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Readers of *Philosophical Psychology* may be most familiar with Ron Sun by way of an article recently appearing in this journal on creative composition expressed within his own hybrid computational intelligence model, CLARION (Sun, 2013). That article represents nearly two decades’ work in situated agency stressing the importance of psychologically realistic architectures and processes in the articulation of both functional, and reflectively informative, AI and agent-level social-cultural simulations. Readers may be less familiar with Sun’s 2001 “prolegomena” to related multi-agent (proto-social) research also from this journal. That article argues that “a proper balance between “objective” social reality and individual cognitive processes” is necessary in order to understand “how individual belief systems... and the social/cultural belief system ... interact” (Sun, 2001, pages 10 and 23). This issue remains central in Sun’s 2012 edited volume, *Grounding Social Sciences in the Cognitive Sciences*, here addressed from within the expanding field of pioneering researchers bent on orchestrating that proper balance, the “cognitive social sciences.” Its fifteen chapters are sectioned according to culture, politics, religion, and economics, and closes with an especially rewarding pair of contributions from Gintis, and McCubbins and Turner, under the heading of “unifying perspectives.” Most entries – but for Sun’s own - are serviceably summarized in the introductory overview. So, rather than follow suit, this review will focus on setting out Sun’s vision, noting how this text helps us to realize it more clearly, with a positive focus on a few entries in particular.

Sun opens the book with a personal anecdote. Struck by the absence of cognitive grounds for discourse while attending a social sciences conference in 2001 – the year of his “prolegomena” - he wondered at the possibility of explaining “a substantial part of social processes and phenomena from a cognitive-psychological point of view” (Sun, 2012, page 3). Initially confounded by the “relative lack of interaction” amongst the pertinent disciplines (page 6), by 2012 Sun is able to confidently maintain that this cognitive “grounding” is not only possible, but necessary, holding that “any understanding of the impact of culture on daily practice” ultimately arises from an understanding of “the psychology of culture” (page 14). Then, he sketches this psychology of culture as the upward and downward co-constitutive causal loops between cognitive agents and the structures arising from their common function, a “two-way interaction” with individuals influencing macro-level social structures, and macro-level structures influencing individuals in very interesting ways (pages 18-23). Consistent with his original work in computational intelligence, Sun’s focus is the autonomous generation of concepts and their representations via the ability to construct abstractions that then guide the behaviors of other similarly embodied and embedded minds. He emphasizes the ontological significance of this process, arguing that knowledge must be discovered before it can be shared, and ultimately that societies and their institutions are actively produced by, from, and for constitutive members who themselves are best understood as enactive, variously mindful meaning-making machines coping, comporting, and
attuning together within and towards the world of their own co-creation (whether or not they are aware of it). Relevant information and requisite practices due resulting institutions are individually internalized, molding agent psychology in the macro-to-micro direction, with these macro-level structures in turn affected by individual “innate psychological propensities and prior learning and experiences” as agents “gravitate toward those perspectives and biases provided by culture” that reinforce said propensities and their ontological and axiological commitments (page 20). With experience, agents can produce actionable explanations for these processes, culminating in meta-level cognition over present and emergent institutional arrangements and correlate commitments (“cognitive emergence” or “implicit-to-explicit explicitation”) with agents so informed able to “explicitly alter their behaviors to take account of them” (page 21). Thus, the two-way interaction between agent and culture runs from lowest to highest levels of organization and back again, and ultimately, with the right conceptual tools, agent psychology is able to directly shape macro-level arrangements, e.g. Thomas Jefferson and the Declaration of Independence.

