

Christopher D. Mellinger (ed) (2025). *The Routledge Handbook of Interpreting and Cognition*. Abingdon (England): Routledge, pp. 474, € 232.50 (hardback). ISBN 9780367277260.

For much of its history, interpreting studies has occupied an interesting position relative to the cognitive sciences. With these two fields in an asymmetrical relationship, interpreting has long been regarded as one of the most extreme forms of language processing, yet sustained theoretical and methodological integration with cognitive science has remained uneven. Edited by Christopher D. Mellinger, *The Routledge Handbook of Interpreting and Cognition* provides an indispensable map for that integration. To do so, the volume contains 25 chapters in several areas, including interpreting of both sign and spoken language, the study of bilingualism, cognitive psychology, neuroscience, and psycholinguistics, not simply to document the state of the art on interpreting cognition but to reorient the field by challenging inherited dichotomies, updating theoretical frameworks, and broadening methodological repertoires.

The core intellectual contribution of the handbook lies in its consistent critique of how interpreting studies is traditionally shaped. Launching the volume with a provocative critique of the conventional binary separating translation from interpreting, Ricardo Muñoz Martín and Elisabet Tiselius argue that this conventional distinction hides more than it reveals when viewed through the lens of CTIS. To encompass tasks from sight translation to interlingual respeaking, the broader category of ‘multilectal mediated communication’ (MMC) is introduced. Such reconceptualization does not entail denying differences between modalities. Instead, it reframes them around specific cognitive and communicative constraints that cut across traditional categories. As the authors themselves call for greater methodological consensus, the proposal remains more programmatic than fully operationalised. This call for a nuanced framework finds further historical and theoretical grounding in Chapter 3, in which Barbara Ahrens maps five families of cognitive models, from the Paris School’s triangular model to neurolinguistic architectures, showing how each has shaped the field’s understanding of memory, capacity limits, and parallel processing.

Throughout the handbook, these critical positions find repeated echoes, where authors challenge the applicability of imported frameworks. In Chapter 14, Elisabet Tiselius draws on Basic Language Cognition vs. Higher Language Cognition (BLC-HLC) theory to problematise the strict A-B-C classification system used by the AIIC. It is argued that, while pragmatically useful, it fails to capture the continuum of language development in which interpreters operate. The field’s bilingual bias, the often unexamined assumption that interpreters possess perfect command of their working languages, receives critique

from multiple angles, including Renée Jourdenais's call for dialogue with second language acquisition research in Chapter 6 and Sonia Colina's demonstration that phonetic and phonological competence has been marginalised due to professional biases and inadequate models of bilingualism in Chapter 8. Chapter 5 by Laura Babcock deepens this critical thread by examining bilingual language control and showing that the much-hypothesized "interpreter advantage" in domain-general inhibition, that is, the capacity to suppress distracting information across different types of tasks, lacks empirical support. Chapter 4 on output load by Bart Defrancq mounts a particularly incisive critique. Seen in this light, the field's focus on source speech features has systematically overlooked the contribution of production processes to cognitive load. Revisiting published pupillometry data, Defrancq offers an alternative interpretation: increased pupil dilation appears most pronounced during periods of pure production, not during overlapping comprehension and production stages. Production indeed seems to be a neglected dimension of cognitive load. This focus on output finds a counterpart in Chapter 17 on language production, in which Agnieszka Chmiel bridges psycholinguistic models and empirical findings on lexical simplification and structural priming.

The handbook's treatment of expertise and individual differences exposes the strengths and some potentially productive tensions within the volume. In Chapter 2, proposing an ambitious synthesis of the expert-performance approach (EPA) from cognitive psychology and the interactional expertise approach (IEA) from the sociology of science, Fabio Alves and Igor Antônio Lourenço da Silva argue that expertise in interpreting should be understood as an acquired interlingual reformulation skill rather than as a set of stable traits. Their distinction between relative and absolute approaches to expertise, and their claim that genuine expertise may be rarer than typically assumed, has direct implications for research design. In Chapter 11, Minhua Liu and Nannan Liu explore the closely related but distinct construct of 'aptitude' to distinguish pre-training capacities from training-induced advantages while critiquing the field's overreliance on decontextualized psychometric tests. These are indeed indicative of a recurrent friction between competing perspectives in the handbook: between calls for greater methodological rigour (larger samples, better controls, longitudinal designs) and recognition that the populations of interest are small, specialised, and difficult to recruit. This tension is not resolved, and perhaps cannot be, but it is at least explicitly acknowledged. In Chapter 21, Pawel Korpak and Christopher D. Mellinger extend the discussion of individual differences by introducing concepts from differential psychology, particularly the 'ergodicity' problem, the questionable assumption that group-level findings apply to individuals. Their call for within-subject designs, longitudinal studies, and qualitative methods to complement

