that there is "nothing Mowgli-like or Tarzanesque" (*CN*: 41) about Daoism, that it "does not identify convergence with wordless, ecstatic absorption in nature" (*CN*: 41), does not oppose "drawing upon nature for materials used in the

production of things" (*CN*: 129), and does not imply a "blanket condemnation of intervention" (*CN*: 128). Indeed, Cooper recognises, such intervention is not only consistent with Daoism but a fundamental part of it, by virtue of the importance of gardens to that tradition. Gardens, he notes, "suggest that a simplistic opposition of nature and culture needs replacing by more nuanced distinctions" and "symbolise a wider co-dependence of human creative activity and the natural world" (*CN*: 138).

Yet while Cooper claims not to be championing "an existence that pre-dated human settlement and agriculture," he does desire "to preserve an untroubled form of peasant life" (*CN*: 120) – and this is surely drawing an arbitrary line too far back in time. In addition to the questionable suitability of the descriptor "untroubled," it is imprecise to claim that "Daoist interventions in nature – patient, reflective, modest, responsive to the materials 'stolen' – bear little resemblance to the interventions of modern industrial technology" (*CN*: 129); the real dividing line is not at all clean, at least not if the Daoist interventions are exemplified by agrarianism. As Jared Diamond has recounted in his book *Collapse* (2005), plenty of agrarian societies – Easter Islanders, Mayans, Greenland Norse – destroyed themselves by decimating available resources, often in the course of immodest vanity projects, while some modern businesses – including oil and mining companies – display a laudably sustainable comportment towards the environment. Cooper insists that "the Daoist concern is not to pass judgement on human history, but to decide which kinds of intervention by a person are consonant with being 'on the Way'" (*CN*: 128) – but it is more accurate to conclude that he has done the former rather than the latter.

6. Two idealisms.

At the root of Cooper's idealism about agrarian life is an idealism – or "perspectivism" – of the philosophical kind. "For the Daoist," he explains, "there is nothing privileged about a scientific account of the world" (*CN*: 88), rather "the sage's attitude towards people, beliefs and aims . . . is one of irony," such that "even when the belief or aim is the sage's own, he recognizes it for what it is – a component in a perspective of the world that should not pretend to objective correctness" (*CN*: 77-78) or to "capture things as they objectively are" (*CN*: 87).

Cooper caveats this claim in two ways, both of which are Kantian in spirit and neither of which is very mitigating. First, he claims that the world is real even though it doesn't exist beyond a person's interpretations.[1] This definitional manoeuvre is unconvincing – it is like describing sparkling wine as champagne, to use an analogy of Cooper's own from an earlier work (2002: 124). Second, Cooper claims that the world is real in the sense that subjective experience arises from a transcendently mysterious source, and that this source is the Dao (*CN*: 24). This manoeuvre is unconvincing because it undermines Cooper's attempt to write about his chosen topic: if the Dao is transcendently mysterious, it is ineffable. Granted, Cooper has tried to address this problem elsewhere (2002: 286-96), but seemingly it still weighs on him; at the start of the book he wonders whether, when it comes to convergence, "*writing* about nature is the last form such a relationship should take" (*CN*: 8) (and we might add that publishing books is surely an activity heavily insinuated into the fabric of modernity which Cooper claims to reject).

Not only does Cooper's perspectivism lead him to overestimate the merits of pre-scientific life, it leads him to underestimate the expressiveness of science itself. His contention that science manifests an "obsession with naming things" leading to "a rigidity in the use of words, and a hostility to imaginative, metaphorical speech" (*CN*: 87) has been convincingly refuted by Richard Dawkins in his book *Unweaving the Rainbow* (1998), which showed how the naturalist uncovers rather than destroys nature's poetry. I am reminded especially of a beautiful passage in *The Blind Watchmaker* in which Dawkins himself – just as Cooper's sage does – blends metaphor and truth in a tender insight into nature's efflorescence:

> It is raining DNA outside. On the bank of the Oxford canal at the bottom of my garden is a large willow tree, and it is pumping downy seeds into the air . . . and the seeds are drifting outwards in all directions from the tree. Up and down the canal, as far as my binoculars can reach, the water is white with floating cottony flecks, and we can be sure that they have carpeted the ground to much the same radius in other directions too . . . The whole performance, cotton wool, catkins, tree and all, is in aid of one thing and one thing only, the spreading of DNA around the countryside . . . It is raining instructions out there; it's raining programs; it's raining tree-growing, fluff-spreading, algorithms. That is not a metaphor, it is the plain truth. It couldn't be any plainer if it were raining floppy disks. (1986: 111)

Most of all, Cooper's anti-scientism doesn't do justice to the naturalist's sense of *immanent* mystery. The notion of the Dao – with its profundity, oneness, transience, efflorescence and wonder – is a lovely way of expressing what is deepest in the evolutionary world-view. In this way, the Dao and its mystery redounds within nature, not without. This, perhaps, is the "grandeur" which Darwin discerned when famously contemplating a "tangled bank" at the end of the *Origin of Species.* Perhaps, indeed, we *evolved* to love nature's enchantments, as Nicholas Humphrey has intriguingly speculated in *Soul Dust* (2010).

A further and related problem with Cooper's perspectivism is that it doesn't take the facts of human nature seriously: we would be better off, Cooper says, if we avoided reflecting on ourselves too much. He derides "the myth of an essential nature of self, bequeathed by our hunter gatherer ancestors" (*CN*: 123) and reports that, in Daoism, "spontaneity" is explicitly prized over "contrived, artificial, or calculating" behaviour; that "human beings are 'great' and 'on the way' when they live spontaneously" (*CN*: 47); and that "the *Zhuangzi* compares a horse that, free to graze and gallop, manifests its 'true nature' with another horse which has been broken, branded and bridled" (*CN*: 48). Yet the achievement of increasing self-knowledge and self-control is one of humanity's greatest; it is the driver of civilization's ongoing flight from barbarism. Moreover, as Cooper himself recognizes (in asserting that spontaneity is not about "impulse and immediate passion," or "actes gratuits" [*CN*: 77]), if we want to foster a state of mindful convergence, we need to know how to outflank any other state which might capture our behaviour. By ignoring human nature, we forgo the opportunity to deliberately cultivate – whether through altering our attitudes or outside influences – certain aspects of the human repertoire while minimizing others. Instead of, as it were, gardening ourselves, we let mental weeds grow. Human nature conspires against our better selves unless we expose and redress its machinations.

7. Modernity and convergence.

For all these reasons, I would *include* the outlooks of science, enterprise, law and integration among the watery virtues accompanying the convergent mindset – these modern virtues are analogous to water's transformative powers, if you like. When gazing upon the ruins of Dunstanburgh Castle, I always resolve to achieve *more* scientific understanding, endeavour and co-operation in my activities, not less; to redouble my efforts to make the most of my fleeting moment, using the best resources available to me, both human and non-human.

Indeed, even when it comes to the question of why modern life estranges us from nature, Cooper's perspectivism gets things back to front: the non-convergent aspects of the modern mindset are typically caused not by an excess but a *lack* of objectivity. For one thing, many of the products churned out by modern economies have the effect of screening us from, rather than attuning us to, reality. This can be seen in the narcotic, happiness-faking properties of many of our modern interests, including the impoverishing virtual realities encountered in computer games, gambling, TV, films, drugs, iPods, smart phones, and social networking websites. Other less obvious examples include shrink-wrapped foods which bear no relation to their origins, the distorting effects of media and political sensationalism, or banks that promise to lend us out of a predicament which really needs a dose of realism. Modern consumerism even insinuates an element of phoniness into the way we relate to one another; whether through fashionable garments and accessories, conspicuous consumption or a sneering comportment, we prioritise appearances over deep mutual understanding.

The environmental rapaciousness of modern industry is, likewise, based on a dearth rather than an excess of objectivity. If one truly understands nature, one appreciates the inescapable ecological fact that an ability to extract resources is simultaneously a mark of dependence. When businesses ransack renewable resources at a non-renewable rate, or pollute local ecosystems, they are not looking nature in the eye but turning a blind eye to the self-harming "externalities" of their actions. The notion of cutting and running – profiting then leaving others to sort out environmental problems – is similarly an idealisation. In the interconnected modern world, businesses are likely, sooner or later, to suffer the consequences of their damaging actions, whether directly through liability for expensive clean-up costs (prevention is usually cheaper than cure), or indirectly through government liability leading to higher taxes. Finally, even in the absence of concrete consequences, unethical behaviour in relation to the environment is lacking in objectivity insofar as such conduct downplays external moral imperatives.

8. Objectivity, environmentalism and collective action.

The foregoing examples illustrate how closely objectivity, enterprise, law and integration are connected. As humanity's ability to manipulate nature has advanced, this has become an increasingly collective pursuit requiring governance. Laws, in essence, solve "tragedies of the commons" – those "collective action" problems wherein individuals seek advantages but the population as a whole suffers much worse consequences. Through proper regulation, groups of individuals can be freed up

to engage with nature and each other constructively rather than destructively. Cooper rightly acknowledges that this dynamic connects environmentalism with modernity. He observes that "environmental writers tend to dwell on economic interest" (*CN*: 84) and that environmentalism's "primary concern is with the human benefits prioritised in a technological society" (*CN*: 40). What Cooper does not observe – few writers ever do – is that the phoney happiness promoted by consumerism likewise constitutes a collective action problem and requires a solution. The whole of society is harmed when companies profit by peddling fakery.

The connection between objectivity and collective action derives ultimately from science, an undertaking which is governed and therefore mostly characterised by rigorous standards of practice, whereby commitments to both impartiality and norms of conduct are mutually reinforcing (see Harris 2012). Modernity is science writ large. In this light, each aspect of Cooper's focus on the individual (perspectivism and anti-collectivism) can be seen to merge as the basis of his opposition to each aspect of modernity (objectivity, enterprise, law and integration); indeed, Cooper hints at these interrelationships when he reports approvingly that Daoism declines any "judgment of things as right and wrong, true or false" (cited in *CN*: 35).

In turn, the crucial role that science plays in human flourishing reveals the insufficiency of Cooper's aspiration to achieve ethical conduct without any commitment to collective action: just as you can't have two for the price of one (reality for the price of perspectivism) in epistemology, you can't have two for the price of one (ethical conduct for the price of individualism) in moral philosophy. This consideration adds weight to the surface inadequacy of many of Cooper's defences, which come later in the book, of ethical individualism in relation to the environment; his reminder that many "creatures, and some people" will "prosper" from global warming, such that "the perception of crisis or catastrophe is a perspectival one" (*CN*: 145); his warning that "attempting to conserve an animal or plant species . . . may be an artificial and fruitless effort to deny nature's transformative character" (*CN*: 148); his downbeat recommendation that "honest recognition of the very limited nature of one's own contribution prompts reflection on the place that activist commitment should have in one's life"; and his quoting of the founder of Orthodox Daoism of America: "I see no crisis" (*CN*: 145). (As to whether Cooper fully agrees with this claim, it is hard to tell: at important critical junctures he sometimes recourses to indirect locutions, e.g., "that's a claim which some will challenge" and "the Orthodox Daoist just cited might not unreasonably reply that . . ." [*CN*: 145].)

That many of modernity's problems stem from a dearth of objectivity connected to a deficit in collective action shows that, far from being a cure to such problems, Cooper's individualism is symptomatic of them – an intellectualisation of society's obsession with appearances, and a rationalisation of prevalent anti-collective attitudes. To some extent Cooper is protected by the remoteness of the actual consequences of his views – our barbaric pre-modern past is in the past, and our future environmental crises are in the future – but he cannot avoid, I believe, the shortcomings which afflict his theory of convergence. People cannot, surely, converge with nature while denying its objectivity, including that which pertains to human nature and to our ethical obligations towards our species as a whole.