The top-down reality of constructs generated bottom-up through coordinated action is especially poignant given the chapter that follows, from Paul Thagard. In “Mapping Minds across Cultures,” Thagard sets out from a nested complex systems portrait of situated agency (“multilevel interacting mechanisms” pages 38-41, reflecting Sun’s “levels of analysis” beginning page 6, endorsed also by Pyysiainen on page 241, and a general notion recurring in various ways throughout the collection) to demonstrate how a suitably refined hybrid approach, such as that articulated in his HOTCO model, can begin to explain the causal efficacy of social phenomena. This view is developed into deceptively simple “cognitive-affective maps” constituted by representations and their relations weighted by affect (positive or negative). He demonstrates how these maps can make relationships between micro- and macro-level phenomena explicit, and how behaviors might be changed on account of this information. Finally, he follows Sun in affirming the necessary exposition of the cognitive grounds of the sociological domain, judging that “much work in current social science is dominated by two inadequate methodological approaches: the methodological individualism … of rational choice theory; and the postmodernism … in the form of vague discussions of discourse and power relations” (page 56) As neither of these approaches reliably explain psychologically realistic social agency at either level of organization, the appointed role of cognitive social science becomes “how to integrate the social and cognitive sciences non-reductively” (pages 56-7), a task that Thagard fruitfully accomplishes with his cognitive-affective maps.

Following Thagard’s, each succeeding chapter in its own way works toward a similar integration, coordinating insights into the cognitive bases for social phenomena on the one hand with the social origins of cognitive phenomena on the other. Each also actively corrects for disciplinary focal aberrations as relevant disciplines are integrated, with some presenting brilliantly resolved views over the emergent breadth of field (c.f. Atran, Thagard, Gintis, N. Ross, Pyysiainen) and others offering ingenious avenues to similar resolution (c.f. Shore, Kable, McArdle and Willis, D. Ross, Whitehouse, McCubbins and Turner), with some openly challenging remaining resistance to these efforts. For instance, Don Ross laments that economists have not adopted “the program
urged by Sun (2006) for combining cognitive with social modeling,” a fact that he finds “surprising” as “economists have devoted considerable attention to models of individual people as disunified agents” while also presuming them to be motivated “more by institutional structures and less by onboard computations” (pages 297 and 308-9). And, McCubbins and Turner’s chapter “Going Cognitive” expresses frustration with disciplinary obstacles to the proper balance required for adequate explanations of social-cognitive phenomena. These authors warn that “social science modulo cognitive science seems to be self-contradictory and unlikely to succeed” (page 410) lest the social scientist’s ”curse of knowledge” be lifted (page 403) and disciplinary “framing effects” minimized (page 400) in order “to include in the array of possible explanations for human behavior the relevant mechanisms [and] heuristics from the cognitive science literature” (page 397). This sentiment, that both perspectives are essential to anything that might pass for an explanation of either, represents a binding assumption common to every contribution to this volume. And, the promise of such an approach to deliver in this regard is perhaps best demonstrated in Shore’s chapter, “Egocentric and Allocentric Perspective in Cultural Models,” in which he deftly underscores the role of both points of view in “the effective orientation of individuals in their changing environments,” facilitating “their ability to gain a basic sense of internal coherence and personal meaning in their lives” (page 114). As lives – in their very living - are understood from both perspectives, meaningful explanations must make both perspectives better understood.

Of course, such all-encompassing explanations are not easily accomplished, and this difficulty suggests a neglected reason for the slow integration of the social with the cognitive sciences. For instance, Sun’s philosophy of social cognition derives from Heidegger and Vygotsky, phenomenological with sociological roots in Weber and Durkheim. As grounds for social sciences, these are at once as solid and as open as can be easily conceived. The trouble is that such integration from the cognitive sciences represents a summit of interdisciplinarity, not an entry point. Scholars up to the legwork are the exception rather than the rule, and those that try often proceed via shortcuts through conventional wisdom and common fabrications that dull the cutting edge and distract from focal phenomena rather than refine them (c.f. the otherwise edifying section on politics). That said, *Grounding Social Sciences in the Cognitive Sciences* is a dizzyingly informative collection, and due largely to a few deeply inspired entries, a visionary resource-book representing what might best be characterized as an emerging post-disciplinary understanding of the human condition and its consequences. Central in this effort has been the editor, Sun himself, and the breadth and caliber of this volume is testament to the influence that this burgeoning study promises to have not only over how we come to see ourselves and our societies, but how we aim to effect and affect them either way. Without doubt, the cognitive social sciences will increasingly set out the terms for meaningful explanations of human life, and their review by way of this text is necessary reading for anyone so motivated. If it is not in your library, already, then you may soon wish that it was. Highly recommended.

Works Cited