quantitative measurement represents a methodological corrective to the field's overreliance on ANOVA-based comparisons between loosely defined groups.

The volume seeks to synthesise the *pluralistic* methodological and epistemological orientations that increasingly characterise the field. Chapter 9 by Thomas Hanson, who writes on psychometrics, reconsiders the concepts of 'validity,' 'reliability,' 'standardisation,' and equivalence. He engages in the multilingual and cross-cultural nature of the field by emphasising measurement invariance and survey translation. Elsewhere, chapters engage with eye-tracking, pen-recording, pupillometry, electroencephalography (EEG), functional Magnetic Resonance Imaging (fMRI), and retrospective process tracing. Chapter 24 by Sijia Chen and Stephen Doherty, who write on technologies, proposes novel ways of thinking about cognition and technology through Mellinger's framework of embedded, extended, and distributed cognition. In Chapter 23, on note-taking, Huolingxiao Kuang and Bingham Zheng demonstrate how pen-eye-voice methodology and ear-pen span metrics have enabled granular analyses of cognitive and physical demands during interpreting. Having said that, the volume also highlights the limitations of these methods. In Chapter 7, noting that scanner noise, supine positioning, and movement restrictions compromise ecological validity, and that findings from simplified laboratory tasks may not generalise to authentic interpreting settings, Alexis Hervais-Adelman's contribution on neuroscience is exemplary in its critical stance toward the field's own methods.

In Chapter 10, Boris Kogan and Adolfo García characterise the linguistic profile of multilinguals with interpreting experience (MIEs) across four processing levels: discourse, sentence, word, and sublexical domains. Observing that no previous accounts have yet synthesised neurocognitive evidence on this population's skills across all these levels, the authors review findings from experimental studies comparing MIEs with non-interpreter multilinguals. Their synthesis reveals that MIEs display a distinctive linguistic phenotype, but only for certain dimensions. Functions directly taxed by simultaneous interpreting (e.g., word translation, time-constrained lexical search, semantic error detection) show clear enhancements, whereas functions not subjected to extreme demands (e.g., picture naming, word reading) do not necessarily show a comparable performance advantage. This selective pattern aligns with the 'interpreter advantage hypothesis,' which proposes that interpreters develop task-specific skills to meet the intense demands of their work, which can generalise to more efficient performance even in non-interpreting tasks.

Signed language interpreting merits particular attention in the handbook. Unlike many volumes in which signed language appears as an afterthought, *The Routledge Handbook*

of Interpreting and Cognition has shown great esprit de corps. Jihong Wang's contribution on memory (Chapter 16) and Ewa Gumul's on explicitation (Chapter 20) include discussions of signed language. The patterns that emerge — for instance, the fact that signed language interpreters, like spoken-language interpreters, show weak links between working memory and interpreting performance, and use explicitation as a strategy for managing cognitive load — suggest that many cognitive phenomena generalise across modalities. The volume also notes that signed language interpreting, which is bimodal (from aural-oral to visual-gestural modality), imposes spatial demands and activates different sensory-motor connections. Sign language research needs better representation in cognitive interpreting, and the handbook pushes the discipline in the right direction.

A number of chapters emerge as providing new research agendas away from the handbook's primary focus. Chapter 22, Alvaro Marín García's contribution on moral cognition, introduces a set of conceptual tools — rationalism, social intuitionism, dual-process accounts, universal moral grammar — that have been almost entirely absent from interpreting studies. The foreign language effect on moral judgement, whereby bilinguals produce more utilitarian responses in a foreign language than in their native language, has direct implications for interpreting. Some studies suggest that this effect occurs with orally presented information but not with written information. If this is the case, interpreters' real-time processing of spoken language may be systematically affected in ways that current frameworks considering ethical issues fail to address.