9. Extremism and the city.

To be fair to Cooper, it should be added that insofar as solving tragedies of the commons involves collectivising certain aspects of behaviour in order to optimise the opportunities of individuals, this balanced approach validates his claim that some forms of environmentalism are too "strident." An excess of collectivism is just as undesirable – and indeed lacking in objectivity, as Cooper recognises[2] – as an excess of individualism. Yet it is "the curious achievement of our own age," to use Theodore Dalrymple's phrase (2005: 51), that we have managed to become extremists in both collectivism and individualism – and are in denial about it – all at the same time. This is worrying. When what's good for the individual, what's good for the collective, and what's real become incommensurate concerns, the callous agrarian totalitarianism of the kind wrought by Stalin, Mao and Pol Pot – not to mention Heidegger – looms.

It would also be unfair to Cooper not to acknowledge that urban life undoubtedly is estranging, regardless of any philosophical considerations relating to modernity. At one point Cooper recounts a recurring theme in Daoist poetry, namely, the city dweller who "escapes into the countryside, there to meditate, reflect and purify himself" (*CN*: 18). The crucial question concerns the required duration of such an endeavour – temporary or indefinite. Most of today's escapees to the country would answer happily that their forays are a booster activity, not a permanent pursuit. The same can be said of meditation, which enhances character just as weight-lifting enhances the body. Through meditating on nature we can cultivate a more objective focus in our attempts to improve our lives in that enterprising and co-operative modern manner whereby human beings thrive.

Of course, getting away from it all will not always be possible. But converging with nature can also inspire us to develop proxy technologies which remind us of nature's profundity rather than screen us from it. I am thinking here of trees, parks and fountains in cities, and most of all of *art* – not the "modern" variety which wallows self-referentially, but art which transports us temperamentally, whether directly via its aesthetic properties or indirectly via our admiration for the skill of the artist, to the real world. It is notable that a recent study looking at the qualities that define the public's ideal painting threw up the same favoured scene in almost every country: a natural landscape containing animals and people (see Dutton 2010: 13-18.). Finally, when all else fails, we can use our understanding of convergence to encounter the city more mindfully: a cycle ride down the high street, for example, is more engaging and enriching than being trapped in traffic or a crowded carriage.

10. Conclusion.

I conclude that re-establishing convergence with nature is not about tearing down the edifice of modernity but reminding ourselves of the foundation on which it is built – an objective and collaborative attitude to nature that modernity itself is prone to screening us from. My position, though not identical to Cooper's, was certainly stimulated by his argument in *Convergence with Nature* – a characteristically inspiring and beautifully written work, which deserves huge credit for restoring reflection on the profundity of nature, along with the pros and cons of modernity, to

the philosophical agenda. I have hinted that on many occasions Cooper caveats his own argument along the lines I have done in this essay, but, to return to the analogy of the coil of reason and the wire of truth, his modifications feel like corrective twitches compared to the recurring urges which lead him too far astray. We should all be wary of such urges.

Notes

[1] Consider the following: "In reverie, a person sees things as they are. Not through penetrating a veil of appearances to a world free from all perspective, for there is no such world" (*CN*: 93).
[2] For instance: "[the] modern style of moral reason is lacking in realism, in attention to the world and human conduct as they actually are, instead of what they might be if only . . ." (*CN*: 10).

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B O O K R E V I E W S

Patricia Churchland. ***Braintrust: What Neuroscience Tells Us About Morality.*** Princeton: Princeton UP, 2011. 288 pgs. $24.95US Hardcover. ISBN: 978-0691156347

Questions at issue: 1. Where do moral sentiments come from? 2. Are the biological origins of moral sentiments relevant in evaluating moral norms and the motivated reasoning of moral authorities?

"We need a critique of moral values, the value of these values themselves must first be called in question – and for that there is needed a knowledge of the conditions and circumstances in which they grew, under which they evolved and changed." Nietzsche, *Genealogy of Morals*, 6.

Critical investigation into the disturbingly non-transcendent origins of morality is not new. Evolutionary and neurological investigations have been trickling out of the academy and into the popular press for a couple of decades. However, these have so far produced more reaction than consideration, both in the general public and among academics. If anything, prevailing beliefs about the origins of morality have been wrapped in anti-scientific rhetorical defenses, most of which deny out-of-hand that science could make any contribution to the formulation of personal ethics or public policy.

No stranger to the bulwarks constructed to shield the humanities from empiricism, neurophilosophy pioneer and academic blockade-runner Patricia Churchland offers perhaps the strongest and most concise defense of the interdisciplinary study of human morality. Churchland's 2012 book *Braintrust: What Neuroscience Tells Us about Morality* focuses on the deceptively simple question of where values come from. Though the question is not significantly different from that posed by Nietzsche, its 21st century incarnation cannot be answered by speculative aphorisms. To refine the question and establish a methodology for answering it, Churchland constructs two mutually-reinforcing arguments, one scientific and the other philosophical. In the scientific argument, Churchland proposes that our feelings about social responsibility, self-restraint, etc. may have emerged from the neurochemical reward system that ensures parent-child bonding in all mammals. The philosophical argument, equally important and skillfully interwoven with the scientific argument, is that rhetorical attempts to exorcise science from the discussion of moral norms and public policy are logically indefensible.

Neuro-Morality

The second, third, and fourth chapters of *Braintrust* contain the groundwork for a hypothesis of brain-based pro-social behavior. Churchland points out the nontrivial point that morality is inherently social. While I may like to believe that I would act according to a particular ethos even if no one was watching, the fact that I want other people to applaud my integrity manifests its social utility. Living in a group is

evolutionarily adaptive, but it requires a mechanism to constrain self-interest in order to ensure group cohesion. Churchland examines the evolutionary history of neural systems which extend the instincts for self-preservation, first to offspring and genetic relatives, and eventually to the social group composed of both genetic kin and non-kin on whom the individual depends for survival and reproduction. Churchland is particularly interested in the role of neurochemicals, especially oxytocin and arginine vasopressin, in constructing emotional bonds between parents and children, parents and parents, and even allo-parents caring for offspring that are not their own. Citing studies involving a range of animal species – rats, rhesus monkeys, even fruit flies – Churchland explores the powerful, if complex, influence of oxytocin and vasopressin on animal behavior. Her favorite exemplars of the social effects of neurochemistry are the monogamous prairie voles and their promiscuous cousins, the montane voles. Not only do the two species seem to differ in little more than their brains' stocks of oxytocin, but artificially increasing the oxytocin levels in the montane vole turns players into family men – just as reducing oxytocin in prairie voles brings on a seven-year-itch. While demonstrably influential in bonding behavior, such neuropeptides are not simple, one-cause-one-effect agents. Male rats who receive a shot of oxytocin become tender toward in-group members, but they simultaneously become hostile toward intruders. Oxytocin does not turn an individual into a universal altruist so much as it extends the individual's self-promoting instincts (somatic effort) to family and, potentially, to immediate community. Just as parental affection may be expanded into care for others, the child's feelings of attachment to the mother expand to create fears of social isolation in the adult – the origins of shame and approval-seeking. "Depending on ecological conditions and fitness considerations," Churchland contends, "strong caring for the well-being of offspring has in some mammalian species extended further to encompass kin or mates or friends or even strangers, as the circle widens. This widening of other-caring in social behavior marks the emergence of what eventually flowers into morality" (14).

As the social circle expands to include non-genetic relatives, brains that evolved with greater social intelligence yielded an adaptive advantage.

> Expanded memory capacities greatly enhanced the animal's ability to anticipate trouble and to plan more effectively. These modifications support the urge to be together, as well as the development of a 'conscience' tuned to local social practices; that is, a set of social responses, shaped by learning, that are strongly regulated by approval and disapproval, and by the emotions, more generally. More simply, mammals are motivated to learn social practices because the negative reward system, regulating pain, fear, and anxiety, responds to exclusion and disapproval, and the positive reward system responds to approval and affection. (15-16)

In other words, culture, like morality, emerges from brain systems that have adapted to form cooperative social units. The norms as well as the individual's receptivity to those norms both depend on a brain that is wired to care what other people think. In the fourth chapter, Churchland surveys the specifically human variables influencing or constraining social behavior, from market complexity to institutionalized religious identities, all of which depend on an interaction between internal (neural) and external (cultural) components. Churchland explores the impact of neurochemicals that

influence the more reflective phenomenon of "theory-of-mind" in social cognition. The "human" social phenomena of cheating, punishment, hierarchy, cooperation, and philanthropic grand-standing have a surprising number of parallels in studies of animal behavior. In the sixth chapter, Churchland identifies brain areas (particularly the prefrontal cortex [PFC]) integral in the sort of predictive social thought needed to create and preserve extended networks of cooperation. While it is the seat of human reflective consciousness, the PFC is not an organ of perfect rationality. Churchland proposes that our focus on the moral or immoral actions of others (including essentialized cultural and religious identities) serves a primarily strategic purpose – shared morality is a means of predicting another's behavior. As such, it is a heuristic engine. We distrust those who don't share our moral prejudices, even when their beliefs can be shown to be more mutually beneficial than our own.

Qualified language

Any book that attempts to communicate the findings of cognitive science to the non-specialist is bound to trick some readers into making untenable over-generalizations about the scientific evidence or its implications. However, Churchland carefully separates what in the study of moral origins can be empirically studied from what cannot. She is reductionist in this sense, but not in the sense that the general public uses the word (meaning a sort of intrusive cynic who does violence to the transcendent object under study). She also inserts qualifying statements which discourage the reader from jumping to single-cause explanations (e.g. "oxytocin causes morality"). She reminds us that in even the simplest questions regarding the neural correlates of morality, "the answers are certainly going to be complex, even in voles, since the neurons affected are part of a wider system, meaning that what is going on elsewhere – in perception, memory, and so forth – will have an impact" (50). "Single genes seldom have big effects, but are part of multinode gene networks, and part of gene-brain-environment networks with recurrent loops" (53). "[I]f a certain form of cooperation, such as making alarm calls when a predator appears, has a genetic basis, it is likely to be related to the expression of many genes, and their expression may be linked to events in the environment" (102). These statements are the dry, qualified, scientific versions of the humanists' reminder of the roles of culture and experience in individual development. Churchland goes on to question the hypotheses of cognitive scientists such as Marc Hauser and Jonathan Haidt, whose propositions about human morality are based on empirical evidence but might exceed the parameters of the particular data. She even challenges claims by neuroscientists Marco Iacoboni and Giacomo Rizzolatti, whose research in mirror neurons has promoted a great deal of speculation about the nature of empathy and imitation. Whereas mirror neurons have been assumed to cause one individual to understand another by first understanding her/himself, Churchland argues that the causal order could actually be reversed – that mirror neurons function primarily to simulate another's action to enable the individual to predict or imitate it. Rather than beginning as self-representations, mirror neurons may be necessary in creating self-representations from observed experience. While the reader might make the simplified observation that Churchland plays the proper role of philosopher by carefully analyzing logical inconsistencies in scientific hypotheses, the fact that her counter-arguments are equally grounded in empirical research should lead us to ask why we ever began to think that philosophy and science were different disciplines.

The Naturalistic fallacy fallacy

Framing her scientific argument, Churchland crafts a philosophical argument directly engaging the common claim that science has no place in the discussion of ethics or public policy. This claim takes various forms. Some forms are little more than tautological "semantic wrangles," such as "only humans have *human* morality," or the assumption that morality requires reasoning and reasoning requires language, therefore only humans are moral. One common argument politely demonizes scientific approaches as "scientism," a vaguely-defined crime that serves to do little more than distinguish "us" (humanists/theologians/policy-makers) from "them" (scientists and interdisciplinary traitors like Churchland). Another tactic exploits a passage from David Hume's *Treatise on Human Nature* (3.1.1.27) that has been decontextualized and over-simplified to say "you can't get an *ought* from an *is*," (i.e. moral conclusions are not based on factual premises). Such mixing of factual arguments with moral ones was dubbed the "naturalistic fallacy" by philosopher G.E. Moore. We may think of plenty of cases in which such a transition would, indeed, be fallacious. We commonly assume that something that is "natural" is, therefore, "good," and "unnatural" is bad, until we come across obvious exceptions such as naturally-occurring influenza and its unnaturally manufactured vaccine. This is clearly an example of fallacious reasoning. But, as Churchland illustrates, there are plenty of cases in which moral arguments that are logically consistent but heedless of the facts of nature prove to be too presumptuous and abstract to find any consistent implementation in reality. Even the most popular rule-based morals fail in practice, not so much due to human frailty as to the frailty of rule-based reasoning, itself. As Churchland demonstrates, even the Golden Rule cannot function as a rule without a host of prior, unexamined assumptions to guide its interpretation. It also carries some unrecognized consequences. If a self-mutilator wants others to find the same salvation-through-pain that he does, is he morally obligated to torture them? The Golden Rule has a function, but not as an a priori rule. According to Churchland, the Golden Rule primarily serves to activate empathetic, pro-social behavior already rooted in our evolved neuroanatomy, not in any set of rule-governed cultural norms. Proposed categorical imperatives by Immanuel Kant, Jeremy Bentham, John Rawls, and Peter Singer have similar problems. The idea of rules, like the idea of reason, is the problem. It creates an imagined antecedent that is not, ultimately, its origin. As philosophers from Aristotle and Mencius to Hume and Nietzsche recognized, our reflective rules are ad hoc generalizations. Churchland cites the now-famous interview of Georgia congressman Lynn Westmoreland by Stephen Colbert. Westmoreland vociferously advocated the inclusion of a graven image of the Biblical Ten Commandments in a Louisiana courthouse because, he insisted, those commandments are the origin of all morality. Despite this, the zealous congressman could only recall three commandments, and those in highly abbreviated form. Unsurprisingly, the three he recalled ("Don't murder . . . don't lie . . . don't steal") are featured in law codes predating the Bible, such as Hammurabi's Code and the Laws of Manu, not to mention isolated cultures across the globe that have had scant contact with the West and none at all with Judaism or its offshoots. Churchland's argument is that, instead of denying or lamenting the ad hoc nature of morality, we will achieve more substantive moral progress by admitting and systematically studying the evolved neurological structures that precede our discursive norms.

The relevance of *Braintrust* is not limited to the academy or the armchair. If the *is/ought* distinction is unduly exaggerated in moral philosophy, it becomes a weapon in the sphere of public policy – an excuse to defund or severely regulate research that does not reinforce popular prejudice. After all, what is at stake is the power to shape and regulate the behavior of others, and maintaining that power depends on popular appeal rather than empirical evidence. Churchland seems to have learned this political truth in 2008 when she presented a paper to George W. Bush's Council on Bioethics.

The council was already notorious as an ideological star chamber established to construct an intellectual façade for the administration's war on stem cell research. With a few exceptions (including Michael Gazzaniga, who seems to have adopted a curious methodological relativism), the council was composed primarily of Right wing political pundits, such as Francis Fukuyama and Charles Krauthammer, rather than research scientists. The council was originally chaired by Leon Kass, who was appointed shortly after the publication of his anti-cloning essay, "The Wisdom of Repugnance" (*The New Republic*, June 2, 1997, 216.22). In this essay, Kass appeals to inarticulate emotional reactions, not only as a justification for banning scientific research, but as a justification for dismissing reasoned arguments which contradict those emotional reactions.

> We are repelled by the prospect of cloning human beings [. . .] because we intuit and feel, immediately and without argument, the violation of things that we rightfully hold dear. [. . . R]epugnance may be the only voice left that speaks up to defend the central core of our humanity. Shallow are the souls that have forgotten how to shudder.

Not only does Kass use a gut reaction to argue for the implementation of government policy, he uses it to divide the in-group from the out-group, the moral from the "shallow souls." Kass' argument exemplifies, perhaps deliberately, Hume's claim that reason is the slave of the passions. At the same time, it abdicates any pretense of prioritizing reason over gut feeling.

As chair of the Council on Bioethics, Kass removed any "shallow souls" who would not ratify the Council's foregone conclusions – most famously molecular biologist and Nobel Prize winner Elizabeth Blackburn, one of only 3 research scientists on the 18-member council. Though Kass was eventually replaced by Edmund Pellegrino, the council's strategy remained dependent on ad hoc arguments and emotionalistic platitudes, particularly the malleable abstraction of "human dignity." After bioethicist and council member Ruth Macklin publicly pointed out that the term "dignity" served only as a rhetorical red herring, the council, in an effort to salvage its own credibility, invited papers from philosophers, theologians, lawyers, physicians, and politicians, which were published as the report, Human Dignity and Bioethics. Though a handful of bioethicists, such as Churchland and Daniel Dennett, tried to explain the nature of Macklin's argument, most of the articles (including one by Leon Kass himself) aimed to ratchet up the emotional valence of the term rather than clarify precisely how it justified a government ban on life-saving research.

Churchland's contribution to the report, "Human Dignity from a Neurophilosophical Perspective," may have been the germ of *Braintrust*. Besides calling attention to the neural origins of moral sentiment, Churchland describes the tragic history of "misplaced moral certitude." She points out that past advances in medical technology, including vaccination for smallpox, anesthesia for use in surgery and childbirth, dissection of corpses, organ donation, and blood transfusion were all initially prohibited by religious and political authorities with similar moral certitude (and "wisdom of repugnance") at the cost of tens of thousands of preventable deaths. The loss of life in these historical examples bears its own emotional valence to those who see human suffering as a greater harm than rule-breaking. More importantly, they serve to undermine the *is/ought* dichotomy by juxtaposing moral norms with the measurable, real-world consequences disregarded by tautological, *ought-ought* moralizing.

In the council's published report, Churchland's essay is followed by a reply from council member and theologian Gilbert Meilaender. Rather than engaging the tenets of Churchland's argument, Meileander simply launches an ad hominem attack on Churchland, herself, for "breath[ing] a spirit of condescension." Rather than qualifying or refuting Churchland's evidence, Meileander denies her right to cite it. Like Kass, Meileander appeals to sentiment as a power greater than reason and claims that if Churchland does not feel the same disgust a Catholic feels at HPV vaccinations or stem-cell research, she is therefore unfit to question them. "Unless and until one is capable of that," Meileander demands, "the most dignified thing to do would be to remain silent." In other words, only those who share the same foregone conclusion are allowed to question its logic or implications. Conspicuously, Meileander invokes the term "dignity" in an attempt to silence Churchland, proving her (and Macklin's) original point – "dignity," like "wise disgust," is not a reason but a rejection of reason and testable evidence in moral arguments. What Meileander forgets to mention is that this emotionalistic certainty which is immune to rational criticism drafts public policy and impacts the lives of thousands, if not millions of people with Parkinson's disease, cervical cancer, and other potentially preventable diseases. Neither Meileander nor Kass inquire into the gut feelings of those crippled by these diseases, nor do they invoke "human dignity" in their defense.

By openly exhibiting and even prioritizing the same sorts of behavior observable in monkeys and rats, professional moralists like Kass and Meileander prove Churchland's argument in the very tactics they use to attack it. Moral arguments begin with evolved, brain-based heuristics which precede and structure conscious reasoning. This does not make them bad or good, but it makes them deceptively convincing when they are at their most self-indulgent. The most highly educated modern human is all-too-capable of ignoring evidence and abandoning reason whenever he *feels* like it. More importantly, moralists don't seem to regard these feelings, themselves, as needing explanation. This is as problematic in the philosophy of Emmanuel Lévinas (whose empathy-based morality famously failed to find real-world application in the Israeli-Palestinian conflict) as it is in the theology of Gilbert Meileander or the punditry of Leon Kass. Since demands for "ethics in science" can be a smoke-screen for imposing irrational restrictions on scientific research and its ability to save and improve lives, we might at least counterbalance the *ethics of science* with a *science of*

ethics. By investigating the cognitive and evolutionary origins of moral sentiment, we do not invalidate that sentiment in policy discussion. Sentiment is inextricable from human thought. Rather, the science of ethics imposes a burden of proof on those who would exploit isolated anecdotes to evoke irrational emotion and then leap to non sequitur generalizations which would regulate the lives of others. It requires us to factor in actual outcomes, such as the loss of life that follows from denial of treatment, instead of assuming that Providence will protect the righteous.

The introduction of these new criteria will require a reevaluation of those who have been designated as moral authorities. Recognizing the all-too-human (or mammalian) motivations of moralists naturally prompts a reevaluation of trust, and it is with the question of trust, particularly when it comes to the formation of institutions like the Bioethics Council, that Churchland concludes *Braintrust.*

> [W]hat kind of regulations should govern stem cell research? To begin to make progress on that question, one has to know quite a lot of science – what stem cells are, what about them makes them suitable for medical research and therapy, what diseases might be addressed using stem cell research, and what objections might be raised against it. (204)

These are simple questions, but they illustrate the false dichotomy of *is* and *ought*. While these questions do not exclude moral philosophers, theologians, or arm-chair commentators, they do introduce new requirements for methodological rigor, predictive accuracy, and accountability in a discourse which has traditionally relied on ad hoc reasoning and sensationalist anecdotes.

As research into the structure of the brain progresses, questions about brain-based morality are going to become even more common and more heated. Recently, President Barack Obama introduced the BRAIN Initiative, a project akin to the Human Genome Project. Assisting him with this introduction was NIH Director Francis Collins, who is serving as de facto director of the BRAIN Initiative in its early stages. In the past, Collins has not been shy about his belief in the metaphysical origins of moral judgment. Explaining his book, *The Language of God: A Scientist Presents Evidence for Belief,* Collins explicitly bars moral cognition from scientific study, implying that some sort of social collapse will follow if we get too inquisitive:

> After evolution had prepared a sufficiently advanced 'house,' the human brain with all of its neurological complexity, God gifted humanity with something special that makes us different from all the animals, the knowledge of good and evil, the Moral Law, with free will, which is not an illusion, and with a soul. . . If the moral law is just a side effect of evolution, then there is no such thing as right or wrong, good or evil. It's all an illusion. We've been hoodwinked by natural selection into thinking that there is such a thing. Are any of us, especially the strong atheists, really prepared to live our lives within that worldview? (2008)

The answer to that last question would be equally well put to Collins, himself. A geneticist and professional administrator, he is new to neurobiology, and it remains to be seen if his stated beliefs will conform to the evidence or if he will follow in the footsteps of morally-certain policy makers like Kass and Meileander. For

neurophilosophers, the short answer to Collins' question is "Yes." Collins may not like Churchland's thesis in *Braintrust*, but it is precisely because the people who hold the purse strings for scientific research frequently share his dichotomized view that *Braintrust* is a very timely and important argument.

- **Eric Luttrell**

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Dennis L. Krebs. *The Origins of Morality: An Evolutionary Account.* Oxford: Oxford UP, 2011. 320pgs. $49.95US Hardcover. ISBN: 978-019977823-2

While there are many significant topics in evolutionary studies, the question about the foundation of human morality is paramount, for the moral emotions (some of which are evident in other primates) and moral reasoning (which we alone seem to have) affect nearly every aspect of our lives. In spite of the daunting task of tackling the biology (or evolutionary origins) of morality, some scholars (to name only a few) have added considerably to the literature, in one form or another: Richard Alexander, Robert Axelrod, Frans de Waal, W.D. Hamilton, Marc Hauser, Lawrence Kohlberg, Peter Singer, Elliott Sober and D.S. Wilson, and Robert L. Trivers. (Christopher Boehm's most recent book, *Moral Origins*, has not been considered for this review.) Nevertheless, this selective list could expand exponentially if we include the articles and book chapters that address or reference obliquely the topic of human morality (such as Leonard Katz, as editor, of *Evolutionary Origins of Morality*). Dennis L. Krebs, in *The Origins of Morality*, offers a careful genealogy, informed perspective, and comprehensive précis of the most important of all human themes – how we came to be intricate (and at times contradictory) moral creatures.

Professor Krebs (reading from his biography on the book's dust jacket) is a psychologist with degrees from Harvard, now at Simon Fraser University, who has spent his career (teaching and writing) addressing the questions of altruism and morality. Krebs has been a Woodrow Wilson Fellow and a Fellow of Stanford University's Center for Advanced Study in the Behavioral Sciences.

The physical properties of the book are good: hardcover, sturdy binding, nicely printed. The book consists of five parts, as follows: Setting the Stage; The Evolution of Primitive Prosocial Behaviors; The Evolution of Uniquely Human Prosocial Behaviors; The Evolution of the Moral Senses; Implications and Applications. In all there are twenty chapters, capped by References and an Index. Within each chapter there are numerous divisions individually titled. Therefore, along with its fourteen page index (and detailed table of contents), the book is so easy to navigate that it has the characteristics of a reference book – quite a boon for one trying to wade this ocean of information – but is mostly a detailed history of the subject with Krebs' intelligent observations and substantial analyses.