Chapter 18 discusses the role of affect and emotion in interpreting performance, which further complicates the account of cognitive aspects. In Chapter 18, building on the theory of constructed emotion, Ana María Rojo López and Ana Isabel Foulquié Rubio argue that emotions are not responses to a situation but rather result from interpreters' attempts to make sense of salient affect features based on past experiences and predictive capacities. This perspective has direct methodological implications. Emotional experience cannot be inferred from physiological data alone because similar bodily reactions can be conceptualised as different emotions depending on context and personal history. Triangulating physiological, psychometric, and performance measures plays as the most reliable practice for studying emotional phenomena in interpreting. Extending this multi-method, situated account of affect and emotion, the volume next turns to the body-environment system in which interpreting actually unfolds. In Chapter 19, Jelena Milošević and Hanna Risku introduce the dimension of 'embodied cognition' and argue for a radical reorientation. Cognitive processes, they contend, are not carried out *in* the body or *in* the environment but *by* the body and *by* the environment, thus suggesting that they act together as a single unit composed of brain, body, and world.



Although this framework seems to offer a way to synthesise sensorimotor activity, artifacts, and social interaction and bring all these aspects into the same cognitive setup, the authors openly acknowledge doubts about how this integration could be implemented in practice. In this regard, researchers are able to chart behaviour including gestures, looks, or notes, but they cannot (yet) pin down how bodily activity is grounded or how body and mind interact in a certain way. This gap is not a weakness of the approach, but rather something to be addressed by future interdisciplinary work.

Several other chapters round out the volume's comprehensive coverage by examining fundamental cognitive processes and their application to training. On the processing side, Aline Ferreira and John Schwieter explain the unique demands of comprehension in interpreting in Chapter 13, and, in Chapter 12, Michaela Aibl-Mikasa and Anne Catherine Gieshoff analyse the additional challenges that non-standard input, such as English as a lingua franca, creates for interpreters. In Chapter 15, Rachel Herring shows that interpreting research often talks about metacognition and self-regulation but rarely studies them properly using established theories from educational psychology. Stephanie Díaz-Galaz and Elizabeth Winston bridge research and practice by applying cognitive principles to interpreter education, from curriculum design to assessment and feedback in Chapter 25.

A more fundamental question concerns the handbook's implicit theory of disciplinary integration. The volume champions interdisciplinary dialogue, yet many chapters reveal why such dialogue remains difficult. Concepts migrate across fields with different ontological commitments; what counts as evidence in cognitive neuroscience differs from what counts in conversation analysis; the grain of analysis appropriate for studying neural plasticity may be inappropriate for studying interactional dynamics. Read as a whole, the volume suggests that cognitive interpreting studies may be entering a phase of what might be called 'reflexive pluralism,' an awareness that no single theoretical framework or methodological approach is sufficient, and that productive inquiry requires holding multiple perspectives in tension rather than seeking premature synthesis.

The Routledge Handbook of Interpreting and Cognition simply defines the contours of cognitive interpreting studies for years to come. It is pregnant with systematic questioning of the foundational concepts that have shaped cognitive interpreting studies for decades. Despite the diversity of topics and perspectives, a set of recurring themes binds the volume together: the critique of modularity and serial processing; the call for greater task granularity and theoretical updating; the recognition that interpreter advantages are domain-constrained and experience-dependent; the importance of distinguishing aptitude from training-induced effects; and the need for methodological pluralism that combines



process and product data. These themes do not simply accumulate; they interact and reinforce one another. The handbook thus succeeds not merely as a reference work but as a genuine intellectual intervention. It challenges the field to think more reflexively about its constructs, more creatively about its methods, and more critically about its assumptions. For a field that has sometimes been criticised for theoretical insularity, this is no small achievement. For early-career researchers, the volume offers an essential orientation to the field's key debates, methods, and unanswered questions. For established scholars, it provides a benchmark against which to measure future progress. For practitioners, the handbook demonstrates that cognitive research has concrete implications for training, in curriculum design, assessment, feedback, and self-regulated learning, without overselling the applicability of laboratory findings to the booth.

Ali Arjmandi

Independent Researcher, Tabriz, Iran

E-mail: aliarjmandi1997@gmail.com