Part one deals with definitions, Darwin, and the neo-Darwinists. Krebs studied under Lawrence Kohlberg and worked with Robert Trivers; it is Kohlberg who shadows this book, for Krebs says that while he began looking for ways to align Kohlberg's stages of moral development with current evolutionary thinking, he had to abandon Kohlberg's paradigm altogether. In reference to reciprocal altruism, Krebs thinks the

correct (or more precise) terminology should be "the evolution of reciprocity," since altruism is as slippery a term as Dawkins' use of the word selfish (8). Krebs says that a problem with Kohlberg's approach is that "people's conceptions of morality do not necessarily get better as they develop . . ." so that there is no real equivalency between high intelligence and morality (26). In fact, one could argue (as Nicholas Humphrey has) that the biological function of the intellect is essentially Machiavellian. So from where does morality then come?

Early on in the book Krebs covers the usual suspects, from Hobbes, Darwin, and Huxley to more modern thinkers, such as Richard Alexander, George C. Williams, and Stanley Milgram. Krebs notes that Williams follows Huxley (from Darwin through Dawkins) and sees human beings as self-serving by nature. But as Krebs points out, human morality is not about the fact of one achieving survival and reproduction (which can be entirely selfish and apparently "bad") but how one achieves these – to what cost put on another. Unhealthy, dangerous competition (which is not mutual in any way) creates tensions leading to punishment (by others) and ultimately destroys any chance for coalition. While this bleak assessment is based on evidence in nature, at the same time any so-called social contract is itself an innate sensibility of fairness and quid pro quo, also roughly apparent in nature. Hobbes erroneously speaks of the selfish bestiality of human beings and their need for an externally imposed social contract: our innate capacities are (Roy Baumeister would assert) for caring, helping, and cooperation (with selfish and deceptive variations, of course).

At any rate, Krebs outlines the development of the moral sense, according to Darwin. (The terminology "moral sense" had been used by the eighteenth-century British moralists, such as David Hume and Adam Smith.) First there were the prosocial instincts of primates and ancestral human beings; next came the conscience; third, because of the facility of language, any such prosocial instincts were now concretized into *mores*; fourth, those who adhered to such *mores* caused them to be "'strengthened by habit'" (41). While this seems quaint when so succinctly stated, it is valid since fundamentally Darwin saw continuity between sociality and the avoidance of others' disapproval. (In fact, the early British moralists, such as Shaftesbury and Hutcheson, saw the moral sense as an approval function.) Krebs points out that Darwin (no philosopher himself) has an ethics which combines Kantian rationality (an ought) and Humean sympathy. Frans de Waal (for one) has done quite a bit of fairly convincing primate research in an attempt to place the emphasis on the side of an instinctual sympathy (which is rationally balanced by the prefrontal cortex in human beings). Whom are we to believe? Are we not good-natured at heart?

The difficulty with Darwin's moral history (or any sweeping evolutionary story of morality) is that it does not account for individual influences (or the power of the individual to affect and alter the group), which a cognitive/developmental psychologist might point out. (Jerome Kagan, for one, has concluded that in spite of social-environmental factors, individual temperament persists over a lifetime.) Darwin focuses (too much, Krebs believes) on cooperative behaviors among many and fails to consider fairness and reciprocity, which can be highly individualistic and operate between just two persons. Darwin also places emphasis on human reason in morality,

but it is more accurate to say that any moral sense (a sensation) relies on understanding and emotion. (Many scientists, from Paul Ekman and Joseph LeDoux to Antonio Damasio have placed emphasis on the role of emotions in reasoning.) Joshua Greene and Marc Hauser (to name only two) have written about the degree of cognition in moral behavior (Greene seeing more cognition involved in such processes than Hauser, though we are now splitting hairs). Darwin leans too much to the consequences (or common good) of moral acts and ignores intentions. Certainly this is a complex area, and even Adam Smith, before modern psychology, noted that not only could one have conflicting motives before acting, but one could also have bad intent and yet (seem to) act with care.

In part two the primitive behaviors are covered in terms of hierarchy, self-control, altruism, and cooperation. Without stating anything with absolute certainty, Krebs suggests that "perspective taking and moral reasoning" probably evolved in primate cultures (seen even to this day) that relied on hierarchy and status as part of their social structure (75). In other words, fighting for a resource is risky and a waste of energy (to say nothing of the fact that one might not gain the prize). Hence we see the origins of deferential strategies (where resources are relinquished to the more powerful or one of high status). Krebs links facts that, first, those in high ranking positions have greater degrees of neurohormonal chemicals (serotonin, vasopressin, testosterone) and, second, are better (than subordinates) in reading minds. He cites work done by, e.g., Christopher Boehm, who ultimately sees the spread of egalitarian attitudes in early human species, in this regard. Self-control (especially individual differences in the modulation of desire and aggression) comes into play here, since over the long haul (in evolution) the accretion of results is what matters, and it seems clear that behaviors selected for include self-regulation and cooperation – one by one individuals successful in maintaining those behaviors would have had consistently greater mating choices and success than aggressive, lone-wolf cheaters.

In terms of altruism, the driving forces are sexual selection, kin selection, and group selection. Darwin, for example, emphasized reproductive adaptations over those of survival. Since so much care is involved in raising young, early human beings found attractive those who would help both mate and offspring. E.O. Wilson in 1975 (*Sociobiology*) really framed the question by asking how we can account for altruism (giving) in light of natural selection (fitness). Why would I want to help you if there is no benefit to me? While there is, at base, an investment in genes, there is no "cost-benefit analyses" when it comes to altruistic (kin) behavior: it is spontaneous and emotional (113) – much of what Hume and Hauser suggest. For the group selectionist, Krebs notes that through time (group against group), altruism will succeed over purely exploitive behaviors (though others might say that on this level it is really once again only kin selection).

Altruistic behaviors (sharing, flexible tit-for-tat, or mutual aid) ultimately benefit the individual and the group, so those less fit will observe and copy (by deference) those in higher ranks (who most likely exhibit altruistic behaviors, even if the motive is for self gain). There is, for instance according to Gilbert Roberts, competitive altruism (raising status). Since those in higher ranks will tend to maximize their fitness (as natural selection demands) through cooperative adaptations, altruism and social

emotions could spread since such high status individuals are quite visible and others will tend to mimic their actions in order to achieve (realistically or not) a similar level of fitness and status. There is, nonetheless, some evidence, Robert Wright reminds us, that pecking orders exist where those in lower ranks are aware of their limits and will not attempt to rise, so that some version of tit-for-tat could occur between any types. However, even though altruism and cooperation did (and do) spread, there are those who will cheat (because of selfish tendencies, lack of self-control, or low status). Yet a cheater only calls attention to himself and is usually punished (which then highlights the benefit of cooperative behavior).

On sympathy, Krebs notes that there are cynics who see such positive social emotion as self-serving; however, Krebs says that some studies have pointed to sympathy as its own end. Perhaps. But even cooperating or sympathetic behavior that seems wholly unselfish might come with some (unconscious) expectation of a future gain (or advantage) in resources or a slight boost in status (even if through the grapevine of gossip, as Robin Dunbar might suggest). Not to be cynical. Krebs acknowledges that social emotions (including forgiveness) evolved because of their inclusive fitness functionality.

Part three includes a discussion of human social behaviors. Compared with other primates, Krebs notes that what makes us distinctly human is our ability to: "show deference to abstract ideas . . . suppress selfish behaviors, control aggressive urges, plan for the future, and delay gratification" (163). These qualities are uniquely combined in us, among primates, as a species but can vary widely in degree among individuals, and that matters since morality is dependent on social interactions. We have always been part of some group, but whereas in our ancestral environment the cluster was small, later tribal, now it has ballooned from towns and villages to cities and metropolitan areas – how much of the early forms of group behavior (asks Krebs, as would any evolutionary psychologist) still linger in us to affect our actions? Richard Alexander says that indirect reciprocity ("cooperating with cooperators") evolved from direct reciprocity. More to the group selectionist thinking, Peter Richerson and Robert Boyd would say that there are two types of "social instincts" we evolved: the individual and the tribal (or cultural selection). Krebs seems to favor (without discounting other theories) Alexander.

In a large group, the common interest served will suppress the selfish outrider, but who will do so and will that person be rewarded? Krebs notes that Christopher Boehm's account of hierarchy deals with dominance and is externally oriented whereas Alexander's account deals with small groups that benefit from direct reciprocity (mate and kin). Alexander's main thinking is that direct reciprocity became indirect (involving three parties) as small groups became larger tribes, and this behavior spread as more observed its benefits. The problem here is that (even today) indirect reciprocity is ripe for cheating; however, at the same time, one who acts fairly and honestly in third party exchanges on a regular basis advances his or her status and prestige across groups – and that gets noticed (and copied).

Krebs sees this as both individual selection and (then later) cultural. This type of interaction among people is part of the so-called social intelligence theory where one

began to picture and guess the intent and motives of another – cause and effect of the highly developed human brain (and hence the ability, above and beyond social emotions, to make reasoned moral decisions and reflect in conscience on decisions). So it is important to stress (missed by many self-proclaimed old-fashioned philosophers) that reason evolved to solve adaptive problems, not to puzzle out free-standing, challenging abstractions about the truth of the universe.

Part four addresses the moral senses. Krebs is clear about how perspective comes into play in any discussion of the moral senses: typically, we do not feel guilt for another's action and we do not experience moral outrage over our own bad actions. The social behaviors gave rise to duty, ethics arose from norms, and conscience grew from "emotional reactions" witnessing the antisocial action and subsequent punishment of others (203). In other words, rather than saying (as many do) *moral sense*, Krebs says *senses*, since it is an approval/disapproval mechanism of *feeling* and of *thought*, in part directed inwardly, in part outwardly, sometimes including thoughts and feelings prior to a decision, and sometimes only upon reflection. To complicate this picture, Krebs notes how we can (and do) form moral judgments in other ways (beyond personal/social emotions and group norms) – namely, by another's rank, accrued deeds, and even overall hygienic appearance. Where is rationality in this type of visceral evaluation? In fact, our moral judgments can be colored by our location (and its relative cleanliness). This, then, is not merely approval/disapproval but an evaluation as to the perceived intrinsic worth of something and how it would (adaptively) help one (or not). Krebs cites a number of researchers here, from Hauser, to Byrne and Whiten, to Haidt, and de Waal.

Calling on anthropologist A.P. Fiske, Krebs reports that cross-culturally, human beings categorize social behaviors as "affectionate," "hierarchical," "egalitarian," or "economic," and while chimpanzees are capable of the first three, only human beings can combine all and especially utilize the fourth (220). Our abilities to cooperate are such that we will alter (even change) our beliefs to do so, and these types of mental adjustments in social interactions would account for the development of theory of mind. Once again deferring to the individual, Krebs notes that while there are universal norms, such norms evolve from the types of moral evaluations individuals decide to make and keep. The origin of social *mores* is not in the environment per se, but the environment of learning will help spread such *mores*. So while there are innate (genetic) dispositions that generate a moral culture, that very culture is an essential prop for the maintenance of such norms (unless it is a purely universal norm, such as fairness). Culture depends on how any group has decided to solve an adaptive problem (and hence why the universal notion of sharing will differ in particulars among cultures).

In part five, human nature, morality, and new models are covered. Krebs cites research that suggests utilitarian models of morality are cognitively driven whereas deontological models of morality are emotionally driven. But this type of split is only superficial because we originated it: human beings "are naturally disposed to help others . . . [and] to obey rules . . ." (245). Since these tendencies emerge in a social environment, Krebs is keen to recognize and not dismiss social learning – apparently it is another of our adaptive functions. If we turn to biologists such as Eva Jablonka

and Marion Lamb we might be able to include in "social learning" organic-related elements such as epigenetics and even transmittable behaviors and symbols.

Krebs returns to Kohlberg and, as reluctant as he is, criticizes data that was derived from studies on only male students in a university setting to hypothetical questions – i.e., why-type questions which do not reveal one's moral grounding but instead become an "intellectual exercise" (265). Krebs cites studies that demonstrate how the reality of a situation draws responses dramatically different from any theoretical question/answer (and even more difference occurs between men and women). Think, for a moment, about all of the ink spilled analyzing over and again Philippa Foot's runaway tram scenario (and all of its variations, e.g., the footbridge). Ultimately Krebs says that while social learning is an important part of our cultural *mores* it does not account for the origins of moral systems. Staunch evolutionary psychologists such as Leda Cosmides and John Tooby would suggest that different modules are simply part of our evolved brain mechanisms, inherited from our ancestral past, which served adaptive (social) challenges (about, e.g., selfishness and aggression) that increased fitness.

Krebs admits that putting together the puzzle about the origins of morality is difficult; since his training was by Kohlberg (in spite of his insistence that he has moved away from him) we can still see his sensitivity to social learning although he places more emphasis on evolution. Some will say that evolutionary studies have nothing substantial to add to the origins of morality, that evolutionary ethics is too theoretical; but the evidence is available and has been studied by too many biologists and psychologists (from Hamilton and Axelrod, to Trivers and Alexander) to ignore. David Haig has gone even further, suggesting, first, the "social gene" and then, later, "intrapersonal reciprocity" (where, despite conflict, internal gene equilibrium is reflected in external social equilibrium). Others might dismiss evolutionary studies altogether, believing that every other part of us (could possibly have) evolved except for our (divine) brain, and that our ancestral environment (whose remnants are evident in other behaviors) has nothing to do with our moral sense. Krebs (and others like him) needs to be commended for his authentic effort, substantial contribution, and honest courage.

- **Gregory F. Tague**

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Christopher Boehm. ***Moral Origins: The Evolution of Virtue, Altruism, and Shame.*** NY: Basic Books, 2012. 432 pgs. $28.99US Hardcover. ISBN: 978-0465020485

Going against the grain of individual selection theories (which posit the emergence of altruism from parental bonds and kin relationships), Christopher Boehm makes a powerful argument for group (social) selection to account for the advent of altruism. Paradoxically, according to Boehm, altruism occurred through negatives: punishment of free-riders and subsequently the fear of public shame (which in turn developed into conscience). Boehm claims our moral origins lie in the adaptive design (its flexibility to rules) of the conscience (away from "fear-based" bullying) and its great concern with maintaining the highest possible personal reputation (176). Drawing from his

vast experience as a field researcher with primates (working, for example, with Jane Goodall) and from his research on Pleistocene-like contemporary foragers, Boehm concludes that small bands of people pressured others to act generously for the sake of group cohesion and cooperation. The book is captivating in its strong narrative voice, its compelling stories from the field, and its scholarly grounding.

This is a handsomely-produced book, with a typeface/font that is very easy to read. There are twelve chapters (and an epilogue), as follows: "Darwin's Inner Voice"; "Living the Virtuous Life"; "Of Altruism and Free Riders"; "Knowing Our Immediate Predecessors"; "Resurrecting Some Venerable Ancestors"; "A Natural Garden of Eden"; "The Positive Side of Social Selection"; "Learning Morals Across the Generations"; "Work of the Moral Majority"; "Pleistocene Ups, Downs, and Crashes"; "Testing the Selection-by-Reputation Hypothesis"; "The Evolution of Morals"; "Humanity's Moral Future." Numerous sub-headings within each chapter make for easy navigation. There is an extensive bibliography and a thorough index. The dust jacket of the book features images of a coiled snake and a red apple, symbols of Eden, and as Boehm points out (not apparent in the Book of Genesis), the Garden of Eden would have been a dangerous place. Christopher Boehm is also the author of: *Hierarchy in the Forest*; *Blood Revenge*; and *Montenegrin Social Organization and Values* (as well as many articles). Boehm is Director of the Jane Goodall Research Center and Professor of Anthropology and Biological Sciences at the University of Southern California.

This is an important book and essential reading for anyone in a field that intersects with evolutionary studies. However, even as Boehm admits, there is no single book or theory that will answer the conundrum about the origins of human morality. This review, therefore, complements the review (in these pages) of Dennis Krebs, *The Origins of Morality: An Evolutionary Account* – it is recommended that both these recent books be read (nearly side-by-side), as each one helps fill in the complex picture concerning the genesis of human morals. Aside from their different approaches to charting the birth of moral systems, both Krebs and Boehm give voice to an exclusively evolutionary reading of human morality. And from these books, one can work backwards through the literature on this subject that started in earnest with Darwin (*The Descent of Man*). In our pre-history (ancestral human species) and from the DNA level, the selfish-gene model is attractive; from the perspective of more recent history (the emergence of *Homo sapiens*) and epigenetics or culture, the group model is attractive.

While he draws from some of the leaders in this field (Trivers and Alexander), Boehm places emphasis on a social (and not selfish or kin) model, in fact often invoking Émile Durkheim's name. There is very little discussion of Hamilton, some reference to Axelrod, and counter arguments to Williams (the last of whom argues that altruism evolved between individuals and is not a group product). Books by Matt Ridley, Robert Wright, and Marc Hauser are criticized for neglecting evolutionary history, which might not be wholly accurate (since quite often they bring into their discussions evolution and the prehistory of humankind). However, Boehm takes pains (in the tradition of Richard G. Klein) to chart human prehistory. Unique to this book is how

Boehm meticulously links our ancestral past to our present (and accommodates both industrialized and still-present foraging societies).

Boehm is a cultural anthropologist, so it is not (perhaps) surprising that he would lay emphasis on the group: culture as problem solving; morality is a group concern. Consider how Dennis Krebs, a psychologist trained by but then turning away from Kohlberg, lays emphasis on the individual: indirect reciprocity; morality as a personal action. According to Boehm, Richard Alexander "flirted" with group selection theory (73). Interestingly, Alexander (a biologist) is used differently by the psychologist Krebs and the anthropologist Boehm. Nevertheless, as Alexander himself proposes (in *The Biology of Moral Systems*), there cannot be any altruism without selfishness: both punishment of and aid to another are motivated (in the short or long term) by one's self-interest. Matt Ridley (*The Origins of Virtue*) insists (for many sequential pages of explanation) that while altruism is evident on a social/group level, the ultimate cause of such is selfishness.

In a nutshell, here is Boehm's line of argument: easily by 250,000 years ago large game hunting (horses and antelope) was done in egalitarian groups (which had replaced the alpha male hierarchy) and which set the pace for altruist sharing (meat distribution) and punishment of cheaters who demanded or stole more than their share. Boehm admits that hunting goes back much further, that there was large game hunting as far back as 400,000 years ago. But by 250,000 years the large game was hunted routinely and butchered carefully and systematically. This is not a new argument. Ridley (as well as Richard G. Klein) comfortably places such hunting and butchering back to approximately 1.4 million years ago. Novel here is Boehm's insistence on a complete shift to group culture. However, in *The Origins of Virtue* Ridley cites Hill and Kaplan (1989) who say, "Societies . . . do not have needs, individuals do; and societies are the sum of individuals, not entities in themselves. Therefore only by understanding what made sense for the individuals would anthropology make progress" (99).

Debunking the tolerated theft theory (biologist Nicholas Blurton-Jones), Boehm asserts that such cooperative hunting and sharing would promote "social bonding," encourage "sympathetic feelings," and involve some form of "perspective taking" (139-140). Of course one could argue that, nonetheless, there is always (risk) calculation in such sharing. The fascinating aspect of this book is how Boehm correlates his theory to the many contemporary late Pleistocene-like communities he has so assiduously researched, from the Inuit to the Kalahari (and many more). Drawing on work of Donald T. Campbell, Boehm notes that many early civilizations (and even contemporary foraging communities) employ "preaching in favor of altruistic generosity" (191). Such preaching might underscore, however, our innate selfish tendencies that repeatedly need correction; indeed, the preacher might be an individual within the group who wants his ego to supplant many others. And yet intriguing is how Boehm uses evidence from our prehistory to bolster his message: the conscience evolved through a process of social (more than natural) selection as hierarchical coalitions were formed and it was paramount to choose "useful partnerships" wisely while punishing (at times severely) others (149). Boehm says that this idea of deviant punishment affecting gene pools and leading to a conscience

is evident in Darwin and Trivers (the latter of whom suggests [1971] there is "'moralistic aggression'") (166). If the cheater is quiet there is no expression of the selfish gene, so that behavior is not (genetically) passed on (200). In his favor and to his credit, Boehm is optimistic and not cynical.

But the egoistic gene/behavior (tendency) does not disappear; in fact, we are probably more prone to selfish behavior and hence the altruistic preaching. Altruists are universally compensated in some way, and yet after many thousands of generations we still see cheaters, deceivers, free-riders, and other forms of selfish behavior quite often (to say nothing of what lurks beneath the surface). Mark Van Vugt and Paul Van Lange (psychologists, "The Altruism Puzzle" in *Evolution and Social Psychology*) like others have made the claim that we evolved cheater detection methods to benefit the group, but such deception-finding is merely a mirror of one's selfishness and is like theory of mind – i.e., these mental calculations are enormously advantageous to the individual. The logic is as follows: because we are self-interested we therefore know to doubt (indeed to question) the trustworthiness of another, especially if there is an outward sign of dishonesty. Boehm's group model (like Robert Boyd and Peter Richerson's) might represent a conformist tendency dating only to the emergence of big-game hunter bands and not necessarily explain the deeper origins of moral emotions. Outside of the group an individual would seek to conserve what little he has (to gain) for himself and his immediate family; but within a large group the individual could attempt to exploit (profit by sharing).

To some extent we need aggressive genes to keep us alive and going: in theory, the aggressive gene was modulated and never disappeared (310). Key to Boehm's thesis is that over time group suppression of cheating has raised the level of conscience to a level where *moderately* potential cheaters are kept in control (201). But for the most part, is this not (via Durkheim) a form of the standard social science model (which Krebs de-emphasizes considerably)? Our instincts are such that we cooperate in order to survive. No one doubts the practicality of the group, but we cannot over-credit the group for self-interested work of the individual(s). We know that cooperators prevail (see, e.g., D.S. Wilson), but what is the underlying motive of the individual(s) to cooperate (as each hunter will always second guess the desire of his fellow)? Individual incentive to invest in the group can yield a more secure return, but this investment does not obviate the individual's egoistic needs or desires. With a nod to individual differences, Boehm admits that the free-riding gene is in the human pool but suppressed at the level of the phenotype (201); yet he insists that this selection occurs on the social (and not individual) level and dismisses as much less responsible any kin-type, reciprocal altruism, or mutualism selection theories (by, e.g., Ghiselin, Dawkins, Wright, or Ridley) (204). Public opinion and gossip (reputation selection) undoubtedly impact fitness (245). Consider, though, how Constantine Sedikides writes about the symbolic self in our prehistory (in nascent form perhaps as far back as 1.8 million years) – that too, on an individual level, would account for perspective taking and the importance of a public persona before big game hunting.

Boehm spends a considerable amount of time discussing Alexander; but whereas Alexander emphasizes "good reputations" as part of mating/cooperation, Boehm stresses how bad behavior will ultimately lead to gossip and then group punishment,

which, through the process of natural selection, would have led to a "'debilitation of aggressive responses'" and a "'strengthening of inhibitory controls'" (167-168, quoting himself from *Hierarchy in the Forest*). What Boehm is describing here is the evolution of the conscience, which is like a "social mirror" highlighting our behavioral accounts, good and bad, for us to view in full (172). Without addressing brain science or consciousness fully, this is where individual differences come into play – how one can use this very *social mirror* in a calculating manner to subtly deceive while appearing good. Even Adam Smith in the eighteenth century (his notion of the *impartial spectator*) recognized individual differences in the competition between caring and personal gain (though as a product of his time Smith chalks up such differences to class). At any rate, Boehm admits that since the tendency to altruism is slight, the hunter-gatherer groups he examines prove that "cultural support" is necessary and apparent if the group is going to survive cooperatively and without serious conflicts (273). For instance, in discussing tit-for-tat, Boehm says that the exchange of goods is less important than the "spirit of generosity" such exchange produces (302). Granted, but one knows that if he boosts the generous spirit of the group he stands a better chance of gain, for without any likelihood of (eventual) profit a player is sure to defect.

For those interested in evolutionary studies (especially humanists interested in ethics), Boehm's work is crucial in that it takes complex questions of morality out of a theoretical cloud and places them squarely in the human arena (of altruism and shame). Boehm's scholarly research of prehistory and anthropological work in contemporary people give credence to our innate sense of fairness and capacity for reciprocity. We evolved away from the hierarchical model to the egalitarian. More precisely, Boehm is able to delineate how and why human conscience arose: more than the function of the individual in a group and more to the function of the group on the individual. While using the imperfect geologic record we have (of human remains, evidence of human culture, climate shifts affecting our prehistory) to complete the puzzle about the origins of morality, Boehm's book makes a significant contribution to this important discussion.

- **Gregory F. Tague**

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Mark Pagel. *Wired for Culture: Origins of the Human Social Mind.* NY: W.W. Norton, 2012. 432 pgs. $29.95US Hardcover. ISBN: 978-0393065879

Mark Pagel's *Wired for Culture* is an eloquent and erudite examination of (to borrow from Richard G. Klein) the human career. While Pagel focuses on the universal aspects of culture ("knowledge, beliefs, and practices" [2]), much of the discussion hovers around the individual related to cooperation and moral behavior, the human tendency to form and adhere to small groups. Pagel places the blossoming of culture at around 80,000 years ago, by which time we not only learned from imitation but moreover began to innovate and re-engineer what we had learned. We then passed that understanding on to succeeding generations so that (via an intellectually ratcheting-up effect) symbolic artifacts (such as jewelry, paintings, and carvings) began to appear. In this way the bits of culture, from an idea to a technological feature, would "act like" a gene in terms of *transmission* and *reproduction* among

individuals (3). Part of this claim is, of course, not new; and Pagel acknowledges Richard Dawkins and his notion of the meme. Other books that have approached this subject of culture and evolution include (to name a few): *Cultural Transmission and Evolution* by Luigi Luca Cavalli-Sforza and Marcus W. Feldman (1981), *Culture and the Evolutionary Process* by Robert Boyd and Peter J. Richerson (1985), *Coevolution: Genes, Culture, and Human Diversity* by William H. Durham (1991), *The Evolution of Culture* by Robin Dunbar and Chris Knight (1999), and *Not by Genes Alone: How Culture Transformed Human Evolution* by Peter J. Richerson and Robert Boyd (2006).

Some ground covered in Pagel's book has been explored and explained before (human history, development of mind, altruism, emotions, group/individual selection, free will, and consciousness, to name a few). But Pagel's efforts are thorough and packaged in clear, precise language with ample examples. One of Pagel's key claims is that our cultures (both the products and influencers of genes) are what count for our flourishing and survival – we are the "first species to throw off the yoke of its genes . . ." (4). Nevertheless, we are not inhabited by unchangeable robotic ideas, evidenced by our long (increasingly complex) lineage and present survival (where cultural universals ripen in many different forms).

The physical properties of the book are excellent: handsomely produced, well-constructed, and printed on good quality paper. After the Introduction the book consists of four main parts, each of which has a Prologue and anywhere from one to four chapters. Each chapter is punctuated with many subheadings to help guide the reader. There are References, a comprehensive Bibliography, and a generous Index. Mark Pagel is a fellow of the Royal Society and a professor of evolutionary biology at the University of Reading. His previous books include *The Comparative Method in Evolutionary Biology* (1991), *The Oxford Encyclopedia of Evolution* (2002), and, with Andrew Pomiankowski, *Evolutionary Genomics and Proteomics* (2008).

Pagel suggests that we have an immune system for ideas – we do not rely completely on instincts but consciousness, as the cultures we have created benefit us genetically. Our brain capacity is in part the result of our own inventions, a process of selective enhancement that continues. Culture (our social inclination and cooperative behavior) has served us in ways that were not available to other *Homo* species, such as the Neanderthals and Denisovans (with whom we shared part of our living history) who simply died off (or were perhaps killed by us). Our ability for symbolic thinking – to see and understand beyond the literalness of an object, event, or spurious thought – and the subsequent social creations and structures that arose from such, was key to our survival. For instance, Pagel presents the poignant image of Neanderthals on the edge of an ice cold Europe looking across to the warmth of Africa but not having the ingenuity to craft ships to take them there.

Pagel's accounting of the migrations, especially the crossing of the Beringia and of the so-called Lapita people inhabiting the Pacific islands by navigating thousands of miles of sea (6,000 years ago, well before the short excursions of the Vikings) by using the stars as guides, is breathtaking. Such is the story of the *homo sapiens sapiens* – the wisest of the wise, and the ones who could flexibly use the various

modules and intelligences of the brain to solve complex problems. (Many others have written about these mental adaptations in various formulations, from Jerry Fodor, Howard Gardner, Steven Mithen, and Leda Cosmides and John Tooby.) Other *homo* species made no such spectacular migrations and simply adapted to their existing environments, apparently incapable of understanding, for example, that the leftover bones from a hunt could be put to other uses, whether technological or ornamental. We, on the other hand, developed cultures to help us disperse across the world and spread ideas within and between our many groups. Without committing to a number, we know that there were many other species related to us, from the Ardipithecus (about 4.5 million years ago), the Australopithecines, and the Paranthropus (with several species in each) and then to the early genus of *homo*, which includes *habilis*, *rudofensis*, and *ergaster*. Why did we survive while they did not; why are we so different?

Our species went beyond stimulus enhancement (repeating in different environments what one would do anyway) to social learning, deliberate *awareness* to design in order to *improve* a behavior or tool – *invention* by thoughtful creation and not by chance (41). There might be a genetic basis for such constructive designs, since we find similar artifacts in widely different places. While there are human artifacts (such as stone tools) that are very old (Pagel points to a later species, *homo erectus*), there is almost no improvement for over 1 million years. While this is true, such a statement can be deceiving. Steven Mithen dates the earliest stone tools to almost 3 million years ago (flaked quartz) that gradually (and somewhat dramatically) improved: heavy duty and light duty tools (1.5 to 2 million years ago), hand-axes and Levallois flakes (1.5 million to 250,000 years ago), blade technology and flint slivers (pre 100,000 years ago). Nevertheless, Pagel's point is well taken: if ancient and early human species had a very rich inner cognitive life, it would probably be reflected in the artifacts they produced and left. This neglects the obvious: perhaps the early hunter-gatherers needed not to improve (over long periods) what they had since they had not yet begun to farm, settle, and establish cities – meaning that they could indeed have had a richer (individual) cognitive life that is not necessarily reflected in their basic, and quite serviceable, tools. Since Pagel's claim is that we improved on learning, there is no way for us to discount the possibility that some random, discrete individuals had nascent, rich cognitive lives that had yet to see efflorescence and others capable of copying. Cultural eruptions were embryonic and had yet to find the right catalyst (probably when our brains began to make connections in finding new and different uses for existing products).

At any rate, Pagel is less speculative and looks to the evidence at hand. Not until 160,000 to 75,000 years ago do we see (caves in Western Cape Province, South Africa) evidence of cultural (and not technological) artifacts – and those are dates pushed back far, since European cave paintings (Ardèche and Chauvet-Pont d'Arc, France) date to around 36,000 years ago and Lascaux at about 18,000 years ago. (Of course there is the red ochre dated to around 360,000 years ago, but no one is quite sure what that might have been used for.) The capability for such cultural manifestations was latent but only flowered, says Pagel, once we adopted social learning: cultural genesis and development come from mind and not necessarily from genes (though genes are in play with neurons and neural connections). For example,

our predecessors roamed the globe and adapted (physically, genetically) to the new environments, but it was culture that initially propelled them (47) and subsequently sustained them to form complex social divisions of labor and societies.

There is, of course, an advantage to different cultural groups: the passing down of rights and property (an advanced development), and hence why, Pagel suggests, there are many different cultures. "Cultures restrict the flow of genes" (54) and so, in spite of one *homo sapiens sapiens* species we all look ethnically different (in our ancestors' predilections for selecting certain features). Just as we see in natural biology (RNA strands joining, hungry amoebae forming a spore tower to sacrifice many to save a few, the many cells and organs of the human body), "natural selection made it possible for individuals to align their interests with those of their group" (72), and indeed there are cues to which we respond positively when identifying who is part of our group and negatively when noting who is outside of the group. While Pagel stresses over and again the importance of the group in terms of culture, he does not minimize self-interest – "natural selection has duped us with an emotion that encourages *group thinking*" (98). Regarding cultural evolution and social learning (or what biologists call diversifying selection), the "variety" of individual skills and talents count most (100). Culture is a sorting process, says Pagel (131): someone makes a musical instrument, and then someone else begins to play it (109). Pagel makes a sustained argument for diverse cultural groups (human culture), but this development can only come to pass through distinct individuals. Oddly, high heritability (individual differences) has little to do with overall human survival (118); but yet natural selection would then have eliminated our differences. Pagel seems to suggest that there is an evolutionary bias for a variety of personality types.

Likewise, Pagel says that the arts and religion are "*cultural enhancers*" – emotional motivators related to behavior (135). He seems satisfied with the simpler notions that the arts transmit ideas and that religion helps explain occurrences. Is this a bit perplexing? Pagel is arguing that we survived and thrived because of culture, but he does not quite come out and argue for an adaptive function in the arts (and lumps arts together without distinguishing one from another). Or maybe he does argue for an adaptive function. Even if beliefs are wrong, false, or incorrect they might, nonetheless, help a group survive (as D.S. Wilson has noted). Be that as it may, Pagel says that even without religion we would be much the same (i.e., selfish and morally corruptible). Simply, we have concocted religion to offer ourselves "courage and hope" and to *coordinate* and *unite* groups over other groups (159). As natural selection pits genes against genes, so religion *induces* emotions shared in a group (opposed to another) in "cultural relatedness" (165). However, there is no cycle (typically) of endless conflict; in fact, conflicts can render "opportunities" that produce moral outcomes (180-181). There are many distinct cultural groups with different beliefs (though all with one common denominator, the need, apparently, to own beliefs).

With acknowledgment to Robert Trivers, Pagel notes that reciprocal altruism by virtue of its mental complexity exists only among human beings (190). But such altruism is always on shaky ground (as game theory has demonstrated) for, in the words of Robert Axelrod, there is "the shadow of the future" – the possibility that one party

will look ahead to extraordinary gains and so default on any agreement (191). Nevertheless, we all seem to be programmed not only to be fair but to be generous – since we expect to be so treated; but paradoxically fairness is rooted in self-interest (201). Such social interactions depend on theory of mind (nonverbal), which in turn depends on a brain very different from that of a chimpanzee or our own ancient ancestors. We are able to detect deception quite well. The human brain has more than doubled in size over about 1 million years compared with that of a chimpanzee's. Pagel suggests that the rapid development of our brain (in quality and not just quantity – on average Neanderthals had slightly larger brains) explains our survival over all others (251). The human brain is a super-charged version of Darwin's descent with modification. (Some of the more interesting parts are when Pagel discusses Human Accelerated Regions – 49 in our genome, especially influential in neurons – and so-called junk DNA.) Much of our cooperative behaviors are a direct result of language, the ability to navigate multi-party transactions. Although we believe that *homo ergaster* had very rudimentary speech followed by more advanced speech in late *homo erectus* (the larynx), Pagel insists that only our species produced language (at most 200,000 years ago) because of "social complexity" and as a "trait for promoting cooperation . . ." (279, 281). As others (Dunbar) have pointed out, Pagel notes that we use language (across the globe in 7,000 current forms) not just to speak but "principally to talk about each other . . ." (294), and this is reflected in key sounds and word lengths universal for thousands of years.

In his discussion of free will (and returning to the function of consciousness as a cultural operator), Pagel says that our brains work out patterns ahead of schedule so that the subconscious might already know what to do in certain instances. This is relevant since our culturally-hungry brains are always in operation mode, as if on a sixth sense. Relatedly, an older part of our brain (affective) responds instinctually to highly charged moral situations – do no harm (329). Clearly, such social sensitivity has become over time a key cultural ingredient. Interestingly, though, Pagel (citing Daryl Bem) suggests that we do not know ourselves because of "introspection" but because of "observing our own behaviors . . ." – and why we often do not know how we would react in a hypothetical situation (327). Pagel goes on to say that consciousness is little more than an after effect (of a highly active brain) organizing input (332) – there might be something illusory about what we label "I." Yet Pagel does not seem to be hinting at cultural determinism or the standard social science model in learning; rather, he seems to suggest that in order for us to imitate and improve upon behaviors (the cultural tools that have preserved our species), our brains need to catalogue (seamlessly) various strands of information in advance of our conscious processing such information.

Finally, coming back to social learning and our ability (need) to connect in clusters, Pagel notes that in spite of our near obscurity in large cities (some of which date back almost 8,000 years), Stanley Milgrim's six degrees of separation (i.e., our proximity to others) is valid, and, *social viscosity*, where we form small groups and stay close by (i.e., "social rules") has not changed much over our long evolutionary history (365, 367).

- **Gregory F. Tague**

Alex Mesoudi. *Cultural Evolution: How Darwinian Theory Can Explain Human Culture and Synthesize the Social Sciences.* Chicago: U Chicago P, 2011. 280 pgs. $27.50US Paper. ISBN: 978-0226520445

Alex Mesoudi's *Cultural Evolution* provides a thorough, well-organized, and comprehensive overview of an increasingly important subject in multi-disciplinary studies. Even genetic hardliners and those who emphasize individual character over the influence of situation will be persuaded by the argument and evidence that culture itself (which E.B. Tylor in 1871 characterizes as "'that complex whole which includes knowledge, beliefs, art, law, morals, custom, and any other capabilities and habits acquired . . .'" [Mesoudi 189]) is subject to Darwin's model of variation, competition, and inheritance. The book is packed with information, historical background, and illustrations of leading research on all of the topics covered. Not to mention, Mesoudi's style is fluid and the book is enjoyable to read.

The text is arranged in ten chapters, and each chapter consists of sections and subsections (thus easy to negotiate). One of the many strengths of the book is Mesoudi's graceful explanations of complex mathematical models provided by earlier researchers in cultural evolution. There are thirteen graphics, each one fully explained. There are Notes, a Bibliography, and an Index. Mesoudi is currently a reader in anthropology at Durham University and has contributed to a number of books and leading journals.

As Mesoudi says, "individual learning and genes cannot fully explain human behavioral variation . . ." and so the reliance on cultural explanations (12). Mesoudi points to the well-known example of the holistic outlook of East Asians compared with the analytic outlook of Westerners. Granted, that is very general, so other, more specific examples are cited. He says that B.F. Skinner, by focusing on individual learning and conditioning ignored culture; and he goes on to say that evolutionary psychologists (naming John Tooby and Leda Cosmides) lean more to genes and less to culture (as Tooby and Cosmides speak of an *evoked culture*). Echoing Peter Richerson and Robert Boyd (whom he cites often), the upshot is that "genes alone cannot explain human behavioral variation" (13). In this way, genes are only responsible for certain potentials (i.e., learning itself), but not for content (i.e., values or beliefs). Robert Turner and Charles Whitehead, citing other studies (in their 2008 paper "How Collective Representations Can Change the Structure of the Brain"), have made a similar argument, and that is, for example: one is not born with a talent or even an inclination to be a musician; one becomes a musician by constant exposure and practice.

While all of this holds truth, by the same thinking, cultural transmission (and social learning) alone does not account for individual variation. Cannot the learning potential of individuals vary, and is that potential not genetic? One can argue that we have everything Mozart left because of the guided influence of his father and the prestigious musical culture of Austria; but then, one could argue that Mozart was a genius (constituted uniquely from his family's genes scrambled). Others, too, who look for a biological (i.e., genetic) explanation of morality (Richard Alexander comes

to mind) might quibble with the assertion that genes are not responsible for content. As the philosopher Arthur Schopenhauer argues, it matters not whether one gambles for bits or nations – what matters is how honestly (or not) one behaves (i.e., how genetic self can be definitive).

Especially in the early sections of the book, Mesoudi understandably keeps steering away from individual genes in terms of learning and favors culture. No one would necessarily question this: cultural learning is easier, more adaptive, and works faster; but individuals have innate dispositions that can affect learning and outcomes (see, e.g., research by Jerome Kagan and even work by Elaine and Arthur Aron). Regarding learning, the human species alone has an advanced, cumulative (Tomasello's ratchet effect), and highly influential culture, but how do we explain the many discrete individuals (not groups) who resist such culture?

But this is not to take away from Mesoudi's points or fascinating argument. Who could really disagree? Mesoudi goes on to argue convincingly about Darwin's model of variation, competition, and inheritance in terms of cultural transmission. And of course in this model there is acknowledgment of individuality (i.e., variation). There is also variation within and between groups, which helps establish cultures: different groups, extending back to our prehistory, are different cultures (languages, religious practices, and social customs). More specifically, as per Darwin, the competition will occur between like species, since both are trying to secure a certain (in this case) cultural foothold. And just as there are distinct individuals and groups, there will be competition between such, and in cultural competition there will be ideas against other ideas, skills against other skills. In fact, in a Darwinian manner, says Mesoudi, some aspects of culture can become extinct. And finally, as Darwin speaks about inheritance, we can see from observation and documented history that values, beliefs, ideas, knowledge, and customs are passed on within families and within groups (some modified, some not). While there is in terms of cultural transmission, on the one hand (among human beings), very close imitation, there is also, on the other hand, what Darwin calls descent with modification – we have progressed and flourished precisely because whatever we learn (whether in manufacturing a product or in generating an idea) is improved over successive generations.

In addition to his careful writing on a Darwinian application of cultural evolution, Mesoudi manages to weave into his explanation a brief history of early cultural evolutionary theories (including Herbert Spencer and his insistence on *progress* to Lewis Henry Morgan and his Euro/American centrism in terms of classifying races). These early theories, whether products of their time or simply illustrations of individual ignorance, stress that some cultures are more evolved than others. To say that these ideas are "racist" (38) is true from our cultural perspective, but would they not be racist because they are products of Victorian, nineteenth-century British culture? Victorians were notoriously fearful of *the other* – that was their culture. (See, for instance, Collins' *The Moonstone*, and earlier still, Austen's *Mansfield Park* – works of art drawing attention to the *status quo* mentality of colonialism.) So how does one define and qualify one *culture* against another or aspects of itself? An earlier and smaller group, the Eighteenth century British Quakers, spoke out against the slave trade long before it was abolished, so were they counter-culture even if theirs is the

position that ultimately succeeded? Sticky business here, this culture (and risky to speak about it in general terms); the closer one looks, culture seems akin to *mise-en-scène* with multiple layers, actors, and props (or is it the endlessly reflecting mirrors of *mise en abîme*?). While Darwin might not have *meant* the word to carry the force with which it strikes many readers today, he does after all use the word *savages* (frequently in *Descent*). In spite of his genius of observation and single-mindedness was Darwin a product of his class and culture? For this reviewer, the key question is whether one can escape influence from culture at all (or, as he has debated elsewhere, at what point is circumstance self?).

All of which proves Mesoudi's claim about the Darwinian components (variation, competition, inheritance) of culture. And Mesoudi's theme is well taken: cultural evolution is not ladder-like and not progressive (as Spencer argued); societies do not progress up a series of steps to a pinnacle (since there is no top). Rather, there are variations within a population that through natural selection cause change over time (where one culture then borrows from an earlier version of itself or from another culture). And this brings us, Mesoudi sees, to the key question as to whether or not the transmission of culture is *particulate*. (Again this reviewer makes reference to the Turner and Whitehead paper.) Biological inheritance is on the micro level and is not, on the surface, a blending of traits – an individual gets only one version of any gene, not a blend of it (and Mesoudi provides examples, such as the color of eyes or fur). According to Mesoudi, cultural traits, however, can blend (with the example of language), or not (since on a neural level aspects of culture, such as sounds in a language, can be discrete). This leads us to Jean-Baptiste Lamarck (Darwin's predecessor who espoused use/disuse and the inheritance of acquired characteristics). Mesoudi says that cultural evolution is Lamarckian – we do not acquire neural activity from others but copy behavior and then modify it before passing it on. In a nutshell, according to Mesoudi, cultural evolution is Darwinian, just not neo-Darwinian (the later espousing the mathematical and genetic models of the evolutionary synthesis in the 1920s/30s).

So the next part of the discussion is on micro-evolution (experimental genetics) and macro-evolution (naturalists). And again, Mesoudi wonderfully limns and explains the history of all this, from Lamarck and Mendel to Fisher, Haldane, and Wright. The macro processes (naturalists) such as gradual change and species diversity, and micro processes (gene transfer) are finally reconciled to natural selection in the so-called evolutionary synthesis. Mesoudi goes on to describe, however, how a macro/micro divide now exists in the social sciences, e.g., psychologists v. cultural anthropologists (or between micro/macro economists). This discussion is an important part of the book and Mesoudi's attempt at his own synthesis (for which he will provide an outline in his final chapter). In fact, Mesoudi later asserts that "microevolutionary mechanisms" are equivalent to "selection, mutation, drift" which "underlie" macroevolutionary "patterns and trends" such as "adaptation, historical contingency" (138).

Much of the remainder of the book is engrossing and filled with research facts and examples, such as the different types of learning (either guided or prestige, for example), or the different types of biases (such as content, frequency-dependent, or

model). Mesoudi spends a good amount of time working over the macro/micro divide. In terms of macroevolution, Mesoudi looks at archaeology and anthropology, and nicely explains phylogenetics in terms of cultural trees, past (e.g., paleoindian projectile points) and present. But this raises (as Mesoudi says) Galton's problem: in terms of descent with modification in culture, what came first? Darwin's early critics (e.g., Fleeming Jenkin and even Lord Kelvin) complained of a similar problem: how did natural selection start? Mesoudi goes on to offer an answer (provided in part by the phylogenetic tree). Societies, while culturally distinct, nevertheless share traits, all of which go back to some common ancestor. So while cultural transmission, some argue, is a messy horizontal blending and does not therefore lend itself to a phylogeny, analyses have nevertheless been done (and Mesoudi cites examples). Mesoudi also tackles language and history in terms of macroevolution (in that language and its elements are akin to evolutionary change). As Mesoudi (among others) notes, there are thousands and thousands of languages, which implies different cultural groups, which assumes (as per Richerson and Boyd) cultural group selection.

Lab experiments and tests demonstrating cultural transmission are adequately explained, as well as field experiments (much of this covered in two chapters). It is worth noting that Mesoudi cites with authority Judith Rich Harris (as does, elsewhere, Jonathan Haidt) – and why not since their models promote horizontal (group) and not vertical (parental) learning and transmission of information; meantime Jerome Kagan questions Harris' research, and why not, since his emphasis is on discrete amygdala activity and individual temperament. But Mesoudi's argument is well taken: learning and cultural evolution may come down to a question of scale, where the parents are but a small part of the larger and more informed group (which is well-stocked with prestige models of skilled workers and expert teachers). In terms of economics, Mesoudi provides interesting examples of cultural evolution (such as irrational behavior in the demise of Polaroid, which developed a digital camera but insisted consumers wanted paper, and how at the turn of the twentieth century there were nearly three hundred tire manufacturers, whittled down by competition to a mere handful by the 1980s). So the model of variation, competition, and inheritance applies.

Mesoudi ends by looking at non-human culture (and the differences from human beings). Rats, guppies, rhesus monkeys, female quails, songbirds, octopuses, and honeybees, to name a few species, engage in social (i.e., non-genetic, adaptive) learning. Human beings, however, move from social learning to cultural traditions in and among groups, and so (as Mesoudi points out), human culture is Darwinian since it is cumulative (nearly exact transmission yet descent with modification). The book concludes with an overview that sketches a synthesis of the social sciences using evolutionary methods, i.e., "a potential science of cultural evolution" graphed alongside biological evolution.

Mesoudi's book is highly-recommended for students of the humanities since it convincingly proves the biological evolution behind culture. No doubt biologists and social scientists will find much to consider in the book as well, and one could see how well this text would suit a course on the subjects of culture and evolution.

- **Gregory F. Tague**

Jared Diamond. *The World until Yesterday: What Can We Learn from Traditional Societies?* NY: Viking, 2012. 512 pgs. $36US Hardcover. ISBN: 978-0670024810

There is a long history, dating at least back to Tacitus' *Germania*, of authors examining more traditional societies and detailing laudable traits from them that their own more technologically advanced societies should emulate. As its title suggests, Jared Diamond's *The World until Yesterday: What Can We Learn from Traditional Societies?* fits squarely within this tradition. It highlights differences between traditional and modern societies in areas ranging from conflict resolution and what Diamond terms "constructive paranoia" to child rearing and nutrition. In the process, it details – with varying levels of success – aspects of traditional societies that people living in the industrialized world should incorporate into our own lives and suggests ways that society as a whole should change.

Diamond, the winner of the 1998 Pulitzer Prize for his earlier book *Guns, Germs, and Steel: The Fates of Human Societies*, is well placed to discuss traditional societies. Although currently a professor of geography at UCLA, his original training and Ph.D. are in physiology, and he has also conducted extensive ornithological research. He indeed refers to himself as an "evolutionary biologist" in the book. As in his previous works, Diamond calls upon his wide-ranging knowledge in the natural and social sciences in writing *The World until Yesterday*.

Over the past fifty years, Diamond's ornithological research has frequently brought him to New Guinea, an island containing a large percentage of the world's remaining traditional societies. Many of the book's insights and anecdotes are gleaned from Diamond's personal interactions with these groups. In fact, it occasionally reads like a memoir of his most memorable experiences in New Guinea. The book also examines a large number of traditional societies with which Diamond has no first-hand experience, such as the North Slope Inuit and Great Basin Shoshone in North America and the !Kung and Pygmies of Africa.

The World until Yesterday is not the first time that Diamond has compared traditional and modern societies. In *Guns, Germs, and Steel* he argued that environmental factors explain why some human groups have evolved into more complex state societies while others have not. Developments such as political centralization were the result of increased population density, which was in turn caused by the intensification of food production due to the domestication of various crops and animals. In order for this process to occur, humans needed plants and animals suitable for domestication, but such species are concentrated in only a few places around the world. Human groups living in areas with these species developed larger, more complex societies. Those who did not continued to live in societies virtually unchanged from those in which their ancestors had lived for countless millennia.

Diamond continues to discuss environmental factors in *The World until Yesterday*. Indeed, he convincingly argues that the environment plays an important, albeit not exclusive, role in differences between traditional societies. For example, a group of people living in an environment that forces them to constantly be on the move in order

to feed themselves is much more likely to euthanize its elderly than a group that leads a more settled existence. The amount of language diversity in an area is also primarily caused by environmental factors such as climate and the productivity of the land in which various groups live. But in his new book Diamond's emphasis has changed from the evolution of societies to a study of those societies whose environment kept them from developing into more complex state societies, and what people living in modern societies can learn from them.

According to Diamond, the answer is a lot. People have, after all, lived in traditional societies until "yesterday" in the overall lifespan of the human race. As a result, studying traditional societies both helps us understand our past and elucidates what elements from these societies remain with us still. Studying traditional societies also emphasizes the diversity of human nature and moves researchers away from basing their findings just on the "narrow and atypical slice of human diversity" of modern industrialized societies (8). Diamond seems rightly disturbed that 96% of psychological research conducted in 2008 was from such societies. (Around 80% of research was on an even smaller grouping: college undergraduates enrolled in psychology courses!) Finally, he believes that both individuals and modern society as a whole could benefit from adopting certain traits found in many traditional groups. This final lesson is by far the most emphasized in *The World until Yesterday*. In almost every section of the book, Diamond's focus is on how we can better our lives by adopting aspects of traditional societies into them.

Diamond's emphasis on what his readers can learn from traditional societies does not mean that he idolizes them. He recognizes that people living in traditional societies usually adopt the trappings of modern ones when given the opportunity – and for good reason. As he puts it, "Many traditional practices are ones that we can consider ourselves blessed to have discarded – such as infanticide, abandoning or killing elderly people, facing periodic risk of starvation, being at heightened risk from environmental dangers and infectious diseases, often seeing one's children die, and living in constant fear of being attacked" (9). Diamond's emphasis on the violence present in traditional societies has even led him to be attacked by some supporters of traditional peoples for supposedly portraying them as savages (*The Observer*, 2/2/13) – an accusation that is not supported by the contents of the book. Diamond, however, argues that even traditional groups' negative traits can teach us the important lesson of appreciating elements of our own society that we might otherwise take for granted.

Diamond's writing is on the whole engaging, and his definitions and explanations are easy to follow. His clear prose is sometimes marred, however, by the overly complex and often unnecessary tables that he includes. Rather than assisting the reader like they should, tables, for instance, listing examples of gluttony in traditional societies when food is abundant, providing sixteen scholarly definitions of religion, and describing in excruciating detail objects traded by a large number of traditional societies instead bog the reader down. The book includes an excellent array of relevant photographs, divided into separate sections of color and black and white plates. But these, too, are marred by poor organization. For example, why did Diamond and the editors at Viking choose to make an image of Ishi, the last Yahi Indian, the first black and white plate when he is not first mentioned until page 398?

The World until Yesterday examines the differences between modern and traditional societies in eight different areas: peaceful dispute resolution, war, raising children, treatment of the elderly, "constructive paranoia," religion, multilingualism, and diet. Diamond admits that he has left out a large number of topics that have been studied by social scientists, but he argues that his goal is not to paint a comprehensive portrait of all aspects of human society. That is his right, of course, although one wonders how he chose to include the above topics while leaving out equally important ones such as gender relations. Each section usually begins with an anecdote relevant to the subject, often drawn from Diamond's experiences in New Guinea, then gives an overview of various traditional societies' norms in this area, and concludes with the lessons that can be gleaned from traditional practices.

The first two topics that Diamond covers are peaceful conflict resolution and war, which in traditional societies are the two ways that individuals handle disputes. Unlike in modern societies where disputes are usually between two or more strangers and the government's overarching goal is to maintain social stability, the goal of peaceful dispute resolution in traditional, small-scale societies is to restore relationships between two individuals who either know each other or at least know of each other. Diamond is careful not to overemphasize the potential advantages of this traditional system of conflict resolution as failed efforts at reconciliation frequently deteriorate into cycles of violence and war, something that does not typically happen in state societies. Indeed, studies show that traditional societies' frequent conflicts result in an average death rate from war that is three times higher than even the most war-torn countries of the twentieth century. But Diamond does believe that modern societies can learn a few lessons from traditional groups' emphasis on restoring relationships. One suggested change is to provide more mediation in conflicts where the two sides do know each other such as divorce and inheritance disputes. Diamond argues that even strangers should be given the option to choose mediation to resolve disputes.

Diamond next discusses how traditional societies raise children and treat the elderly. While traditional societies' behavior towards the elderly varies, Diamond argues that they are remarkably similar when it comes to the basic elements of raising children. For example, the average age of weaning in traditional societies is three, and many hunter-gatherer groups practice continual nursing in which an infant nurses in brief spurts every 15 minutes or so, a practice that they share with our closest primate relatives. Diamond huffs that "modern human mothers have acquired the suckling habits of rabbits, while retaining the lactational physiology of chimpanzees and monkeys" (183). In climates that allow it, most hunter gatherers also retain constant skin-to-skin with their babies, and every traditional society surveyed engages in co-sleeping. Most traditional societies also deal with crying children immediately, give their children more autonomy, encourage creative play rather than bombarding them with toys, and practice allo-parenting in which individuals beyond the family assist in raising a child. Diamond believes that parents in modern societies should consider adopting all these practices, observing that "other Westerners and I are struck by the emotional security, self-confidence, curiosity, and autonomy of members of small-scale societies, not only as adults but already as children" (208). While traditional societies' treatment of the elderly vary greatly, Diamond argues that many rely on the

elderly for historical memory and tasks such as childcare – areas in which modern societies should utilize their aged population more as well.

The most important lesson that Diamond learned from his time among traditional groups in New Guinea is "constructive paranoia," an oxymoron that reflects the importance of being aware of one's environment and the potential dangers within it. Diamond believes that one close correlation to this lesson that his readers can learn is to think more clearly about the dangers we face in state societies. As such we should not focus our fears on something such as genetic modification, which has an extremely low chance of killing us, and focus instead on driving safely and wearing a helmet while biking, both of which would save many lives a day.

Diamond's interesting discussion on religion does not really fit with the rest of the book, as he does not really attempt to describe what his readers can learn from traditional religions. Diamond instead offers a learned exposition about how religion possibly originated among humans in order to explain the world around them and make predictions about it. He also explains how the functions of religious belief differ between traditional and modern societies. For instance, religion's role in defusing anxiety was greater in traditional societies where the threat of violence and other dangers were much higher than in modern societies. On the other hand, religion's function in larger states of providing people with codes of behavior when interacting with strangers was much less necessary in smaller traditional societies where you knew everyone.

The section on multilingualism begins by making an impassioned plea for the preservation of traditional languages, sadly noting that a language disappears every 9 days. Diamond believes that this trend is tragic as "each language is the vehicle for a unique way of thinking and talking, a unique literature, and a unique view of the world. Hence looming over us today is the tragedy of the impending loss of most of our cultural heritage" (370). Diamond then notes that multilingualism is widespread among small-scale societies that will frequently come into contact with groups speaking a language different than their own. The section ends with Diamond forcibly arguing that people living in mostly monolingual societies such as the United States need to strive to learn other languages. Besides its cross-cultural benefits, studies show that learning a different language results in more flexible minds and can even stave off the effects of Alzheimer's for a time.

The book's last section details how the study of traditional societies provides guidelines to reduce hypertension and diabetes in today's industrialized societies. In it, Diamond points out that the rates of non-communicable diseases are extremely low in traditional societies and correctly argues that many of these diseases can usually be staved off by lifestyle changes. The section ends with Diamond's prescription for leading a healthy lifestyle.

As it details what people living in modern states can learn from traditional societies, *The World until Yesterday* often reads as some sort of weird self-help book filled with insights that range from the useful and interesting to the unoriginal and humdrum. The conclusions that Diamond draws from traditional societies about how to lead a healthy

lifestyle definitely fall into the latter category. After giving the standard advice about limiting one's intake of calories, exercising more, not smoking, and eating more fruits and vegetables, Diamond admits: "This advice is so banally familiar that it's embarrassing to repeat it." Although he then goes on to justify his conclusions by stating that "it's worth repeating the truth," this reviewer at least was left thinking: "Yes, your prescriptions in this area are quite banal, aren't they?" (451).

One wonders how the average reader of Diamond's book could implement some of his other most worthwhile suggestions. Many readers will agree that bilingualism is important, but immersing children in multiple languages early in life is extremely difficult in countries with one dominant language unless a family has the money to hire caregivers who speak a foreign language and/or send their children to a special school. Much of Diamond's advice for childrearing is equally difficult to follow. Although a large percentage of his readership could presumably implement allo-parenting to some extent, few harried parents are in a situation where they can engage in continuous nursing or have constant skin-to-skin contact with their child. Diamond himself acknowledges that at least one of the lessons taught by traditional societies, the methods that many of them use to resolve conflict peacefully, is a change that should be adopted more at the societal rather than the individual level.

The World until Yesterday does a good job of providing an overview of differences between traditional and state societies in the areas that Diamond chooses to highlight. But the lessons that he argues modern individuals and societies should glean from traditional groups are often either trite or too difficult for the average person to implement.

- **Eric Platt**

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ANNOUCEMENTS

The *ASEBL Journal*, fully peer-reviewed and indexed in the MLA International Biblography and Ebsco Host, is published every year in January. On occasion there might be a special issue. If you are interested in the journal, please visit the blog (About tab) for complete information, mission and goals, aims and scope: www.asebl.blogspot.com You may contact the editor at publisher@ebibliotekos.com, with ASEBL in the subject line, but do so only after you have reviewed the About tab, please. Sister site: www.ebibliotekos.com

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